TRAINING GUIDE Beginning Crystal 1

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clarity through connections www.lucity.com

Using Crystal Reports with Lucity

Beginner - 1

The first of a seven-part series, this workbook is designed for new Crystal Reports® users. You'll learn how to make small modifications to an existing report under a new report name, and link your customized report into Lucity.

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Getting Started

The Crystal Report software is what is currently used to create the standard reports provided with the Lucity software.

To create or revise reports the user must own the Crystal Reports software. The user also needs to have permission to make changes to the reports and add them to the system.

The desktop version of Lucity can only support the functions provided in Crystal XI. The Lucity software can run reports created in later versions of Crystal, however; it cannot use any new functionality. The Web version of Lucity was developed using a newer version of Crystal, Crystal 2008. There is at least one added bit of functionality in this version that is very helpful to have. If you are purchasing the Crystal Report software you should buy at least Crystal 2008.

Crystal Versions ...9, 10, XI, 2008, 2011, 2013.

Crystal Reference

The tool bar icons sometimes change with the version of Crystal. Screen shots throughout the Help Guides are capturing what was provided with Crystal XI.

Standard Toolbar

Crystal XI

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New Report, Open, Save, Print, Print Preview, HTML Preview, Cut, Copy, Paste, Format Painter, Undo, Redo, Toggle Group Tree, Field Explorer, Report Explorer, Repository Explorer, Dependency Checker, Workbench, Find, Zoom Control, Help

Crystal 2008



New Report, Open, Save, Print, Print Preview, HTML Preview, Export, Cut, Copy, Paste, Format Painter, Undo, Redo, Toggle Preview Panel, Field Explorer, Report Explorer, Repository Explorer, Dependency Checker, Workbench, Find

Insert Tools Toolbar

Crystal XI

ab (8 Σ 🔝 🏠 🕫 📐 🔽 🛍 👰

Insert Text Object, Insert Group, Insert Summary, Insert Cross-Tab, Insert OLAP grid, Insert Subreport, Insert Line, Insert Box, Insert Picture, Insert Chart, Insert Map

Crystal 2008



Insert Text Object, Insert Group, Insert Summary, Insert Cross-Tab, Insert OLAP grid, Insert Subreport, Insert Line, Insert Box, Insert Picture, Insert Chart, Insert Map, Insert Flash Object

Formatting Toolbar

Crystal XI

Arial - 9 - ↓ ↓ ▲ B I U 토 프 프 트 ▲ - 트 - ☞ 栂 매 \$ 5 5 % 양 양

Font Face, Font Size, Increase Font Size, Decrease font Size, Bold, Italics, Underline, Align Left, Align Center, Align Right, Justify, Font Color, Outside Borders, Suppress, Lock Format, Lock Size/Position, Currency, Thousands, Percent, Increase Decimals, Decrease Decimals.

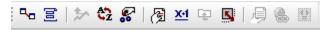
Crystal 2008

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Font Face, Font Size, Increase Font Size, Decrease font Size, Bold, Italics, Underline, Align Left, Align Center, Align Right, Justify, Font Color, Outside Borders, Suppress, Lock Format, Lock Size/Position, Currency, Thousands, Percent, Increase Decimals, Decrease Decimals.

Expert Tools Toolbar

Crystal XI



Database Expert, Group Expert, Group Sort Expert, Record Sort Expert, Select Expert, Section Expert, Formula Workshop, OLAP Design Wizard, Template Expert, Format, Insert Hyperlink, Highlighting

Crystal 2008



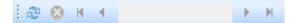
Database Expert, Group Expert, Group Sort Expert, Record Sort Expert, Select Expert, Section Expert, Formula Workshop, OLAP Design Wizard, Template Expert, Format, Insert Hyperlink, Highlighting

Navigation Tools Toolbar

Crystal XI



Refresh, Stop, Show First Page, Show Previous Page, Show Next Page, Show Last Page, Back, Forward Crystal 2008

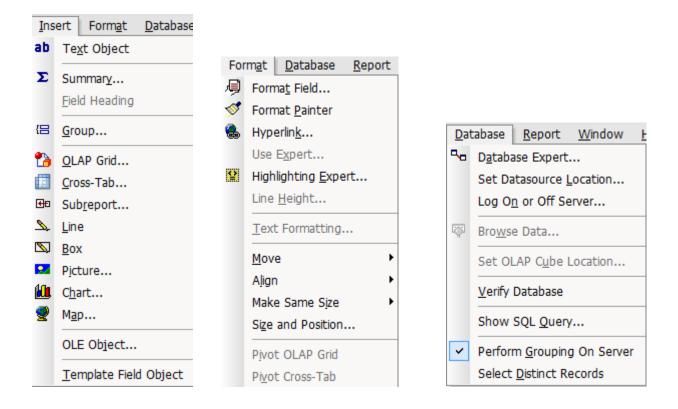


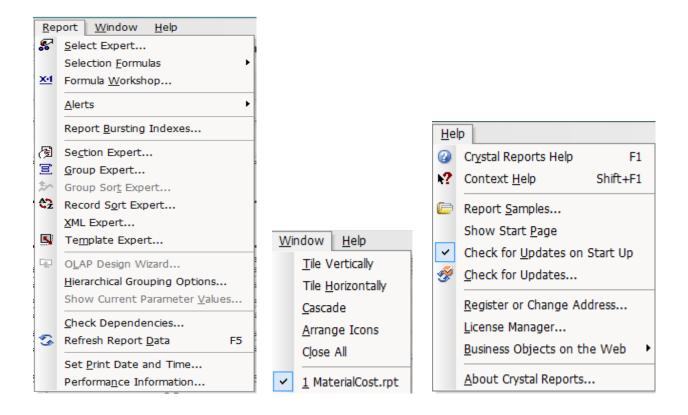
Refresh, Stop, Show First Page, Show Previous Page, Show Next Page, Show Last Page

Menu Bar

The functions of the toolbar icons are also available in the drop down Menu Bar at the top.

	sert Form <u>a</u> t	C								
	sert Form <u>a</u> t	D								
							Vie	w Insert	Form <u>a</u> t	Data
	Ctrl+C						~	Design		rl+D
	Ctrl+9						L.			
s								Preview S	ample	
ata <u>w</u> ith Rep	ort		Edit	t View	Insert	Forma	0	HTML Pre	view	
u <u>b</u> report As					-	1 onn <u>a</u>	×	Close Curr	ent View	
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		• •	Ж	Cu <u>t</u>		Ctrl+X		R <u>e</u> port Ex	plorer	
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				Object				Gri <u>d</u>		•
								T <u>o</u> oltips		•
	ubreport As Getup Fo s Options ary Info rrialCost.rpt etmap.rpt comments or Gum.rpt getTaskDetail. eList.rpt getDeptList.rp	Is Iata with Report Ubreport As Ctrl+P Setup To S Options ary Info wrialCost.rpt etmap.rpt comments only 12-29-10.rpt Sum.rpt getTaskDetail.rpt eList.rpt getDeptList.rpt CountDaily.rpt	Arata with Report ubreport As Ctrl+P eetup Fo S Options ary Info rrialCost.rpt etmap.rpt comments only 12-29-10.rpt getTaskDetail.rpt eList.rpt getDeptList.rpt CountDaily.rpt	s Edi ubreport As Ctrl+P eetup To Ctrl+P eetup Ctrl+P eetup Ctrl+P C Ctrl+P C C C Ctrl+P C C C C C Ctrl+P C C C C C C C C C	As Aata with Report Ubreport As Ctrl+P Getup Ctrl+P Getup Ctrl+P Getup Ctrl+P Getup Ctrl+P Getup Can't Red Can't Red Can't Red Copy Can't Red Copy	s ata with Report ubreport As Ctrl+P detup Ctrl+P detup Ctrl+P Go Can't Undo Can't Redo Can't Redo Cut Copy S Copy Paste Paste Paste Special Delete Select <u>All</u> Find Go To Page Edit View Insert Can't Redo Cut Edit Select <u>All</u> Find Go To Page Edit Report Object Subreport Links Object	s hata with Report ubreport As Ctrl+P detup Ctrl+P detup Ctrl+P detup Ctrl+P detup Ctrl+P detup Ctrl+P Con't Undo Can't Redo Cut Cut Cut Cut Cut Cut Cut Cut	s pata with Report ubreport As Ctrl+P detup Ctrl+P detup Ctrl+P detup Ctrl+P detup Ctrl+P detup Ctrl+P detup Ctrl+P Con't Undo Can't Redo Can't Redo Cut Cut Cut Cut Cut Cut Ctrl+X Paste Delete Del Select All Ctrl+A Paste Special Delete Del Select All Ctrl+A Find Ctrl+F Go To Page Ctrl+F Go To Page Ctrl+G Edit Report Object Subreport Links Object Cut Ctrl+A Ctrl+A Cut Ctrl+A	s preview S s ata with Report ubreport As Ctrl+P aetup Ctrl+P aetup Ctrl+P aetup Ctrl+P aetup Ctrl+P aetup Ctrl+P aetup Ctrl+P aetup Ctrl+P aetup Ctrl+P aetup Ctrl+C Copy Ctrl+C Paste Copy Ctrl+C Paste Copy Ctrl+C Paste Copy Ctrl+C Paste Copy Ctrl+C Paste Copy Ctrl+C Select <u>A</u> ll Ctrl+A Status Ba Group Tre Go To Page Ctrl+G Qbject Ctrl+G Copy Ctrl+C Comments only 12-29-10.rpt Sumrpt petTaskDetail.rpt etail.rpt Copy Ctrl+C Ctrl+A Ctrl+F Copy Ctrl+C Ctrl+G Coup Tre CountDaily.rpt etail.rpt Ctrl+C Ctrl+C Ctrl+C Ctrl+C Copy Ctrl+C Ctrl+C Comments Ctrl+C Copy Ctrl+C Ctrl+C Copy Ctrl+C Ctrl+C Copy Ctrl+C Ctrl+C Copy Ctrl+C Ctrl+C Copy Ctrl+C Ctrl+C Copy Ctrl+C Ctrl+C Ctrl+C Copy Ctrl+C Ctrl+C Copy Ctrl+C Ctrl+C Copy Ctrl+C Ctrl+C Ctrl+C Ctrl+C Ctrl+C Ctrl+C Ctrl+C Copy Ctrl+C Ctrl	Ctrl+S Preview Sample ss Preview Sample ubreport As Image: Forma Ctrl+P ietup Paste Options Paste any Info Paste irialCost.rpt Select <u>All</u> ietur.rpt Go To Page ietur.rpt Go To Page ietur.rpt Go To Page ietur.rpt Guidelines ietur.rpt Object





Lucity provides a Request Summary Report (ReqSum.rpt) that looks like this:

Summary	of Requests	1			Print Date
?Report Subtit	le				Print Time
Request#	Record Date Status	Status Date Priority	Problem	Address	
RQ_NUMBER	@ReqDate RQ_STAT_TY	@StatDate_RQ_PRTY_TY	RO_PROB_TY	@ Location]
	Total Requests: #TotReq				

Preview

Summary of Requests									
-	•					3:09 PM			
Request #	Record Date	Status	Status Date Priority	Problem	Address				
2006-00013	4/5/2006	Completed	6/12/2006	INFO REQUEST - COMMERCIAL					
2008-00022	4/5/2008	Completed	4/7/2006	COM - 40 YD ROLLOFF SERVICE / RETURN	625 W GUADALUPERD				
	Total Req	uests: 2							

We would like to modify the report to look like this:

								@ commen	t 1
Summary Report Subtit	of Request	5							Print Dat Print Tim
Request Numb	er [Record Date	Status	Status Date	ollow-Up	Category	Problem		X Coord	YCoord
Q_NUMBER	@ R eqD ate	RQ_STAT_TY	@StatDate	Follow U p	RQ_CAT_TY	RQ_PROB	TY	RQ_X_COORD	RQ_Y_COORD
	Total Requ	ests: #TotRed							
ile Author]				@ Page	;	:	File	e Path and Name,
			-			-			

```
+lucity
```

Summary o	f Request	ts					8/17/2015 3:20 PM
R equest N umber	Record Date	Status	Status Date Follow-Up	Category	Problem	X Coord	Y Coord
2006-00013	4/5/2008	Completed	6/12/2006	Commercial Collection	INFO REQUEST - COMMERCIAL	11.23568990	12.58963200
2006-00022	4/5/2006	Completed	4/7/2008	Commercial Collection	COM - 40 YD ROLLOFF SERVICE / RETURN	10.12345670	12.45678900

Some of the changes include adding a company logo, changing column headers, adding text objects, adding data fields, creating formulas and formatting.

Custom Reports from a Standard Report

Finding the Report Location and Name - Desktop

The first step in modifying a standard Lucity report is to identify the report name and location so a copy of the report can be created to modify as a new custom report.

- 1. Open the Lucity module where the Request Summary Report is located.
 - Select Work>>Request from the Lucity main menu.
- 2. Open the *Reports* dialog. Click the report icon in the module toolbar.
- 3. Locate the report to be modified and highlight it.

Summary of Requests

- 4. You'll see the *Report File Path* at the bottom of the dialog box. This path tells you important information about the report.
 - The first part of the path tells you where the report file is located. In our example below, the report is located at C:\Lucity76\Reports\Work\.

Note: Lucity report files are stored in the shared files location designated during your initial installation. This is typically on a file server, but could be on your local machine. In the path shown below, C is a mapped drive. This could also be a UNC path using the full server name.

• The report name appears after the last backslash. As you can see below, this report is named **ReqSum.rpt**.

eports			Report Filter
•	Request Problem Count Report	*	
	Request Response Time by Supervisor		This Record Only
•	Request Response Time by Supervisor Summary		C Current Filter
	Request Work Order Costs Grouped by Problem Type		C All Becords
	Requested Work Form		
	Requests For Same Location		V B
•	Requests per Address Report		View Report
•	Requests Without Affected Utility	=	Print Report
.	Response Letter		
.	Summary of Requests		Export Report
•	Work Request/Work Order Review		
		Ŧ	Add
eport [Description:		E 0
One Lir	e Summary of Each Request.	*	Edit
			Delete
		-	Properties
	File Path:		

In the report location, the Reports Directory can be sorted by **Name** or **Date Modified** by clicking on the title in the upper bar.

Name 🔻	Date Modified
WOTskSumByCrew.rpt	1/22/2007 1:25 PM

Finding the Report Location and Name - Web

The Web Report list varies depending on the version of Lucity being used. Typically there will be the Report Name, Description and File Name. There may also be a reference to Quick Report Type and Group Name.

Report Name ↓ [₽]			Report Description
THE DATE DATES			Catal West Contraction
Quick Report Type	Group Name	File Name	

Renaming Reports

If you modify a report and save it under the original name, the changes you made will be overridden the next time Lucity is upgraded. Thus, reports that are modified must be saved under a new name in order to be used.

Reports\Work\WOTaskDetailWeb.rpt

Note: You must have adequate permissions to save the modified reports. If you are not sure whether you have these permissions, check with your system administrator.

- 1. You'll want to make a copy of the report before you begin working on it. You can do this by simply exporting the report from the Lucity module's Report List to the Report Directory under a different name.
- 2. It's a good practice to establish a naming convention for your custom reports that makes them easy to distinguish from the Lucity standard report names. For example, you might want to add a two or three letter abbreviation for your company or organization or perhaps your initials to the original report name as a prefix or suffix.
 - Some sample custom report names are LC_ReqSum.rpt or ReqSum_LC.rpt.
 - Adding the abbreviation to the end of the report name (before the .rpt extension) will allow the custom report to be sorted with the original.
 - Adding the abbreviation as a prefix will sort all of your custom reports together.
- 3. Lucity reports store database connection information. When the report is run in Lucity, the program replaces this connection information with connection strings specific to the customer's database configuration during run-time. When you export a report, the database connection information used at run-time is saved. This is the preferred method for handling Lucity reports and will ensure that the report stays pointed to the correct data set so that the report can be run out in Crystal.

Exporting a Report

As we mentioned above, the preferred way of handling Lucity reports is to export them. This allows you to rename the report and make modifications as well as maintain your database connection information. Follow the steps below to export a report:

Desktop

- 1. Within the Reports dialog click *All Records*.
- 2. Highlight the report you'd like to copy (Summary of Requests) and select Export Report. (Wait)

Reports			- Report Filter
•	Request Problem Count Report		C This Record Only
•	Request Response Time by Supervisor		
	Request Response Time by Supervisor Summary		C Current Filter
.	Request Work Order Costs Grouped by Problem Type		All Records
	Requested Work Form		
	Requests For Same Location) General
	Requests per Address Report		View Report
	Requests Without Affected Utility	Ξ	Print Report
.	Response Letter		Event Devent
•	Summary of Requests		Export Report
.	Work Request/Work Order Review		
		Ψ.	Add
leport [Description:		Edit
One Lir	ne Summary of Each Request.	~	
			Delete
		-	Properties
Report F	File Path:		
D.U	ity76\Reports\Work\ReqSum.rpt		Close

- 3. An Export dialog will appear.
 - a. Select "Crystal Reports" from the Format drop down box.
 - b. Then, select "Disk file" in the Destination drop down box.
 - c. Click OK.

Export	×
Format:	
Crystal Reports (RPT)	ОК
Destination:	Cancel
🖃 Disk file	

4. The following dialog will appear:

Choose Export File	ty76	Reports Work	✓ 4y Search Work	Q
Organize 🔻 New	folde	r		:= • 🔞
	*	Name	Date modified	Туре
4 🥽 Libraries		2TestWOSumName.rpt	10/18/2011 3:05 PM	Crystal Report
Documents		ActivityGuideline.rpt	5/31/2011 10:32 AM	Crystal Report
Music	=	ActivityGuidelinePB.rpt	5/31/2011 10:32 AM	Crystal Report
Pictures		BudgetAnnWkPlanDet.rpt	5/31/2011 10:32 AM	Crystal Report
🖻 🛃 Videos		📑 BudgetDeptDetail.rpt	1/18/2012 1:37 PM	Crystal Report
4 🖳 Computer		BudgetDeptList.rpt	5/31/2011 10:33 AM	Crystal Report
Local Disk (C:)		BudgetDeptSumm.rpt	5/31/2011 10:33 AM	Crystal Report
Disk (C.) HP_TOOLS (E:)		BudgetPlannedVsActual.rpt	5/8/2012 8:55 AM	Crystal Report
	Ŧ	•		P.
File name:	LC_Re	qSum.rpt		•
Save as type:	Crysta	I Report (*.rpt)		•
Hide Folders			Save	Cancel

- 5. Find the location where the report is to be stored. It is recommended that you use the default report location discussed in the previous pages.
- 6. Type in a new File Name (LC_ReqSum.rpt).
- 7. Click Save.
- 8. At this point the report needs to run, the subtitle query is optional but almost any other query such as dates must be entered, then click *OK*.

Note: If the Export takes more than a few seconds then cancel and change the Report filter to "This Record Only". This may be necessary for complex reports, especially ones with subreports. Then Export (follow above steps 2 - 8).

Exporting Red	ords	×
	Current	Total
Records		
		% Complete
	Cance	el 🔤

- 9. Close the Report dialog.
- 10. Minimize the Lucity module.

- 11. In the Reports Directory, open the new report that was just exported.
 - On the report title either Right click and select *Open* or double click.
- 12. From the menu bar at the top of the screen, select File.
- 13. Uncheck the Save Data with Report option.
- 14. Click Save.
- 15. If the report is Exported with *This Record Only* then the *Select Expert* needs to be opened and the ID selection formula deleted.
 - a. Click Select Expert 🚱 .
 - b. Click Show Formula>>>.

ſ	Select Expert	X
	WKREQ.RQ_ID <new></new>	
	is equal to Tr.00	New
		Browse
	OK Cancel Help	Show Formula >>>

Select Expert		Σ	S
WKREQ.RQ_ID	<new></new>		
is equal to	▼ 57.00	• New	
		Delete	
		Browse	
ОК	Cancel Help	Hide Formula <<<]
Record Select	ion 💿 Group Selection	Formula Editor	
{WKREQ.RQ_ID}	= 57	*	
c. Click and	drag over the formula.		

- d. Press Delete key to remove.
- e. Click OK.
- f. Click Save.

You are now ready to begin making modifications to the report.

Note: Reports with "secure" fields may show as "Hidden" but this is temporary and can be changed when refreshing the report and choosing the "Prompt for new parameter values". If date fields were required to run the report these too would be temporarily placed in the report until the report is refreshed and new parameters are given.

Example 1

Web

- 1. In the Request module highlight one record.
- 2. In the Report Dialog click on the report to be Exported. (Requests per Address Report)
- 3. Run the report with Selected Records and the Advanced View (HTML) options.
- 4. Once the report has run, select the **Export this report** option in the top tool bar.
- 5. This opens the following Dialog. Click Export.

Export	×
File Format:	
Crystal Reports (RPT)	-
Page Range:	
All Pages	
O Select Pages	
From: To:	
Ex	port

6. The referenced report name in this example is lucityMSCRV.rpt and is not the actual file name, ignore this.

Depending on the Browser being used you will get a dialog.

Internet Explorer should look similar to this:

Do you want to open or save lucityMSCRV.rpt from bpinkston-It?	Open	Save	•	Cancel	×

Firefox should look similar to this:

Opening lucityMSCRV.rpt		23
You have chosen to open:		
IucityMSCRV.rpt		
which is: Crystal Report (46.0 KB)		
from: http://bpinkston-lt		
What should Firefox do with this file?		
Open with Crystal Reports (default)	•	
Do this <u>a</u> utomatically for files like this from now on.		
OK Can	cel	

7. Select the **Open** option. Click through any comments such as Invalid Printer or Crystal Reports version.

- 8. In the tool bar select File, UNCHECK the Save Data with Report option.
- 9. Open the Select Expert and remove the formula for the ID field that was placed in here because the report was run with Selected Records.
- 10. In the top tool bar select File > Save as...
- 11. Browse to the location for this new custom report (client specific in training we will use **CustomLucityWebReports)** and give it a new file name (**LC_ReqPerAddyWeb.rpt**)

You now have a copy of the report with a new name and pointed to your data. The User ID and Password for your database are required to run the report away from the Lucity environment. Ex. 2

Setup Options

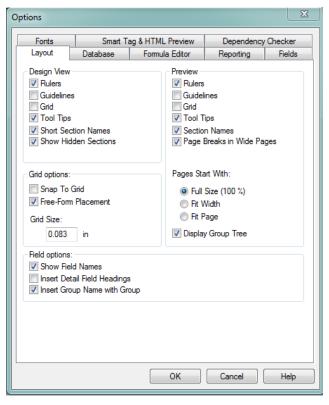
Whether a report is modified or created new, it is helpful for certain report options to be set before working on the report. Within the Crystal Reports *Options* and *Report Options* there are a number of settings that can be preset for generalizations. These can be changed for individual reports or individual fields within a report.

Options

To view the "Options" section, we will look at the previously exported report, LC_ReqSum.rpt.

• In the Menu Bar click File >> Options

The following screen captures show what options can be changed behind the scenes. These options will be reflected in all of the reports created.



Options			×
	ag & HTML Preview	Dependency	Checker
Layout Database	Formula Editor	Reporting	Fields
Tables and Fields Show Name Show Description Show Both Data Explorer		ables Alphabetically elds Alphabetically	
 Tables Views System Tables Synonyms Stored Procedures 	Table nam Owner LIK	(%,_)	
Advanced Options Use Indexes or Server for S Perform Grouping On Server Database Server is Case-In Select Distinct Data for Brow Perform Query Asynchronou Verify On First Refresh Verify Stored Procedures Or Verify When Database Driv Automatic Smart Linking	r sensitive wsing usly n First Refresh		
	ОК	Cancel	Help

Once the database has been unified it is important to confirm the "**Stored Procedures**" option is <u>unchecked</u>. This is necessary to show all of the Lucity tables to add to a report or when repointing tables. Crystal Reports limits the number of objects available to be used in a report and Stored Procedures are counted as objects but are typically not used in reporting.

ptions	X
Fonts Smart Tag & HTML Pre Layout Database Formula Ec	
Text Options Font: Courier New ▼ 10 ▼	Tab Size:
Color Element : Comment Keyword	Foreground: Black v
Text Text Selection ✓ Use Windows system color	Background:
Default Formula Language: Crystal Syntax 🗸	
Null Treatment: Exceptions For Nulls	UFL Support: C/COM UFLs Only
Sample: //A formula that returns a If {Orders.Order Amount} > "Insured shipping"	-

Options					×		
Fonts	Smart Ta	ag & HTML Preview		Dependency	Checker		
Layout	Database	Formula Editor		Reporting	Fields		
Enterprise Se	ettings						
Update Er	Update Enterprise Report Properties on Save						
Update Co	onnected Reposit	ory Objects on Oper	I				
-Reading Data	a						
Convert D	atabase NULL Va	alues to Default					
Convert O	ther NULL Values	s to Default					
Always So	rt Locally						
Discard Sa Re-import Suppress Show All H Autosave	a With Report aved Data on Ope Subreport on Ope Printing if No Rec Headers on Drill D Reports After erts on Refresh riew Picture	en ords Selected		Minutes			
Retain Orig	ginal Image Color	Depth					

Options				×
Fonts	Smart Ta	g & HTML Preview	Dependency	Checker
Layout	Database	Formula Editor	Reporting	Fields
	- Field format:	String		
		Number		
		Currency		
		Date		
		Time		
		Date and Time		
		Boolean		

For each field type there are format options specific to that type. There is a sample box at the bottom of the Format Editor for each field type that shows the current field formatting.

String

Format Editor		23
Common Border Hyperlin	k	
Object Name:		
Read-only Suppress	Lock Position and Size	
Can Grow	Maximum number of lines: (Enter 0 for no limit) 0	
Text Rotation:	0 v degrees	
Horizontal Alignment:	Default	
CSS Class Name:		X-2
Repeat on Horizontal Pa	iges	
Close Border on Page Br	reak	
Sample:		
xxxx		

Number

System Default Number Format -1123 -1,123	Currency symbol (system default):
-1123.00 -1,123.00	Display Currency Symbol
-1123.0000 -1,123.0000	Fixed
(1123) (1,123) (1123.00) (1,123.00) (1123.0000) (1,123.0000)	Floating
Custom Style	

Currency

Common Number Border Hyperlink	
Style System Default Currency Format \$-1123 \$-1,123 \$-1123.00 \$-1,123.00 \$-1,123.000 \$-1,123.000 \$-1,123.0000 \$-1,123.0000 \$(1123) \$(1,123) \$(1,123.00) \$(1,123.000) \$(1,123.000) \$(1,123.0000)	Currency symbol (system default): Display Currency Symbol Fixed Floating
Customize	

Date

Common Date Border Hyperlink	
Style	
Style System Default Long Format System Default Short Format 3/1 3/01 3/1/99 03/01/1999 1 - Mar 1-Mar - 1999 01-Mar - 1999 01-March - 1999 March 1999 March 01, 1999 Monday, March 1, 1999 Monday, 1 March, 1999 3 3-99	
Customize	

Time

Common Time Border Hyperlink	
Style System Default Time	
13:23 1:23 pm 13:23:45 1:23:45 pm	
13:23.45	
Customize	

Boolean

Common	Boolean	Border	Hyperlink				
Boolean	Text:	Tru	ue or False		•		

Options				×
Layout	Database	Formula Editor	Reporting	Fields
Fonts	Smart Ta	ag & HTML Preview	Dependency	y Checker
	- Default fonts	:		
		Fields		
		Summary Fields		
		Group Name Fields		
		Text Objects		
		Field Titles		
		Charts		

Each Field or Object type opens the Font options.

ont	-		X
Font:	Font style:	Size:	
Arial	Regular	9	
The Arial The Arial Black The Arial COP The Arial Narrow The Arial Narrow The Arial Rounded MT Bold The Arial Unicode MS The Baskerville Old Face	Regular Italic Bold Bold Italic	 ▲ 9 10 11 12 14 16 18 	• III •
Color: Black	•		
Effect:			
Strikeout	Underline		
Preview:			
	AaBbYyZz		
This is a TrueType font. This same font will be used on b	ooth your printer and yo	ur screen.	

Layout	Database	Formula Editor	Reporting	Fields
Fonts	Smart	Tag & HTML Preview	Dependency	Checker
Smart Tag Web	o Server Optio	ons		
Web Server Nam	ne:	http://localhost		
Virtual Directory:		crystalreportviewers	\$11	
BusinessObject	is always ena ts Enterprise	crsmarttag.asp abled when you are logg		
HTML Preview HTML Preview BusinessObject	is always ena ts Enterprise			
HTML Preview HTML Preview BusinessObject	is always ena s Enterprise /IL Preview w	abled when you are logg		
HTML Preview HTML Preview BusinessObject Enable HTM Enterprise	is always ena s Enterprise /IL Preview w	abled when you are logo when not logged on to th		
HTML Preview HTML Preview BusinessObject Enable HTM Enterprise	is always ena s Enterprise /IL Preview w	abled when you are logg then not logged on to the localhost		
HTML Preview HTML Preview BusinessObject Enable HTM Enterprise	is always ena s Enterprise /IL Preview w	abled when you are logg then not logged on to th localhost © COM		

Options				×			
Layout	Database	Formula Editor	Reporting	Fields			
Fonts	Smart Ta	g & HTML Preview	Dependency	Checker			
Report Checking Options							
Compi	le formulas						
Compi	le SQL expression	s					
Compi	le custom function	s					
🔽 Valida	te hyperlink URLs						
Verify	database						
- Multi-Repor	t Checking Option	8					
Check	repository custom	functions					
Check	repository objects	(text and bitmap)					
Check	report part hyperli	nks					
Check	subreports which	are re-imported on ope	en				

Report Options

Report Options are specific to an individual report.

• In the Menu Bar click File >> Report Options.

These Report Options are also available within Subreports (discussed later).

	Report Options	8 C -					×	
	General Settings							
	Convert Database NULL Values to	Default	Sav	/e Data	With Repo	ort		
	Convert Other NULL Values to Default			Suppress Printing If No Records				
	Show All Headers On Drill Down		V Per	form Qu	uery Asyno	hronously		
	Always Sort Locally		V Cre	ate Gro	up Tree			
	Database Server is Case-Insensiti	ve	V Dis	play Ale	rts on Ref	resh		
	V Perform Grouping On Server		📃 Rea	ad-only				
	Use Indexes Or Server For Speed		Sel	ect Disti	inct Record	ds		
	📝 Verify on First Refresh		🔽 Sele	ect Disti	inct Data f	or Browsing		
	Verify Stored Procedures on First	Refresh	Ret	tain Orig	ginal Image	Color Depth		
	Respect Keep Group Together On	First Page	V Pro	mpt For	Hyperlink	s		
•								
•								
	Initial Report Part Settings				B	Paste Link	-1	
•	Paste the Report Part link:					Easte LINK	· ·	
	Object Name:							
	Data Context:							
	Preview Pages Start With :	Full Size					•	
			OK		Cancel		lelp	

Document Properties

Another useful Crystal option is Document Properties. This information could help in report documentation. Some of the fields are available to be used in the report. They are found in the Special Fields section listed in Field Explorer (Discussed later).

• In the Menu Bar click File >> Summary Info...

Document Properties	X
Summary Statistics	
Application:	Crystal Reports
Author:	
Keywords:	
Comments:	·
	~
Title:	
Subject:	
Template:	
Save Preview Pie	cture
	OK Cancel Help

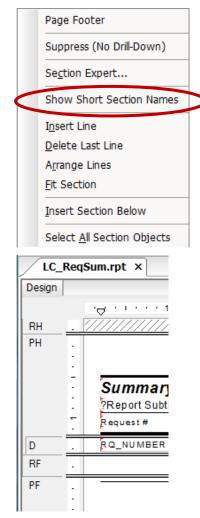
C	Ocument Properties		23
	Summary Statistics		
	Last Saved By: Revision number:	53	
	Total Editing Time:	693 min	
	Last Printed: Created:	9/14/2004 3:45:02 PM	
	Last Saved:	10/18/2011 3:05:37 PM	

Report Sections

Every report has a minimum of five sections. These sections show on the left side of the report.

LC_ReqSum.rpt ×	
Design	
Report Header	. 2
Page Header	•
	:
	-
	:
	· _
Details	
Report Footer	-
Page Footer	-
	:

To conserve space this section can be reduced in size by right clicking in the section and selecting *Show Short Section Names*



Modifying a Report

Beneath the toolbars the open report will have a tab with either the report file name or the Title set up in Document Properties. Beneath this, the exported report already has two tabs available, Design and Preview. If the report is opened from the report folder then the Design tab will be present but the Preview will only show after the report is run.

🐻 Cr	ystal	Reports	- [LC_R	eqSum.rp	ot]		1	
1	<u>F</u> ile	<u>E</u> dit	<u>V</u> iew	Insert	Form <u>a</u> t	<u>D</u> atabase	<u>R</u> eport	<u>W</u> indov
10	È	•	a 👌	i 🔯 🖄	X 🖻	🛍 🖉 🗠) + Ci ·	- 🔚 🖽
i ab	(日	Σ	🎦 🕀	N 🔊 🖉	💌 🛍 🖇	2 :		
÷ 🗣	E	🏞 😫	z 🌮	€ ⊠	🖻 🖪 /	9 & 11	S 🛛	$\mathbb{H}_{-}\mathbb{H}_{-}$
	LC_R	eqSum	n.rpt ×	:				
Desi	gn	Preview	×					
	LC_R	eqSum.rp	x				1	
			PH	- 1				

The Design page is where most of the report modifications will take place but can be done in Preview as well.

Note: The undo and redo buttons are very helpful when revising reports.

Saving and Viewing your Report

- Save any changes by clicking on Save . It is a good idea to Save while you are working and not just when you are finished with the report. (You never know when you will encounter one of those mysterious error statements that shuts down your system, losing all of your work).
- To preview the report, click Print Preview
- To refresh the report, click Refresh 🍄 .

Preview Sample

- To limit the number of records previewed:
 - In the Menu Bar click View.
 - Select Preview Sample...
 - Select *First* and type in the number of records you would like the report to run with. This is particularly helpful when you have large numbers of records to deal with.

Preview Sample
Preview this report with:
 All records.
First 100 records.
OK Cancel Help

Set Print Date

Sometimes reports use the *PrintDate* function in formulas. This is just as it sounds, it uses the current date. If you need to try the report on a previous date that is known to meet certain criteria on that date then the Printdate can be set to a specific date.

- In the Menu Bar click Report.
- Select Set Print Date and Time...
- Select Other
- Fill out the desired Date and Time

Set Print Date and Time		— X
○ Today's Date and Time		ОК
Other:	Cancel	
Date:		Help
1/ 1/2017		Ticip
Time:		
2:57 PM	×	

Note: If you are looking for a specific record in Preview mode, you can use the Find Tool button And enter the data you wish to find.

Field Types

Field types include Text Objects, Database Fields, Formula Fields, Field Titles, Parameter Fields, Running Total Fields, Group Name Fields and Special Fields.

When the cursor is placed over the field boxes, field type information appears if *Tooltips* is turned on.

- If you place the cursor over the **Request** # box, *Text Object* appears. This means that **Request** # is a group of characters that can be modified. This is a column header that was manually typed in.
- If the cursor is placed over **RQ_Number**, it shows the table (WKREQ), field name (RQ_NUMBER) and data type (string). Depending on the age of the report the default field caption may also show. This Database Field is bringing in data from a table. In Field Explorer (discussed later) the previous tooltip information may show as well as the size of the string mask for the field.

Changing Text in Text Objects

In the example report, LC_ReqSum.rpt, we will change the text object field "Request #" to "Request Number".

To change the text within a *Text Object*:

- 1. Double click on the box with Request #.
- 2. Click and drag over the portion you want to change (#).
- 3. Type the new text (Number) and click out of the box.

Request #	Record Date		RequestNumber	Record Date
RQ_NUMBER	@ReqDate	change to	RQ_NUMBER	@ ReqDate

Field Sizing

Sometimes it is necessary to resize or delete existing fields to accommodate additional text or make room for a new field.

Resize a Text Box:

- 1. Click on the text object (Problem) which will highlight the borders of the box.
- This will activate the sizing handles, the small dark dots on each side of the box.

Problem

2. Place the cursor over the right border's mark which will turn the curser into a two sided arrow. Click and drag the box to the left to reduce the empty space.

Problem

Resize a Field:

- 1. Click on the field (**RQ_PROB_TY**).
- 2. Click on the right sizing handle and drag to the left (to about 7.5" in the top ruler).

Deleting a Field

- 1. Click on the field (**RQ_PRTY_TY**) to highlight it.
- 2. Press the Delete key

OR

Right click in the field and select Delete

Field Movement

- 1. The simplest form of moving fields is by clicking on the field and dragging it to the new location.
 - a. Click on the Priority text object (resize to reduce the empty space).
 - b. Drag to the right until the left edge is aligned with the 5" mark.

2. Multiple fields can be moved by holding the shift key down while clicking on the fields. This will highlight the fields which can then be moved or sized or formatted all at the same time.

The click and drag feature, as well as the adjustment of the box size, are done to the highlighted box with the four dark marks on the edges (anchor box). Multiple fields may be copied or cut as a unit as well.

- 3. Multiple aligned fields can be moved as a unit by "attaching" Guidelines to the fields. This can be done both horizontally and vertically using the rulers at the top and left side of the report (if this option is turned on).
 - a. In the top ruler, click near the 6" mark and hold, moving slightly if necessary, until the dotted line meets the left side of the **Problem** text box. Release
 - The left side of the text box will appear red and there is a pointed box in the ruler section.
 - b. The left edge of the **RQ_PROB_TY** field will likely be red as well but if not, click on the field and drag to attach the left side to the guideline.

·	¢	·	·	·	I.	·	·	·	7	·	·	·	T	·
2	//	//	//	/_	//	/	//	/	//	//	//	//	//	//
_														
	Þ	ob	ole	m]		
=	R	Q	P	RC	в	1	ſΥ							

c. To move the fields attached to the guideline, click on the ruler marker and drag it to the new location. (about 6 5/8") This will move any fields attached to the guideline.

Note: Caution should be used with guidelines if there are a number of fields in the report. You may attach fields you had no intention of moving. This is a problem that can affect Lucity Detail reports.

- d. To remove a marker, click on it and drag it up and away from the ruler. Then, release your mouse.
- e. All markers can be removed with a right click in the ruler or body of the report and then selecting either *Remove All Vertical Guidelines* and/or *Remove All Horizontal Guidelines*.

-							
F	Section Expert						
~	$Sho_{\underline{W}} \text{ Hidden Sections in Design}$						
ab	Insert Text Object						
	Insert <u>C</u> ross-Tab						
	Insert C <u>h</u> art						
	Remove All <u>V</u> ertical Guidelines						
	Remove All <u>H</u> orizontal Guidelines						
	Page Setup						
	<u>S</u> nap to Grid						

Example 3

Add a Text Object

Make sure there is room to add the text object.

In the example we will create space between the Status Date and Priority:

- 1. Reduce the size of the Status text object to close up the empty space.
- 2. Reduce the RQ_STAT_TY field (right edge to 3 1/4").
- 3. Move the Status Date text object and @StatDate field to the left (right edge 4 1/8").

This has opened up space to add a new text object.

- 4. Click (release don't drag) on Insert Text Object **ab**. The cursor turns into a plus sign.
- 5. Click on the location where the box is to be inserted. Just to the right of the **Status Date** text object.
- 6. Type in the desired text (Follow-Up).
- 7. Click out of the box when you are finished.
- 8. Resize to close up the empty space. In the example it is overlapping the **Priority** text object. It doesn't hurt anything but may hinder your design efforts later.

Status Date Follow-Up Priority

Adding Fields

To add a field, you may need to make room by moving or removing existing fields.

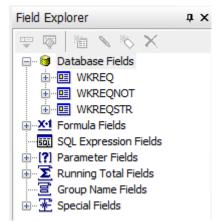
- 1. In our example, we'll change the "Priority" column to "Category".
 - First, you'll edit the **Priority** column header to read **Category**.
 - The **RQ_PRTY_TY** field has already been deleted.
- 2. Now, you'll add the new "Category" field.
- 3. You'll need to find out the name of the "Category" text field.
 - a. Go back to the *Requests* module and locate the field that is to be shown in the report.
 - b. With your cursor in the field, press Ctrl and then right click.
 - c. Select Field Definition.
 - Some fields, including the Code field, have an additional option, *Field Properties*. This option offers additional information such as the field Mask and Editing options.
 - In the example, you can see that the table name is **WKREQ** and the "Category" field name is **RQ_CAT_TY**.

100	
1	Field Definition
	Caption: Category Text
	Field Name: RQ_CAT_TY
	Table Name: WKREQ
	Definition Lock:
	Lucity Def Save Close
	The Category field is a code-description, pick list field that allows you to select a category for the request.

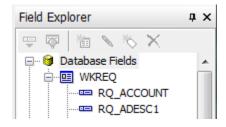
Note: Sometimes fields that have a code box and a text box will only show the field definition of the code portion. The only difference with the text portion is that the field name would end in TY rather than CD.

Sometimes if the box is pulling information from a different module, the field definition will not show up or the given field name may not be accurate. It may be a connecting field to pull the correct data from another table.

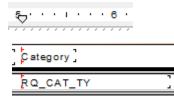
- 4. Return to the report. Then, complete the following steps to add the new field.
 - a. Open *Field Explorer*. (Also under "View" in the top menu bar.) This may already be open on the right of the report.
 - b. Open Database Fields (click on the + sign).



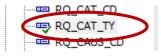
c. Open the **WKREQ** table (click on the + sign).



d. Click and drag the **RQ_CAT_TY** field and place it in the *Detail* section under the **Category** column heading.



When a field is used in the report, a check shows up next to it in the Field Explorer.



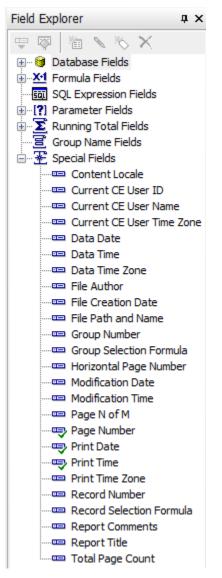
Beginning Crystal 1

- 5. We will now add the X and Y Coordinate fields:
 - a. Change the Address text object to X Coord.
 - b. Reduce the box width to close up the space.
 - c. Add another text object called Y Coord to the right of the X Coord.
 - d. Right align both the X and Y Coord text objects.
 - e. Delete the @Location field.
 - f. Add the appropriate fields below the X and Y column headers.

X Coord	Y Coord	_
X_COORD	Y_COORD	_

Special Fields

There are a number of "Special Fields" that Crystal Reports provides. In *Field Explorer* expand *Special Fields*.



The report is currently using **Page Number**, **Print Date** and **Print Time**. If the *Summary Info...* (from File in the toolbar) had been filled out for the report then several of these fields would have been available to bring into the report (**File Author**, **Report Comments** and **Report Title**).

The **File Path and Name** could be a helpful field to place in the Report Footer. This would tell you exactly where the report is located and the exact report name (**LC_ReqSum.rpt**).

Copying Fields

A field that is used in a report can be copied and used elsewhere in the report. There are various methods for doing this.

- Click on the field(s) and:
 - > Right click *Copy* and then right click *Paste* to the new location.
 - > Ctrl C to copy then Ctrl V to paste in the new location.
 - > For a single field hold Ctrl, click and drag to new location and release.

Formatting Fields

General Formatting

If you want a field to stand out, there are various tools you can use. You can change the lettering size, font or color of the text as well as change it to **boldface**, *italics*, or <u>underline</u>. The options are located in the Formatting Toolbar (pictured below).

Formatting can also be accessed by right clicking on the box and selecting *Format Text*... (For a text object) or *Format Field*... (For a field with data).

- Click on the box containing the text you wish to change. Then, select the options to be used.
- If partial text is to be changed, double click on the box and then click and drag over the part that is to be changed.

Note: For Web reports avoid the use of the Calibri font. There are issues with viewing the report as PDF.

In the example report change the column header text objects to be **Bold**.

- 1. Hold the shift key down and click on all boxes that need changing.
- 2. Click on the **B** (for bold) in the toolbar.
- 3. Resize any boxes to accommodate the bold text.

Preview the report.

Request#	Record Date	Status	Status Date Follow-Up	Category	Problem	X Coord	YCoord
2006-00013	4/5/2006	Completed	6/12/2006	Commercial Collection	INFO REQUEST - COMMERCIAL	43.64	-116.24

The X and Y coordinates are showing with two digits to the right of the decimal and the actual values in the record require 8 digits.

Loc X Coord.	43.63871944
Loc Y Coord.	-116.24135134

Number Formatting

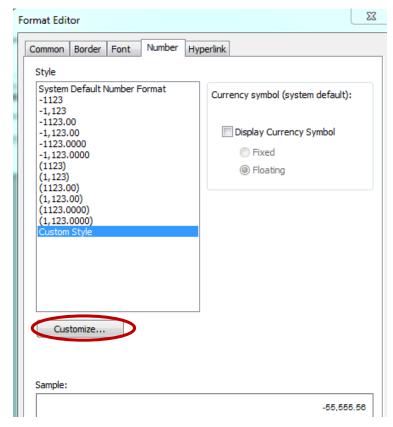
Number fields may require formatting for many reasons such as decimals, rounding, negatives, field size where the value is showing ##### or the numbers are cut off. The field size can either be increased, or the field can be reformatted to remove the decimals.

To change the format of the **RQ_X_COORD** field:

1. Right click on the field and select Format Field....

	Field: WKREQ.RQ_X_COORD
厚	Forma <u>t</u> Field
Ś	Format <u>P</u> ainter
₽	Highlighting Expert
	Browse Field Data
8	Select Expert
	Insert •
	Move •
	Size and Position
Ж	Cut
8	Сору
6	Paste
	Delete

2. Click on Customize...



- 3. Click on the down arrow next to "Decimals:" and select the correct option for the number of digits.
- 4. Repeat for "Rounding".

Custom Style				×
Currency Symbol	Number			
Use Accour	nting Format			
Suppress if Z	'ero	×·2	Decimal Separator:	. X2
Decimals:	1.0000000	▼ <u>×2</u>	Thousands Separate	or: 🔛
Rounding:	0.0000001	▼ × 2	Symbol:	×-2
Negatives:	-123	▼ ו2	🔽 Leading Zero	<u>×2</u>
Reverse Sign	for Display	×-2	Show Zero Values as:	
Allow Field Cl	ipping	× •2	<default format=""></default>	•
Sample:			-55,555.55555556	

- 5. Select OK to close the Custom Style dialog.
- 6. Select OK to close the Format Editor dialog.

In the preview tab the X Coordinate value is now showing:

X Coord

7. Increase the field size with the sizing handles on the field.

Another issue that sometimes occurs is the clipping of numbers. This is where you see incomplete numbers instead of the ###.##. This is not recommended. This option is located in the Custom Style dialog box.

Allow Field Clipping

Make sure the "Allow Field Clipping" box is NOT checked.

Copying Formatting

The Y Coordinate will need similar formatting. The *Format Painter* can be used to copy the X Coordinate formatting onto the Y Coordinate field as follows:

- 1. Click on the **RQ_X_COORD** field.
- 2. Select the Format Painter in the Standard Toolbar \checkmark .
- 3. Click on the RQ_Y_COORD field.
- 4. Increase the field size to accommodate the additional digits.

X Coord Y Coord

Note: Many cost fields within Work reports are fields that will be "Hidden" if the person running the report does not have the proper security. The way this is achieved turns the number field into a "Text" type field thus normal "number" formatting does not work on these fields.

Example 4

Alignment of Fields

1. Shift click on all fields to be aligned.

OR - use a lasso. Click hold and drag to form a box around fields to highlight.

- 2. Right click on the field you want to size and align with, the darker markers will show up on the field you select.
- 3. To size, click Size > Same Height.
- 4. To align, repeat steps 2 and 3, clicking *Align > Tops* (or Bottoms, see what looks better).
- 5. Do this for both the Column Headers and fields in the *Detail* section.

Note: If a section has only a single line of fields, then all fields can be selected by right clicking in the left margin of the section and selecting "Select All Section Objects". This option wasn't available in our example due to the line in the Detail section.

Example 5

Using Formulas

Crystal provides a way to create formulas that can be used in record selection, conditional formatting, conditional suppression and calculations to name a few.

Date and Time Fields

In Lucity the date and time fields are a *DateTime* type field. If the Date field is brought in directly with the Options (File > Options > Fields > Date and Time... > Date and Time) set as *System Default Short Format*, the date field when brought directly into the report will look like this:

2/20/2014 12:00:00AM The time portion is not a good value.

In the same way the Time field will look like this:

1/1/1900 12:01:00 PM The date portion is not a good value.

In File > Options > Fields > Field format the **Date and Time** type field could be set up to always show a date (without time) but then the time field would also show as a date.

Each field's format can be set case by case to either show the date or time portion but the best practice is to handle the *DateTime* fields with a formula. The formula will take out the required portion of the field.

Note: Formula fields begin with the @ symbol like the Status Date . @ StatDate

Date Fields

In our example, we will add the Follow-Up Date.

- 1. Within Field Explorer, right click on Formula Fields.
- 2. Select New.
- 3. Type in the name. For our example, we've entered "FollowUpDt".

Formula N	ime 🗾
Name:	Follow Up Dt
	OK Cancel

4. OK

This will open the Formula Workshop.

Formula Workshop - Formula Editor - FollowUpDt
🔄 Save and close 🔒 Save □ マ 😭 🗃 ≯ ?
🛛 🥸 🗠 🖙 🛤 🛛 🔌 🕉 🌾 🖏 🔛 🕎 🕎 🗱 Crystal Syntax 🔹 Exceptions For Nulls 🔹 🖊
Report Custom Functions Formula Fields Formula Fields Follow UpDt Sql Expression Fields Sql Expression Fields
Formatting Formulas
It would be helpful to have the <i>Hide/Show workshop tree</i> highlighted as well as the <i>Field</i>

Tree, Function Tree and Operator Tree

- 5. Expand the Function Tree, Click the plus sign (+) in front of Functions.
- 6. Expand Date and Time.
- 7. Expand Date.
- 8. Double click the Date(dateTime) option.

🎰 🉀 Math
🗄 🙀 Summary
🗄 🉀 Financial
🗄 🏘 Strings
🚊 🉀 Date and Time
Current Date
···· Current Time
···· CurrentDateTime
🚊 ·· Date
Date (dateTime)
Date (YYYY, MM, DD)

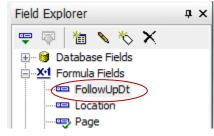
9. The following formula will show up in the lower box work space of the Formula Workshop:

Date()

- 10. In the Field Tree expand the ODBC database. In this case it is Work.
- 11. Expand the WKREQ table.
- 12. Make sure the cursor is flashing between the Date parentheses in the formula box, then in the *Field Tree* double click **RQ_FLLW_DT**. The final formula will look like this:

Date({WKREQ.RQ_FLLW_DT})

- 13. Click Save and close.
- The new formula will now show under the Formula Fields in Field Explorer.

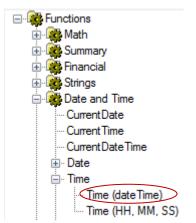


14. Drag the new formula field into the *Detail* section, under the **Follow-Up** column header.



Time Fields

A Time field which is also a DateTime type of field should also be set up in a formula. It would be created like the date formula except in the *Formula Workshop* in the *Functions Tree* the *Time* option would be used to create the formula.



Note: Once the date has been pulled from the DateTime field in the Date formula it will follow the formatting in Options for Date. In a like way the Time formula will now format as a Time field. This can be changed in a general way out in Options or specificly with the right click Format Field... option.

Note: Formulas created in the Formula Workshop can be typed in without using any of the "Tools". The Tool Fields, Functions and Operators may also be dragged in as opposed to double clicking.

Documentation Comments

Comments can be made within the Formula Workshop to help with documentation. The comments can be in a separate formula documenting all of the changes for the report or they can be specific comments to a formula. Each line of a comment must be preceded by two forward slashes //. This will change the font color (default green can be changed in *File > Options > Formula Editor*).

A general comment will be added to the example.

- 1. Right click on Formula Fields and select New.
- 2. Type in "Comment".
- 3. In the lower section, type //.
- 4. Next, type whatever clues you need to remember what was done. We'll type:

"Removed Priority and Address. Added Follow-Up date, Category, and X & Y coordinates."

- 5. Select Save and Close.
- 6. Drag the **Comment** formula to whichever section you will see it, like the *Page Header*. This will not show up in the Preview mode of the report but it is there for you to reference in the future.

@ Commen	t	1
	:	Print Date
	5	Print Time
X Coord		YCoord

Inserting Lines and Boxes

Lines

When reports have a great deal of information, it is often helpful to use lines to break up the data. This makes it easier to read.

- 1. Click on *Insert Line* \square . This turns the cursor into a pencil.
- 2. Place the pencil point wherever you would like to insert the line in the report. Then, drag the line across the screen until you have reached the desired length.
- 3. The line characteristics can be modified by right clicking on the line and selecting *Format Line*.
 - Several line samples appear below

4. If any of the fields above the line are able to grow then in the *Format Line* dialog (right click on the line) select "Move to Bottom of Section when Printing".

	ormat Editor 🗾
	Line
	Border:
	Style: Single 💌
	Width: 0.5 pt
	Color: Silver 🗸
0	Move to Bottom of Section when Printing
	Suppress Repeat on Horizontal Pages
	Read-only

This usually solves any growing issues, but sometimes the line should be given its own section instead.

• A new section can be added by right clicking in the left margin next to the section and selecting *Insert Section Below*. These options can also be selected by typing the underlined letter.

Insert Section Below

The "I" is underlined.

All Crystal sections allow multiples. They will show with a letter behind the section designation.

Example: Details a, Details b, Report Footer a, Report Footer b...

Example 6

Boxes

Another option is enclosing data in a box. In the example we will place a box around the **Total Requests** text object and field (**#TotReq**).

- 1. Click on Insert Box 🔊. This turns the cursor into a pencil.
- 2. Place the pencil point wherever one corner of the box should be (top left of **Total Requests** box) and then drag diagonally to the other corner (bottom right of **#TotReq** box) and click.
- 3. Right click on the box line and select Format Box...
- 4. Select *Fill:>>Color*:
- 5. Use the drop down arrow to select Yellow.
- 6. Click OK

Format Editor	
Box Roun	ding
Border:	
Style:	Single 🔹
Width:	그 크 트 크 르 르 르 1pt
Color:	Black 👻
Drop Sha	dow
Fill:	
Color:	Yellow 👻
📝 Always C	lose Border
Extend to	Bottom of Section when Printing
Suppress	Repeat on Horizontal Pages
Read-onl	y Dock Position and Size
	OK Cancel Help
Total Req	uests: _ #TotReq _

Example 7

"Growing" Fields

Sometimes the data in a field is cut off and there is no more horizontal room to increase the field size. In this case, it is helpful to allow the information to be shown in multiple lines. This can be done with the "Can Grow" option.

To add or delete the "Can Grow" option, complete the following:

- 1. In the example, right click on the field (RQ_CAT_TY).
- 2. Select Format Field.
- 3. On the Common tab, check the Can Grow box.
 - The "Maximum number of lines" should be "0" to see all of the data in the field. This will scroll the data vertically. If the *Can Grow* option is unchecked then in most cases the data will cut off when reaching the limits of the field size. This is not the case for the Advanced View in the Web. The field will grow horizontally to the right and overlap any field to the right. This can be corrected by using the *Can Grow* option with the "Maximum number of lines" set at "1".

Format Editor		X
Common Border Font	Paragraph Hyperlink	
Object Name:	RQCATTY1	
Tool Tip Text:		× •2
Read-only	Lock Position and Size	_
Suppress		×-2
Suppress If Duplicated		<u>×-2</u>
Can Grow	Maximum number of lines: (Enter 0 for no limit) 0	<u>*2</u>
Text Rotation:	0 v degrees	
Horizontal Alignment:	Default 🔹	× •2
Display String:		<mark>ו2</mark>
CSS Class Name:		X-2
Repeat on Horizontal Pa	iges	
Keep Object Together		<u>×-2</u>
Close Border on Page Br	eak	X-2
Sample:		
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	000000000000000000000000000000000000000	
	OK Cancel	Help

Report Manipulation

Lucity typically provides a Summary report and a Detail report for each module. The Summary report is great for a quick overview of many records. The Detail report usually shows all of the fields within a module. It is much easier to delete fields and sections and move things around than it is to add information. We'll go over the steps to manipulate a report below:

- 1. Copy the **ReqDetail.rpt** report. This copy is just to "play" with so does not need to be exported or saved. (Copy and Paste)
- 2. Open ReqDetail Copy.rpt.
- 3. Removing Sections:
 - If a section type has multiples (a, b, c...) then all but one may be removed by right clicking to the left of the report section and selecting *Delete Section*
 - Right click on the left margin of the *Detail g* section and select *Delete Section*. The *g* section is removed and the *Details* sections will now rearrange their lettering. The old h section is now g.
 - > Some Sections cannot be removed but the information within them can be deleted.
 - Right click in the left margin of the *Page Header* section and choose *Select All Section Objects*.
 - Then press delete.
 - > Another option is to suppress a section.
 - Right click in the left margin of the *Detail c* section and choose *Suppress (No Drill-Down)*.
- 4. Moving fields around within a report can be challenging. In this example, *Detail a* section, we will move Home Phone and Work Phone up to just below Phone Number.
 - a. To make room for these fields, place the cursor to the left of the report on the right edge of the ruler strip where the field is to be inserted. You'll see a single line with double arrows.
 - b. Click, hold, and slightly wiggle, pulling to the right as you release to create a section break.
 - c. Click and drag the section break line to make room for the new fields.
 - d. Hold the Shift key and click *Home Phone*, *RQ_HM_PHN*, *Work Phone* and *RQ_WK_PHN* to highlight the fields to be moved.
 - e. Click and drag the fields beneath Phone Number.
 - f. Right click in the *Details* section next to *Phone Number* and select *Merge Section Below*.

Note: The Merge function may have caused the check next to **Do Not Disclose** to "disappear". Right click on the check box and select Move >> To Back.

- 5. Report sections can be switched by clicking and dragging to the new location.
 - Click and drag section *Dk* to beneath *Da*. This is now the new *Db* section.
- 6. The report page orientation is another way to add room or shrink a report. Landscape mode is always helpful if you need to add a couple of fields or see all of the text on one line. This option is found in *File > Page Setup. . . > Orientation*.

Removing Parameters

Parameters are special fields that query the user for information to be used in the report before the report will run. Common parameters used in Lucity reports include *subtitles* and *date* queries.

• These can be removed by clicking on the Parameter field and selecting *Delete*.

The report no longer uses the parameter field, but the parameter exists in *Field Explorer*. Unused parameter fields have been an issue in some of the Web reports.

To permanently remove the parameter field in *Field Explorer*:

- Right click on the specific parameter field and select Delete
 - OR
- Click the parameter field and press the delete key.
- > Parameter fields are recognizable by the "?" at the beginning of the field:

?Report Subtitle

In V2016r2 there are two new options available through the Admin Portal to suppress the subtitle parameter for Dashboard and/or Web reports.



Summary of Requests

You may want to have your agency logo appear on your customized reports. This helps identify the report as one of your own.

The image to be added to the report should be a Bitmap, TIFF, JPEG or PNG type.

To insert an agency logo in our example report (LC_ReqSum.rpt), complete the following steps:

- 1. You may need to make space in the report for your logo.
 - a. Right click somewhere to the left of the report in the *Page Header* section and select *Insert Section Below*.
 - b. In the new *PHb* section left margin, click and hold, the cursor should turn into a hand.
 - c. Drag up into the *PHa* section and release. The two sections have switched places.
 - d. Place the cursor over the line between sections *PHa* and *PHb* (it should turn into double horizontal lines with an arrow pointing up and one pointing down).
 - e. Click and drag down to increase the *PHa* section size so that it can accommodate the logo.
- 2. To insert a logo into the *Page Header a* section, perform one of the following steps:
 - Click on *Insert* and select *picture*.
 - OR
 - Click on the Insert Picture icon

- 3. Browse out to the location of your logo file and double click to add it to the report.
- 4. You can resize the logo by clicking and dragging the corners and edges. You can change the placement of the logo by clicking and dragging the entire picture.
- 5. Resize sections as necessary.
- 6. Finally, right click in the **Page Header a** section and select Merge Section Below. You now have one **Page Header** section. Save and Close the Report.

Datasource

If standard reports are copied and pasted instead of exported and then run or verified in the Crystal software, the original Lucity connection information is maintained, but the connection information specific to the customer's database won't be available. Thus, the report will be unable to find the proper database tables. You should receive a warning message similar to the following - Select *No*:

Remove Table	X
The database table "SWPUMPLH" cannot be found. Proceed to rem	ove this table from the report?
Yes No	

If you receive the warning message displayed above, you have the following options:

- > Delete this copied report and export the report from the Lucity module. This process was explained previously.
- > You can manually point each table in the report to the correct datasource.

The above options will repoint the connection strings. This will allow you to run the report in Crystal Reports, which is the quickest way to test the report modifications.

Set Datasource Location

Below, we've described the steps needed to set the Datasource Location for reports with database connectivity errors. Remember, you'll need to complete these steps if you've performed a "Save As" or copied and pasted a report and received a warning message informing you that certain database tables could not be found.

- 1. Within the open report, click on *Database* in the toolbar at the top of the screen.
- 2. Click on Set Datasource Location. The following dialog will appear:

Set Datasource Location	X
Change the location of the data source by selecting the current database (or table) and choosing the database replace it with. Then click Update.	ase (or table) to
repot GBAWork001 F Properties WKREQ WKREQSTR WKWOMWO WWWWWO WWWWWO Bubreports GBAWork001	
Replace with:	
Current Connections Favorites History Create New Connection F Repository	Update
Close	Help

3. In the bottom window, open the *Create New Connection* folder.

Desktop

For Desktop open ODBC.

Data Source Selection Choose a data source f button	rom the list or open a file dsn from the bro	wse
Select Data Source:	۲	
Data Source Name:	GBAWater730 GBAWater750 GBAWater750 GBAWater760 GBAWork001 GBAWork015 GBAWork140 GBAWork145 GBAWork710 GBAWork720	-
Find File DSN:	©	
File DSN:		
Enter Connection String:	0	
Connection String:		

In the ODBC dialog, click on the correct Datasource name and then click Next.

 \circ $\,$ For example, here we've selected GBAWork001. If you have a Unified database you may see Lucity

Web

For Web if you are using SQL Server you will then be prompted to select a provider. Use the *Microsoft OLE DB Provider for SQL Server* as shown below. Then click *Next*.

Microsoft OLE DB Provider for Oracle Microsoft OLE DB Provider for Outlook Searc Microsoft OLE DB Provider for SQL Server Microsoft OLE DB Simple Provider	<u>P</u> rovider:	Microsoft OLE DB Provider for DTS Package Microsoft OLE DB Provider for Indexing Serv Microsoft OLE DB Provider for Internet Publis Microsoft OLE DB Provider for ODBC Drivers
Microsoft OLE DB Simple Provider		Microsoft OLE DB Provider for Outlook Searc

For Oracle your will select *Microsoft OLE DB Provider for Oracle*. Then click *Next*.

Desktop or Web

At this point you need to know the server for the Lucity data and the User ID and Password. This is specific to your agency. Lucity does not have this information!

- 4. Now enter the Connection information.
 - For SQL Server, include the SQL Server Name, User ID, Password, and Database.

Provide necessary inf	ormation to log on to the chosen data source.
<u>è</u> erver:	
Jser ID:	GBA_USER
2assword:	•••
<u>D</u> atabase:	GBAWork V
ntegrated Security:	

• For Oracle, include the Service, User ID, and Password.

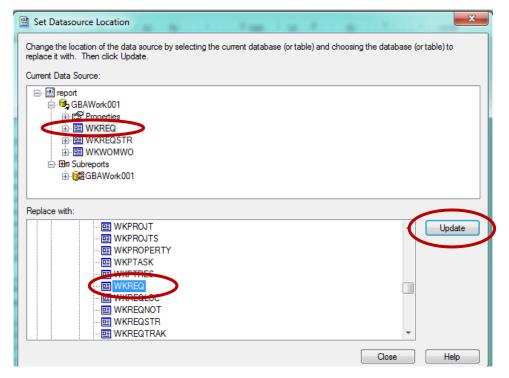
Connection	
<u>S</u> ervice:	MYINSTANCE
<u>U</u> ser ID:	GBA_USER
Password:	•••
OS Authentication:	

Once you create a connection you will need to individually (manually) map every table from the report one at a time. Don't forget the tables in the Subreports!

5. You'll return to the Set Datasource Location dialog. Now, open Tables in the bottom window.

Set Datasource Location		X
Change the location of the data source by selecting the current database (or table) and ch replace it with. Then click Update.	loosing the database (or	table) to
Replace with:		
Tables "	•	Update
	Close	Help

- 6. Next you'll have to click on each table in the top window (*Current Data Source*) and find its match in the bottom window (*Replace With*). Click on the matching table name and then press *Update*.
 - As you can see in the example below, we've selected the **WKREQ** table in both windows.

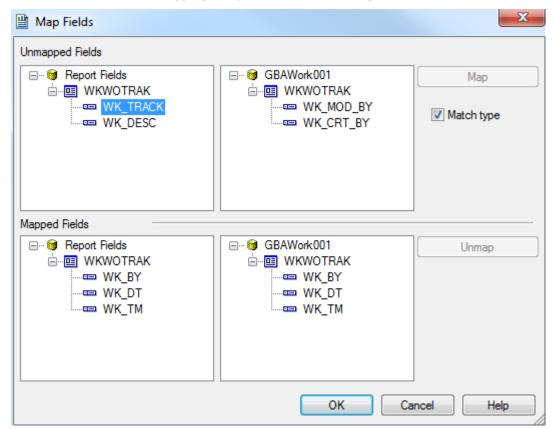


7. After updating each table listed, click *Close*.

Note: Make sure to perform these steps with the Subreport tables as well!!

Note: If the matching table names don't appear in the bottom window, open the **Synonyms** or **Views** tables and look for them there. Once the database is unified (version 2015R2 or later) Synonyms or Views should not be necessary unless the client has created a special View. If the database is unified and the table list cuts off, not showing the bottom of the alphabetical list, then check the Options Database tab and make sure the "Stored Procedures" is unchecked.

If a field type has changed or been removed from the table since the report was last updated then there will be an issue with Field Mapping and you will see something similar to this:



- Sometimes unchecking the "Match type" checkbox will show the field to Map To but sometimes it doesn't.
- In Lucity 7.5 **Work** module > **Tracking** grid, the Tracked *Item* and *Description* fields were changed from a *Text* type field to a *Memo* type field. There was no option to match the Unmapped Fields to so selecting *OK* allowed the rest of the mapping to complete. When going into the Tracking subreport, these fields had been removed.

Item Tracking	Description	By] <u>Date</u>] <u>Time</u>]
		W K_BY	@On @At

• These fields needed to be manually brought back into the report with the new field types. The fields have the same name; they are just a different type of field that allows more data.

Converting Desktop Reports to use in the Web

Custom Reports that have been created for the desktop version of Lucity will NOT work in the Web application as is. To convert a report from a desktop Lucity report to a Web report, complete the following steps:

- 1. Make a copy of the desktop report and give it a new name (maybe add Web to the end of the file name). Open the Web report in Crystal Reports.
- 2. Go to Database >> Set Datasource Location.
- 3. Follow the steps for repointing the tables for OLE DB (ADO) connection as described in the previous section.

Note: The converted report needs to be added to the appropriate module in Web.

Adding a Report to the Module

Desktop

To use any new or revised reports within Lucity, you'll need to add them to the module where you wish to view them. The reports need to stay within the "family" for which they were created. For example, you may not run a Work report in Sewer modules.

- 1. Open the desired module. (ex. Requests)
- 2. Click on *Reports* 🛄 .

- 3. Select Add.
- 4. Click on the box with three dots _____ next to Report File Path.
- 5. Find the report directory with the new report and double click on the report (LC_ReqSum.rpt).
- 6. Enter the report name and give it a description.

Report Name:
Request Summary Report
Description: (255 characters Max)
Request summary with Category, Follow-Up, and X & Y.

7. Select Save. This report is now available to be used within the module.

Accessing Reports in Lucity - Desktop

Within a module you may use any of the reports available in the reports dialog box. Frequently used reports can be added to the Quick Reports option (drop down arrow next to the Report icon). This can be set up in the Reports dialog.

Right click on the Report Title and select the type of Quick Report you would like saved. This setting is on a User Login basis. This allows various users to set up their own Quick Reports in whichever manner they'd like to see them.



The report will be displayed with the hand 🌇 icon before the report name.

- Crew Assignment Report All Addresses
- 🛃 🛤 🛛 CT Run Total _ Summary 🛛
 - CT WOs by Category

Another means to access a frequently used report is to simply add a number in front of the name to bump it to the top of the list.

💾 Dialog	
Reports:	
1	1-Work Request/Work Order Review
	Affected Utility Work History Report



Going forward, when adding new custom reports, upload the report using *Lucity Web*. The system will place the report in the report-share automatically.

- 1. In *Lucity Web*, open the module you would like to add the report to.
- 2. Click the Reports 🗵 button on the toolbar. The *Report* tool opens.
- 3. To add a new report, click the Add button. The following dialog appears:

V2015

Add Report	
Report Name:	
Report Description:	
Report File Path:	
Choose File to Upload:	
Report Group (optional):	[None]
 Standard Report 	Quick Report - All Records
🔘 Quick Report - Filtered Set	: 🔘 Quick Report - Current Record Only
Cancel	Save

V2015r2

:
[None]
Save

V2016

Ado	d Report	
Rep	eport Name:	
R	eport Description:	
н.		
S	ubdirectory that Report will be stored in: (%CustomReportFolder%)	
Q		
C	hoose File to Upload:	
F		Browse
0	ptional Report Group: [none] 🗸	
	Cancel	Save

V2017

Add Report	
Report Name:	
Report Description:	
	h
Subdirectory that Report will be stored in: (%CustomReportFolder%\)	
F Choose File to Upload:	
Choose file No file chosen	
Optional Report Group: [none] •	
Cancel	Save

- 4. Enter the *Report Name* and *Report Description*.
- 5. In the *Report File Path*, enter the name of the subfolder to which you want to upload the report file (ex. Work, Sewer) or leave blank.

Note: Reports are automatically uploaded to the location specified in the Lucity Administration Tool's "Path where Reports are stored" setting, which may be found in the **System > Settings > (Documents or Reporting tab depending on the Lucity version)**.

Note: If the folder name entered does not exist, the system will create a folder with that name within the folder to which the reports are uploaded.

6. Under *Choose File to Upload*, click the Browse button is and select the .rpt file you would like to upload to the web server. The report would ideally be located in the folder established in Step 1 at the top of this document (**CompanyCustomWebReports**) or a subfolder within; however, it can be brought in from any location. This will put the report into the location created for Custom Web reports that was designated in the *System Settings Report File Path*.

Note: The name of the .rpt file being uploaded cannot match any other .rpt files.

Accessing Reports in Lucity - Web

V2015

Assign the report to a Group (optional).

Add Report	
Report Name:	WO Resource Custom Report
Report Description:	Modified WO Resource report
Report File Path:	Work
Choose File to Upload:	WOResourceCustomWeb.rpt
Report Group (optional):	[None]
 Standard Report 	Quick Report All Records
Quick Report - Filtered Se	et 🔘 Quick Report - Current Record Only
Cancel	Save

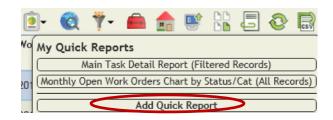
Choose or change the *Type* of report:

- Standard Report The report is generated when the user clicks the Report tool, selects the report and chooses how to run it.
- Quick Report All Records Adds the report to the Quick Report drop-down list, located next to the Report tool. The report always runs against all records.
- Quick Report Filtered Set Adds the report to the *Quick Report* drop-down list, located next to the Report tool. The report always runs against the current filter set.
- Quick Report Current Record Only Adds the report to the Quick Report drop-down list, located next to the Report tool. The report always runs against the current record.

Report Description: Modified WO Resource report Report File Path: Work Choose File to Upload: WOResourceCustomWeb.rpt Report Group (optional): [None] (a) Standard Report Quick Report - All Records	Report File Path: Work Choose File to Upload: WOResourceCustomWeb.rpt Report Group (optional): [None] • Standard Report Quick Report - All Records	Report Name:	WO Resource Custom Report	
Choose File to Upload: WOResourceCustomWeb.rpt Report Group (optional): [None]	Choose File to Upload: WOResourceCustomWeb.rpt Report Group (optional): [None] Standard Report Quick Report - All Records	Report Description:	Modified WO Resource report	
Report Group (optional): [None]	Report Group (optional): [None]	Report File Path:	Work	
Report Grand (optional)	Standard Report Quick Report - All Records	Choose File to Upload:	WOResourceCustomWeb.rpt	
Standard Report Outick Report - All Records		Report Group (optional):	[None]	
	O Quick Report - Filtered Set O Quick Report - Current Record Only	 Standard Report 	Quick Report - All Records	

For V2015r2 these options are available in the Edit mode.

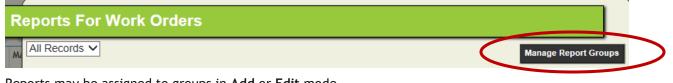
For **V2016 and newer** the Quick Report option may be added through the Quick Report drop down arrow



Or through the Report tool where the reports are listed. Click on the report to be setup as Quick then select Add Quick Report Add Quick Report. The Create Quick Report dialog will open where the various reporting options can be setup.

Create Quick Report For : Mai	n Task Detail Report	
All Records	Filtered Records	Selected Records
As:		
n Basic View	Advanced View	
sh Cancel		Save

Groups can be setup or deleted in the Manage Report Groups option found in the Report Dialog.



Reports may be assigned to groups in Add or Edit mode.

