Web Reports

It is often helpful to develop reports for desktop first to see how all of the child grids interact and to gather field names.

Custom Reports that have been created for the desktop version of Lucity will **NOT** work in the Web application as is. Desktop reports must be converted for Web use.

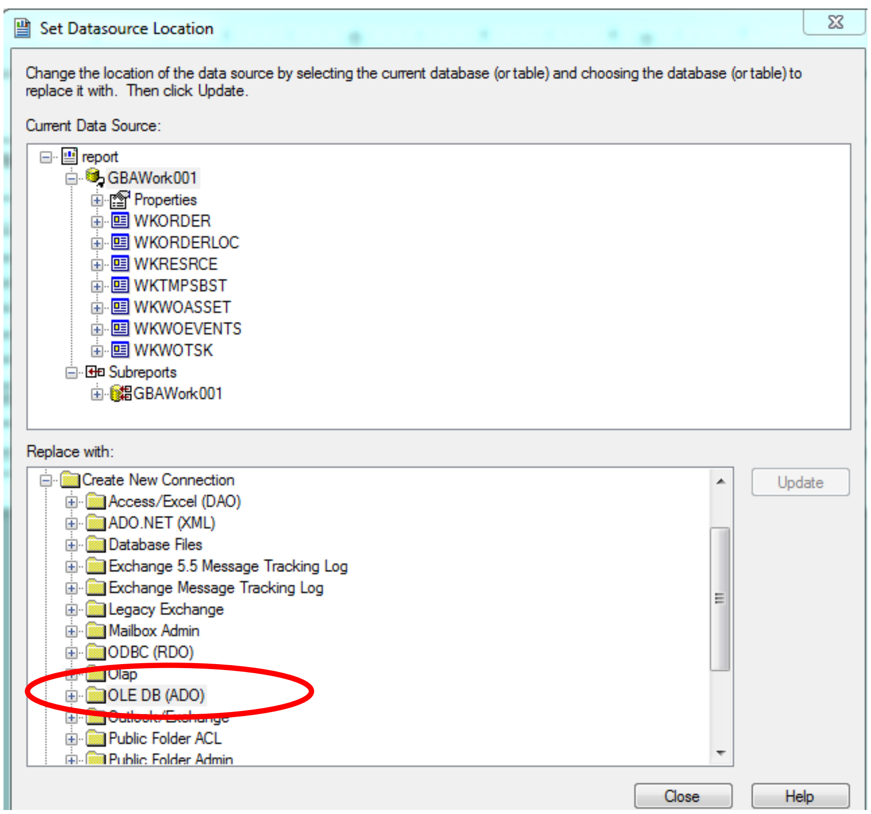
Converting Desktop Reports for use in Lucity Web

Version 18r2 or older

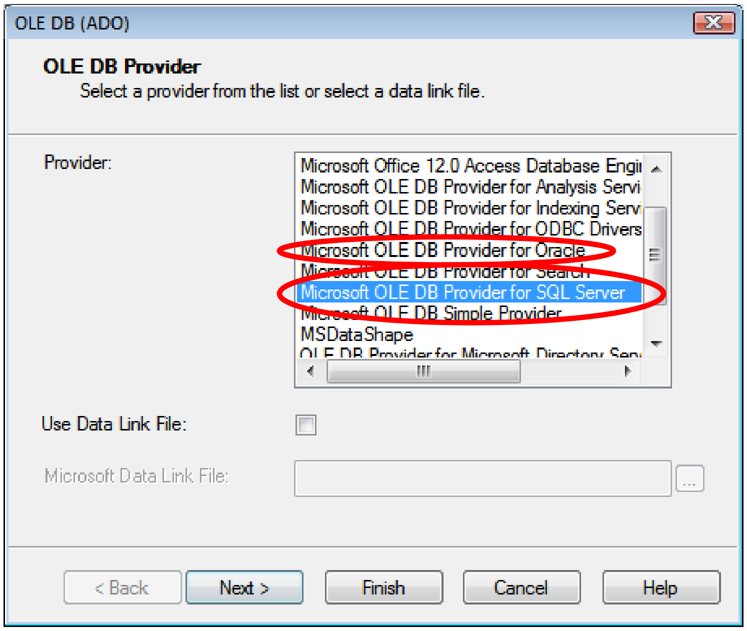
1. Make a copy of the report and add Web to the end of the report name. (Optional, yet helpful)

> Example: Desktop report **WOSumAssetByCat.rpt** would be copied and renamed for the Web **WOSumAssetByCatWeb.rpt**.

2. The Web report would then be converted as follows.
3. Open the report in Crystal Reports.
4. Go to *Database>>Set Datasource Location*.
5. Within the lower box (*Replace with:*) open *Create New Connection*.
6. Select *OLE DB (ADO)*



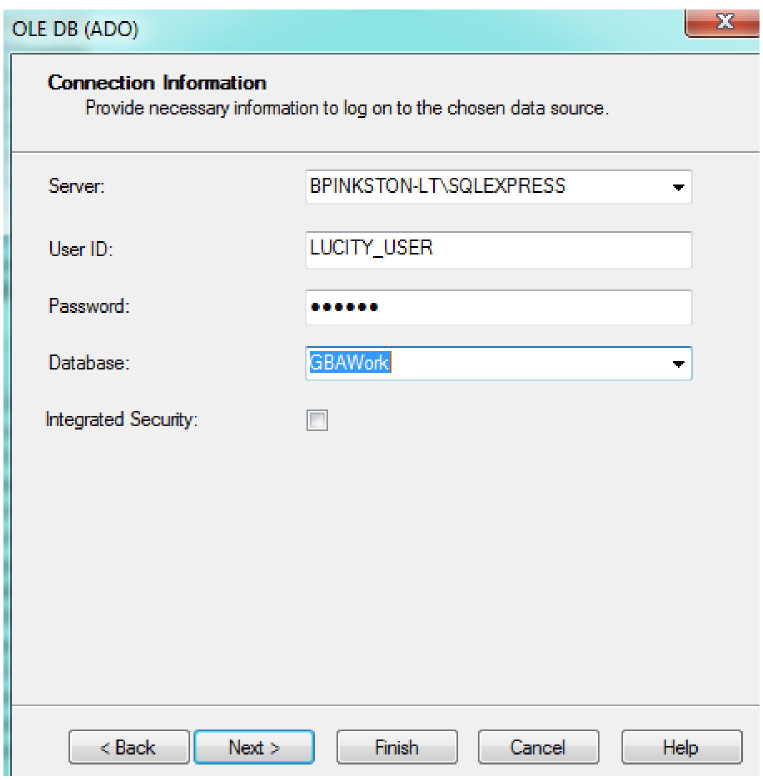
7. You will then be prompted to select a provider. If you are using **SQL Server** use the *Microsoft OLE DB Provider for SQL Server*. For Oracle use *Microsoft OLE DB Provider for Oracle*.



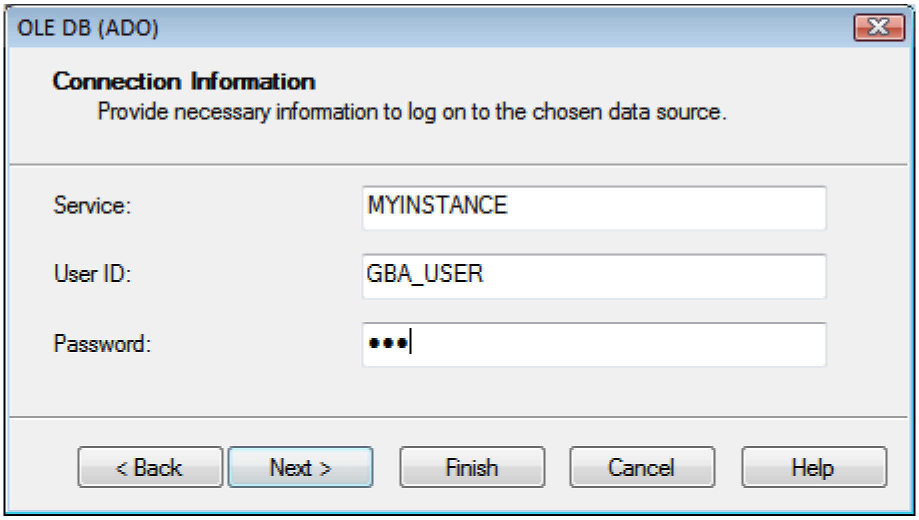
8. Next, enter the Connection information.

   - For **SQL Server**, include the SQL Server Name, User ID, Password, and Database. Your Lucity Administrator should be able to provide this information. The Database is specific to the report database that it was created with such as GBAWork or GBAEquip.

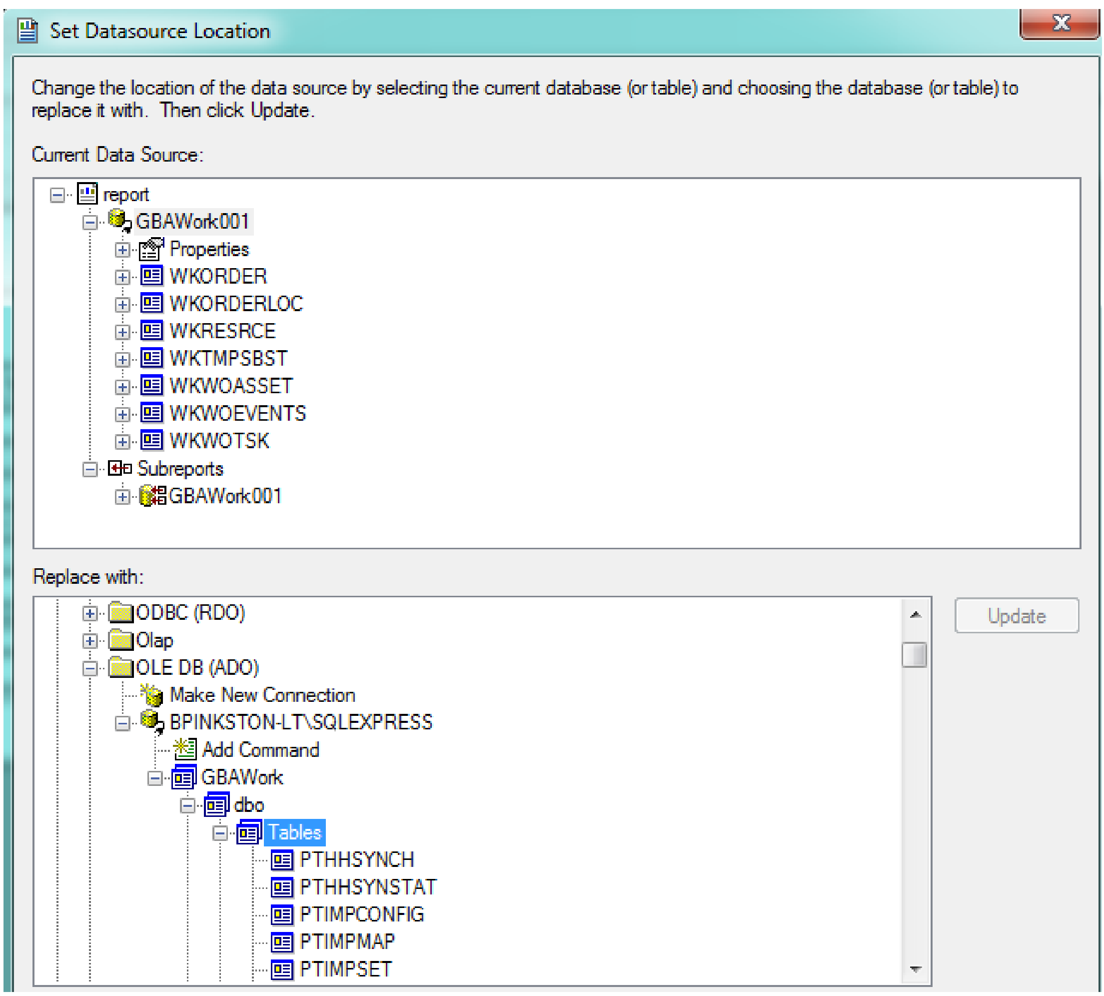
Note: For 2015r2 post data unification it will be one database. The name will be whatever you have assigned the database (Default is Lucity).



- For **Oracle**, include the Service, User ID, and Password.

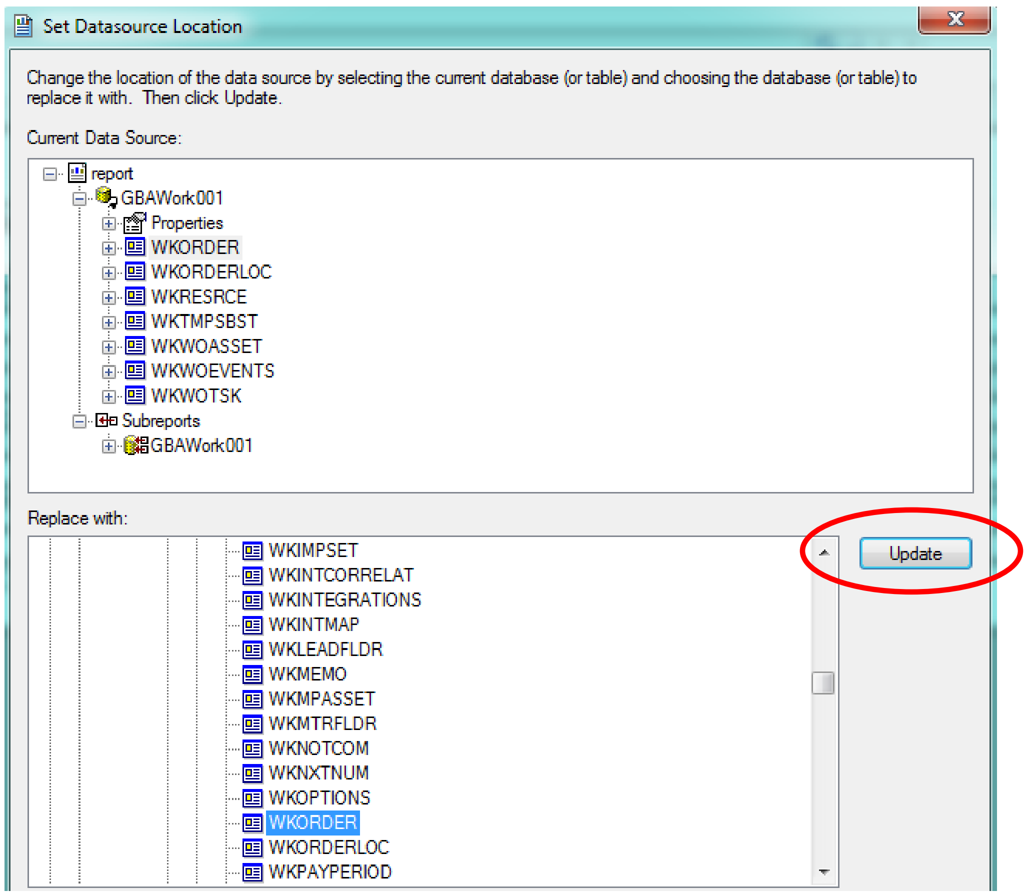


9. Once you create a connection you will need to map the Data Source or possibly **EVERY TABLE** from the report one at a time.



10. To do this, click on a table in the top box (*Current Data Source*) and the same table in the bottom box (*Replace with*) and then click on *Update*. Do this for each table, even the ones listed under Subreports.

> *Note: Properties is not a table to be updated.*



11. After the report is converted for Web use it will need to be added to the appropriate module.

Version 2019 or newer

The Lucity 2019 release moved to a new SQL Server driver for Crystal Reports. This accommodates the possibility of the TLS 1.0 and TLS 1.1 protocols being disabled. The 2019 release installs this new driver with the Lucity Report Server (a new installer).

Custom reports will continue to work unless TLS 1.0 and 1.1 have been disabled. If they have been disabled, then custom reports will need to be updated to run in Lucity.

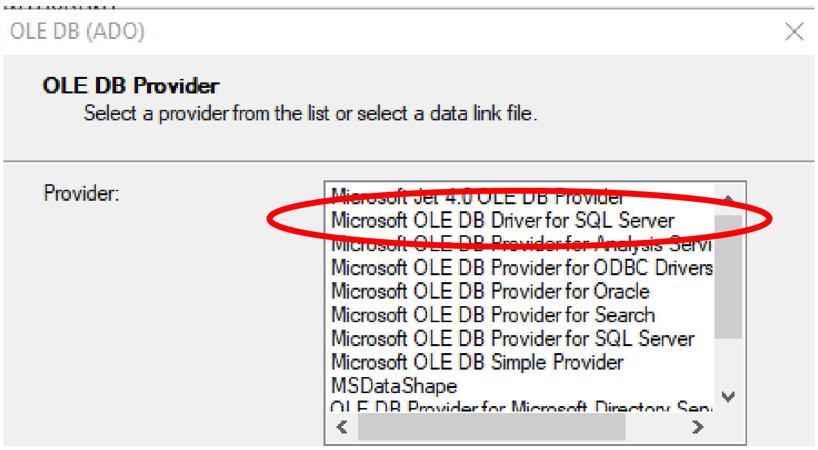
If a report is going to be edited or created, then the driver may need to be added to the workstation.

The necessary driver is: Microsoft OLE DB Driver 18.1 For SQL Server (select the 64 bit version)

https://docs.microsoft.com/en-us/sql/connect/oledb/download-oledb-driver-for-sql-server?view=sql-server-2017

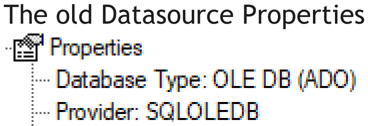
Repointing the tables is done when converting Desktop reports to Web, updating report tables for newer versions of Lucity or updating for use with the new Driver.

1. In the report design mode select Database > Set Datasource Location…
2. In the "Replace with:" box expand **Create New Connection**.
3. Expand OLE DB (ADO)
4. In the Provider box select **Microsoft OLE DB Driver for SQL Server**.

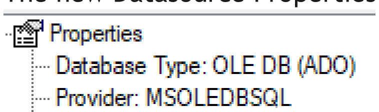


Note: The old driver was Microsoft OLE DB Provider for SQL Server.

5. Change the location of the data source by selecting the current database (or table) from the top box (Current Data Source) and then choosing the database (or table) to replace it with. Then click **Update**.
   Note**: All tables in the report and subreports must be repointed!**
   - The old Datasource Properties looked like this:

   - The new Datasource Properties look like this:

Standard Report to a Custom Report

To develop a Custom Report, it is often helpful to use a standard Lucity report to start from as opposed to starting from scratch. If your agency uses the Web version of Lucity exclusively then using a standard report pointed correctly for Web use is likely preferred. Depending on the Lucity version being used, there may be options for getting a copy of a Web report.

- The report .rpt file can be copied from the standard reports folder and copied directly to a report folder outside of the Lucity environment and given a new name. (Limited to personnel that have rights to the Web Standard Reports folder.)
- Lucity offers a Download feature where a copy of the report can be placed on your system.
- There is also a way to Export the report holding the connections to your data similar to the Desktop Export feature.

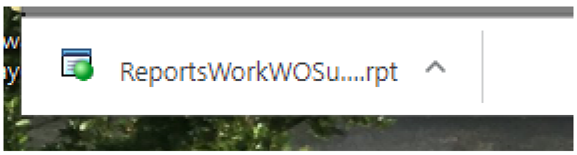
Downloading

Downloading a report grabs a copy of the report that can be used to create a custom report from. This report has the correct OLE connections for Web use but it cannot be run outside of the Lucity environment without manually repointing the tables to your data.

1. In the Report Dialog click on the report to be copied.

2. Once the report is highlighted, click on the **Download** button.

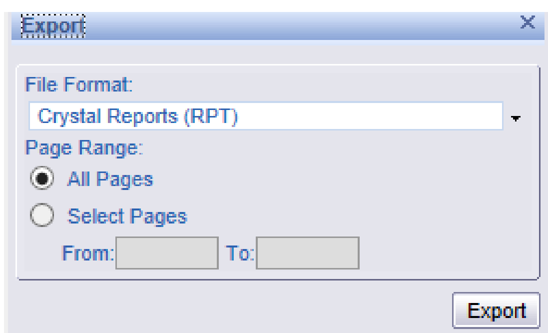
3. The report needs to be saved in another location and given a new name. Depending on the Browser this process differs slightly. In Chrome it would look similar to this:



Exporting a Web Report

Exporting a report captures the connections to your data. This allows the report developer to work on the In the Report Dialog click on the report to be Exported. In our Example

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**.



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

   Depending on the browser used the report will either need to be saved with a new name and then opened or opened and then saved with a new name.

7. Once the report is open (Click through any comments such as Invalid Printer or Crystal Reports version) a few changes are required before a clean copy is achieved.

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.

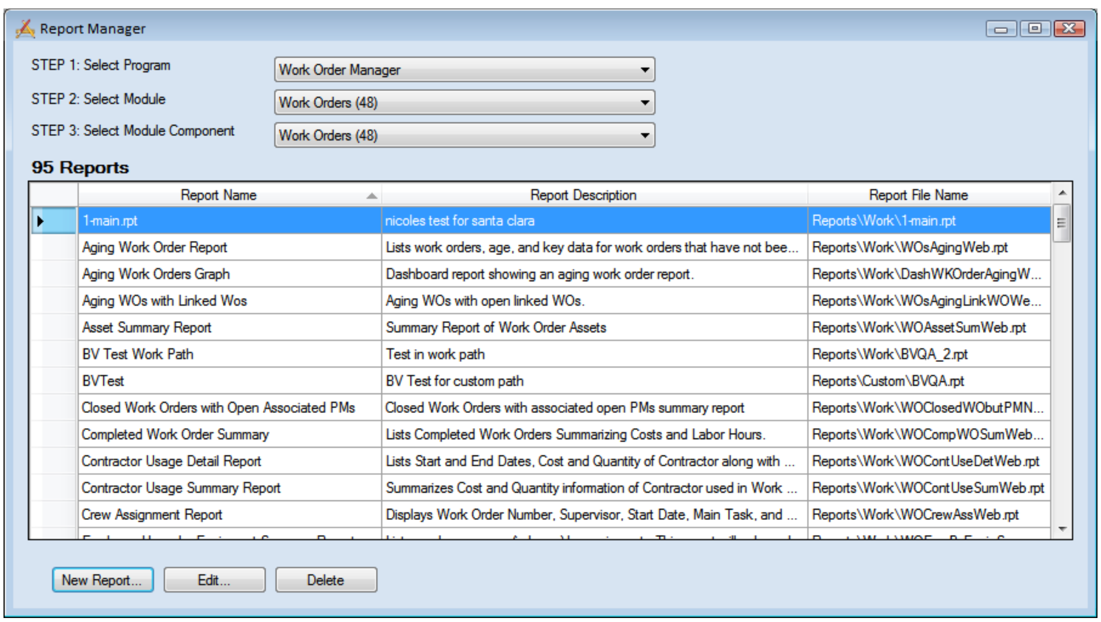
Adding Custom Web Reports (Prior to V2015)

The converted report then needs to be added to a report folder, typically found at **intpub\wwwroot\LucityWeb\Reports**. Drop the report in the correct folder such as **Work** or **Equip**. Depending on your system and number of custom reports, you may have a separate **Custom Reports** folder and within this there may be folders for the type of reports such as **Work** or **Sewer**.

Then the report will need to be added to the list of available reports in the module the report is to be run from. There are two different methods for adding reports in the web.

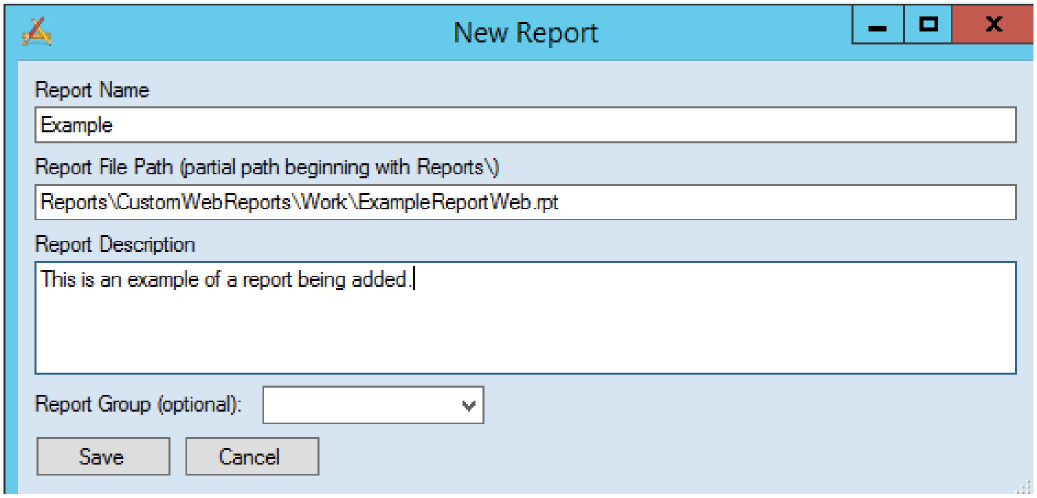
Method 1 - Through the Lucity Administration Tool

1. Launch the Lucity Administration Tool and go to **Reports > Report Manager**.



2. Use the drop downs at the top of the tool to navigate to the module that the report is meant for.
3. Click the ***New Report*** button at the bottom of the Report Manager dialog.

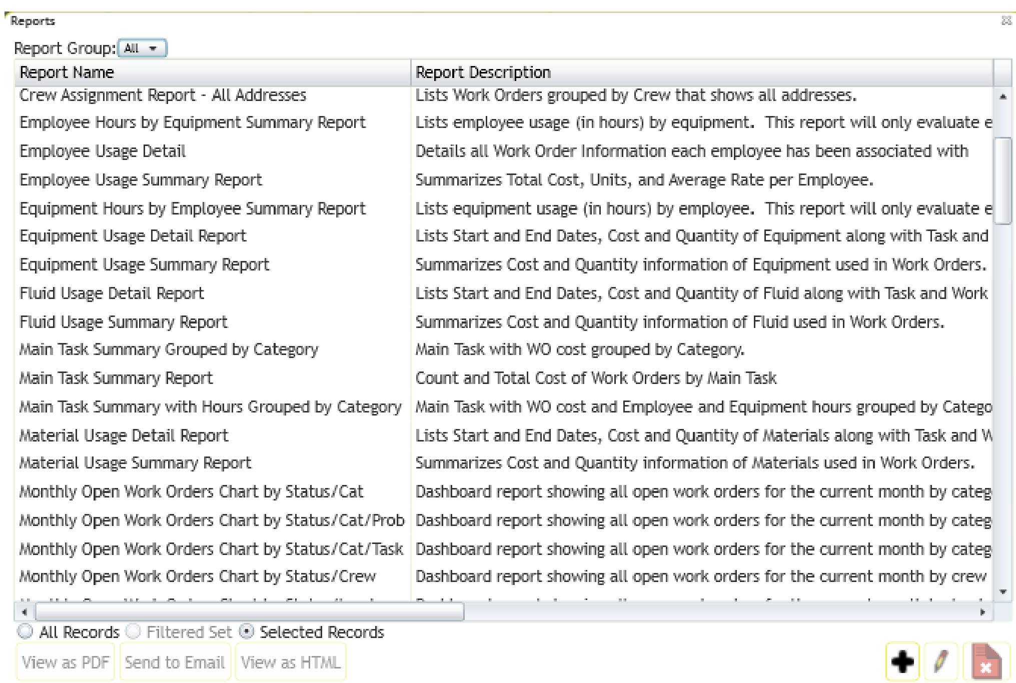
4. The following window will appear:



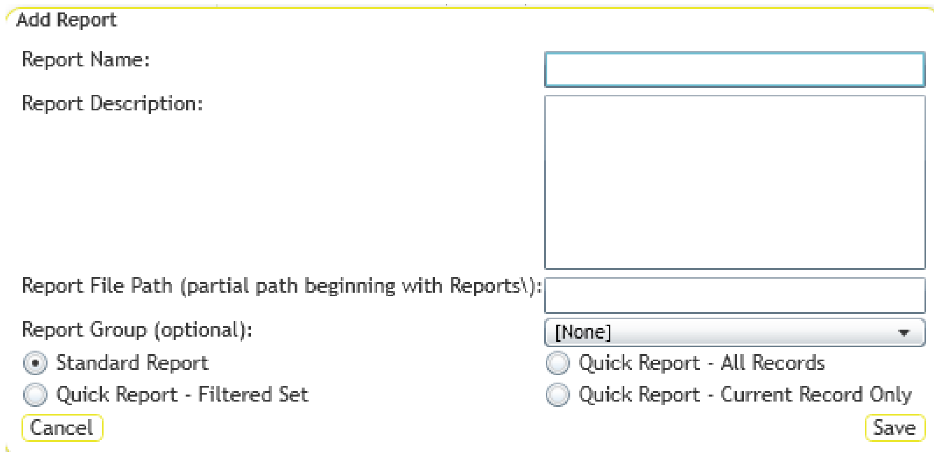
5. Enter the **Report Name**.
6. Enter the **Report File Path**. This should always start with **Reports** and then the rest of the path to the report including the **.rpt** file extension.
7. Enter the **Report Description**.
8. Click **Save**. The new report will be added to the Report Manager.

Method 2 - Through Lucity Web

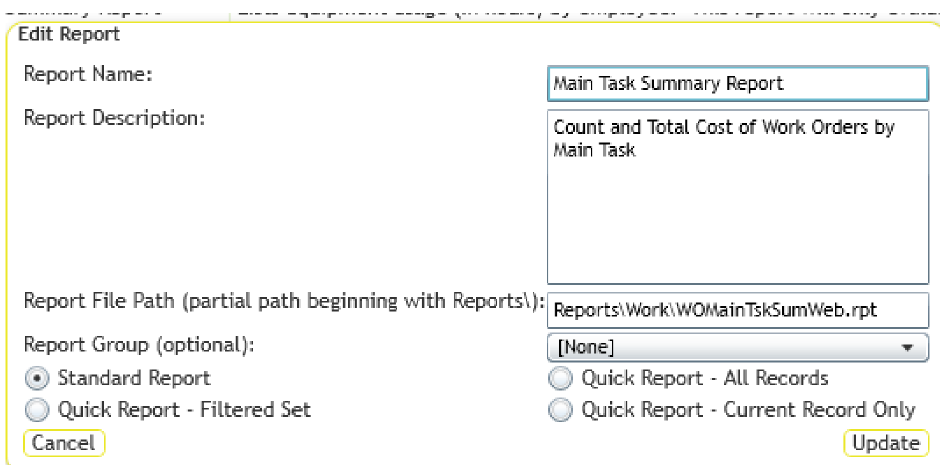
1. Open the Web module that the report will be run from.
2. Open the Reports Tool.
3. To launch the Reports tool, click the on the toolbar. The following window will appear:



4. To add a new report, click the **Add button** . The following dialog will appear:



5. Enter a ***Report Name***, ***Report Description***, and the ***Report Filename*** (starting with **Reports**) then the folder name where the report is located followed by a backslash (**Work**) then the name of the actual **.rpt** file. Remember to add the .rpt portion on at the end of the report filename.



6. Choose the type of report this will be:
   - Standard Report - The report will be run by clicking the report tool, selecting the report and how to run it, and running it.
   - Quick Report - All Records - Adds the report to the quick report dropdown list next to the report tool. The report will always be run against all records.
   - Quick Report - Filtered Set - Adds the report to the quick report dropdown list next to the report tool. The report will always be run against the current filter set.
   - Quick Report - Current Record Only - Adds the report to the quick report dropdown list next to the report tool. The report will always be run against the current record.
7. Click ***Save***.

Adding Custom Web Reports (V2015 and Beyond… for now)

The Lucity software is moving the web design to be used as Software As A Service (SAAS). To accommodate this direction, the Custom Web reports are handled in a different way.

There are two locations that Lucity will now use to manage custom reports.

- One is a new folder that can be seen in **inetpub > wwwroot > LucityWeb** that is called **ReportsCustom**. The client should **NEVER** be in this folder.

- The other is a new location that the client sets up. (**Report Share**) Once this is set up and the existing reports moved into this new folder then this folder should not be directly used by the client unless copying a report to be modified. Indirectly, the new custom reports will be uploaded to this location.

Understanding the Process

How Lucity Manages Custom Reports

Lucity makes it easy for an agency to manage its custom reports by managing the file locations for them and providing an easy user interface for uploading report files. To make this process work there are several components on the back end. The following table describes those components and the diagrams show how they work together to complete a process.

Components

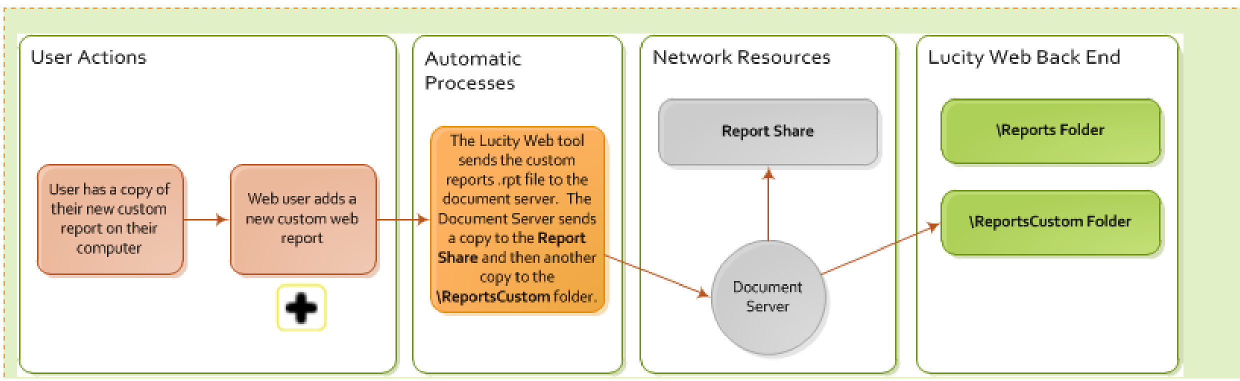
Lucity Web Reports Tool	A tool that enables **Lucity Web** users to add, update and run **Lucity** reports.
Document Server	A **Lucity Web Server** application that enables users to move files (including reports) around using **Lucity Web**.
Report Share	The folder that stores a user-accessible copy of each custom report's .rpt file. • The path is set in the **Lucity Administration Tool > System > Settings > (Reporting *or* Documents *depending on the Lucity version)* > Path where reports are stored** setting. • **Lucity Web** does **not** run reports from this location. • Users can copy reports out of this folder to modify them. • The reports in this folder are copied to the **/ReportsCustom** folder daily.
/Reports Folder	The folder that stores a **Lucity Web**-accessible copy of each standard report's .rpt file. • **Lucity Web** runs all of **Lucity's** built-in, standard reports from this location. • Historically, custom reports were added to this folder and they were mixed in with standard Lucity reports.

	• Users can copy reports out of this folder to make custom reports. • The reports in this folder should not be modified.
/ReportsCustom Folder	The folder that stores a **Lucity Web**-accessible copy of each custom report's .rpt file. • **Lucity Web** runs all custom reports from this location. • The reports in this folder should not be modified. • The reports in this folder are overwritten with copies from the **Report Share** folder.

Processes

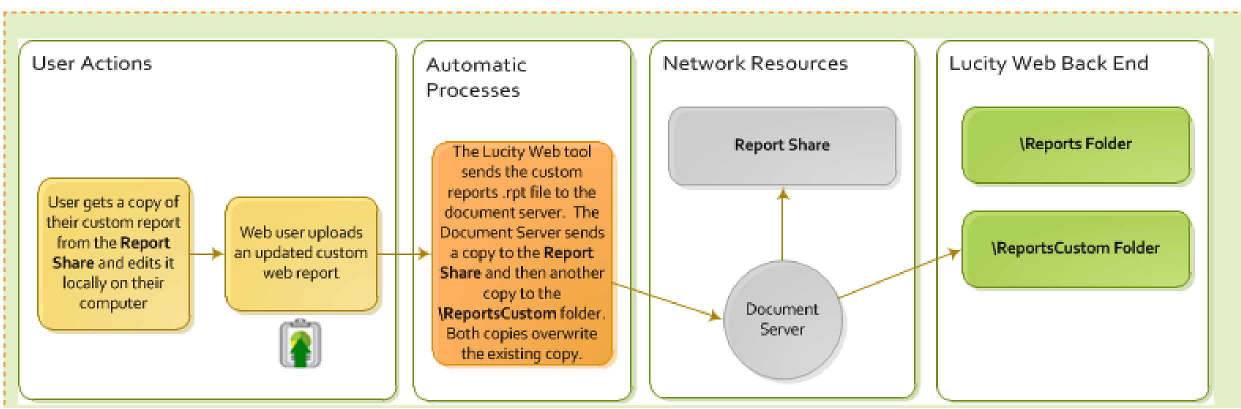
These are the processes that occur in the background when users are working with ***Lucity Web*** and custom reports.

User adds a custom report

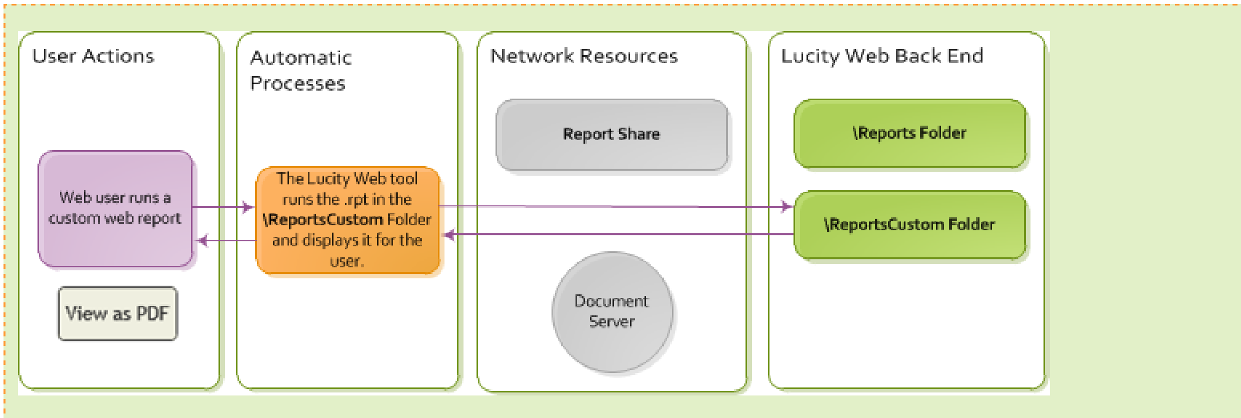


Note: Give this process a minute to complete before attempting to run the new report from Lucity.

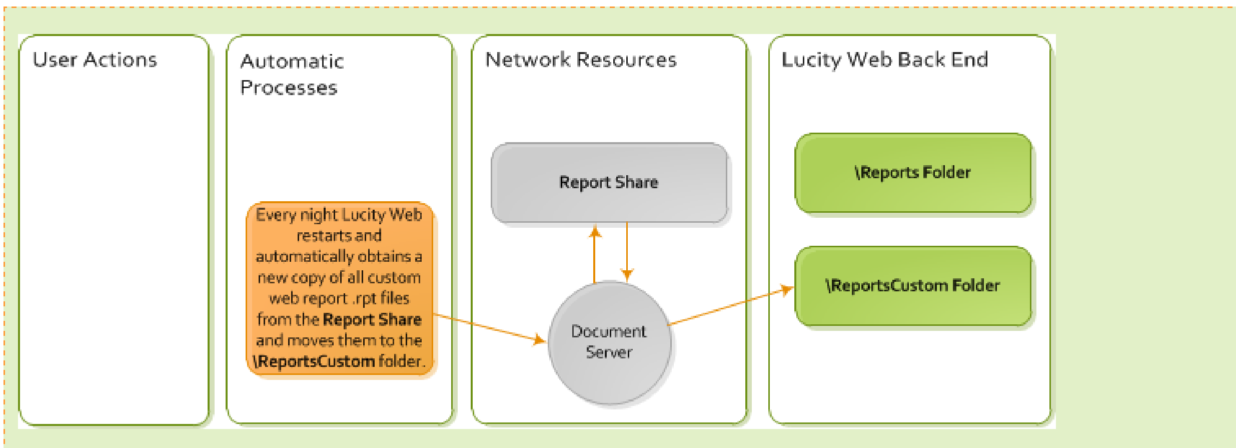
User updates a custom report



User runs a custom report



Automatic custom report processes



Best Practice for Making the Change

The custom web reports need to be moved to their new location and the path reestablished. If there are problems with mapping to the new location then remove and add them into the system as if they were new reports.

The Document Server must be setup for the report process to work as designed.

Report Setup

1. If the client doesn't currently have a location outside of Lucity to store and work on custom reports then this should be established first.

   It might be a good idea to have one shared file for all custom reports for your company. This is separate from Lucity!

2. A second location needs to be established which Lucity will use. This needs to be a folder that the WebServer (IIS) can get to. Ideally, this would not be on the web server. That means it will be on a network share. Something like \\<Servername>\Shared\CustomWebReports.

   Example: \\ClientServ-01\WaterGroup\CustomWebRpts15

   Where "\\ClientServ-01" references the server, "WaterGroup" the Shared location and "CustomWebRpts15" the folder name for the custom web reports.

3. This path then needs to be entered in:

   Lucity Administration Tools > **System** > **Settings…** > **Documents tab** > **Path where Reports are stored**.

   Or depending on the Lucity version it may be

   Admin Portal > Settings > System Settings > Reporting > Path where Reports are stored (Reports Hive).

   Enter the new path for the Custom Web reports.

   (*Example*: \\ClientServ-01\WaterGroup\CustomWebRpts15)

   Save

4. Clear Caches

   Lucity Administration Tools > **System** > **Clear All Site Caches…** > **Clear All Caches** button.

   Or depending on the Lucity version it may be

   Web App Management > Tools

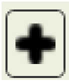
5. An agency may wish to create a directory structure in this location to separate reports by system; however, this is optional:

   \\<Servername>\Shared\CustomWebReports**Work**\ <reports for the work program go here>

   \\<Servername>\Shared\CustomWebReports**Sewer**\ <reports for the sewer program go here>

6. Once the custom report path has been established and the custom reports are in the new location then try using the **Update** feature and browse out to the new location. If there are any problems with reestablishing the report's path then remove the report and add as new.

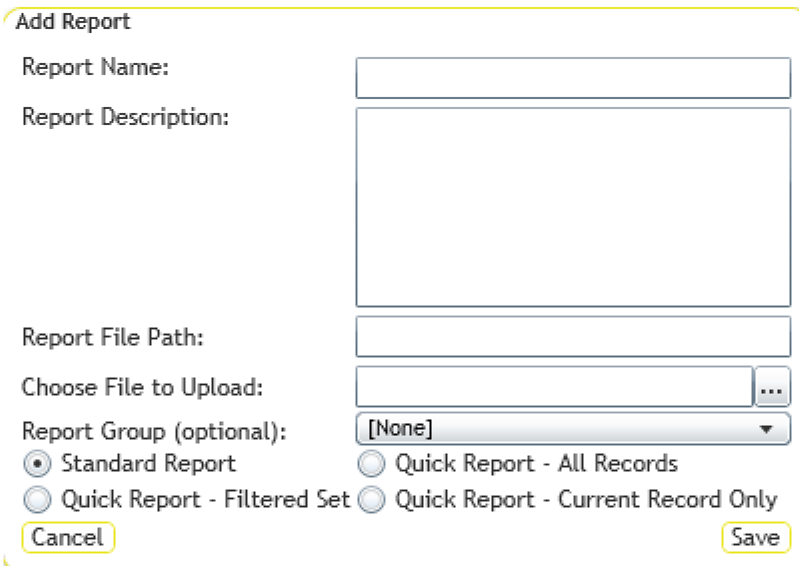
How To Add New Custom Reports

 or 

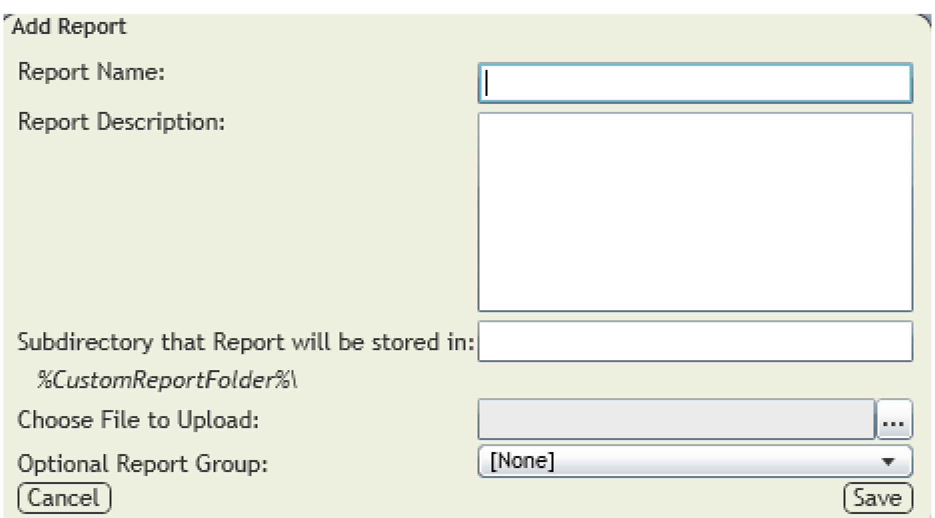
Going forward, when adding new custom reports, upload the report using *Lucity Web*. The system will place the report in the report-share automatically.

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:

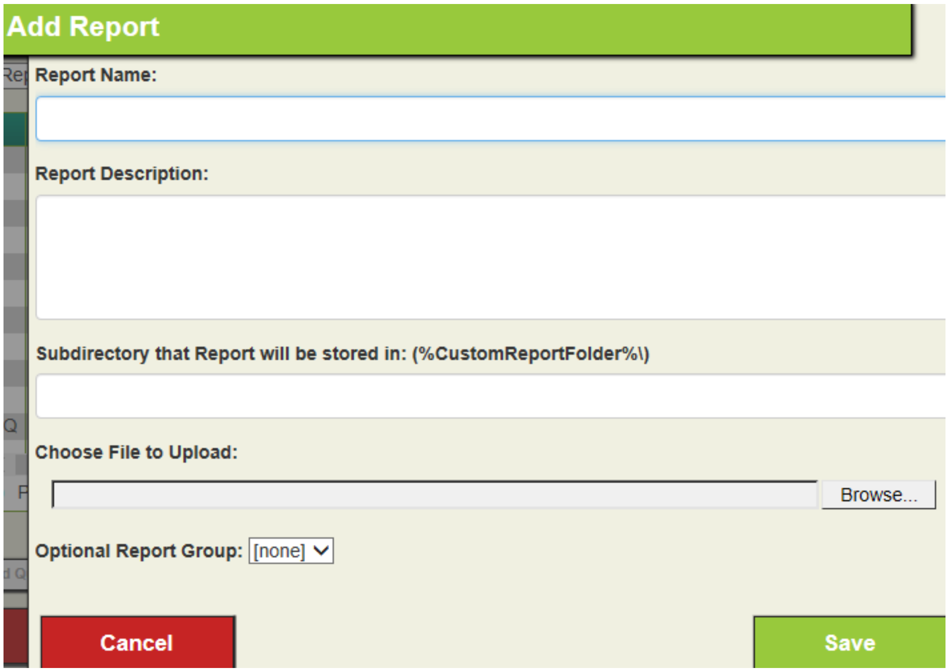
V2015



V2015r2



V2016



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.

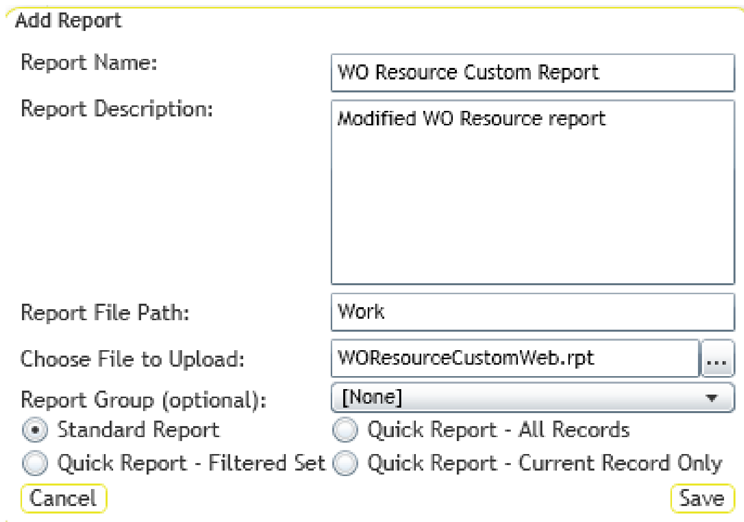
> ***Note:*** *Reports are automatically uploaded to the location specified in the* Lucity Administration Tool's "Path where Reports are stored" *setting, which may be found in the* ***System*** *>* ***Settings*** *>* ***Documents tab****.*
>
> ***Note****: If the folder name entered does not exist, 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  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.*

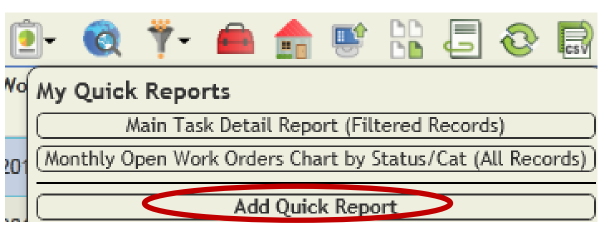
7. Assign the report to a *Group* (optional).

8. Choose or change the *Type* of report (V2015):
    - **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.**



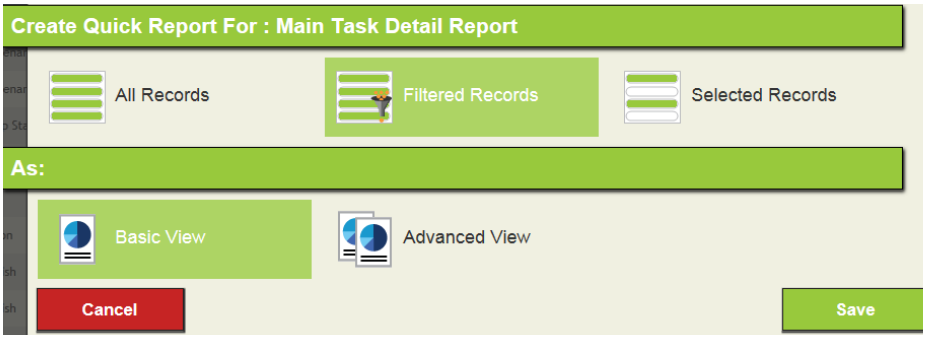
For V2015r2 these options are available in the Edit mode.

For V2016 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** 

. The Create Quick Report dialog will open where the various reporting options can be setup.



9. Click ***Save***.

Editing Reports

 or 

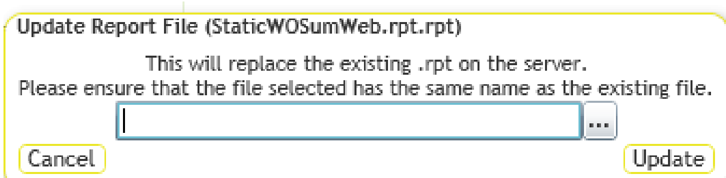
Editing allows changes in the Report Name, Description or Grouping.

Updating Custom Reports

 or 

When existing Custom reports need to be revised, this should be done outside of the Lucity system. The revised reports could be worked on or loaded into the location established for your company, mentioned in step 1 (Example: **CompanyCustomWebReports**).

1. Open *Lucity Web* and go to the module associated with the report.
2. Click the Reports button  on the toolbar. The *Report* tool opens.
3. Select the report to update from the list and click the Update Report File button.



> *Note: The file name has to be identical to the file being replaced.*

4. Click the Browse button and select your updated .rpt file from the location of the revised report (Example: **CompanyCustomWebReports**).
5. Click **Update** or **Save** depending on the version.
6. The new copy of the report will be uploaded and will replace the existing report file in the Lucity system (the location established in the System Settings Report Path).
7. Wait a minute before trying to run the updated version of the report. This allows the system to cycle and use the revised report.

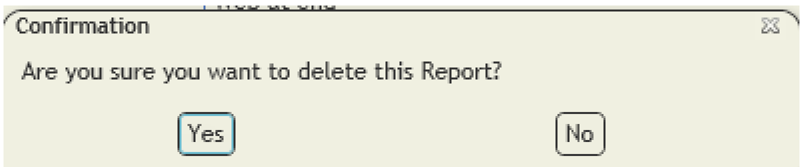
> ***Note:*** *The reports that Lucity provides with the software (standard reports) cannot be updated.*

Deleting the Report

 or 

For version **2015 sp0**, if the User's Report Security isn't set up properly, a user can delete the entire report file. This caused problems with several clients so this was changed.

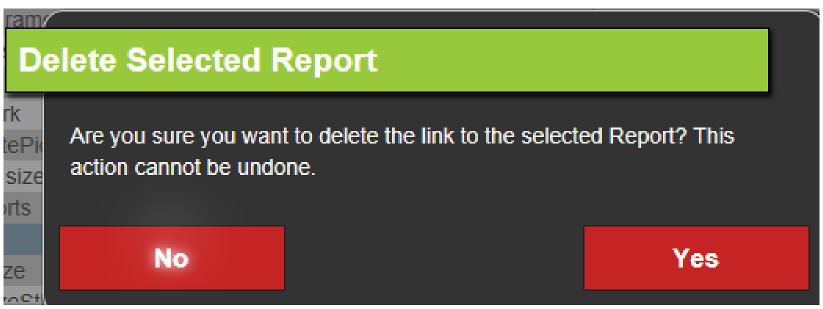
In **2015 sp1** the Delete option queries if the user would like to delete the report.



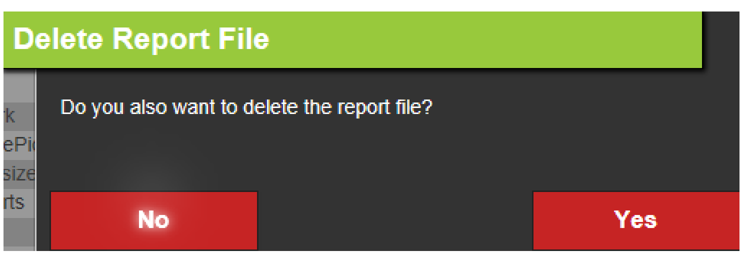
If you select **Yes**, the report is removed from the dialog but the report remains out in the Custom Report folder as an orphan. The IT administrator can retrieve it if necessary or delete it.

V2016 has two options in the Delete process.

First you can delete the path to the report.



The second allows the removal of the actual report.



Web Browser

Officially Lucity Web supports IE (Internet Explorer) for **versions prior to 2017**. Firefox will work however some things do not run well. Chrome has dropped support of Silverlight so cannot be used for versions prior to 2017.

Version 2017 runs with IE, Chrome and Firefox browsers. For Chrome and Firefox everything except web map and edit resource dialog will work.

<u>*IMPORTANT KNOWN ISSUE*</u>

The IE browser is an issue if a report has been added or updated in the Lucity Report dialog and then the report needs modifications. If Lucity Web remains open and the report is opened and modified, the changes will not save. When Lucity Web is closed, this action will DELETE the file from the original location of the report.

There are 3 options for working around this.

- Close all instances of IE after uploading a Crystal Report.
- Use another browser to upload a Crystal Report.
  - 2015 - 2016r2 - Use Firefox
  - 2017+ - Use Chrome or Firefox
- If the previous two solutions are not possible you can use the following process to modify and replace the uploaded file.
  - Make a copy of the .rpt file you added or uploaded previously.
  - Delete the original .rpt file.
  - Rename the copy of the .rpt file to have the same name as the file you just deleted.
  - Make the changes to the copy of the .rpt file that you just renamed.
  - Upload the file you just modified.

Page Limit

V2015 and Older

When reports are run in the Web with the **PDF** view the page limitation is ten.

In order to increase the web page limit you will need to add a new line statement to the **appsettings.config** file. This is located on your Web Server in the **C:\inetpub\wwwroot\LucityWeb\Config\appsettings.config** folder:

- Open the file with Notepad and paste the following line between the <**appSettings**> and <**/appSettings**>:

  <**add key="MAXPDFPAGES" value="10"** />

- Adjust the **"10"** to the total number of pages you want the report(s) to account for.

> *Note: the larger the number the longer it will take to generate.*

The file when complete should look similar to this:

<appSettings>

<add key="MAXPDFPAGES" value="50" />

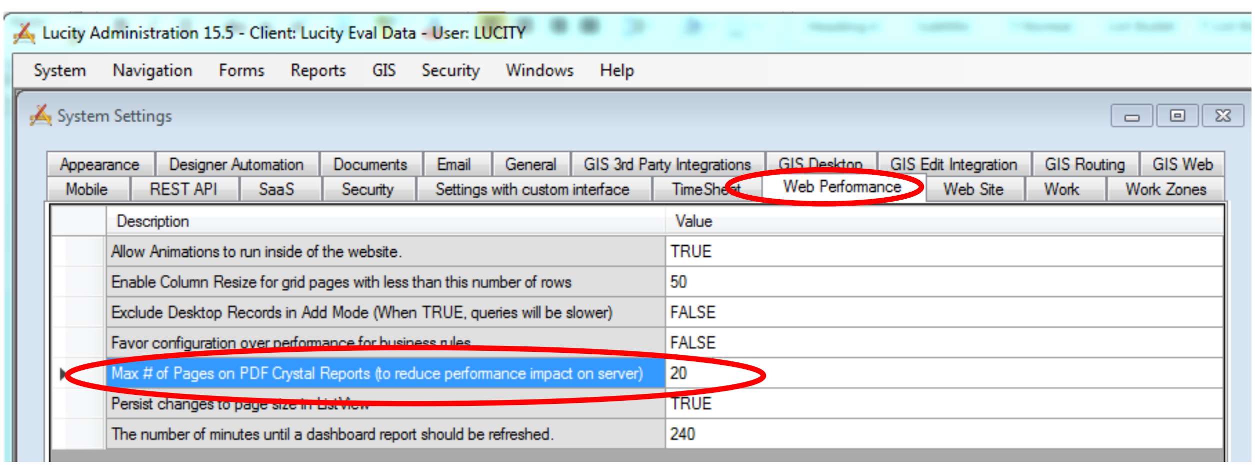
</appSettings>

This may require an IIS reset to take the changes.

V2015r2

PDF (**Basic View**) page number can be modified in **Lucity Administration** > **System** > **Settings** > **Web Performance** tab > **Max # of Pages on PDF Crystal Reports** (to reduce performance impact on server).

V2016 uses the new report term **Basic View**.



V2016r2 and newer, this option is available through the Admin Portal.

Clear All Caches is necessary to enable this change.

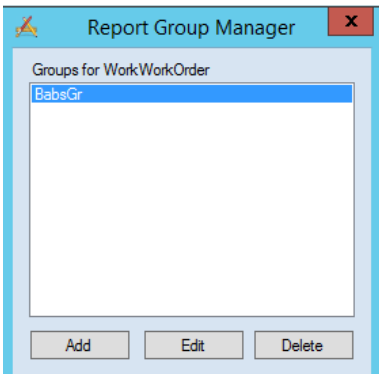
Web Report Grouping

V2014R2

1. In Lucity Administration Tools go into Reports > Report Manager
    a. Select Program
    b. Select Module
    c. Select Module Component

2. Click on Report Groups

   The Report Group Manager window will show.

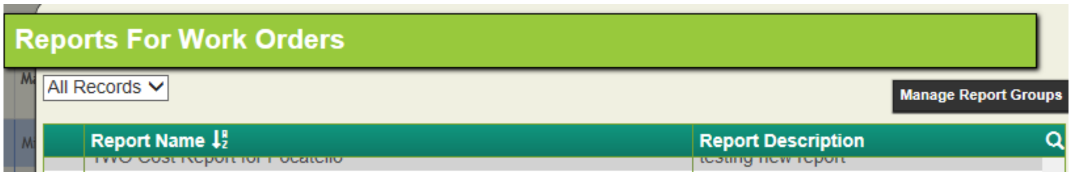
   - Select *Add* to add a group.
     - Type in a Group Name - *Save*
   - Select *Edit* to edit an existing group.
     - Type in a revised Group Name - *Save*
   - Select *Delete* to delete an existing group.
3. Close the Report Group Manager window.
4. In the Report Manager select a report to include in a group.
5. Click *Edit…*
6. In the Update Report window there is an option for *Report Group (optional)* with a drop down arrow. Select the group the report is to be associated with.
7. Save
   The Group Name should now show in the Report Group column for the selected report.
8. Repeat from step 4 for all reports to be associated with the group.
9. When the Web module's report list is opened, the top left corner now has a drop down box for Report Group. When the group is selected, only the reports assigned to the group will show.

If the newly added group does not show in the list then close Lucity and go into Lucity Administration Tools > System > Manage Web Site Caches…

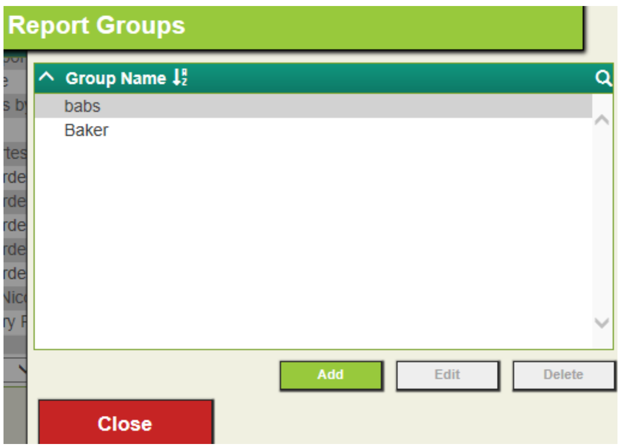
- Scroll to the bottom and click **Clear all Caches**.
- Close
- Reopen the Web module's report list and the Report group should now be present in the Report Group drop down box.

V2016 (and newer)

Groups are established from the Report tool listing the reports for the module.



Selecting **Manage Report Groups** opens the following dialog:

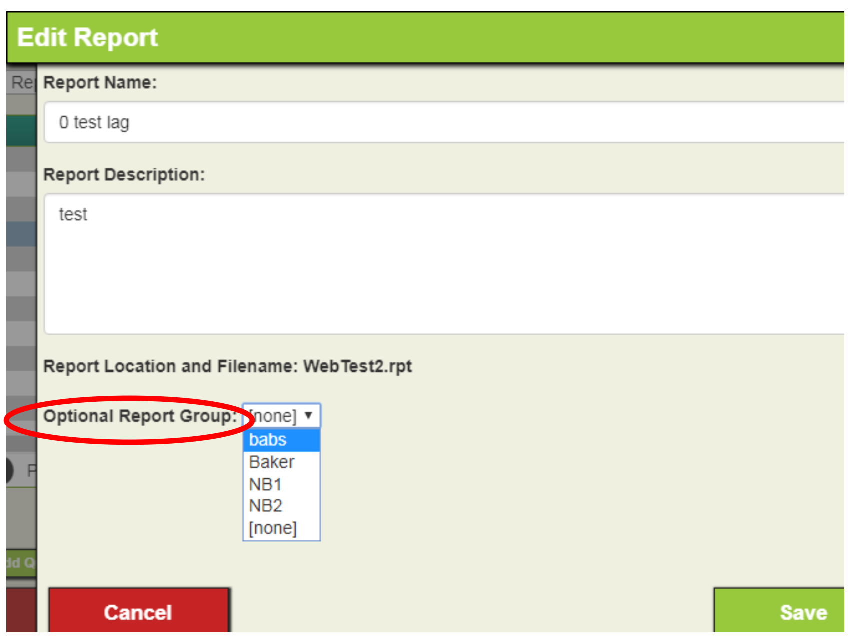


Groups may be Added, Edited or Deleted from here.

Once the Group(s) has been established then Reports may be assigned to the Group.

This may be done when adding the report to the list or added to an existing report in Edit mode.

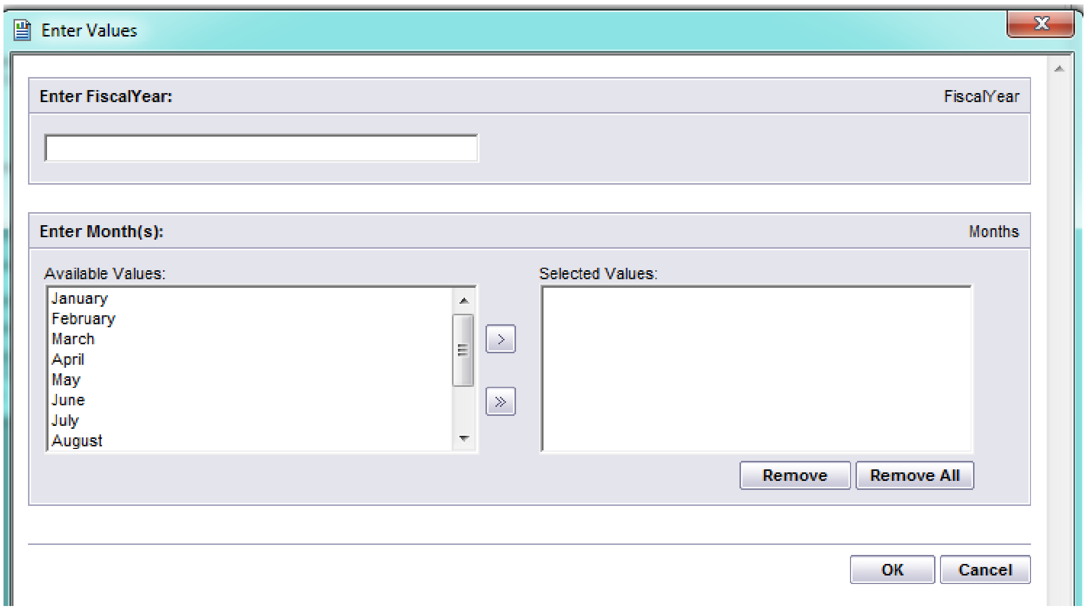
The groups are available in the Optional Report Group dropdown.



Parameters

Parameters are special Crystal fields that query the user for information to be used in the report before the report will run.

Example



Prior to V2015r2, reports used as **Dashboard** reports should avoid the use of parameters. Otherwise the report will show as a link to run the report as opposed to seeing the report.

Web reports allow the use of parameters but may have some limitations depending on the version of Lucity and Crystal being used.

Common parameters used in Lucity reports include *subtitles* and *date queries*. Parameter fields are recognizable by the "?" at the beginning of the field.

- The *subtitle* parameter is set up as optional (not used in record selection) thus it can be removed by clicking on the Parameter field ?Report Subtitle in the report and selecting *Delete*.
- The report no longer uses the parameter field, but the parameter exists in *Field Explorer*.
- The unused parameter still queries but then the parameters are not used in the report.

  This can be very confusing for anyone running the report.
- **If there is an unused parameter in a subreport, the report will error!**

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.

The subtitle parameter may be ignored (not deleted) as of version 2016r2. This option is explained at the end of this document in the **Admin Portal - V2016r2 (and newer)** section.

> *Note: In a subreport if there is a parameter that has not been passed in from the main report, the report will error!*

Date Selection

To use parameters in selecting a range of dates in Record selection use the following format.

{@RecDt} in[{?Start Date} to {?End Date}]

Instead of

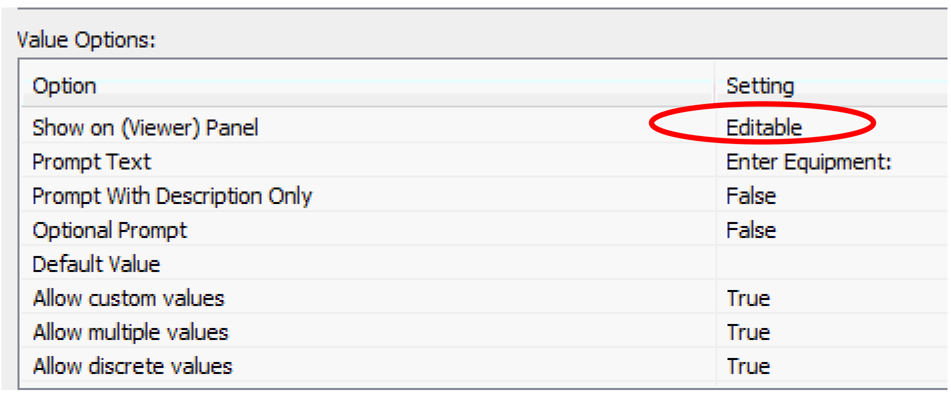
{?Start Date}<={@RecDt} and

{@RecDt}<={?End Date}

Set up a "range" with two separate parameters as opposed to the Crystal option of one "Range" parameter.

Editable Parameter

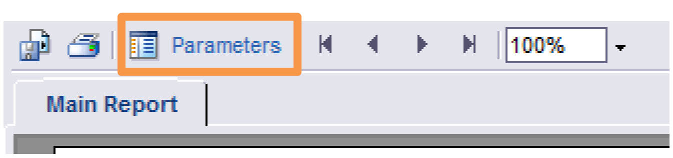
Prior to V2015 a parameter that was set up to allow multiple values only accepted a single value when the report was run in the Web. If the report was developed in Crystal XI or earlier, the report did not allow multiple values to be selected. If the report was created in Crystal 2008 or later it was possible to query again once the report had been run in the HTML view (Advanced view) to allow multiple values. This is set-up within the Parameter field. The *Value Option* is "Show on (Viewer) Panel". The setting options are Editable, Do not show and Read Only.



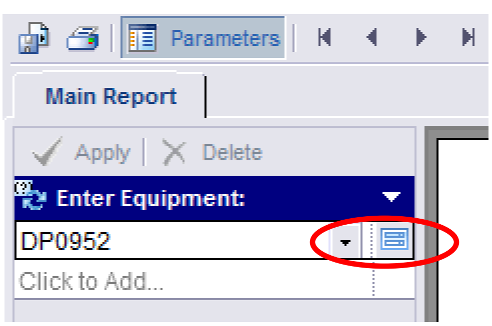
Value Options:

Option	Setting
Show on (Viewer) Panel	Editable
Prompt Text	Enter Equipment:
Prompt With Description Only	False
Optional Prompt	False
Default Value	
Allow custom values	True
Allow multiple values	True
Allow discrete values	True

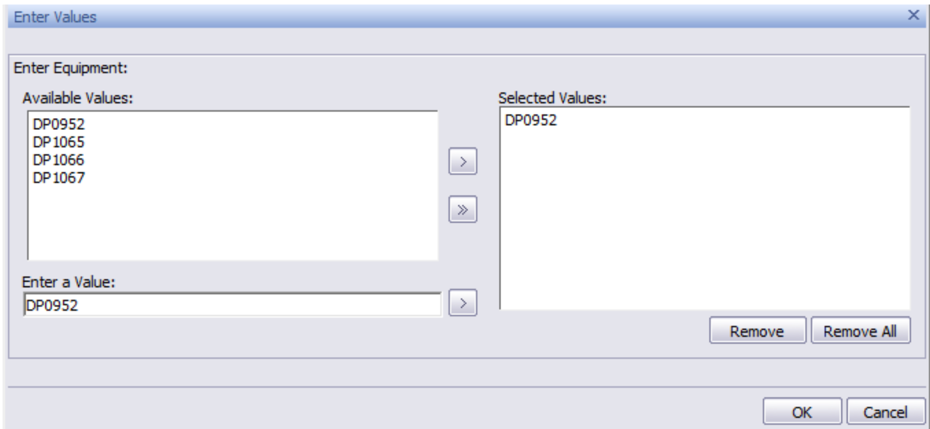
When this setting is **Editable** and the Web report opened with the HTML view (Advanced view), the **Parameter** button will be active for use to modify the Parameter selection. To use this option, complete the following steps:



1. Click on **Parameters** to open a panel to the left of the report.



2. The actual parameter screen can be opened to either select a new value or multiple values (if the parameter was set up to allow multiples) by clicking on the Parameter value and then clicking the "*Edit parameter value*" button.

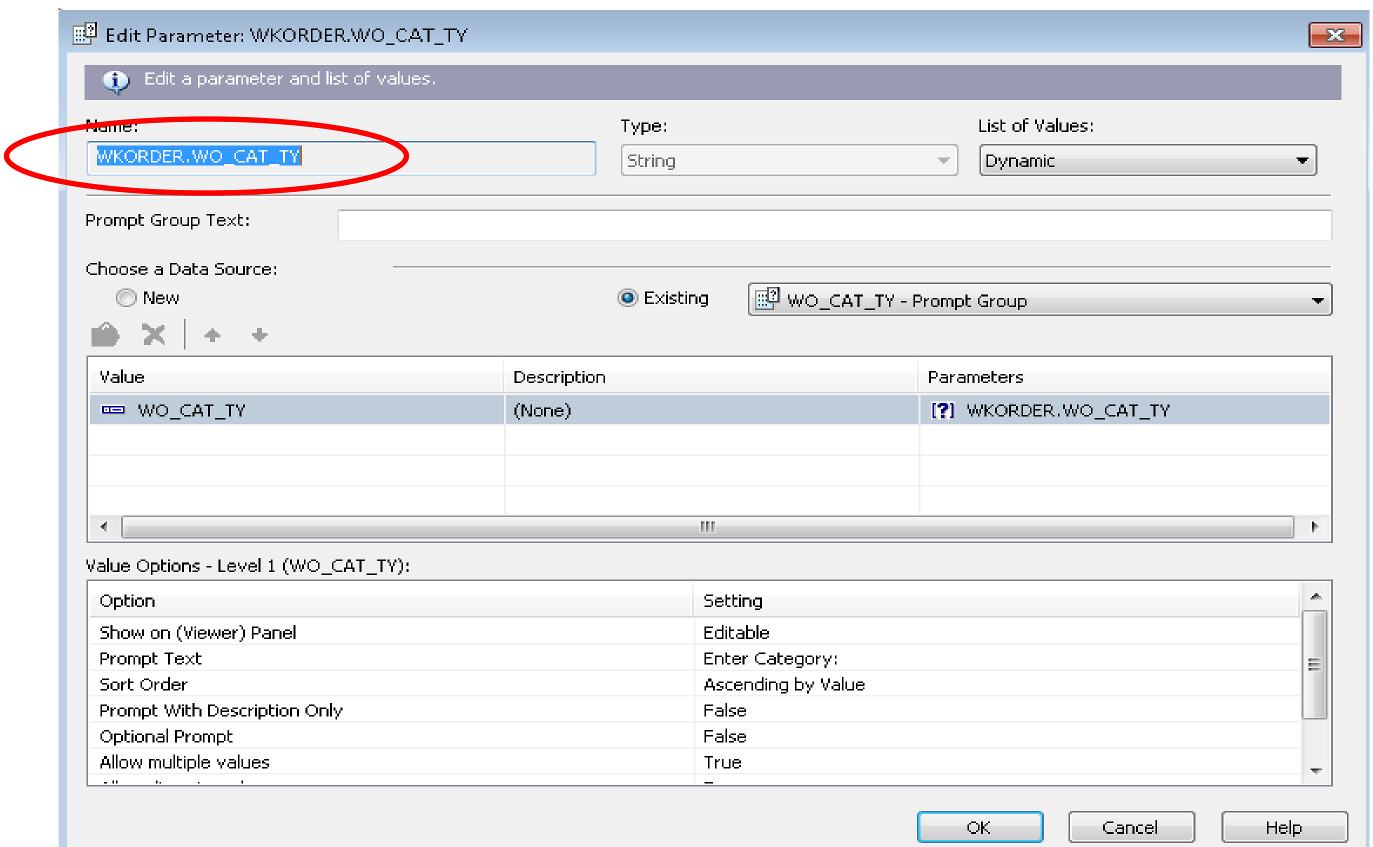


3. After the new selection values have been set up, click on OK.
4. At the top of the Parameter column select "**Apply**".

Dynamic Parameters

Starting in V2015, the Dynamic Parameter pick list was available when running the report in Lucity Web. The way to achieve this is by naming the parameter the same as the field name.

1. For example, if the Work Category field was to be set up as a dynamic pick list, the Name would be entered as WKORDER.WO_CAT_TY. The Prompt Text usually defaults to the Name field (Enter WKORDER.WO_CAT_TY) so this would likely be modified to "Enter Category".
2. *List of Values* should be set to **Dynamic**.
3. The actual field should be selected for the *Value*. This allows all data within this field to show in the pick list.
4. Within the *Value Options* set the "Show on (Viewer) Panel" to **Editable**.
5. If multiple values should be allowed, it will be necessary to set the option for "Allow multiple values" to **True**.



Note: If a field is used in multiple Forms tracking different data then all data will show in the picklist. This can be limited by setting up a Command (Advanced 2) or by changing the parameter to a Static picklist.

Parameters Displayed as Value Only

Lucity Web report parameters always query the user for a value whether the parameter is used or not. For Web reports developed in Crystal Reports version XI or older, all parameters used in record selection or formulas must have a value for the report to run.

There is a parameter Option in Crystal Version 2008 and newer that allows the parameter prompt to be optional. If set to True, the parameter value may be empty when the repot is run.

Value Options:

Option	Setting
Show on (Viewer) Panel	Editable
Prompt Text	Enter Invoice I
Prompt With Description Only	False
Optional Prompt	True

Example of use in record selection:

(not HasValue({?WKORDER.WO_USER51T}) OR {WKORDER.WO_USER51T} = {?WKORDER.WO_USER51T})

Parameters Cut off

For both Static and Dynamic Parameters –

If the list of items is less than 15 items, it will add 15 pixels in height for each item.

If it is over 15 items, it sets the box to 200 pixels and then the scroll bars appear to move down and pick the items.

Static Parameter - A work around is to add some blank static options in the report, which will push the size of the box a bit larger.

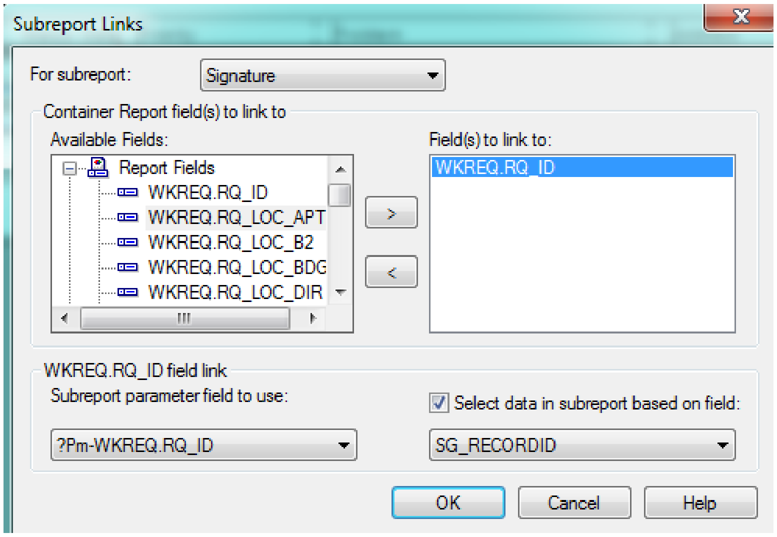
Signature Reports

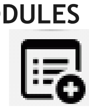
As of version 2017R2 the mobile application allows signatures to be added to records.

Signature Types are set up in the Lucity Web **Signature Configuration** module found in **System Configuration**. These signatures may then be added to Web forms. When the signature is captured in the field it is stored in a separate table, LSIGNATURE.

The best way to add the signature to a report is with a subreport.

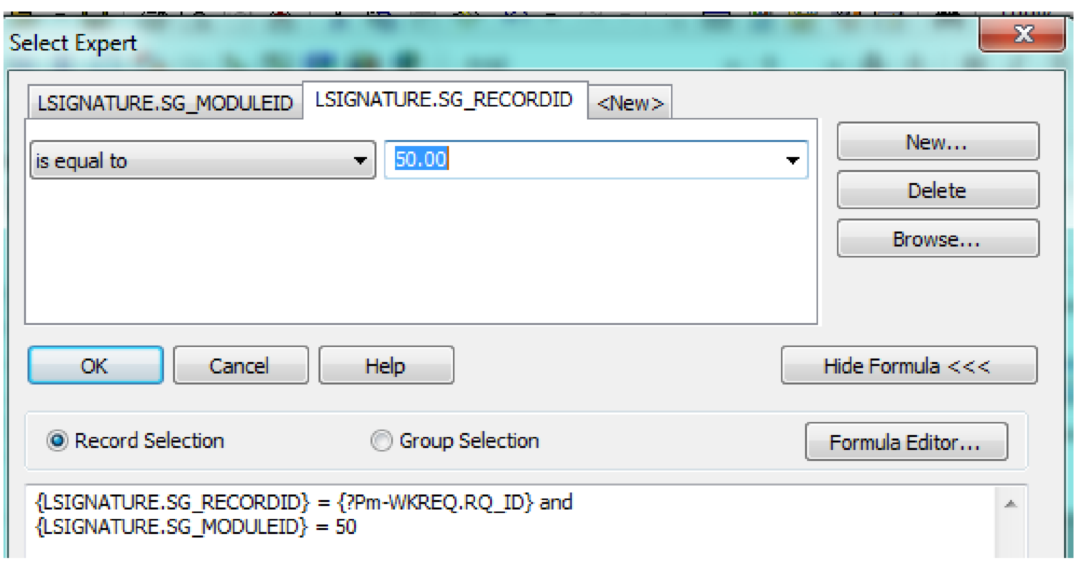
For example, to add the signature to a Request report the following link is required for the subreport.



Within the subreport's *Select Expert* the specific module needs to be referenced. This value is the **KEYID** which can be found in the **MODULES** table. This number is also referenced in the URL in the Web **Field Property Modification** button.  (Be aware - Pop up Blocker could block this)

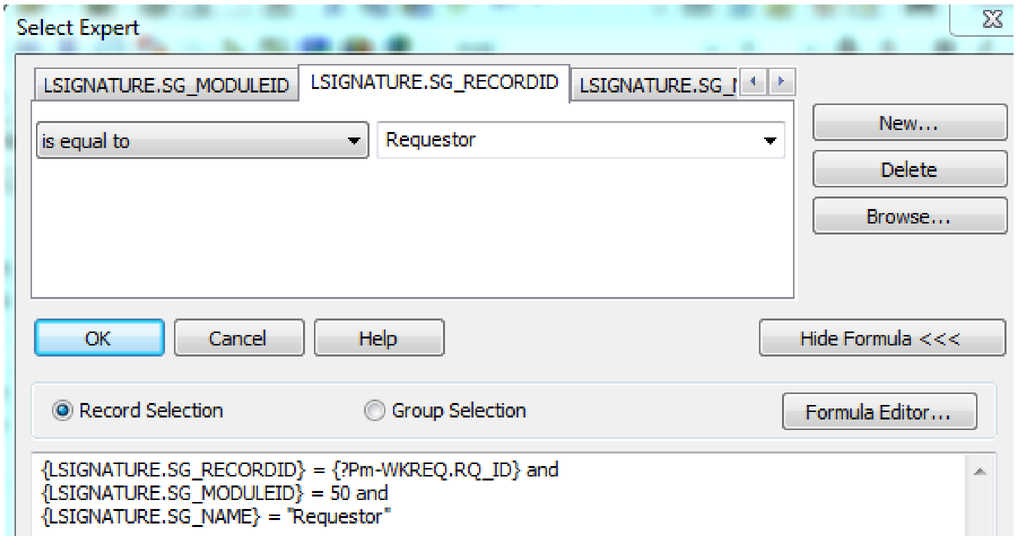
/LUCITYWEB/Protected/EditableProperties.html?modid=50&processid=89#/ReadOnly/76

The subreport's *Select Expert* would look like this:

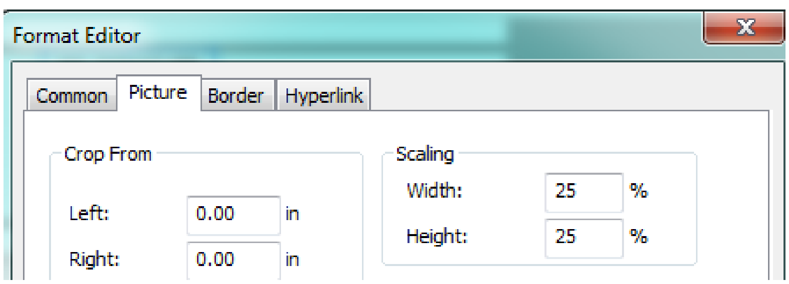


Multiple Signature Types may be used on a Form; however, the Type may only be used once on the Form. If multiple Types have been used on the Form, then the report will need to reference the correct Type of signature. In this example, a Signature Type was set up called “Requestor”.

The subreport’s *Select Expert* now looks like this:



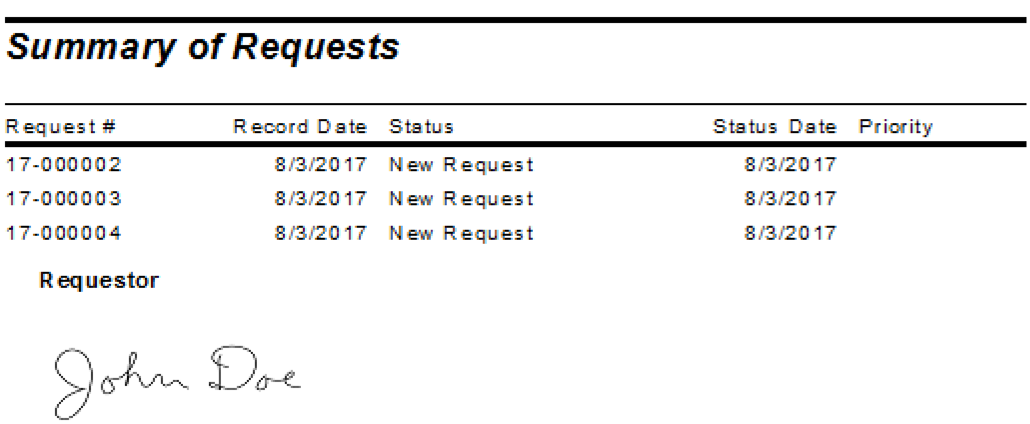
The actual signature is located in the **SG_SIGNATURE** field. Once it has been added to the report the size of the field will likely need modifying. This will require some experimentation. Start by using the *Format Graphic* option and scaling the Width and Height to 25%. Adjust from there.



To close up the empty space for records with no signatures, use the following setup.

In the **Format Subreport** option, make sure the *Suppress Blank Subreport* is checked.

In the Main report’s *Section Expert*, click on the section where the Signature supreport is located and select *Suppress Blank Section*.


Summary of Requests

Request #	Record Date	Status	Status Date	Priority
17-000002	8/3/2017	New Request	8/3/2017	
17-000003	8/3/2017	New Request	8/3/2017	
17-000004	8/3/2017	New Request	8/3/2017	

Requestor

John Doe

Barcode Reports

Crystal XI (Desktop or Web)

Reports developed with Crystal XI or before could show barcodes but it required the font 39 software to be present on the machine the report was run from. The field in the report also needed to be placed in a formula for the font software to create the barcode.

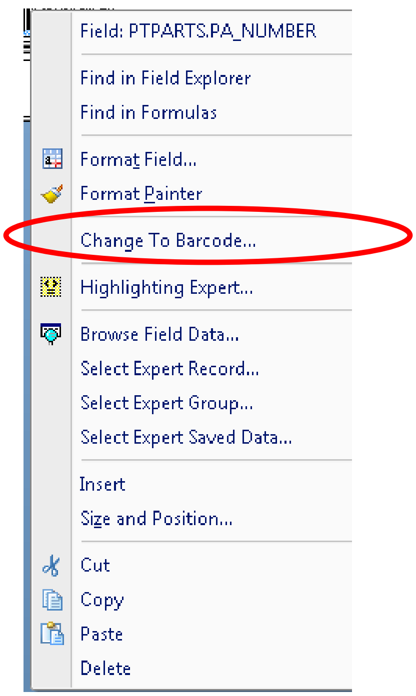
Example: **"*"+uppercase({PTLOCATION.PL_NUMBER})+"*"**

Because Lucity Desktop uses Crystal XI to generate reports, this is the only option for developing and running barcode reports in desktop.

Crystal 2008 (Web only)

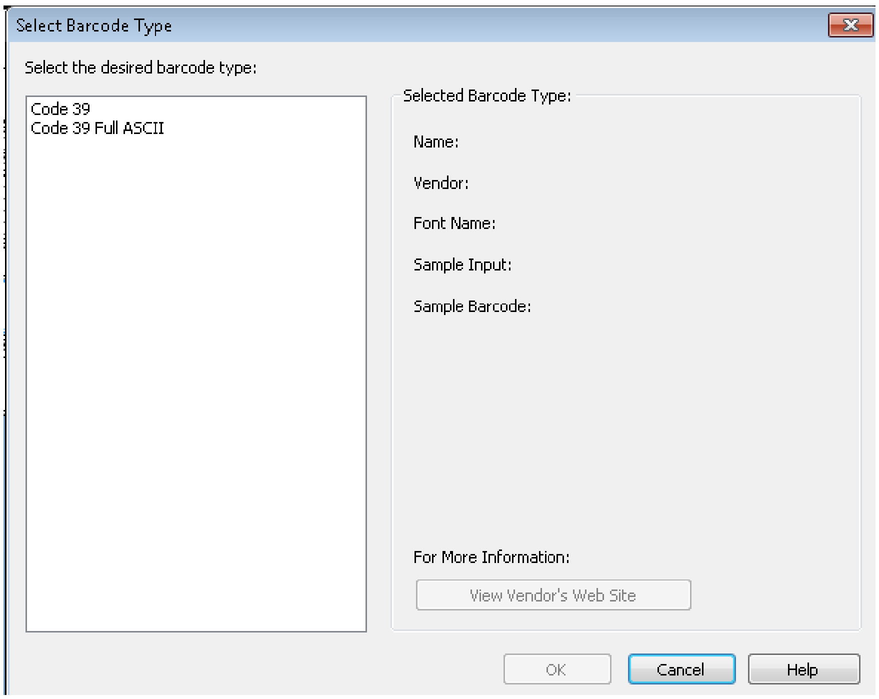
Reports developed with Crystal 2008 or newer have a barcode option to apply to individual fields. Lucity Web uses Crystal 2008 to run Crystal reports so this feature may be used.

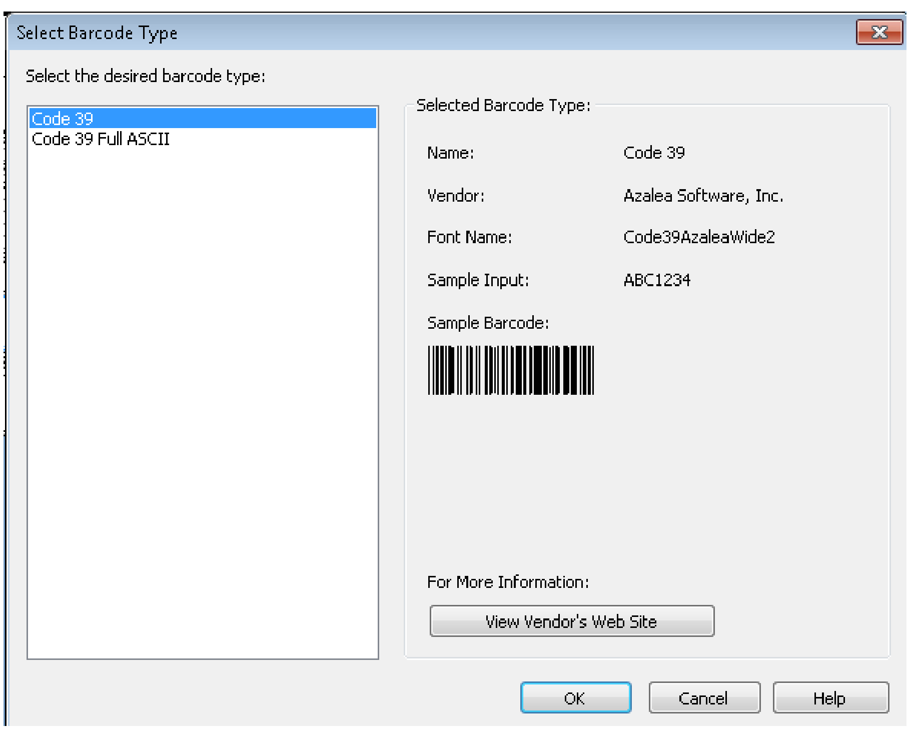
For the field to show as a barcode, bring the field into the report and right click. The following options show:



Select **Change To Barcode…**

Then select the desired Barcode Type.

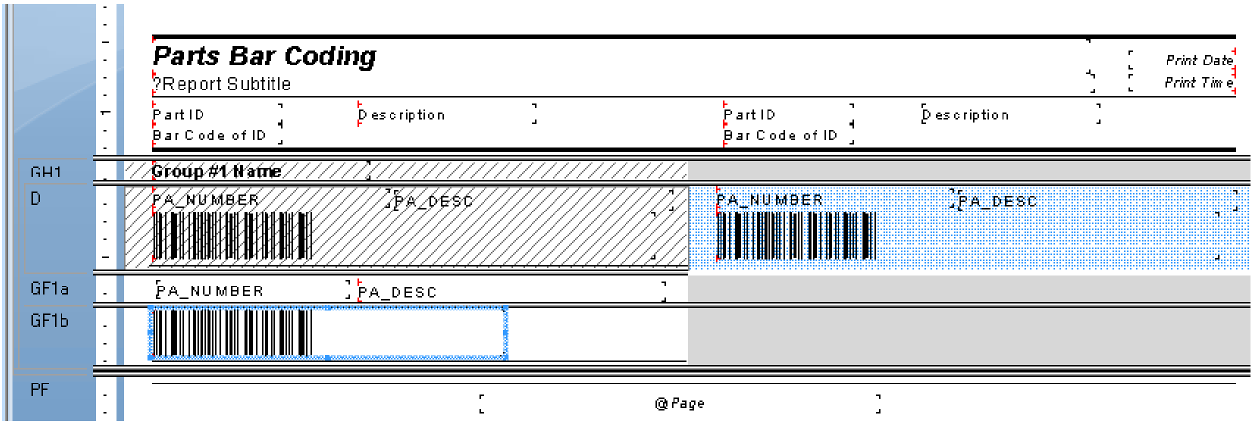




For the barcode to show in the report the Code39AzaleaWide2 font needs to be available on their web server where Lucity Web is installed (or in version2019 or later, where Lucity Report Server is installed)

After the font is installed on the server, a server reboot is necessary before the font will be available.

Report Design view



Report View Terminology

1) **Prior to V2015r2** the Web report viewing options were **PDF** and **HTML**. Both report views query for any parameters in the report.
   a) The **PDF** view shows the report with a scrolling format – 10 page limit (unless modified).
   b) The **HTML** view shows the report as paged with a Parameter tab at the top. If the report is set up with editable parameters, this tab would open the parameters to be modified and applied for the report to run again with the new parameters. The **HTML** view is also available to export.
2) For **V2015r2 sp0** the web viewing options remain the same. The Dashboard reports have changed the viewing options to **Report** (old **PDF** - with 20 page limit unless modified in Settings) and **Paged Report** (old **HTML**).
3) For **V2015r2 sp1** the viewing options changed for both Web and Dashboard. **Basic View** (old **PDF**) and **Advanced View** (old **HTML**).

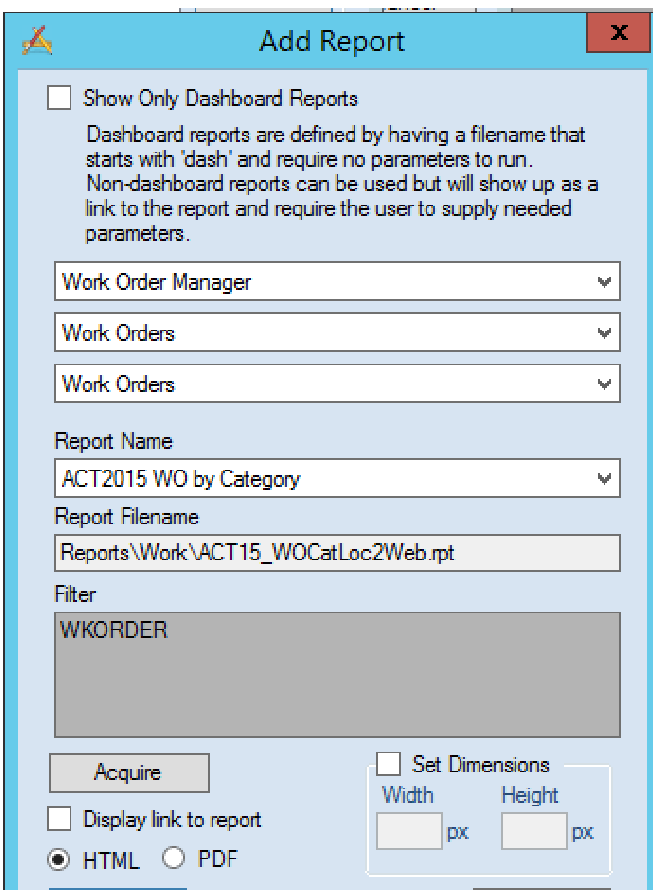
Dashboard Reports

V2015 and Older

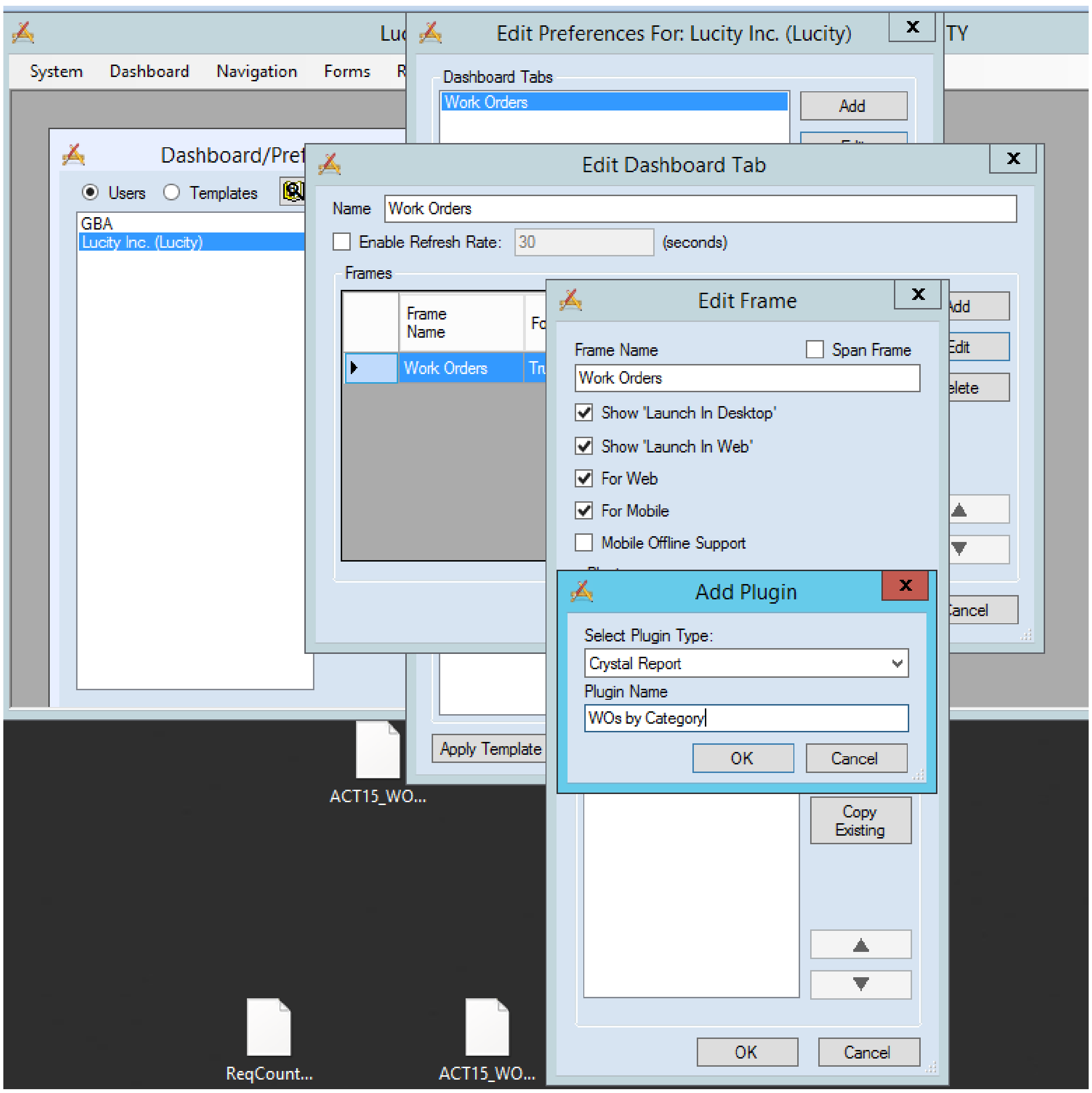
Dashboard reports prior to V2015r2 were set up in Lucity Administration Tools.

To add a standard Dashboard report to your Dashboard, do the following:

1. In *Lucity Admin Tools* click on **Dashboard > Dashboard/Preferences.**
2. If **Lucity** is in the list of users on the left, select it and click **Edit**. If it is not there, click **Add**.
   - If you have to **Add**, then on the next screen select **Lucity**.
3. On the **Dashboard tabs** screen click **Add**.
4. Give the tab a name then click **Add** to add a frame.
5. Give the frame a name then click **Add** to add a plugin.
6. Select **Crystal Report** from the list, give it a name if desired and click **OK**.
7. Once a *Plugin Type* of **Crystal Report** is selected then an **Add Report** dialog is opened.
   - The *Show Only Dashboard Reports* option will show a list of reports created with no parameters and to fit a frame size.
   - If this option is unchecked then all reports are available to add to Dashboard. If the report has a parameter it will show as a link to open the report.

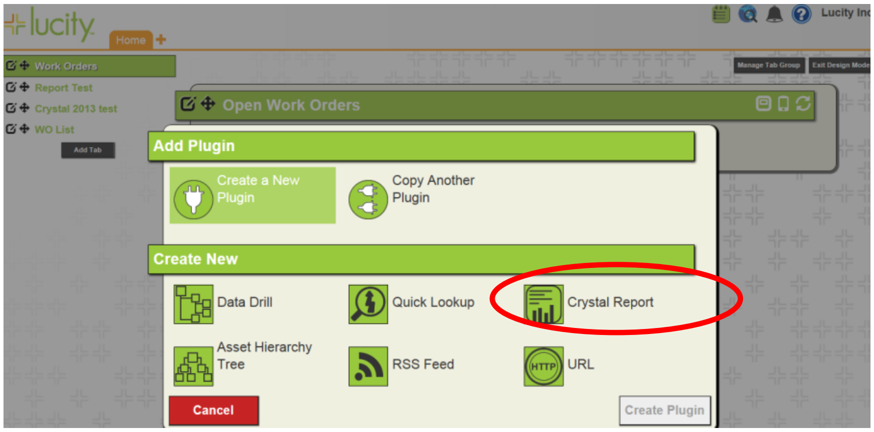


8. Select the module you want the report to run in by using the three drop downs.
9. Select the report to run under *Report Name*.
10. To change the filter, click the *Acquire* button. Click **OK**.
11. Click **OK**, click **OK**, click **OK**, click **Save**. Click **Close**.
12. The report should now show in the web dashboard.

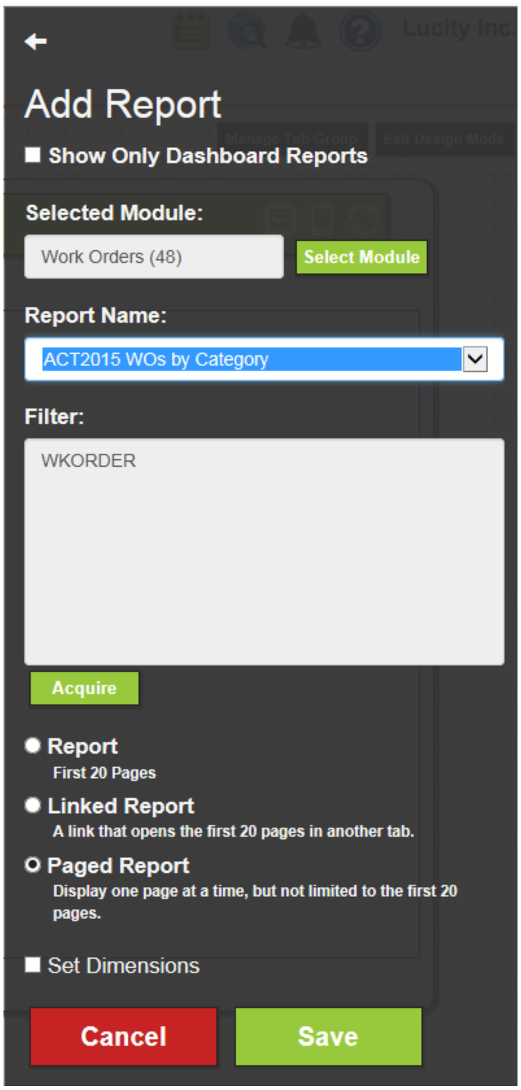


V2015r2

As of V2015r2 the Dashboard design has been removed from Lucity Administration and the Dashboard is now set up in the Web screen.

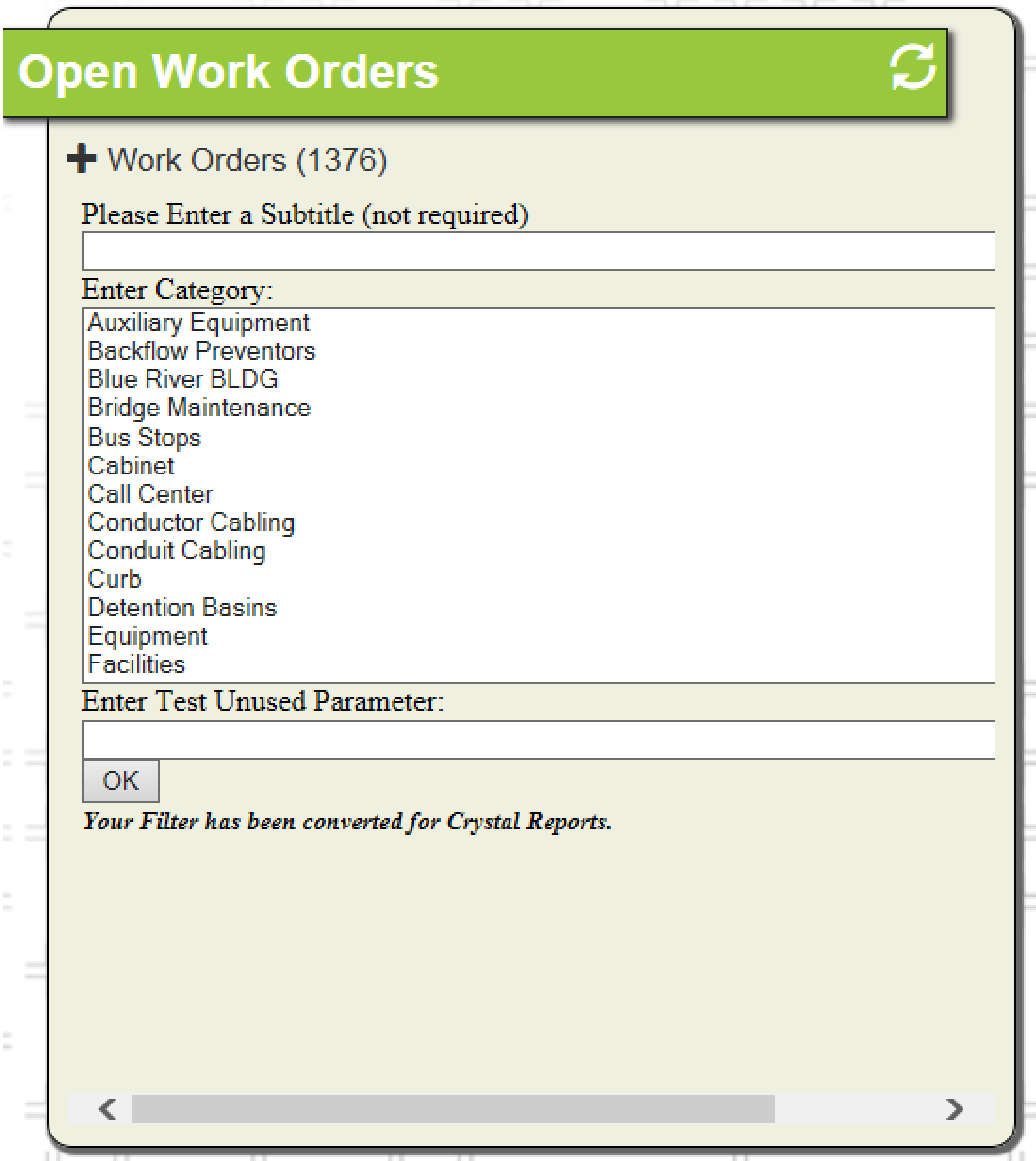


When Crystal Report is selected then the following dialog opens.



> Note: V2015r2 sp0 viewing options do not work correctly. Report (old PDF) shows as blank, Linked shows as old PDF and Paged Report (old HTML) shows as old PDF. There is a patch. It was corrected in V2015r2 sp1.

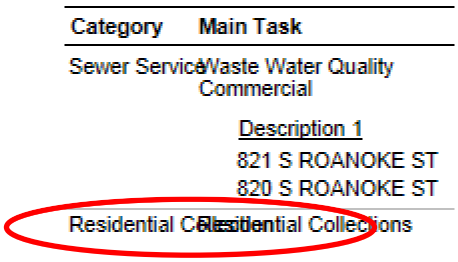
For a report with parameters set up in Dashboard as **Advanced** (old HTML), the parameters will be offered before the report runs. Refresh  will reoffer the parameters.



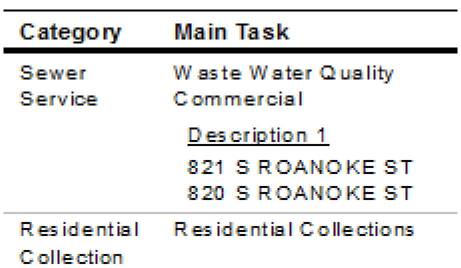
Field Growing

String Field

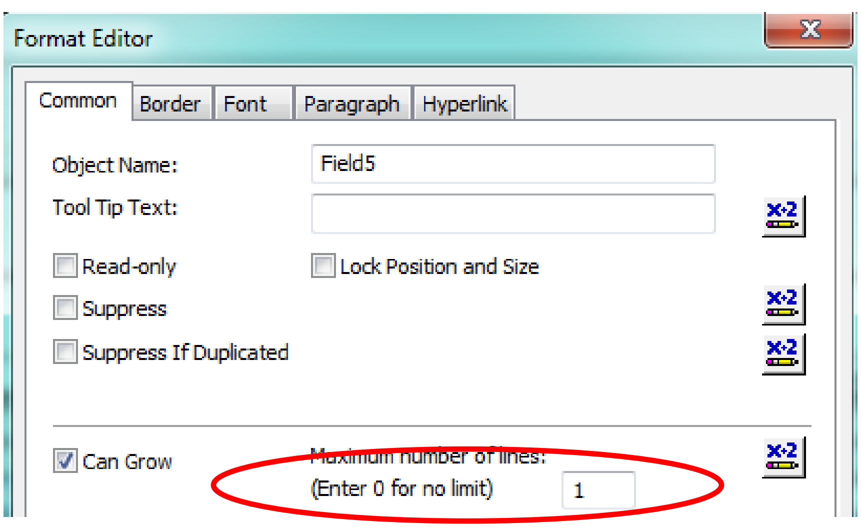
Depending on the field size and Field formatting, there may be issues with the field growing horizontally when run in the Advanced View (HTML). If a field has not been set up to grow vertically and if the value in the field is longer than the space provided by the field in the report, the field will grow horizontally into the next field.



To correct this, the field may be set up with the *Can Grow* option in *Format Field*. This will allow the field to grow vertically.



Some reports do not have the luxury of allowing a field to grow vertically, like a Detail report, where many fields are grouped together in the same report section. If there is no room to expand the field horizontally and a clipped field is acceptable, then in the *Can Grow* option the field can be limited to grow one line. This will lock the field size in.



Number Field

Make sure the “Allow Field Clipping” box is **NOT** checked. This is honored in Crystal and Desktop but Web Basic View will continue to clip and Advanced View will grow to accommodate the number, overlapping the next field if necessary. Make sure the field size accommodates the number populating it. Check this in Crystal (or desktop) to make sure the report is showing the data correctly.

Font

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

Web Filters

Date

If a date filter is built in the desktop, the filter uses the “#” sign.

WKORDER.WO_STRT_DT BETWEEN #01/01/2014# AND #12/31/2014#

If this is used in the web and the report is run with ‘From Filtered Set’, it will error.

Instead use the single quotes in the filter.

WKORDER.WO_STRT_DT BETWEEN '01/01/2012' AND '12/31/2012'

Wildcard Use

For Lucity desktop filtering the wildcard symbol is the asterisk “*”. If a filter is built in the Lucity web version the wildcard symbol is the percent sign “%”.   Crystal recognizes the asterisk. The web version converts the symbol before it runs the report. If you typically use the percent sign for a wildcard make sure that when you are working in Crystal that you use the asterisk.

New Fields

If a Web report has an older version of a table associated with it and a filter with a newer field (not part of the report table) is run with the report, the report will error. Standard reports beginning with 2018r2 will be repointed to the current tables.

Logged in User ID and Logged in Employee Code

For versions 7.4 or later the **Logged in User ID** and **Logged in Employee Code** can be brought into Web reports straight from Lucity. This information is being brought in from the Employee module in Work and is set up much like the “ViewSecuredFields” parameter.

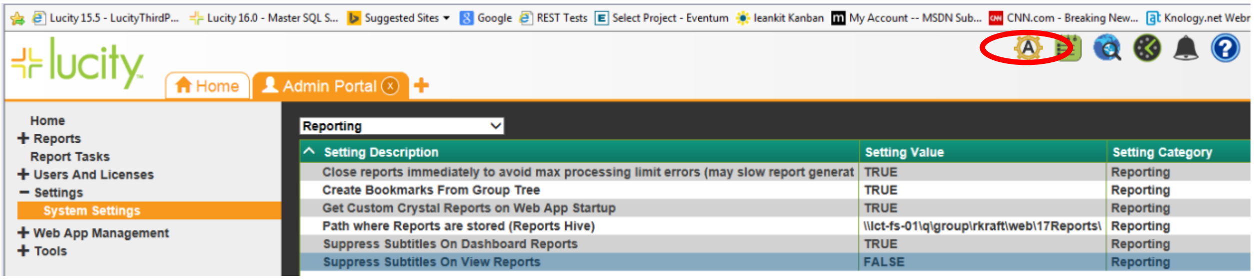
- For the User ID, create a new parameter called **LOGGEDINUSERID**.
- For the Employee Code, create a new parameter called **LOGGEDINEMPCODE**.

Both parameters are *String* type fields.

Drag the parameter fields into the report. When the report is run from Lucity, these fields will populate with the correct Logged in User information.

Admin Portal - V2016r2 (and newer)

Many Lucity Administration Tools are now found in the Web Admin Portal.



This screen shows the values set up in Lucity Administration Tools > System > Settings > Reporting.

Close Reports Immediately…

Helps with report disposal if agency is having issues with their maximum processing limit errors. There are logic changes in V16r2 so this option should be False unless there are errors.

This setting causes report connections to be immediately closed after a report page has generated. Crystal Reports limits how many concurrent reports may be open and this will allow more reports open at once. However, it will cause higher CPU utilization and slightly slower report performance because the report must be regenerated for each page. By default, a user's report connections are closed when a user runs a new report and an older report has been open for more than 5 minutes or when the user's web session ends. Reports may also close when the user closes the window displaying the report but this may be unreliable

Get Custom Crystal Reports on Web App Startup

Causes Lucity Web to get new copies of Custom Crystal reports from the Document server whenever Lucity Web is restarted. This should be True unless instructed to disable by support for trouble shooting purposes.

Subtitle Suppression

Suppress Subtitles On Dashboard Reports, that removes the subtitle parameter for ***Dashboard*** reports.

Suppress Subtitles On View Reports, that removes the subtitle parameter for reports run from modules.

For the Subtitile suppression to work correctly, the Subtitle parameter name must be "**Report Subtitle**".

Group Tree Bookmark

Create Bookmarks From Group Tree, that allows users to create bookmarks within the output of a Basic report.

Web Performance

Reports take memory when they run. Each subreport is seen as an individual report when the reports run. If many individuals have numerous reports running on their dashboard, the system may slow down.

One possible solution to this issue is using Crystal Reports Server or SAP Business Intelligence Server (Crystal Reports Enterprise). This would allow reports to be offloaded to a server dedicated to that purpose. This is now supported in V2016r2. This is available to purchase through SAP.

Reporting

There is now a Report tool for adding and running **Admin** reports.

Report Name
Custom Objects
Custom Web Reports
Database Fields Customizations Summary Report
Electric Standard Lucity Web Reports
Equipment Fields Picklist Summary Report
Equipment Standard Lucity Web Reports
Field Name Customization by Module
Field Name Customization by Module and Form
General Fields Picklist Summary Report
General Standard Lucity Web Reports
Park Fields Picklist Summary Report
Park Standard Lucity Web Reports
Sewer Fields Picklist Summary Report
Sewer Standard Lucity Web Reports
Storm Fields Picklist Summary Report
Storm Standard Lucity Web Reports
Street Fields Picklist Summary Report
Street Standard Lucity Web Reports
Water Fields Picklist Summary Report
Water Standard Lucity Web Reports
Web Forms with Assigned Groups Report
Web Views and Forms with Associated Groups Report
Web Views with Associated Forms and Grids Report
Work Fields Picklist Summary Report
Work Standard Lucity Web Reports

There is a separate report tool for adding and running the **Security** reports.

Report Name
Security Permissions by Group Report
Security Permissions by User Report