Version 25 | Trapeze Enterprise Asset Management

Reporting

User Guide

Trade Secret | February 2026

Technical Support

Trapeze provides several ways to connect with the Customer Care team. Please provide detailed information to the representative. If you are reporting an issue by e-mail, include any error messages, screen shots of your problem, and steps to replicate the issue.

Customer Care is available Monday through Friday, 8:00 a.m. to 8:00 p.m., Eastern Standard Time.

Toll-Free Telephone:	1-877-411-8727
E-mail:	cc@trapezegroup.com
FTP Site:	https://ftps.trapezegroup.com/
Web Site:	https://collaborate.trapezegroup.com

The website provides access to Trapeze Collaborate which offers resources to implement and operate the software, search knowledge, participate in communities, log/track service requests, sign-up for release alerts, view product health recommendations, and download updates or documentation. For secure access to Collaborate, contact Customer Care through the website or by calling the number above.

Product Compatibility

Refer to the latest Product Compatibility information on Trapeze Collaborate for requirements including operating system information, databases, Crystal reports, network protocol, HTTP servers and browsers that are supported.

Reporting - User Guide

Version 25.x

February 2026

Contents

1. Overview

The Reporting module makes it easier to take the data stored in your system database and reformat it into knowledge you need to more effectively manage your operations. At the same time, it allows you to open up the visibility into your operations to your entire organization, publishing professional reports over a zero-client, browser interface. The Reporting module will provide your organization with graphically pleasing, standardized reports, as well as accessibility to real time data, quick report processing times, and report automation.

Once the Reporting module has been successfully installed and configured, users may learn how to maximize the system by reviewing the following instructions. This Guide covers the following Reporting areas:

- Running and viewing reports
- Navigating in the report
- Scheduling reports (an optional feature)
- Exporting reports
- Printing reports
- Reporting special features

The Appendices are specifically designed to provide helpful information to report content editors. Report content editors may refer to the appendices for assistance in the following areas:

Appendix A – Report Content Editor Guide

- Creating Reports
- Testing and Uploading Reports
- Publishing Reports

Appendix B – Technical Extras for Report Content Editors

- System Standards
- Formatting Tips
- Functions

Requirements

Application 25.x

Web Modules 25.x

Assumptions

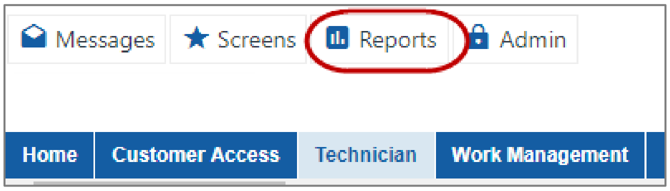
This guide assumes familiarity with workflows and configuration of the application.

- User-defined required fields that do not appear in the Web Modules will return validation messages.
- Special characters cannot be placed into the Web Modules fields or unanticipated results may occur. This would include any character that cannot be typed with a standard keyboard.
- Do not use the browser's **Back** button in the Web Modules as unanticipated results may occur.
- Reporting does not support the use of Crystal Report SQL Commands.
- Do not open or use the same instance of the web portals in multiple browser windows or tabs. This can cause errors or unexpected performance issues.

2. Running and Viewing Reports

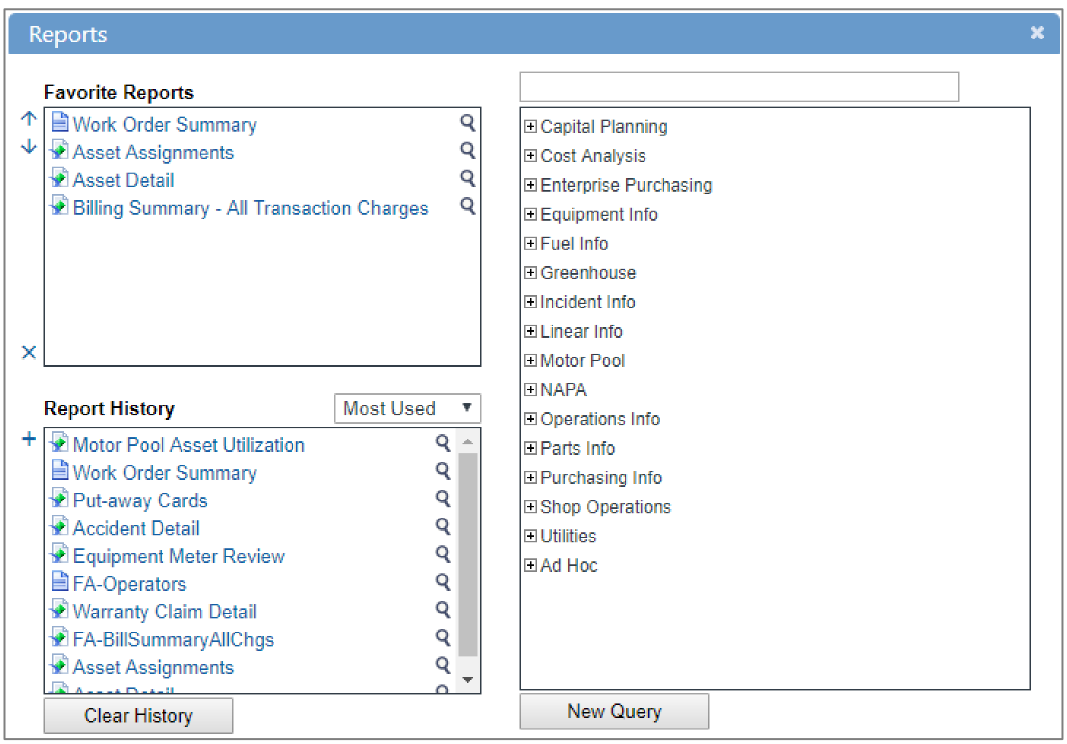
Report Launcher

From the Web Modules, in the upper-left corner in the shortcuts area, click **Reports** to open the report launcher.



From this screen you can view and access **Favorite Reports**, **Report History** and the full menu of available reports.

⚠ This shortcut will only display reports that have been published and to which the user has access rights. The reporting tab provides more access if the user has report creating rights.

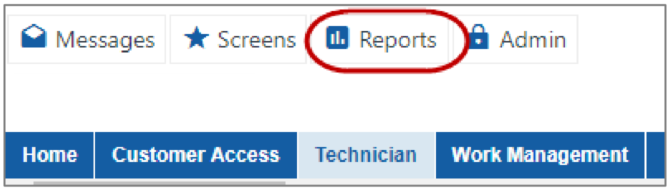


Viewing a Report

To run and view a report, you must have the reporting module installed and set up, and the report content editor must first publish the report, and assign security rights to the end users. If you are a report content editor, refer to Appendix A.3 for detailed instructions on publishing reports and assigning appropriate security rights to end users.

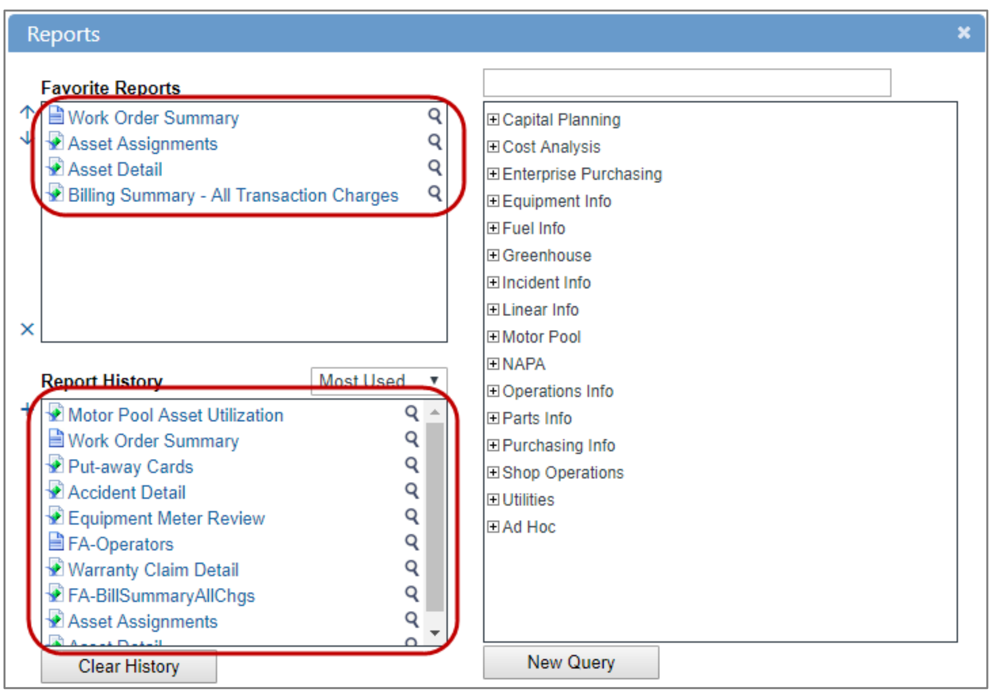
To launch a report from the Report Launcher:

1. In the top-left corner of the Web Modules screen, click the **Reports** shortcut.

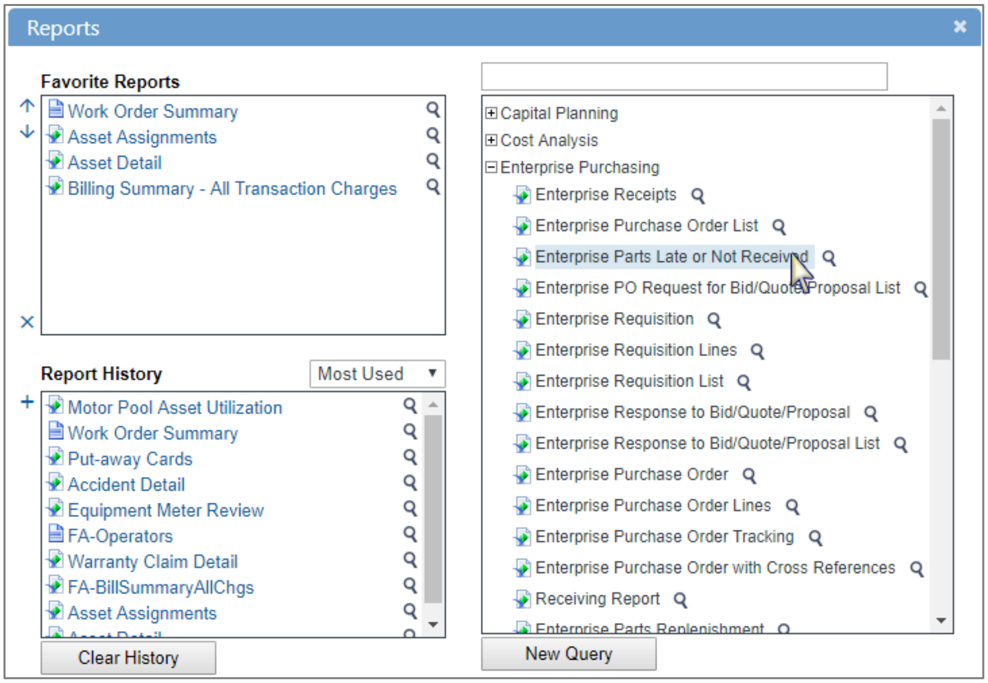


2. Launch a report by doing one of the following:

   - In the Favorite Reports or Report History sections, double-click on any of the report names or click the zoom button to the right of the report to launch that report.



   - Search through the menu to locate a specific report, and click the report.



- Click the **New Query** button to create a new report.

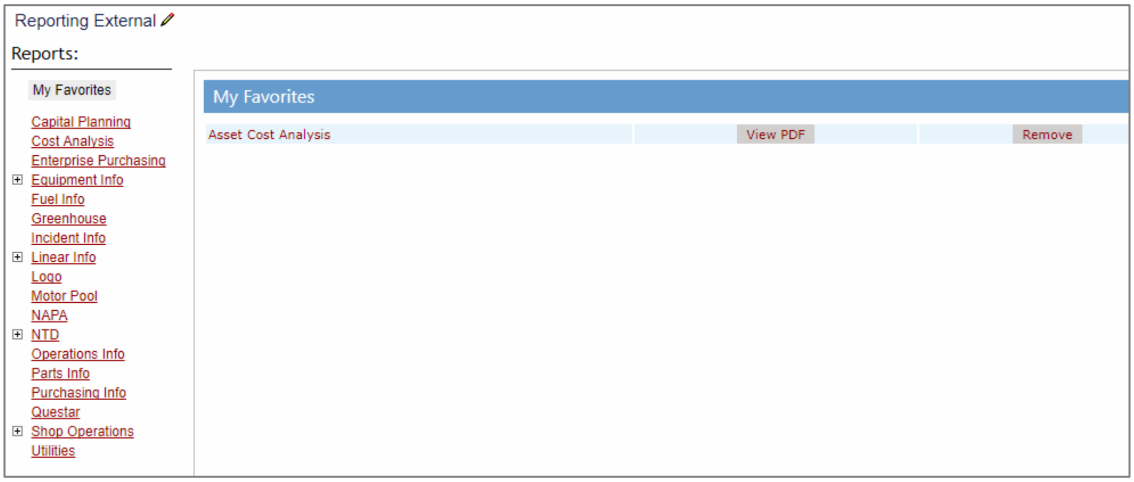
Refer to the *Reporting Administrator Guide* to learn how to set-up a new query.

3. To access and interact with the reporting features, close this window and click the **Reporting** tab.

To launch a report from the Reporting tab:

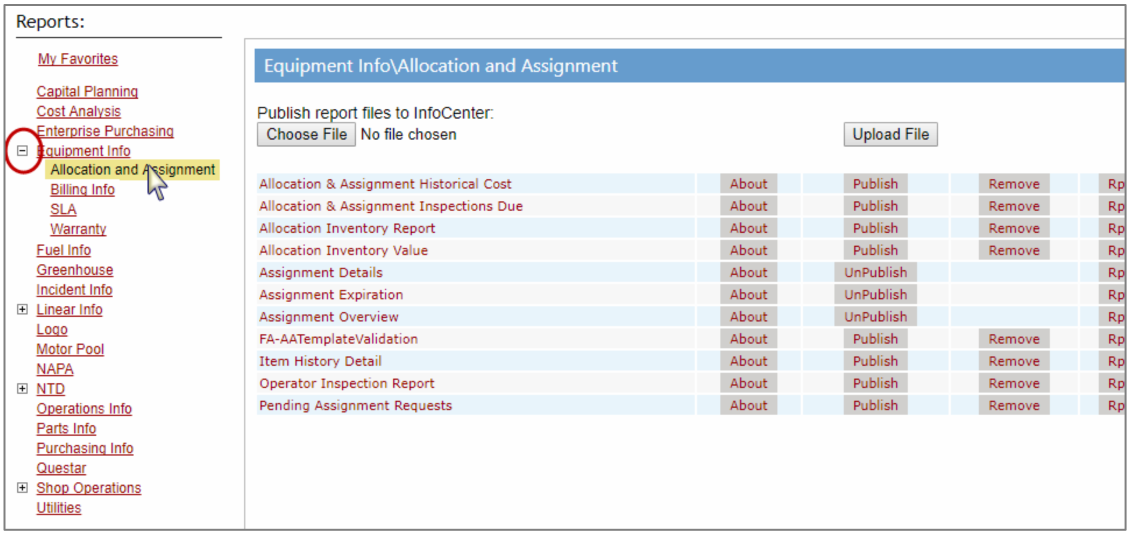
1. Click the Reports tab.

   The Reports tab displays.



2. If the report is listed in the My Favorites section, click the report or **View PDF** to open it, and continue on if it has needed filter data, or continue to the next step to open reports through the report list.

3. To open a report with the report list, click on the report category. You may need to drill down in the list by clicking the + to expand the report category list.

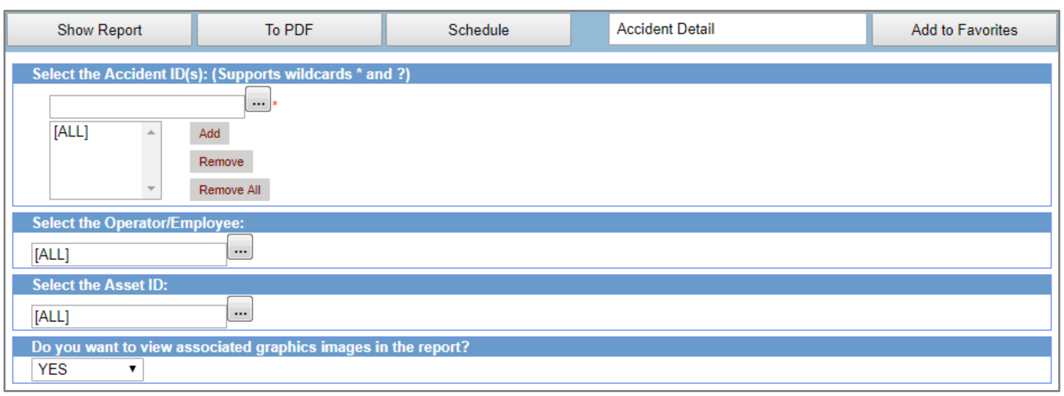


The report list displays to the right.

4. Click the report you want to open.

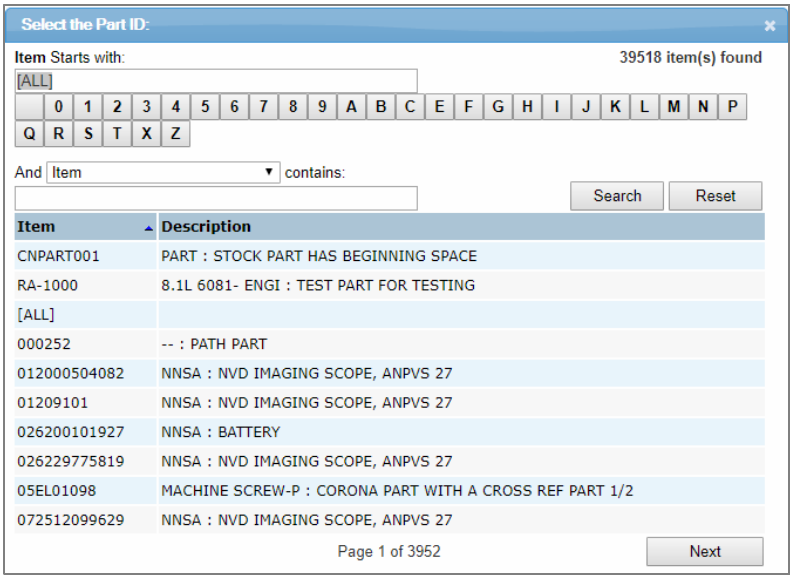
   One of the following will happen:

   - If you select a report that does not require filtering data, the report runs and displays on page.
   - If you select a report that requires filtering data, a page displays for you to enter the data. Continue to the next step.



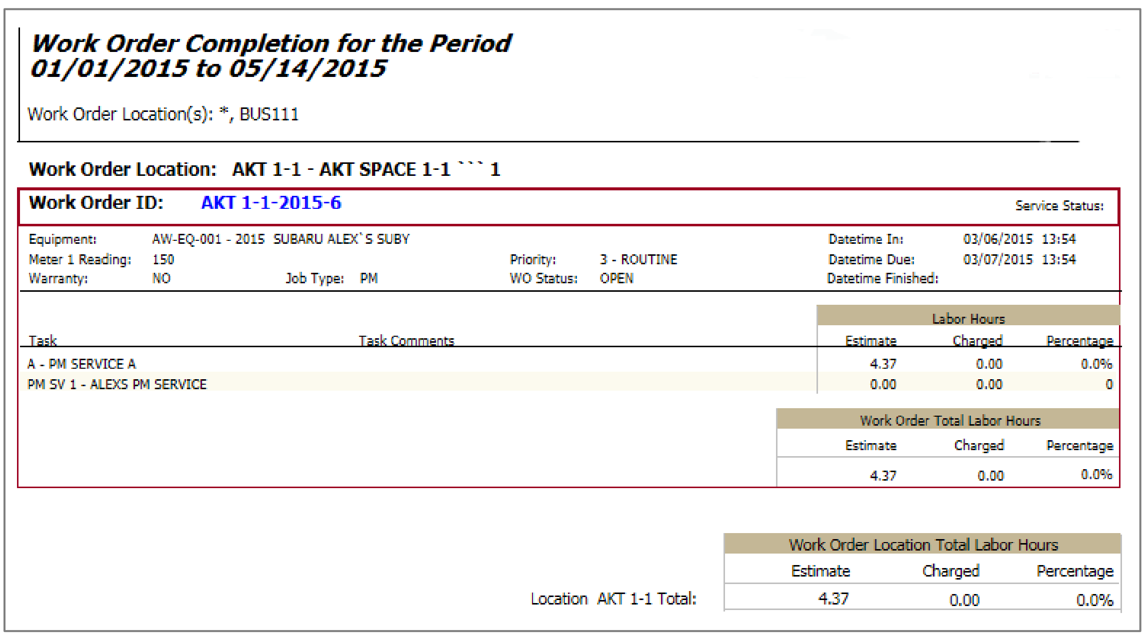
The fields with asterisks are required filter items. You must enter data in these fields.

5. Click the choice-list button next to each field to display a choice-list of all the values that may be entered in the field. Choose from the selection list to enter filtering values. Below is an example of one of these choice-lists.



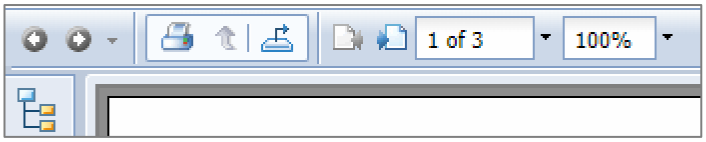
6. When you are done entering data, click **Show Report** or press **Enter** to run and display the report.

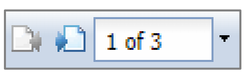
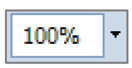
   The report displays.



3. Navigating in the Report

The Crystal toolbar allows for easy navigation in reports. The following image is a display of the Crystal toolbar:



Button Name	**Icon**	**Description**
Group Trees		Click this button to display grouping levels, and drill-down in the report to the data in a specific group.
Export		Click this button to export data in different formats. Refer to the Exporting Reports section below for instructions on how to export reports.
Print		Click this button to print the report. See the Printing Reports section below for instructions on how to print reports.
Page navigation		Type a page number in this field to go to a specific page, or navigate one page at a time, or use the page drop-down to the right to select a specific page.
Zoom		Choose the percentage of magnification from the drop-down list to view the report.

Closing a report:

A report window can be closed by logging out of the system or closing the browser. When a report window is closed, the system will wait a predetermined number of seconds before ending the report's connection to the RAS. Connections to SAP's Report Application Server are based on the number of open connections. The system manages these connections closely to ensure that unused report connections are properly closed out to prevent the reporting environment from reaching its license limitations.

4. Scheduling Reports: An Optional Feature

To schedule reports, you must have installed and configured the Scheduler module as mentioned in the *Reporting Administrator Guide*. Refer to the *Scheduler Administrator Guide* for setting up the scheduler. Once the Scheduler module has been correctly installed and configured, all reports executed in the Reporting module will have a **Schedule** button on top of their display and filter pages.

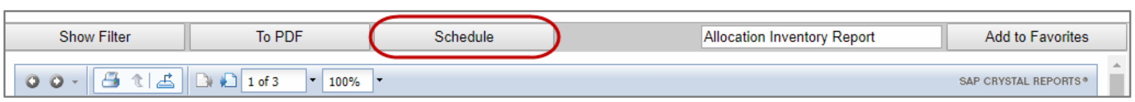
Reports can be scheduled by clicking **Schedule** from either the Filter page or the Show Report page.

To schedule reports, the user must have an email address defined on their user record in the system.

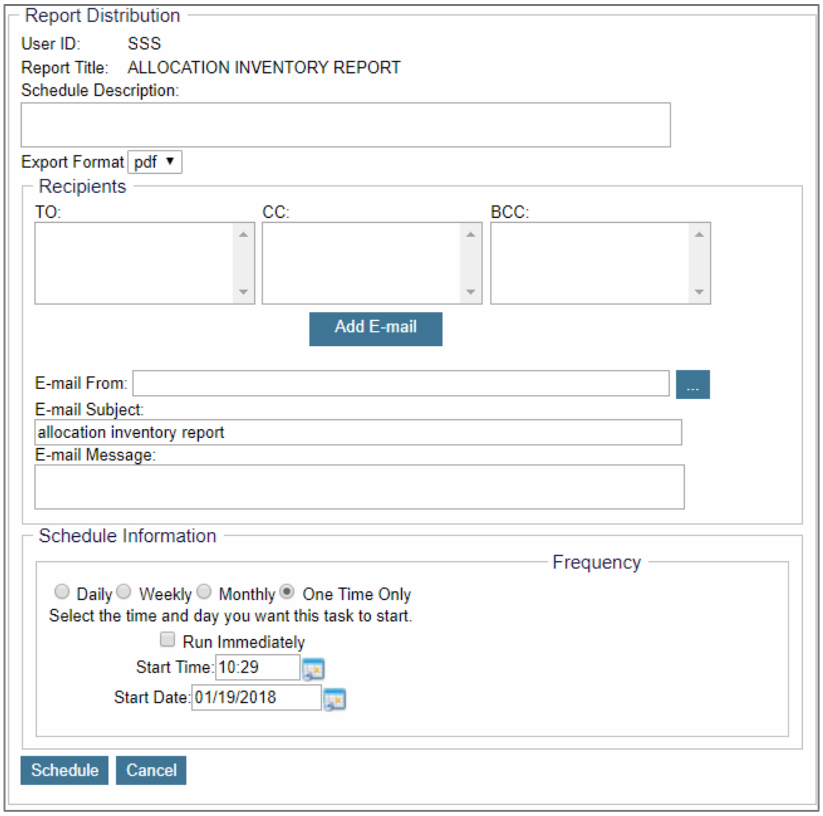
Scheduling a Report

1. Click the **Schedule** button on either the Show Report page or the Filter page to schedule the report.

   Note: If you schedule from the Filter page, the filter information must be completed prior to clicking the **Schedule** button.



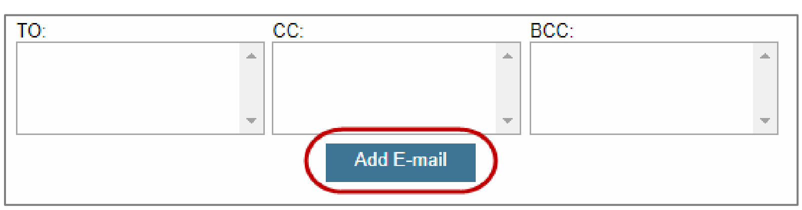
   *When you click the **Schedule** button, the Report Distribution page opens. Use this area to schedule the execution of the selected report (using the previously specified filter criteria) to be sent to a specified distribution list on a specified schedule.*



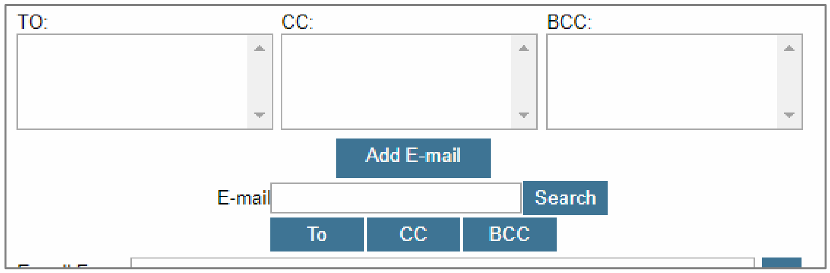
2. Complete the Report Distribution page, which contains all the email distribution and schedule information:

   - **User ID**: The schedule owner. This field is display only.
   - **Report Title:** The title of the report. This field is display only.
   - **Schedule Description:** Description for your reference.
   - **Recipients:** The email addresses for people added to the report distribution. Email addresses can be added to the To, CC, or BCC fields. To add email addresses, use the following process.

     a. Click **Add Email**.

     b. Additional email fields display.

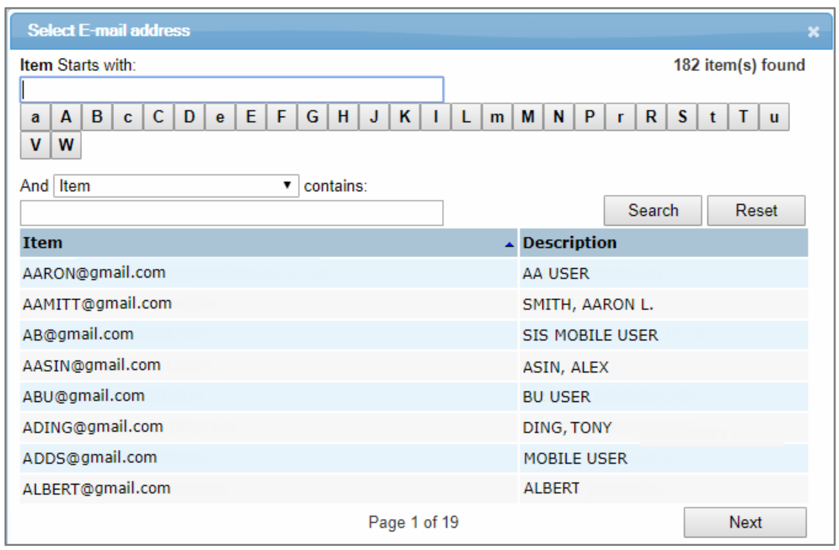


c. Type the email address in the **E-mail** field.

d. Click one of the buttons below to place the email address in the To, CC, or BCC fields, which adds the email to the corresponding to fields in the email distribution.

- **Email From:** Email address associated with user ID (the schedule owner).

  a. Click the chooser button to search for an email address.



  b. Enter the name, or a partial name with a wildcard and click **Search**, or use the letter buttons to narrow down the list of email addresses.

  c. Click an email address to enter that email in the **E-mail From** field.

- **Email Subject:** The title is in this field by default, but you may change the subject. This is the information that will display in the Subject field of the email.

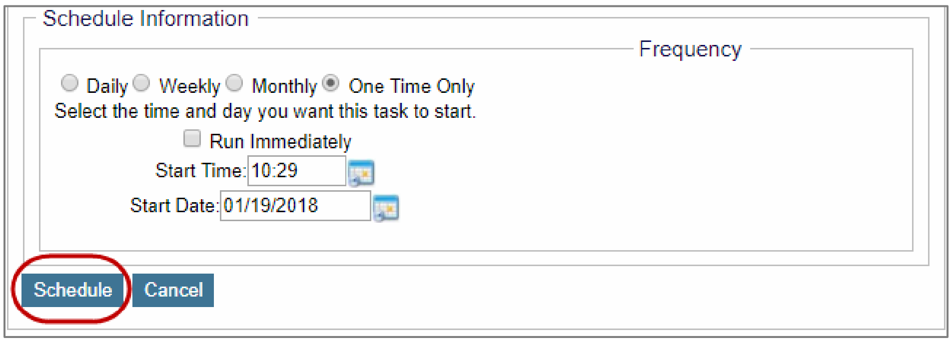
- **Email Message:** Optional free-form text field for the message to be included in the email with the PDF file attachment.

- **Frequency:** The time period which you want to schedule this report to automatically execute (Daily, Weekly, Monthly, One Time Only).

- **Run Immediately:** Check this box to run the report distribution immediately.

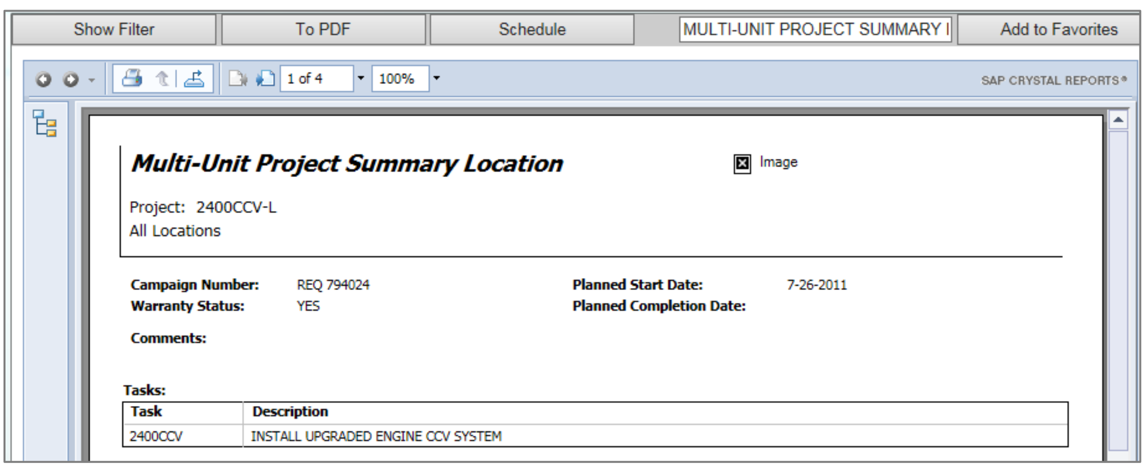
- **Start Time:** The time of day the scheduled report execution should occur. This is a 24-hour clock.
- **Start Date:** Select a date from the date chooser on which to start the scheduled distribution.

3. Once all the information is entered on the Report Distribution page, click **Schedule** to add the scheduled job to the Web Modules Scheduler Queue.

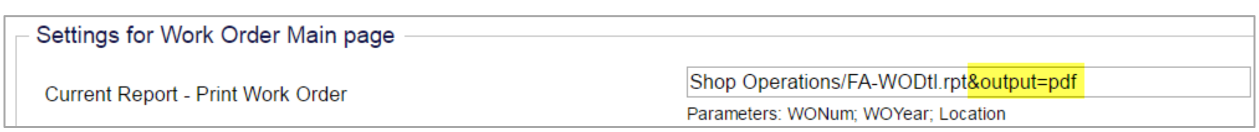


Once reports are scheduled, they are e-mailed as an Adobe PDF file attachment, according to the specified schedule and distribution.

4. To go to the report's PDF file, click **To PDF** on the Show Report page.

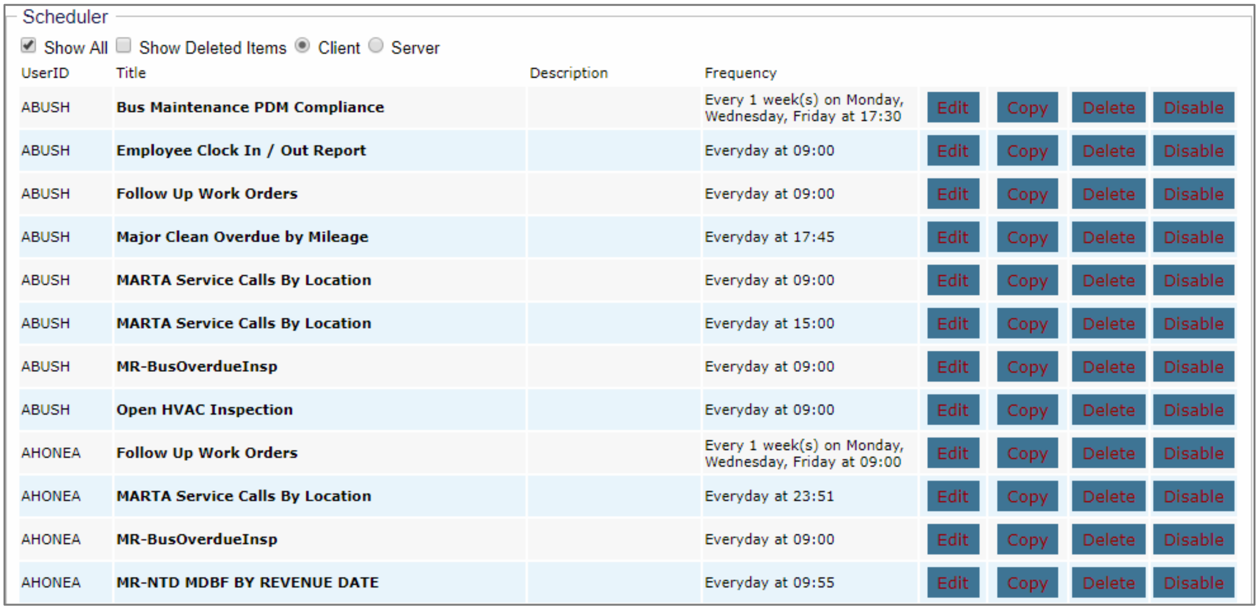


To have a report automatically go to PDF, a user with administrative access must edit the report settings in the portal options. To do this, click the edit pencil in the appropriate portal to open the portal settings. Locate the desired report field and at the end of the report name in the report field, type **&output=pdf**. This saves a step by defaulting the report to PDF instead of needing to click the **To PDF** button.



View Scheduled Jobs List

To view the scheduled jobs list, open the Scheduler tab in the Web Modules.



Scheduler

Show All | Show Deleted Items | Client | Server

UserID	Title	Description	Frequency				
ABUSH	Bus Maintenance PDM Compliance		Every 1 week(s) on Monday, Wednesday, Friday at 17:30	Edit	Copy	Delete	Disable
ABUSH	Employee Clock In / Out Report		Everyday at 09:00	Edit	Copy	Delete	Disable
ABUSH	Follow Up Work Orders		Everyday at 09:00	Edit	Copy	Delete	Disable
ABUSH	Major Clean Overdue by Mileage		Everyday at 17:45	Edit	Copy	Delete	Disable
ABUSH	MARTA Service Calls By Location		Everyday at 09:00	Edit	Copy	Delete	Disable
ABUSH	MARTA Service Calls By Location		Everyday at 15:00	Edit	Copy	Delete	Disable
ABUSH	MR-BusOverdueInsp		Everyday at 09:00	Edit	Copy	Delete	Disable
ABUSH	Open HVAC Inspection		Everyday at 09:00	Edit	Copy	Delete	Disable
AHONEA	Follow Up Work Orders		Every 1 week(s) on Monday, Wednesday, Friday at 09:00	Edit	Copy	Delete	Disable
AHONEA	MARTA Service Calls By Location		Everyday at 23:51	Edit	Copy	Delete	Disable
AHONEA	MR-BusOverdueInsp		Everyday at 09:00	Edit	Copy	Delete	Disable
AHONEA	MR-NTD MDBF BY REVENUE DATE		Everyday at 09:55	Edit	Copy	Delete	Disable

This page lists all the reports that were scheduled with your user ID, as well as their descriptions and frequency settings. On this page, you may also edit, copy, delete, and enable or disable scheduled reports as mentioned below.

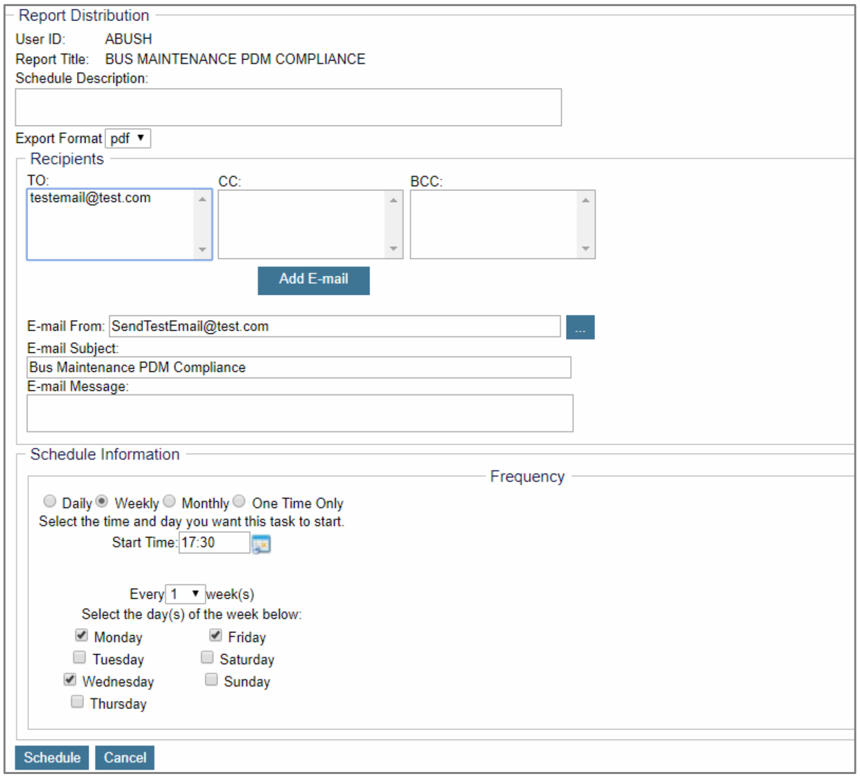
The options available depend on whether the user is an administrator or not. Refer to the *Reporting Administrator Guide* for more information about the functionality available to administrators.

Use the **Client** and **Server** radio buttons display the list of scheduled reports for the selected item. These options also display the time difference between reports if the client and server are in different time zones.

Edit Scheduled Reports

1. Click **Edit** to edit a scheduled report distribution.

2. The Report Distribution page displays.



3. Modify the fields as desired.

4. When you are finished making changes, click **Schedule** to save your changes.

Copy Scheduled Reports

1. Click **Copy** to open the above mentioned Report Distribution page.

2. Change any information as needed (recipients, description, messages, etc.).

3. When finished editing to fit your needs, click **Schedule** to create a copy of the scheduled report.

Delete Scheduled Reports

From the Scheduler page, click **Delete** to mark the scheduled report as deleted.

Administrators will need to purge the deleted items from the database as mentioned in the *Reporting Administrator Guide*.

Enable/Disable Scheduled Reports

- If the report is disabled, click **Enable** to begin the scheduled report.
- If the report is enabled, click **Disable** to take the report off of the schedule.

Export Scheduled Reports

You may export scheduled reports to PDF or CSV (default is PDF). Refer to the Exporting Reports section below for information on creating reports for export to CSV.

5. Exporting Reports

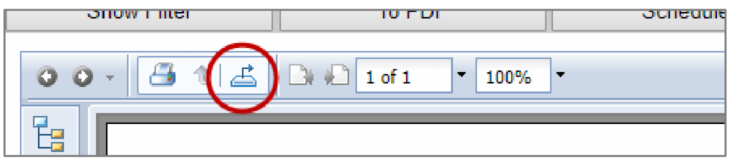
Crystal allows you to export reports in a variety of formats.

Follow these recommendations for designing reports for export to CSV:

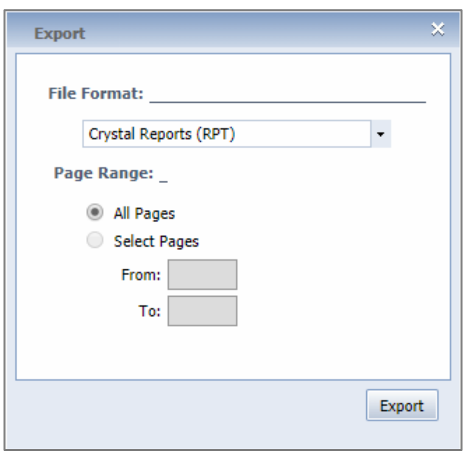
- Organize the report in columns.
- Add labels in the header, not in the details section.
- Line data up below the header label so it will line up in the CSV file.
- If there are many columns, the report may be better suited in landscape view, and possibly even on larger paper such as a wider 11x17 size. This can be done easily if no printer is defined.

To export a report:

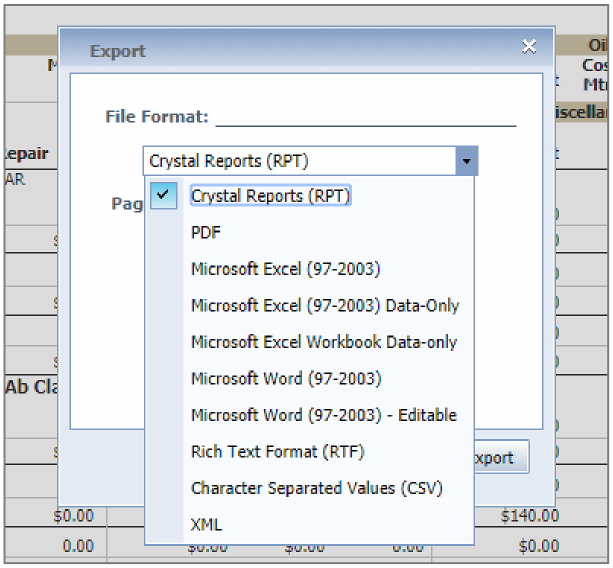
1. From the report, click the export button.



The Export pop-in displays.



2. To select the export format, click the **File Format** drop-down list. The formats in the drop-down list are dependent on the report type.



To export reports cleanly, only export reports to Excel if they were developed specifically for Excel. In most cases, it is recommended that users export to a CSV file and then open the file in Excel.

3. Leave the page range as **All Pages**, or enter the specific page range to export.

4. Click **Export**.

   A file download dialog box may display that asks whether you would like to open or save the file to your computer.

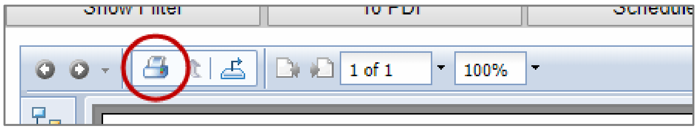
   i. Choose the desired option.

   Your report is exported.

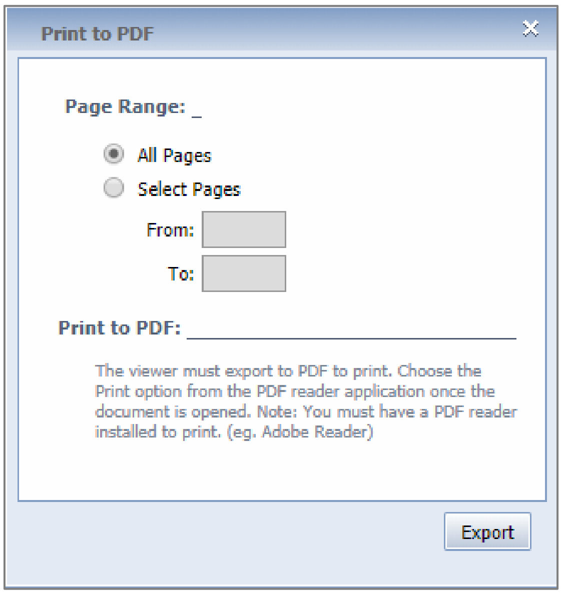
6. Printing Reports

To print a report:

1. Click the print button.



The Print to PDF dialogue pop-in displays.



Note: In some cases, a different printer dialogue displays for your printer. This process follows the system dialogue. Set your printer dialogue as needed and continue below.

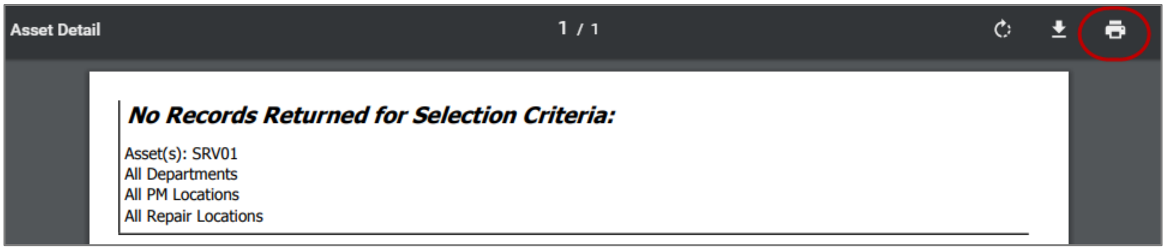
2. Leave the **All Pages** option to print all pages, or enter the page range in the **From** and **To** fields.

Tip: If you select to print selected pages, Crystal default is **From: 1** and **To: 1**. If you want to print more than just the first page, be sure to indicate the pages needed.

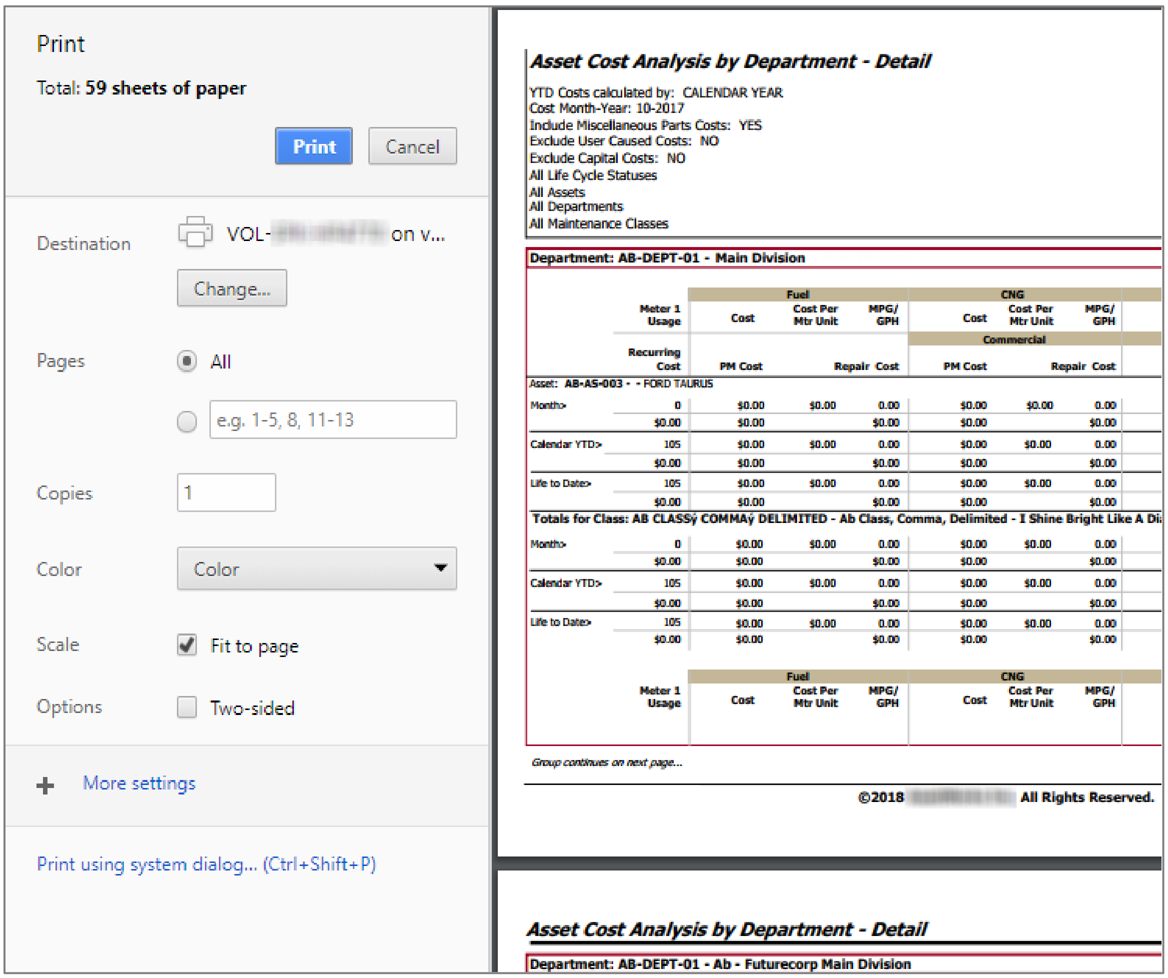
3. Click **Export**.

    i. If a dialog appears, click the dialogue, or select the **Open this file** option depending on the version of browser you are using, and click **OK** if prompted. If the dialog does not appear, proceed to the next step.

4. Click the printer icon on the Acrobat Reader Menu rather than the **Print** button on your internet browser.



5. The Print dialog appears. Verify the information and click **Print**.

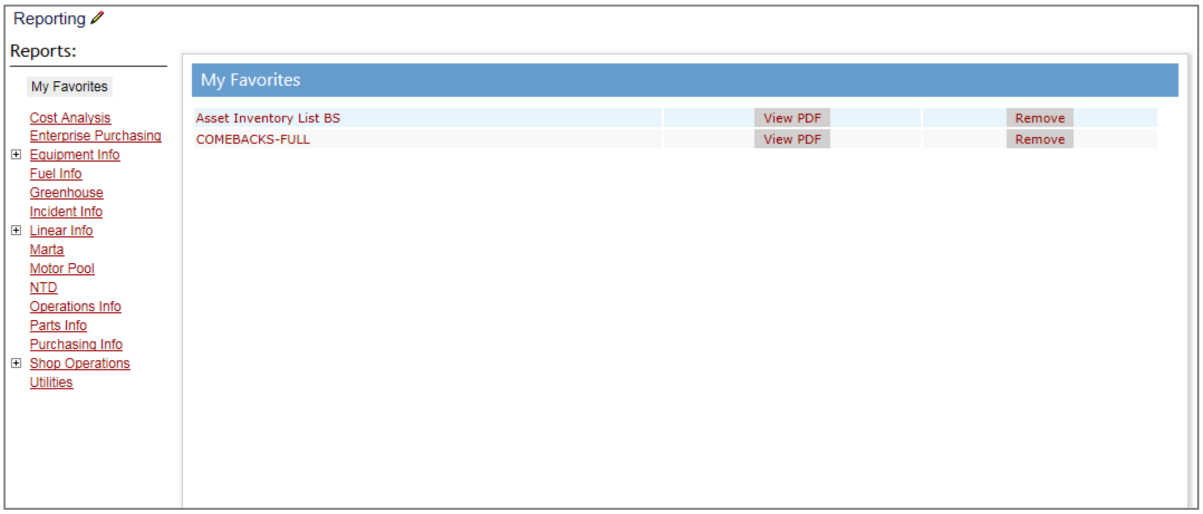


7. Reporting Special Features

The following sections outline several special features of the Reporting module.

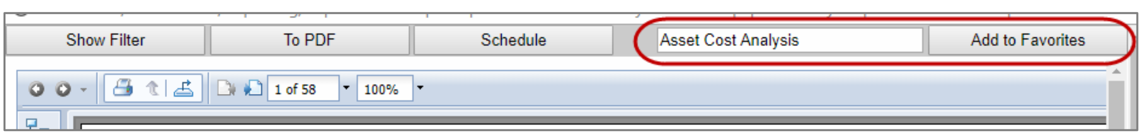
Adding to Favorites

You may have your favorite reports listed in the My Favorites section when you enter the Reports page in Web Modules if you created a list of favorite reports with partial filter information, or from the completed report.



To create a favorite report:

1. From an open report in either the Show Report page or the filter page, enter a descriptive name in the **Favorites** field.



2. Click **Add to Favorites**.

3. Log out of the Web Modules.

4. The next time you log in, your selected report will available on the Reports page in the My Favorites section.

Appendix A. Report Content Editor Guide

The following appendix provides reference information to assist report content editors, and assumes expertise in using Crystal Reports.

A.1 Creating Reports

When you are ready to create a report, refer to the Crystal training documentation for instructions. Any existing report may be used as a template for your reports. Additionally, two base templates have been provided.

Place your reports in the parent directory where all other Web Modules reports are located.

Templates

To create reports that have the same look and feel as the standard reports, you may use the templates that are shipped with the product. These templates are located in the Reporting\Reports\Images folder and are named:

Portrait_Blue_Lines.rpt
Portrait_Blue_Lines-Land.rpt

The Portrait_Blue_Lines.rpt template is for creating portrait reports, and the Portrait_Blue_Lines–Land.rpt template is for creating landscape reports.

When creating a new report, if you base it off one of the above mentioned template reports, you will have the same basic structure as the out-of-the-box reports.

Using the templates will create the needed header object, MyLogo, so that the update reports page will update your custom reports as well as all of the included reports.

Identifying Data Table and Column Structure

For a report to pull information from the database, it is necessary to identify the location where the data is stored.

- To find the table and column name information refer to the instructions in the *Administrator Guide, Section 3. Web Modules Configuration, User Interface (UI) Options* to turn on UI controls and find the necessary information.
- The views and columns within the reports have been named to correspond to the labels in the web and Enterprise Portal screens. Therefore, finding the data in the views should be simple once you become familiar with them.

Summary Information

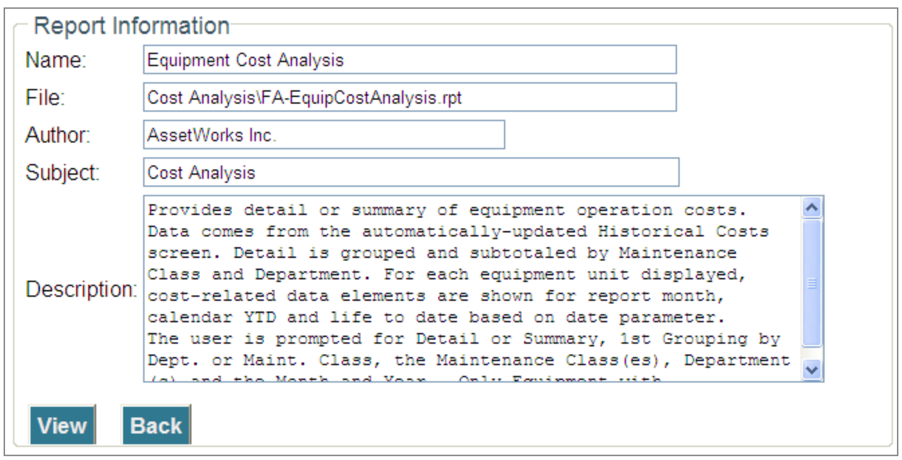
The Summary Information section is where you may choose to provide basic information regarding the report to assist users when trying to locate reports. Completing this section is optional.

To create the summary information for a Crystal report:

1. Select **File**, **Summary Info**.
2. Enter the **Report Title** and **Description** information on the report summary.

   *This information is displayed in Web Modules when the user clicks the **About** button. If you include a title in the report summary information, it is displayed in Web Modules as the title instead of the report file name. This creates a much more user-friendly interface to the reports. It is necessary to update the report titles as report names or the file name will continue to be the report title.*

The following is a sample Report Title and Description:


Report Information

Name: Equipment Cost Analysis

File: Cost Analysis\FA-EquipCostAnalysis.rpt

Author: AssetWorks Inc.

Subject: Cost Analysis

Description: Provides detail or summary of equipment operation costs. Data comes from the automatically-updated Historical Costs screen. Detail is grouped and subtotaled by Maintenance Class and Department. For each equipment unit displayed, cost-related data elements are shown for report month, calendar YTD and life to date based on date parameter. The user is prompted for Detail or Summary, 1st Grouping by Dept. or Maint. Class, the Maintenance Class(es), Department

View Back

To update the report titles as the report names in Web Modules, it is necessary to run the executable file, rpttitles.exe which is located in the InfoCenter\Bin directory. This file must be run from the server, and cannot currently be run from a UNC path.

Reporting Views

Views for use with reporting have been created. These views make data available from multiple tables with the proper links. They also have user-friendly column names for easier report creation.

We have found that performing links in the WHERE clause of a view is usually much more efficient than using the linking in Crystal Reports. Poor linking can make significant differences in the performance of a report, so always be aware of how you link tables. The views also properly link data between relevant tables.

Some of the included views have restrictions built into them so that you do not have to build them into the reports (e.g., the view RPT_EMP_MECHANICS has a where clause of "WHERE empl_time_charged = 'Y'").

When using these views in SQL Plus, the field names are surrounded by double quotes because they often contain spaces and mixed case.

Prefixes Used for Reports and Views

It is recommended that you create recognizable prefixes for your own reports and views to use with reports. This will distinguish between yours and Web Modules' included reports and views.

Reports: The Web Modules reports always start with a prefix of **FA-** or **FAC-**. Avoid using these prefixes when naming your reports as they may be overwritten during an update.

Views: When naming your views to use with reports, avoid using the following prefixes: **RPT_**, **RPTC_**, **RPTCLV_**, or **RG_**. These are prefixes that are used to name views. If you alter the included views or create your own with these prefixes, they could be overwritten during an update.

RPT_
RPTC_ Used for customer-specific report views.
RPTLV_ Used for report choice-list views.
RPTLVC_ Used for customer specific report choice-list views.
RPT_RG_

Choice-lists and Their Views

You can make use of views for choice-lists. These views have the following very strict structure:

```
CREATE VIEW view_name
(
"Fixed",
"Item",
"Desc"
)
AS
SELECT
0,
field to use for key,
field to use for description
FROM table or view to select from
;

GRANT ALL ON view_name TO prototype;
CREATE PUBLIC SYNONYM view_name FOR EMSDBA.view_name;
```

The following is an example of an Oracle script to create a list view:

```
CREATE VIEW RPTLV_LOCATION
(
"Fixed",
"Item",
"Desc"
)
AS
SELECT
2,
'[ALL]',
''
from sys_main
UNION
ALL
SELECT
0,
loc_loc_code,
NAME
FROM LOC_MAIN
;
```

To use a choice-list, you need to have a corresponding .xml document that includes the following:

<FilterItem>

<Name>parameterName</Name>
<Choice-list>ListViewName</Choice-list

</FilterItem>

Where **Name** is the parameter (filter) name from the report and choice-list is the name of the Report List View.

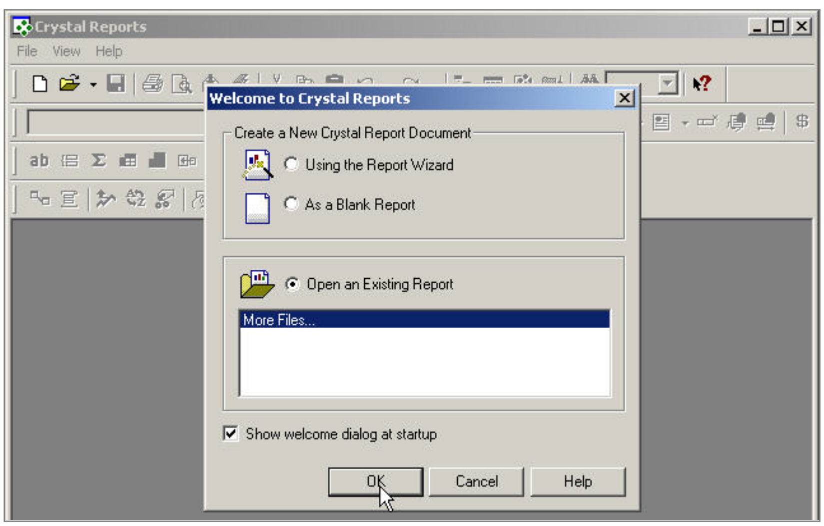
Consult your database administrator before adding any objects to the database.

Creating New Reports from Existing Ones

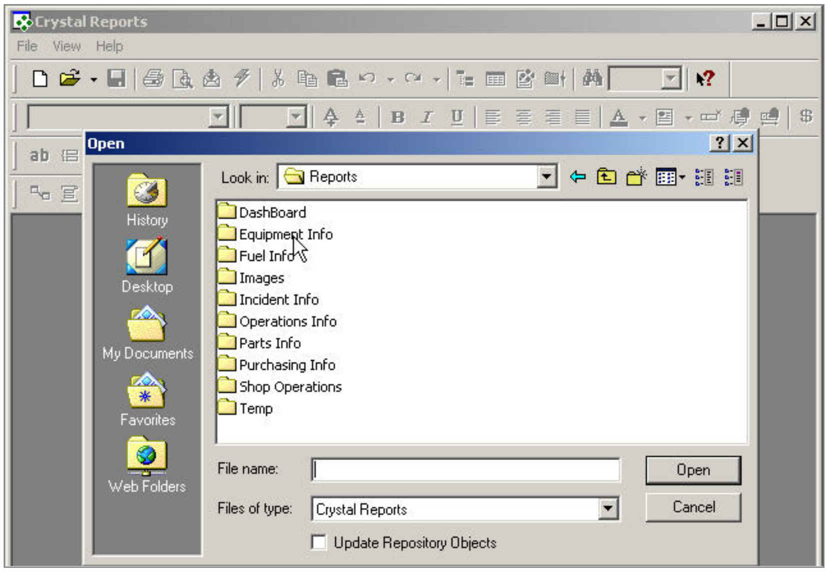
To make creating reports easier, you can create a copy of an existing report and update to match your needs. Follow the process below to create a copied report.

To create a new report from an existing report:

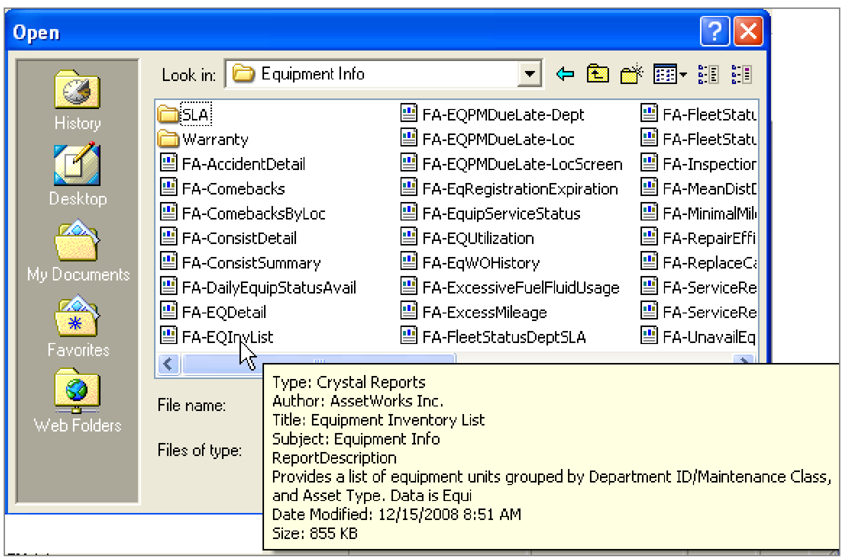
1. Launch Crystal Reports.
2. On the Welcome to Crystal Reports screen, select **Open an Existing Report** and click **OK**.



3. In the Open dialog box, browse to the shared reports directory on the Web Modules Reporting server. An example path for connecting across a network is: \\InfoCenterServer\CompanyName\FASuite\Reporting\Reports.

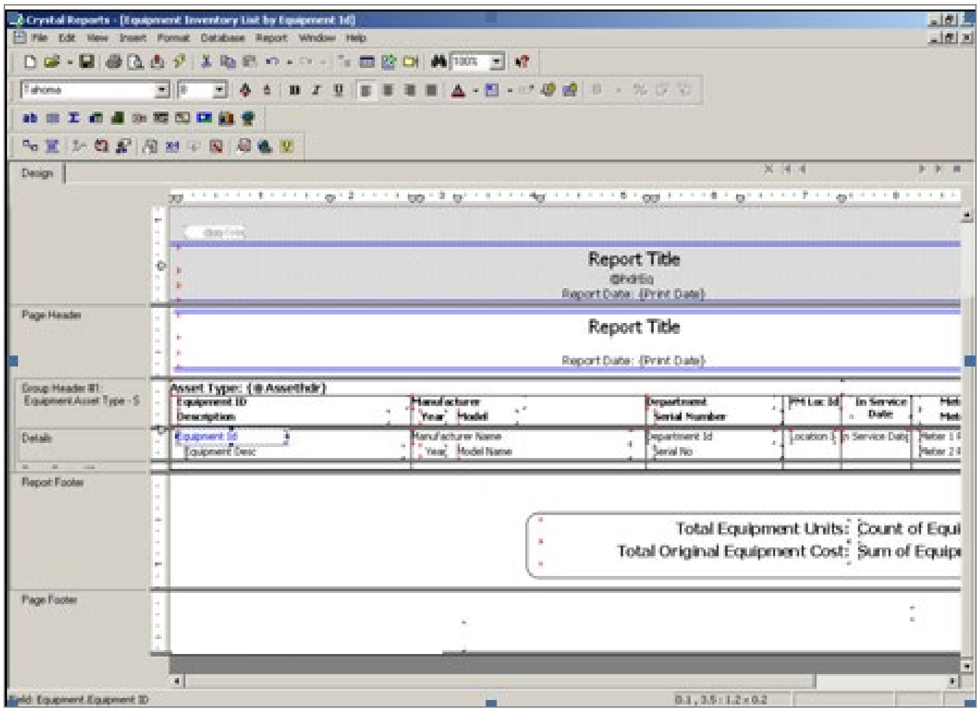


4. In the Open dialog box, select a reports subdirectory and a report file (.rpt file).



5. Use Crystal Reports to edit reports.

⚠ Always save modified files to names other than the out of the box default. Failure to do so may result in your changes being overwritten when the system is updated. For example, the file name should NOT begin in **FA-** or **FAC-**.



Report content editors may refer to Appendices A.2 and A.3 for detailed instructions on testing, uploading, and publishing reports.

Indexes

It is recommended that you try to use indexed fields as parameters for reports. Reports run much faster if you limit your report parameters to fields that are indexed in the database. For instance, if you limit on an employee ID instead of their name, then (in most cases) you will get much better performance from your report.

Consult your database administrator to find out which fields have indexes.

The XML File

The xml file holds information that is used by the Web Modules environment to better suit the user's needs. The xml file has the same name as the report except with the .xml extension. The xml files are useful as they allow you to do the following:

- Build hyperlinks from one report to another
- Access choice-lists when defining filter data while executing reports
- Pass through default values to the report instead of selecting values from a choice-list when defining restricting values

The following is a basic xml file layout:

<ReportSettings>

```
        <HotLink>
            <Name>Equipment</Name>
            <Title>Equipment WO History</Title>
            <Destination>Equipment Info\FA-EQWOHistory.rpt</Destination>
        </HotLink>
        <FilterItem>
            <Name>MaintCla</Name>
            <Choice-list>RPTLV_CLA_MAINT</Choice-list>
        </FilterItem>
    </ReportSettings>
```

Keywords:

- **ReportSettings:** This is required syntax for these files.
- **HotLink:** This section describes a hot link to another report.
- **Name:** The name of the report to link to.
- **Title:** The title to display to the user if there are multiple possible reports to link to.
- **Destination:** The path to the linked report.
- **FilterItem:** This section describes parameter specific information.
- **Name:** Matches the parameter/prompt name in a report.
- **Choice-list:** Use this optional item to include a choice-list for a parameter item. This is the name of the choice-list view.

Constructing Hyperlinks Reports

It is recommended to use hyperlinks to connect to other existing reports when it makes business sense to do so. Common report hyperlinks are work order number and equipment ID.

There are three parts to successful hyperlinks in Web Modules. They are the rptPath formula, the Format Formula Editor, and an xml file.

The xml file contains the following:

- the <HotLink> tag
- the <Name> tag which refers to the field name in the formula
- the <Title> tag for the report name to which you are linking
- the <Destination> tag which is the file name of the report to which you are linking

The .rpt file and the .xml file for the report must reside in the path specified in the rptPath formula.

The formula and information necessary to create the link include the following items:

- The name of every parameter in the linked report
- The values for each of those parameters
- rptPath formula

To create a hyperlink:

1. Right-click on the field to link and choose **Format Text**.
2. Then go to <hyperlink tab>, <choose a file>, and click on the X-2 button with the pencil.
3. Add the code to create a hyperlink using the Format Formula Editor.

The following is a sample Hyperlink formula:

```
formula = "LinkManager.aspx?SourceReport=" & {@rptPath} &
"&SourceName=WO&Page=Report&Location=" _
 & {WO_Main.Work Order Loc} _
 & "&WOYear=" & totext({RPT_WO_MAIN.Work Order Yr},0,"")_
 & "&WONum=" & totext({RPT_WO_MAIN.Work Order No},0,"")
```

Where WO is the name of the variable in the original report in the format hyperlink section and in the .xml file (see below).

```
<HotLink>

    <Name>WO</Name>
    <Title>Work Order Detail</Title>
    <Destination>Operations Info\FA-WODtl.rpt</Destination>

</HotLink>
```

Any text after **Page=Report&** will be the variable parameters for the report that you are linking to.

In the above example, the underscore is a continuation character. You can also place the entire statement on one line. When using hyperlinks to the Work Order Reports, use the totext function to convert the work order year and work order number from numeric (which displays the .00 as a default) to text.

The rptPath

The ***rptPath*** formula enables Web Modules to hyperlink to another report. It provides the reference for the folder and name of the report you are editing.

Add the following *rptPath* formula to each report:

Formula = "**Folder\report.rpt**"

For example, to link to the Equipment Detail report, use Formula **= Equipment Info\FA-EQDetail.rpt**.

This formula is used in the associated formula for the linked report when it is implemented in Web Modules.

rptPath is the folder structure starting at FASuite\InfoCenter\Reporting\Reports.

A.2 Testing and Uploading Reports

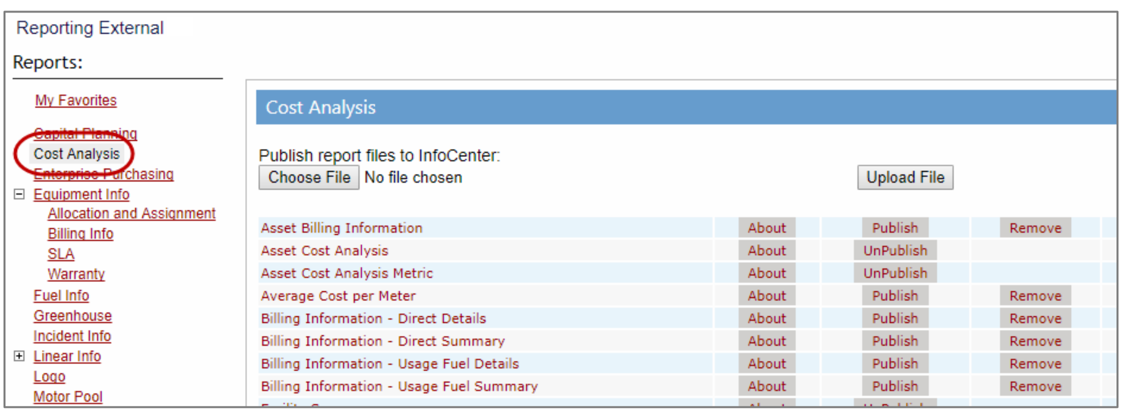
Once a report is created, test it locally to make sure it runs correctly. After successful testing, upload the .rpt and .xml files to the Web Modules using the file upload procedure mentioned below. Users belonging to the defined report creators group may use the Web Modules client to upload these files.

The report location is important for the Web Modules formula used in hyperlinking. Therefore, save reports in the parent directory where all the other Web Modules reports are located.

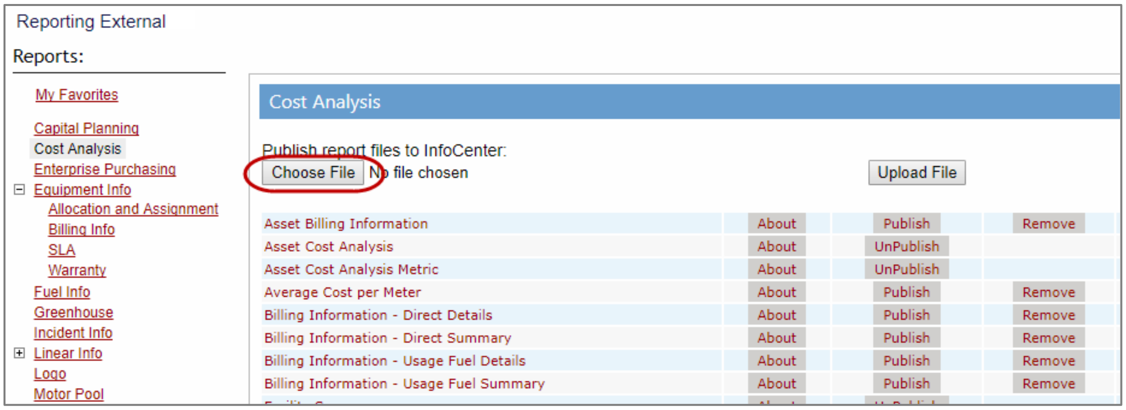
To upload a report:

1. Log in to the Web Modules and click on the Reports tab.

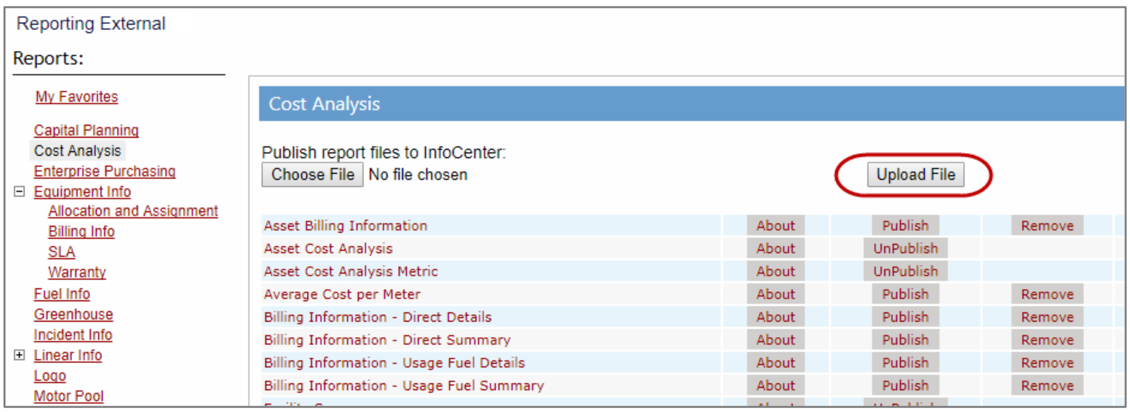
2. In the reports menu structure to the left, navigate to the folder or sub-folder where you wish to upload your new report.



3. In the right hand panel, click **Choose File**.



4. Browse to the rpt file and double-click or click **Open**.
5. Click **Upload File** to upload the rpt file to the Web Modules server.



6. When you see the report listed, you the upload is complete.
7. Test the report to ensure it works.
    i. Run the file using the Web Modules client to ensure that it works in the Web Modules environment.
8. When you are ready to grant users access to your report, publish it using the methods described below (Publishing Reports) and grant access to the report on the Report Rights Template screen.

A.3 Publishing Reports

Once the report has been successfully tested and uploaded, you may publish the report or remove it from the web modules.

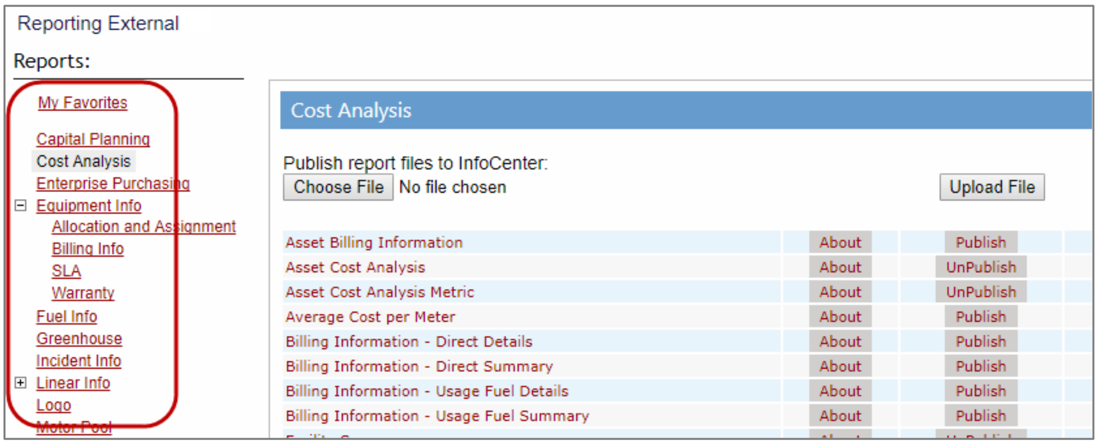
When a report is published, it means that the report is now available to be viewed by users with the rights to view the report.

Each report that needs to be made available to users must first be published before security rights can be applied for the user group.

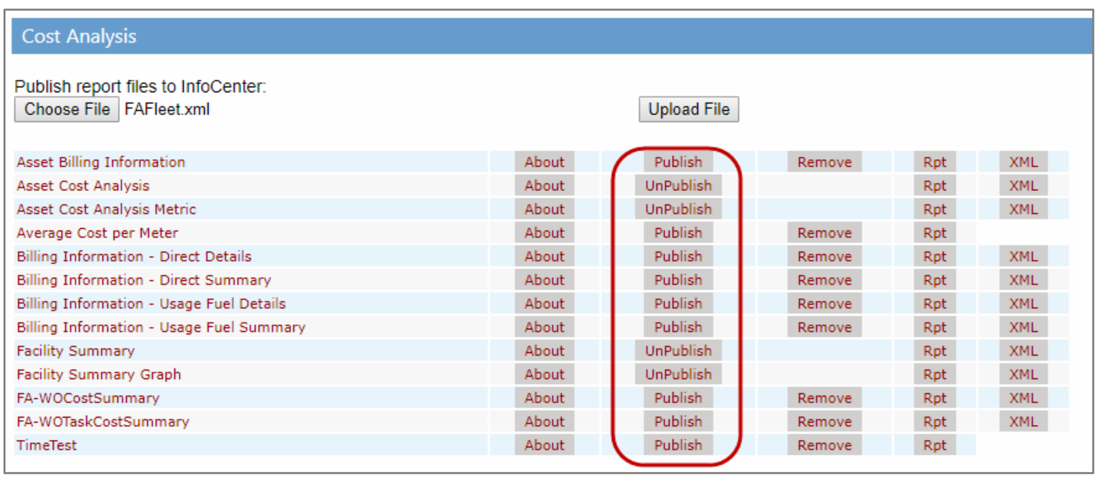
To publish a report:

1. Open the appropriate Reporting module.

2. Click on a report group to see the list of available reports.



3. Next, click **Publish** next to each report you would like to publish.



*The **Publish** button turns into an **UnPublish** button after you click it. If you later determine a report should no longer be visible to users you can unpublish the report by clicking **UnPublish**.*

You must publish each report prior to defining security rights.

Defining Security Rights for Published Reports (versions 5.3 and greater)

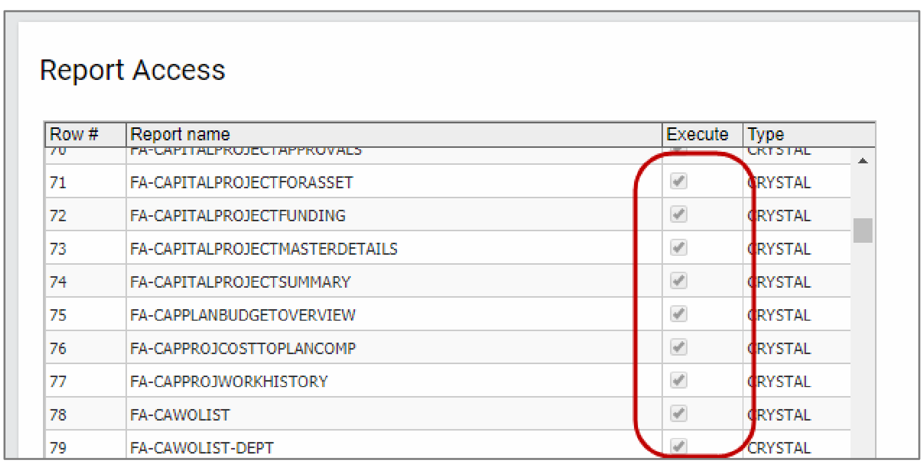
Before web modules users (other than report creators) may view reports in the web modules, they must have rights to view them through their user group. Granting access is performed in the Report Rights Templates screen and is conducted in the same manner as granting rights to view Query or Report Generator Reports.

To define security rights:

1. Open the Report Rights Template screen (shown as Reports Access in the screen menu)
   - In the Enterprise Portal screens, open the Reports Access screen.
2. Click **Search** and filter for the appropriate Report Rights Template ID.
3. Click **Apply Filter**.
4. Click **Edit**.

   In addition to all Query/Report Generator reports (marked with a type of RPTGEN), all web modules reports are listed in the reports list (marked with a type of CRYSTAL).

5. Check the **Execute** box for each report that users associated with this reports rights template need to access.



Report Access

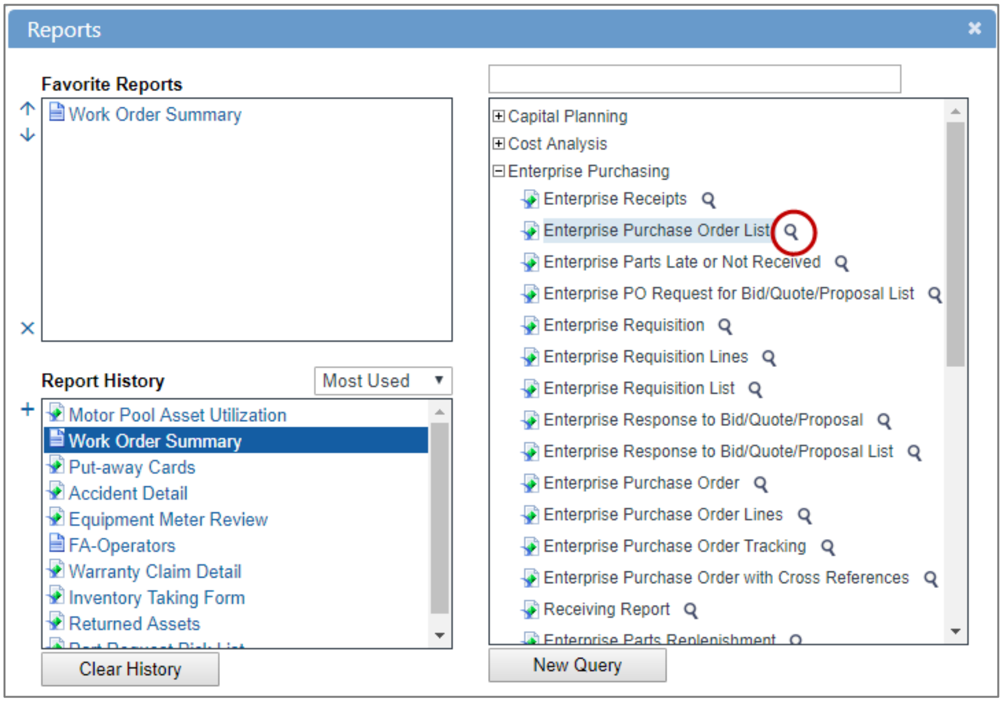
Row #	Report name	Execute	Type
70	FA-CAPITALPROJECTAPPROVALS		CRYSTAL
71	FA-CAPITALPROJECTFORASSET		CRYSTAL
72	FA-CAPITALPROJECTFUNDING		CRYSTAL
73	FA-CAPITALPROJECTMASTERDETAILS		CRYSTAL
74	FA-CAPITALPROJECTSUMMARY		CRYSTAL
75	FA-CAPPLANBUDGETOVERVIEW		CRYSTAL
76	FA-CAPPROJCOSTTOPLANCOMP		CRYSTAL
77	FA-CAPPROJWORKHISTORY		CRYSTAL
78	FA-CAWOLIST		CRYSTAL
79	FA-CAWOLIST-DEPT		CRYSTAL

6. Repeat the steps outlined above for all report rights template IDs. Users assigned to user groups having these report rights template IDs will now be able to view assigned reports in the web modules.

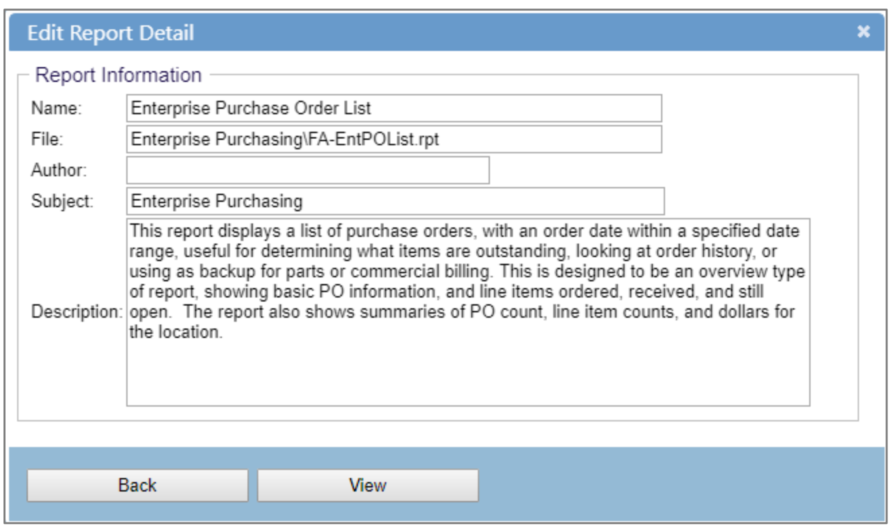
All Web Modules reports are listed by their report title. If you need to update or access the file, perform the following process:

   i. Click the **Reports** shortcut to open the Reports menu.

ii. Find the report and click the magnifying glass next to the report.



iii. Edit the needed information, or find the information you need for this report.



iv. When you are done, click **View** to run the report, or **Back** to exit this menu.

Appendix B. Technical Extras for Report Content Editors

This appendix provides optional technical reference information to assist report content editors. It assumes expertise in using Crystal Reports.

B.1 Standards

The following section provides several standards that are used when creating out of the box reports.

Naming Conventions

- Reports are always named with a leading **FA-** or **FAC-**.
- Views are always named with a leading **RPT_**, **RPTC_**, **RPTLV_**, **RPTLVC_**, or **RG_CR_CON_**.
- If you chose to create your own reports or views, use a naming convention different from the standard naming convention. Otherwise, your custom work could be in jeopardy when performing updates to Reporting.
- It is strongly recommended that you use the views provided since much effort went towards ensuring that links were properly created between related tables to optimize performance.

Before making your own views, please consult your database administrator.

Group Headings

It is recommended that customizing the formula for group heading so the ID is linked with the name when the tree structure is shown in web modules.

1. To customize the formula for the group heading, navigate through **Change Group**, **Options**, **Customize Group Name** field, **Use Formula for Group Name**.
2. Click **Formula Workshop** to edit and add a formula (formula = Combine ID, name, or description).

   Sample Group Heading formula:

   formula = Combine ({RPT_WO_MAIN.Work Order Loc},{RPT_WO_MAIN.Location Name})

Totals in Group Footings

To format the totals in group footings, place a box around totals. Format the box and choose rounding to make the corners rounded at 10%. All text is bold, Tahoma, and font size is 10. Grand totals are 12 point font.

Dates

To format dates, go to File, Options, Set Options, Date. Dates are formatted to MM/DD/YYYY (with leading zeros and a four character year).

Report Headings

To format the report headings, make all text fields the width of the report and centered. Use Tahoma, font size 10. Bold all except the report date and the title of the report. The title of the report is font size 14 and the report date heading is font size 8 (neither is bold).

Section Headers

To format the section headers:

1. Size each header to be the width between the lines.
2. Use Tahoma, font size 8.
3. Make the header bold and center.
4. Select each header and align the tops of all.

B.2 Formatting Tips

The following sections provide optional information that may be useful to report content editors.

Tip for Web Applications

When data for a field will not fit in the space allotted for it in the report, right-click on the field and choose <format field> and <common> tabs, and **Can Grow** check box. Set the maximum number of rows to the maximum number of rows that you want to display on the report.

The number 0 is unlimited.

Highlighting Lines

To highlight lines, you may use alternate colors in the detail section such as the first row white and the next row gray and continuing to alternate throughout the detail section.

Any report that requires alternating item shading will use the following rules:

- Color number: 14671839
- All new groups will start with a “nocolor” line, so make sure to reset the Boolean before the new group.

To set the rest of the options:

1. Open the Repository Custom Functions and add the following functions to the report:
   - ColorOnOff
   - BoolRev
2. Add the following formula for **grpColor** to your report (grpColor cannot be in a Custom Function Repository) in the Report Header section:

   ```
   WhilePrintingRecords
   Shared GrpColorOn as boolean
   GrpColorOn= true
   formula = 0
   ```

3. Add **grpColor** as a formula to set the color initially.
4. Then go to Section Expert for the detail line and add the following code in the color tab:

   ```
   shared GrpColorOn as boolean
   formula = ColorOnOff (GrpColorOn)
   GrpColorOn = BoolRev (GrpColorOn)
   ```

5. For Drill Down Reports, add the following formula:

   ```
   grpColorDtl
   WhilePrintingRecords
   Shared GrpColorOn as boolean
   if DrillDownGroupLevel=1 then
           GrpColorOn= true
           formula = 0
   else
           formula = 0
   end if
   ```

Page Setup

To format the page:

1. Set all margins to 0.25 inches.
2. Place the page number on the bottom, right side of the report.
3. Always set the page as portrait if at all possible, to lessen the impact of scrolling for the user who is viewing the report in the Web Modules.

Printer Setup

To set up the printer, check the checkbox for **No Printer**.

Heading Dates

To format heading dates, add a formula for Header Dates and call it hdrDates.

```
Date range will be:
formula = "Date From: " & minimum({?Date}) & " To: " & maximum({?Date})
Single Date will be: “Report Date: “
```

B.3 Functions

The following section outlines various functions used in reports. The information is optional and provided for reference.

Fix Commas in Oracle Databases

It is important to look for commas when reporting on data from the system. The comma character is converted by the GUI into a special character for saving to the database to avoid confusion as this character has special meaning in SQL. Since the data is coming to Crystal Reports without going through the GUI conversion, you will need to use a formula inside your reports to better present the data.

Oracle stores commas in a manner that makes them appear as a **Y** in Crystal. Most of these will be found in the description or name fields. To replace them with a true comma, add the commafix formula from the Repository Custom Functions.

The commafix formula is:

```
Function CommaFix (inputstring as string)
CommaFix =Replace (inputstring, chr(253),"," )
End Function
```

Use the commafix formula anytime you need to print a field value which contains a comma.

Following is an example of a commafix formula:

```
formula = commafix ({RPT_PM_TASKS.Work Order Loc} & ": " &
{RPT_PM_TASKS.Location Name - PM Performed})
```

Combine Function

Use the Combine function for ID and Name or Description fields. Add the Combine function from the Repository Custom functions.

The Combine function is:

```
Function Combine (ID_Field As String, DescName_Field As String)
if descname_field="" then
        Combine = ID_Field
else
        Combine = ID_Field & ": " & CommaFix (DescName_Field)
end if
End Function
```

Now you may create a new formula to display on your report and use Combine to combine the ID field to the Description.

EqComp Function

Add the EqComp function from the Repository Custom Functions. The EqComp function is used to concatenate Equipment information.

The EqComp function is:

```
Function EqComp (EqId as string, EqYr as number,EqMfr as string, EqMdl as string,
EqDesc as string)
EqComp =eqid & ": " & totext(eqyr,0,"") & " " & eqmfr & " " & eqmdl & " " & eqdesc
End Function
```

WOComp Function

Add the WOComp (Work Order Location - Work Order Year – Work Order No) Function from the Repository Custom Functions. It is used to concatenate the Work Order information.

The WOComp function is:

Function WOComp (WOLoc as string, WOYr as number, WONum as number)
WOComp =WOLoc +"-"+totext(WOYr,0,"")+"-"+totext(WONum,0,"")
End Function

Crystal Repository and Repository Functions

Adding Custom Functions to Your Crystal Repository

To add custom functions to the Crystal repository:

1. Open the Crystal report that contains the function that you wish to add to the repository.
2. On the Report Menu, click **Formula Workshop** to show the Formula Workshop.
3. Along the left side of the screen, there is a tree structure with the top item called Report Custom Functions. Click the adjacent **+** sign to expand the tree.
4. Click the function that you want to add to the repository.
5. The pop-in displays.
6. Click **Add to Repository**.
7. A prompt to add the custom function to repository displays.
8. Click **OK**.

   The function has been added to the repository.

Adding a Repository Function to a Report

To add a repository function to a report:

1. Open the Crystal report is getting the addition.
2. On the Report menu, click **Formula Workshop**.

   The Formula Workshop displays.

3. Along the left side of the screen, there is a tree structure. Expand the item titled **Repository Custom Functions**.
4. Right-click the function that you want to add to the report.
5. Click **Add to Report**.

Custom Functions

Below is a table of custom functions available for use on all reports:

Function Name	Return type	Description
CommaFix	String	Replaces any instance of character (253), **ŷ**, with a comma.
ColorOnOff	Number	Returns the color number to shade an area. Use this in the section expert to change background color.
BoolRev	Boolean	Reverses the Boolean value.
WOComp	String	Combines the WO Loc/Yr/No into a string.

No Records Returned Sections in Reports

To create a section for no records returned section:

1. Suppress all of the current report sections.
2. Insert a section below the current header, and copy the report header information into the new section.
3. Add the text box **No Records Found for Selection Criteria**: (bold, centered, and font size 14).

   The sequence for the new header is: Report Title, report date, No Records Found for Selection Criteria: text box, and Header text boxes for the prompts.

After the above information is set, use this formula example to suppress (or not suppress) the headers and sections of the report. {RPT_PART.Part NO} is used here. Use any report field for which you expect data to be returned. This will probably be returned from a parameter.

Suppresses all sections:

```
if IsNull({RPT_PART_REQUESTS.Location ID - From}) then
formula = true
else
formula = false
end if
```

Do not suppress the No Records Returned for Selection Criteria: section:

```
if IsNull({RPT_PART_REQUESTS.Location ID - From}) then
formula = false
else
```

```
formula = true
end if
If already suppressed:
if IsNull({RPT_WARRANTY_MAIN.Work Order Loc}) then
formula = true
else

        if DrillDownGroupLevel > 1 then or can be > 0 depending upon level
        formula = false
else
        formula = true
end if
end if
```