

TSI® FMS 5 SOFTWARE

HOW TO CREATE AND VIEW REPORTS

IN FMS

TECHNICAL BULLETIN TCC-140
(3/5/2021) Rev C

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Description

The purpose of this document is to detail how to create Manual Reports and Scheduled Reports in FMS.

Requirements


- FMS version 5.3.0 or above must installed.

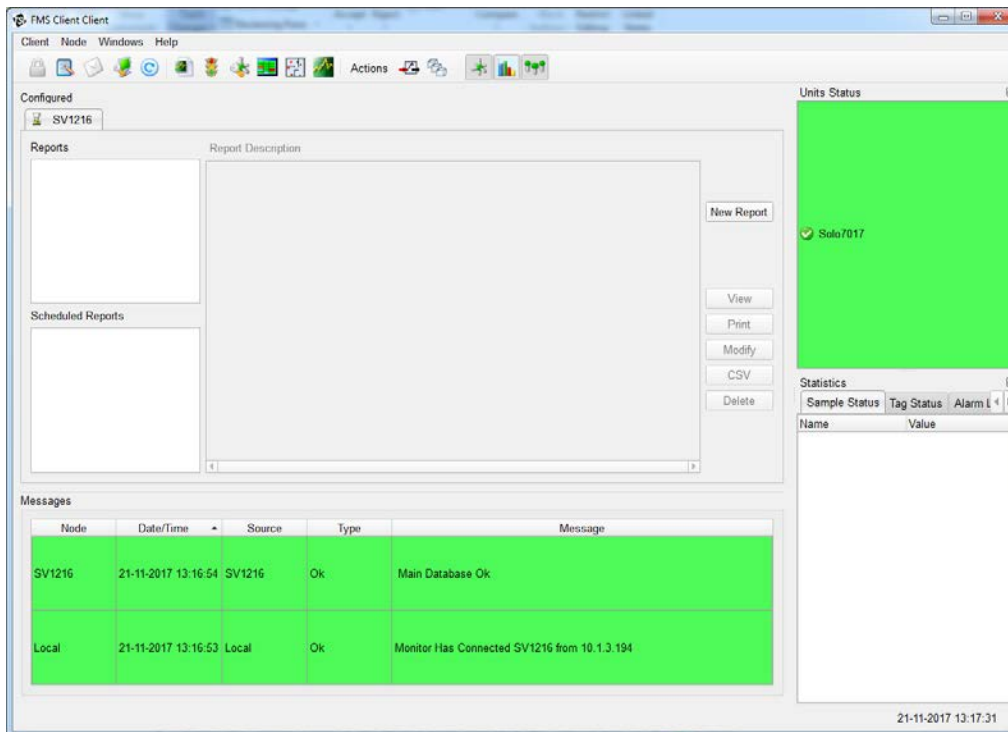


IMPORTANT NOTE

This Technical Bulletin is also valid for FMS versions prior to 5.3.0, but some settings presented here will not be available.

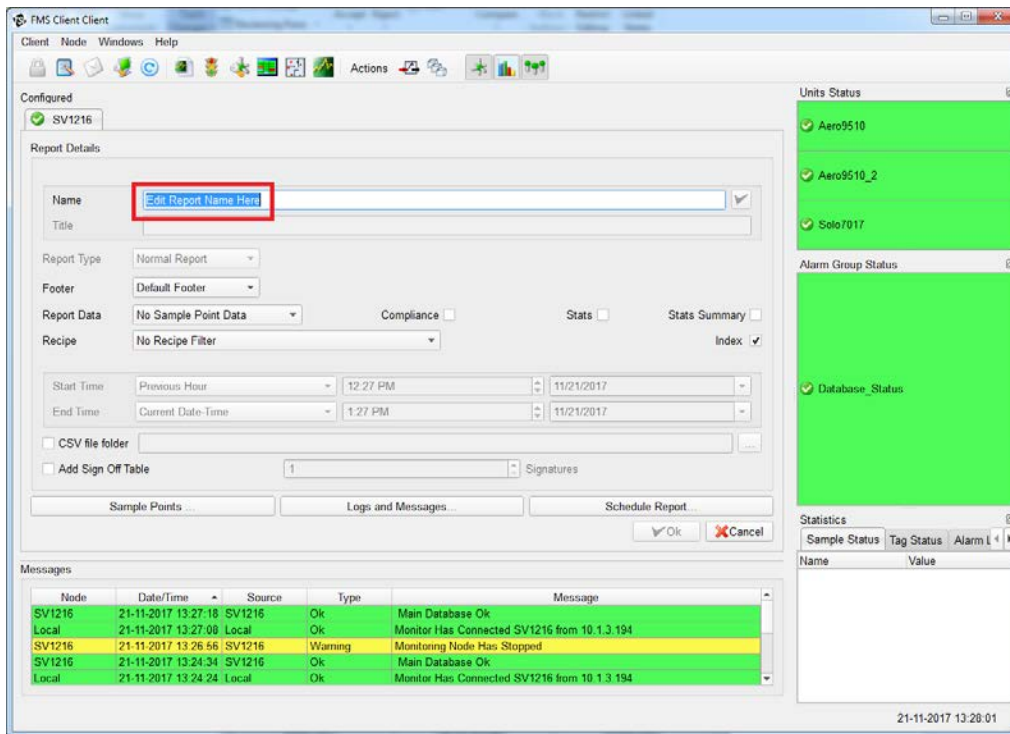
Create a New Report

1. From the **Node** menu select **Report** or click on the  button.
 - The Report window will be displayed.

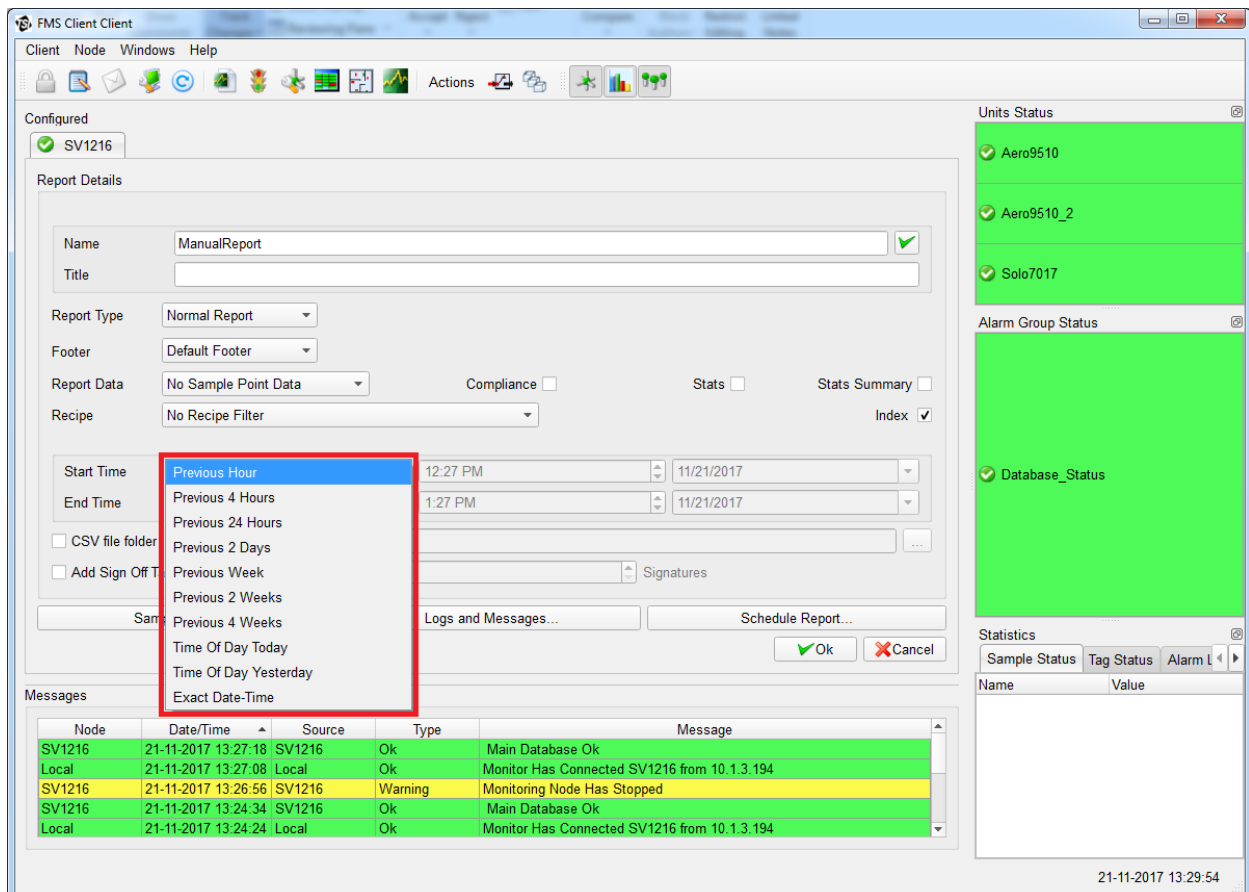


2. Click the **New Report** button.

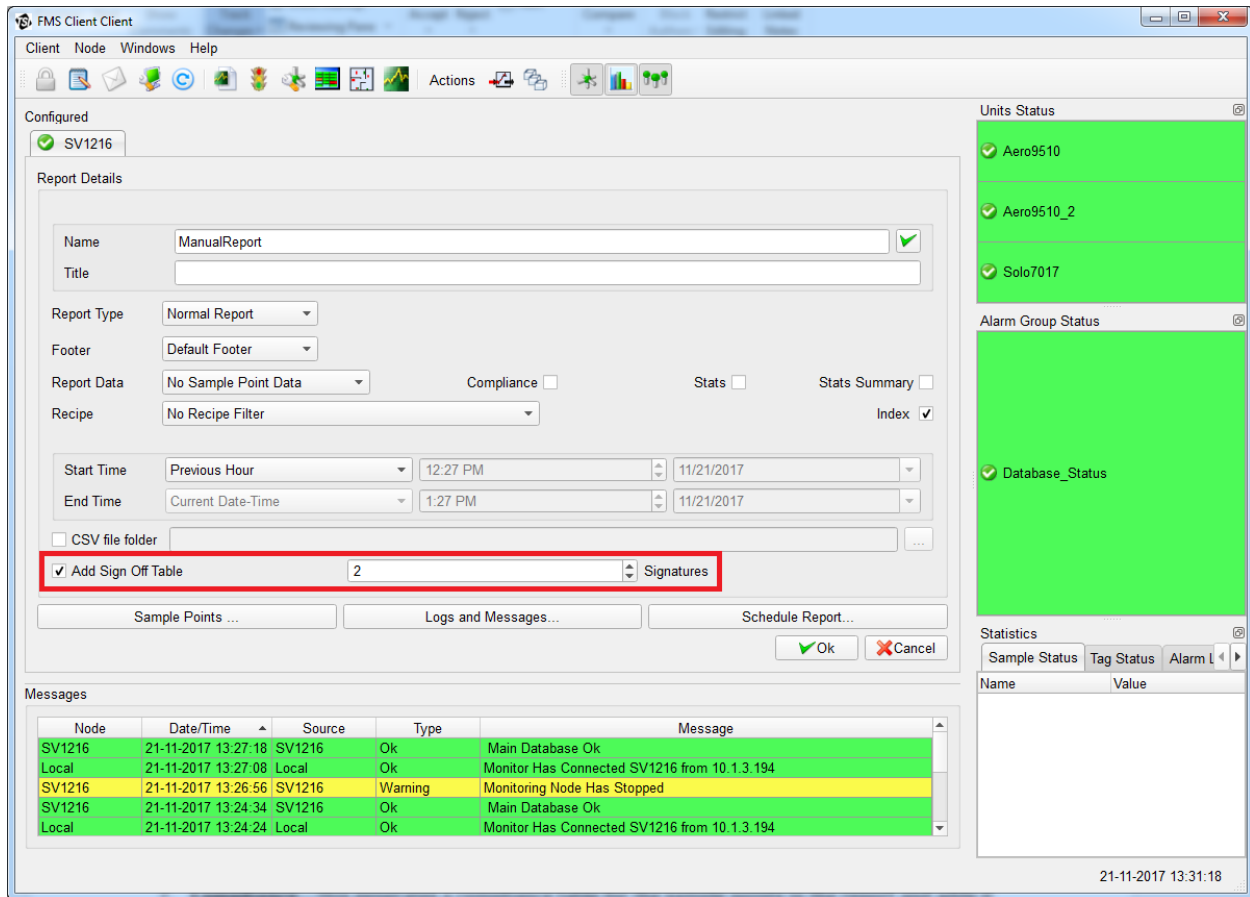
- The New Report window will be displayed.
- Enter the report name in the Name field and click the return key or the ✓ button.
- All fields will then be enabled.



3. **Start Time** and **End Time**—this is the time-frame for which the report should generate data.



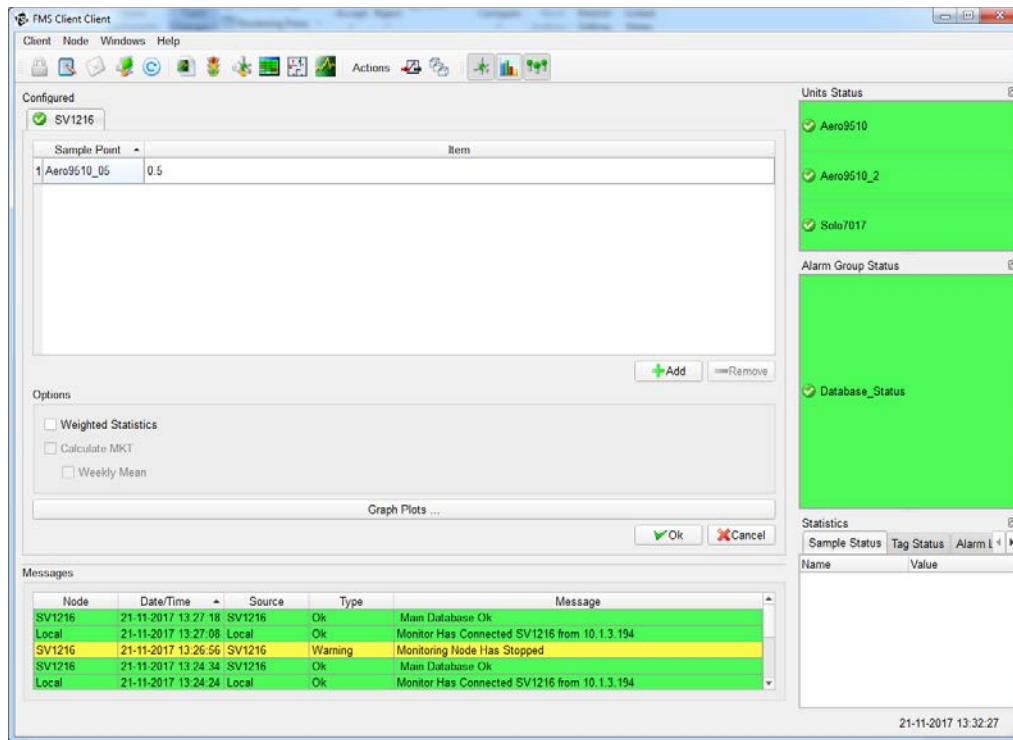
4. **Add Sign Off Table**—this adds a signoff table that people use when the report is printed to enter their name and signature to confirm that they have looked at the report.



5. **Generate CSV**—this option generates data being written to a .csv file which can be opened in a spreadsheet application. The file will be saved in the specified location. The default location is: *"Application drive:\FMS5\Users\node name\username\csv"*.
6. **Index**—this adds an index page to the report. When generating a report over a long period of time with a lot of data, selecting this option might result in slowing down the report generation.
7. **Compliance**—this generates a compliance table for the sample points in the report and adds it to the report.
8. **Stats**—this generates the statistics tables for all the sample points selected and adds them to the report.
9. **Stats Summary**—this results in generating a statistic table for all the sample points.

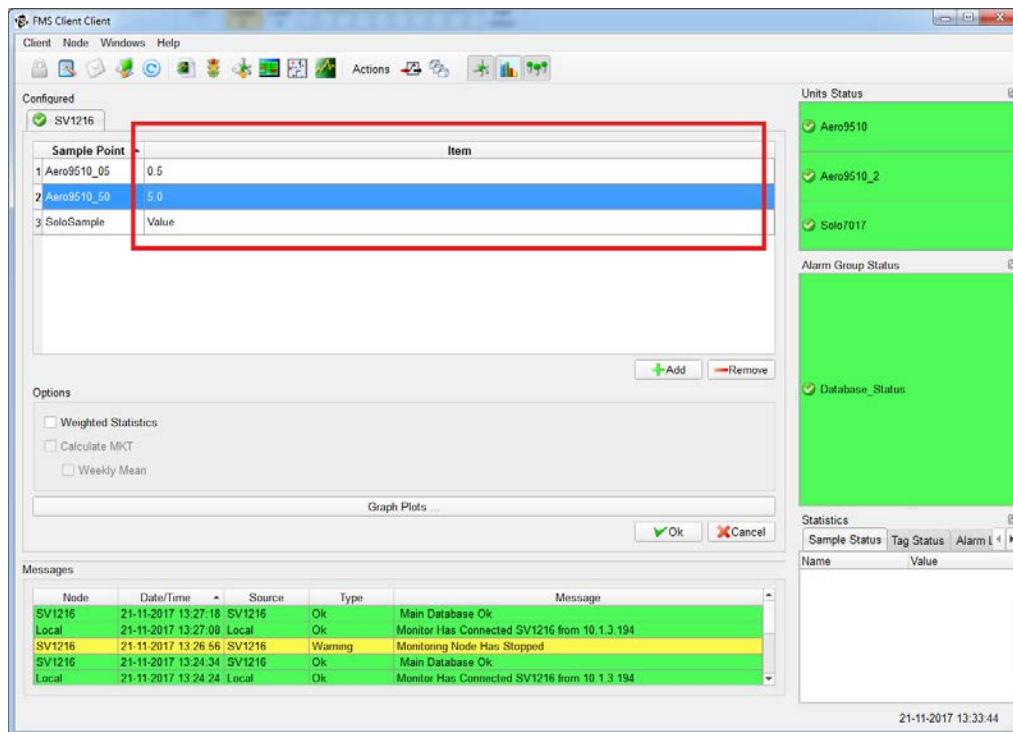
Setup Sample Points

1. Click on the **Sample Points** button. The Sample Points window will be displayed with a sample point selected as the default.
 - To select the required sample point, double click on the sample point to display the list of all the node's sample points and select the required sample point.
 - To change a sample point tag, double click on tag in the Item column to get a list of all tags.
 - Click on the tag required to select.



2. To add more sample points, click the **Add** button. This will add a new row to the table with a sample point.
3. To remove a selected sample point, click on the sample point row and then click the **Remove** button.

- For each Sample Point select the preferred tag (item column) for which you want to report data.



Sample Point Options

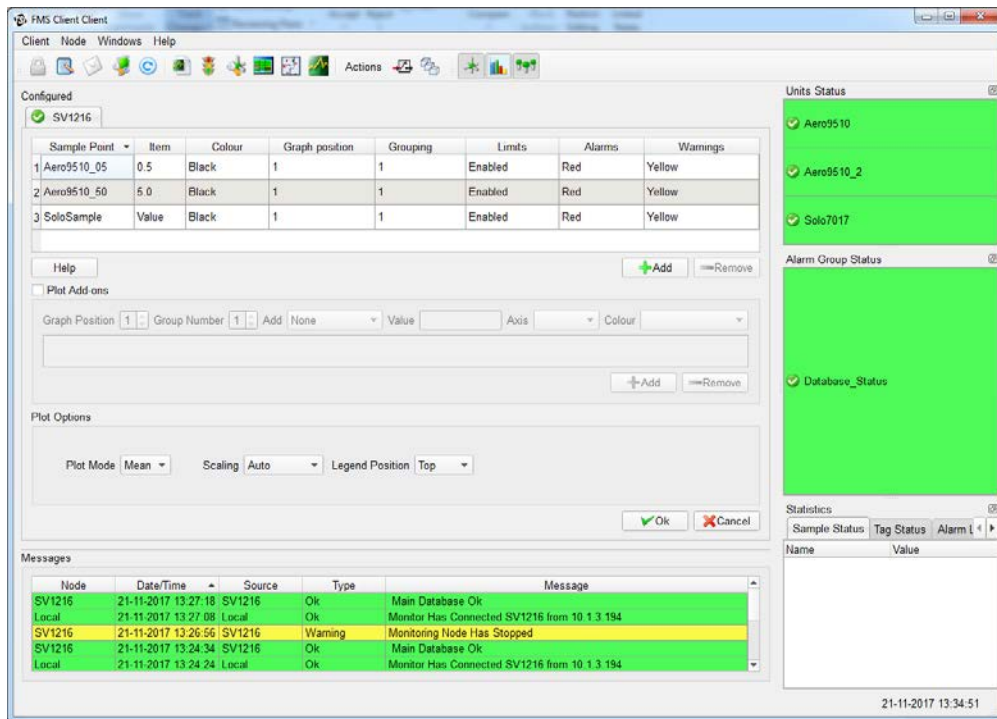
- The following are the sample point options:

Weighted Statistics	If selected, the mean, standard deviation and confidence limits will be calculated utilizing the sampling interval in use when each sample value was taken. The statistics table in the report will display weighted values.
Calculate MKT	<i>(Enabled when Weighted Statistics is selected.)</i> If selected, the mean kinetic temperature is calculated and displayed in the generated report statistics table.
Weekly Mean	<i>(Enabled when Calculate MKT is selected.)</i> If selected, this provides an alternative method of calculating MKT.

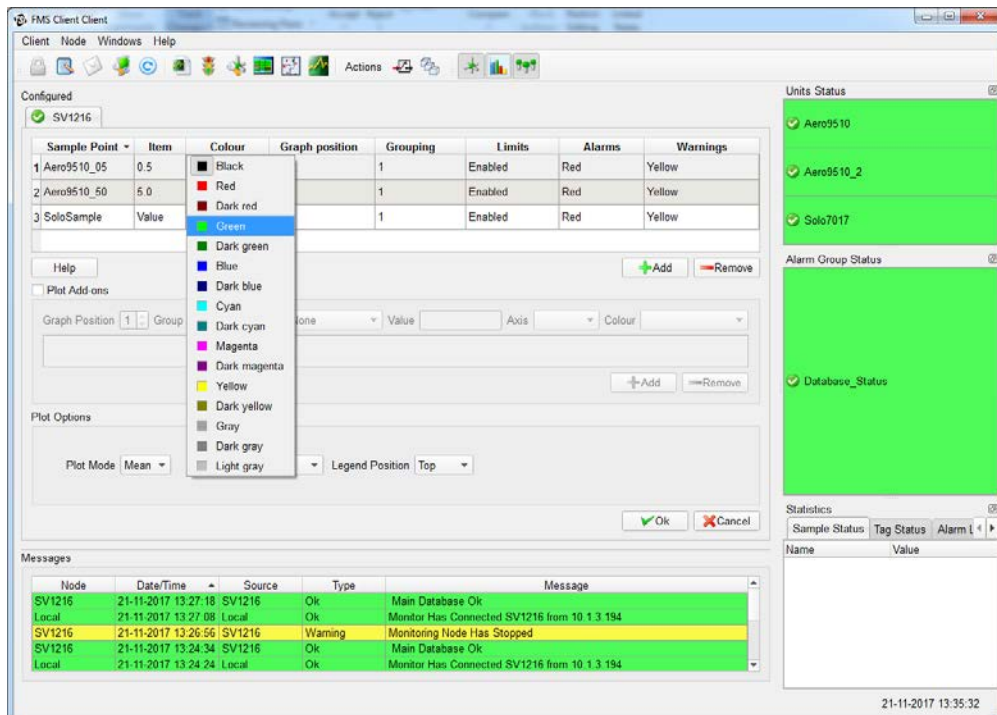
- If no graph plots are required, click the **Ok** button to save the sample point settings.

Setup Graph Plots

1. Click the **Graph Plots** button. The graph plots window will be displayed with all the sample points that have been setup in the sample point's window displayed.



2. To add more graph plots, click the **Add** button. This will add a new row to the table with a graph plot.
3. To remove a selected graph plot, click on the graph plot row and then click the **Remove** button.
4. To change the color of a graph plot, double click the color name on the Color column and select the required color from the list.



5. **Graph Position**—The Graph Position column refers to the order in which the graph will appear in the corresponding Grouping column. You can have multiple sample points assigned to the same graph position.

For Example:

- A graph position set to 1 corresponds to the first graph in the associated group.
 - A graph position set to 2 corresponds to the second graph in the associated group, and so on. Note—in this example, you have to have a graph in graph position 1 in order to add a graph to graph position 2. This would generate two graphs on a single page.
6. **Grouping**—The Grouping column refers to grouping of graphs. You can have a maximum of one group per page; each additional group will correspond to a new page of graphs.

Configure a single graph:

- To configure a single graph in a report, have all values in the Graph position column set to 1, and have all values in the Grouping column set to 1.

Configure multiple graphs:

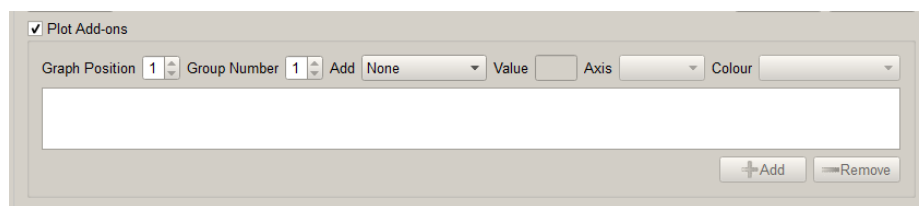
- Every sample point in a graph should have the same graph position and grouping.
- You can have a maximum of 3 graph positions per grouping, this would plot 3 graphs on a single page, and each graph will be displayed in portrait.

If you only have 1 graph position in a grouping, the graph will be on its own page, displayed in landscape.

7. **Limits**—The limit lines which are upper and lower alarms and warnings of the sample points are automatically added to the graph by default. You can choose to disable them by selecting disabled.
8. **Alarms**—The color of upper and lower alarms can be selected from the list. The default color for alarms are red.
9. **Warnings**—The color of upper and lower warnings can be selected from the list. The default color for warnings are yellow.

Plot Add-ons Setup

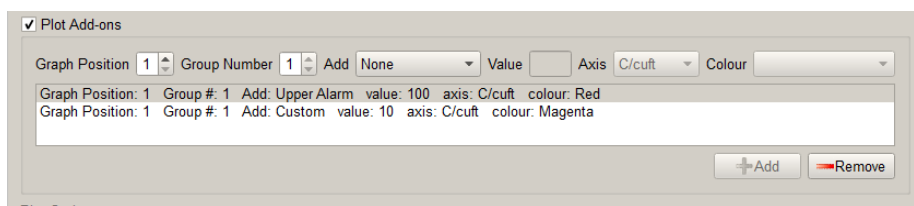
1. **Plots Add-ons**—this is an option that allows you to add items to the graph to help with data analysis. If selected the following add-on options are enabled.



The screenshot shows a configuration window titled "Plot Add-ons" with a checked checkbox. Below the title bar, there are several input fields: "Graph Position" with a dropdown menu showing "1", "Group Number" with a dropdown menu showing "1", "Add" with a dropdown menu showing "None", "Value" with an empty text box, "Axis" with a dropdown menu, and "Colour" with a dropdown menu. Below these fields is a large empty rectangular area. At the bottom right of the window, there are two buttons: "+Add" and "Remove".

Graph Position	Allows selection of the graph required for the add-on.	
Group Number	The group that contains the graph position selected that requires the add-on.	
Add	Provides a list of items (Line, Min, Max) that can be added to the graph.	
	Line	Draws a horizontal line in the given color at the given value. This is useful for marking an alarm limit line on the graph.
	Min.	The Value specifies the scale minimum. This applies for the current graph only. These definitions must precede the sample point selections.
	Max.	The Value specifies the scale maximum. This applies for the current graph only. These definitions must precede the sample point selections.
Value	Allows you to enter a value for the add-on.	
Axis	Provides a list of the graph axis.	
Color	Provides a list of colors for the add-on.	

2. After setting up an add-on, click the **Add** button to add to the add-ons list.



3. To remove an add-on, select **add-on** on the add-ons list and click the **Remove** button.

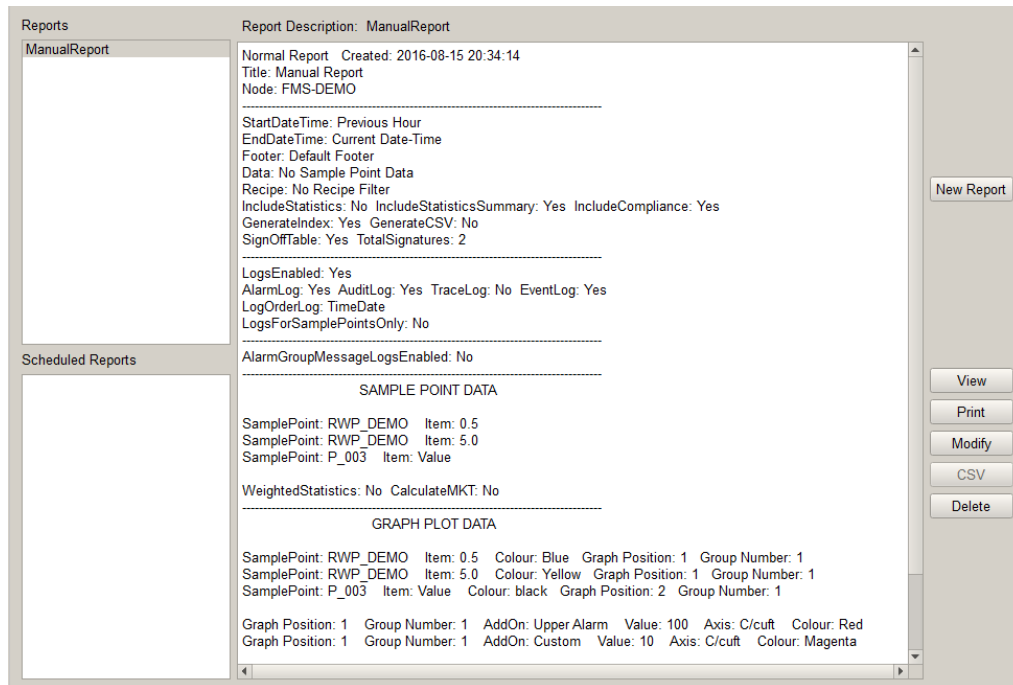
Plot Options

1. There are three plot options available:

Plot Mode	In circumstances where all data points cannot be individually plotted; e.g., where the number of samples during the report time period is large, samples will be grouped and either the mean, min or max for each group may be plotted.
Scaling	This selects if the graph scaling is forced to be linear or logarithmic. If Auto is selected, then the scales are induced from the selected sample points. If any sample point has logarithmic scales selected then logarithmic scales are used, otherwise linear scales are used.
Legend Position	Legend can be positioned at the Top, Left and Right or at the Bottom of the graph.

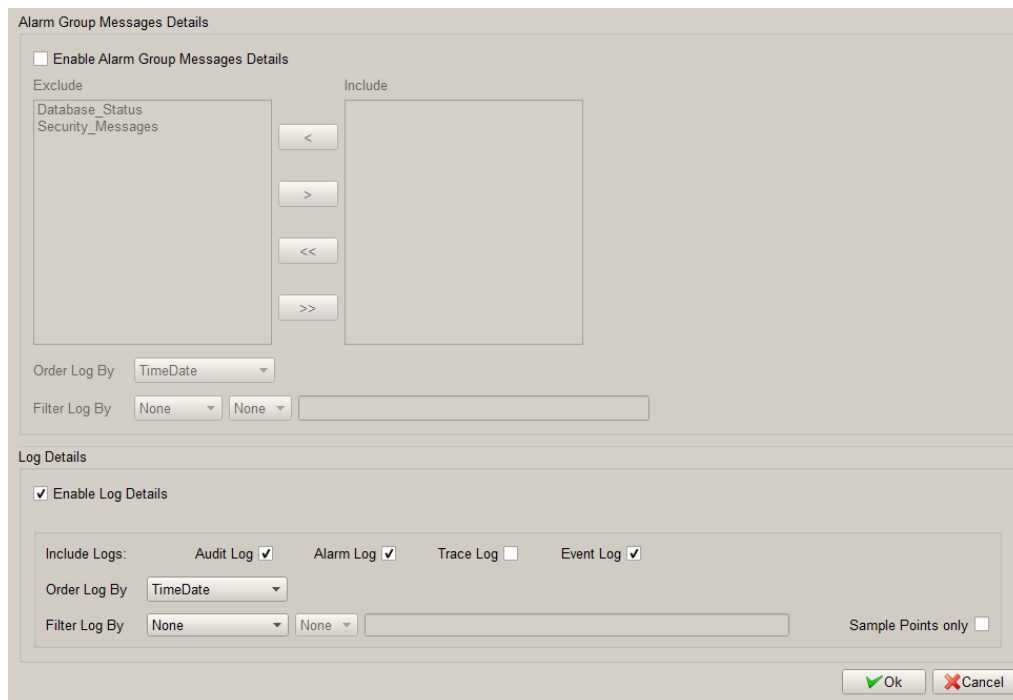
2. To save Graph Plot settings, click the **Ok** button. To exit without saving, click the **Cancel** button.
3. Click the **Ok** button to save sample point settings or click the **Cancel** button to not save sample point settings.
4. Click the **Ok** button on the report details window to save the report or **Cancel** button if the report is not required.

- When a report is saved, the report is automatically selected and its description is shown on the report description section.



Setup Log and Messages

- Click on the **Log and Messages...** button. The Log and Messages window will be displayed.



- If you want to make a report with Alarm Group Messaging, check **Enable Group Messages Details**.

Select the group you want to include and click

These messages can be ordered by:

- Time and Date
- Messages
- Source, Time and Date
- Source, Messages

- Order Log By—(enabled when “Enable Group Messages Details” selected) there are three options to order the log table columns by:

TimeDate	Order of columns is DateTime, Source, Comment. This is the default option.
Source	Order of columns is Source, DateTime, Comment.
Messages	Order of columns is Source, Comment, DateTime.

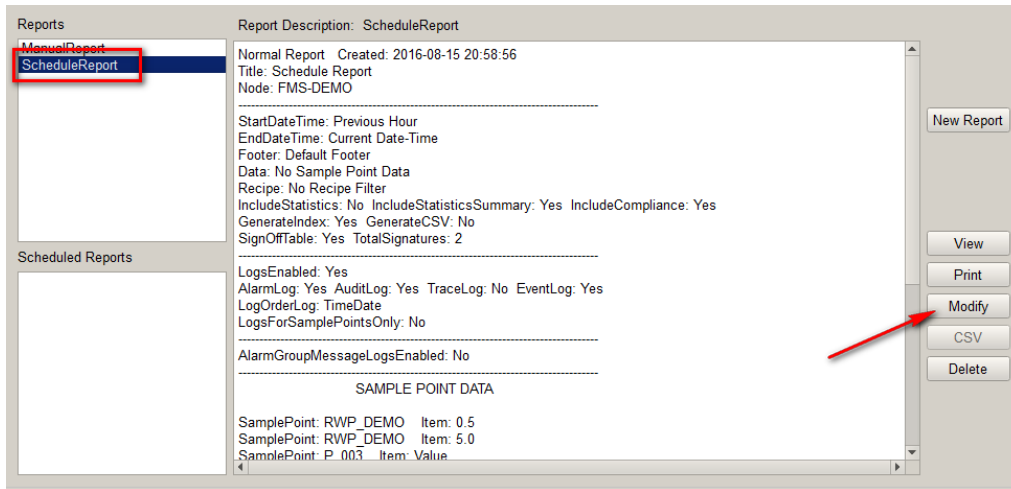
- Include Logs – there are four types of logs that can be included in a report:

Audit Log	Provides details of all audit messages logged by the client.
Alarm Log	Provides details of all the node’s sample point alarms.
Trace Log	Provides diagnostics information about communication between drivers and field equipment.
Event Log	Provides information on all the Client events.

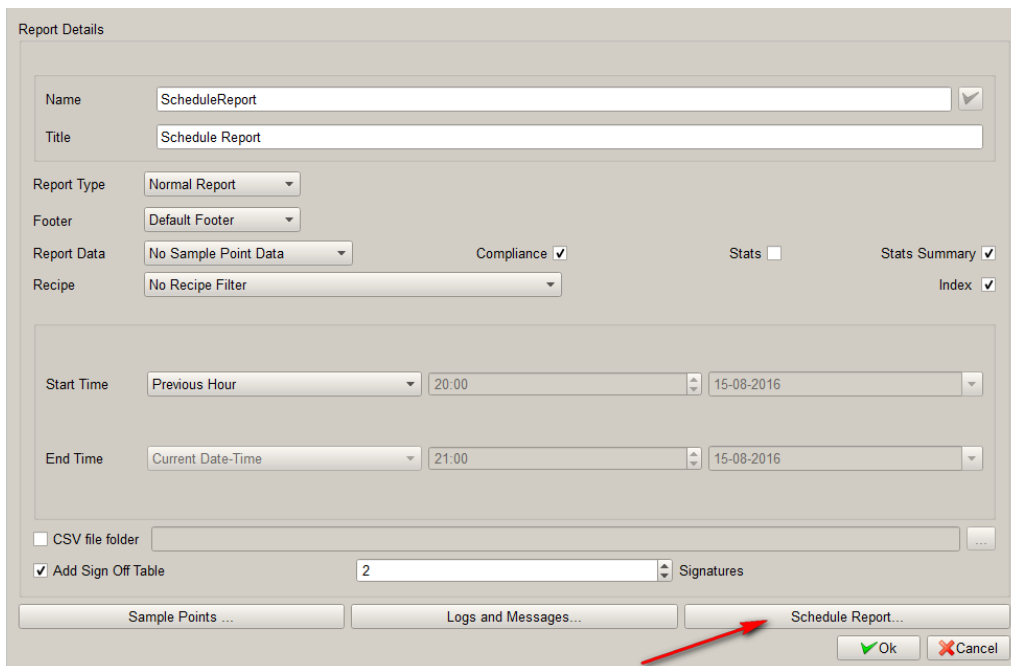
- Filter Log By—provides means for filtering the data according to the selected data filters (enabled when a log is selected).

Setup Scheduled Reports

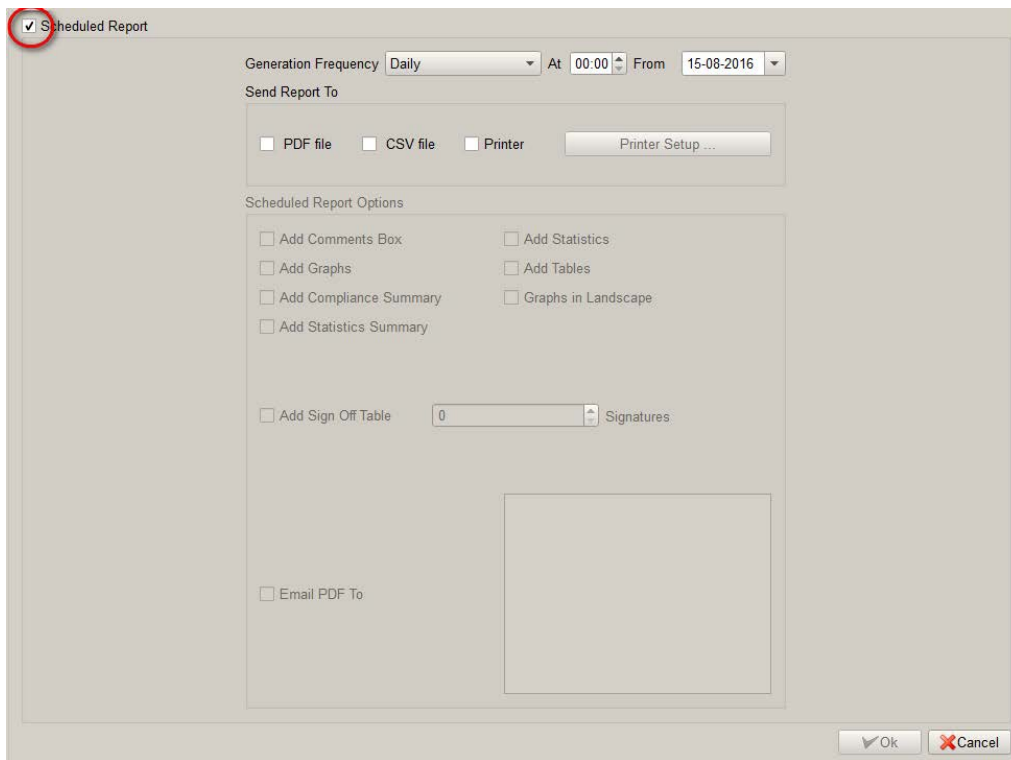
1. To run scheduled reports, the Client Options Scheduled Report User Settings needs to be setup with the username for which reports will be scheduled on the client. Reports will only be scheduled by the configured user.
2. Select the Report that you want to schedule and then click the **Modify** button.



3. Click on the **Schedule Report** button. The Schedule Report window will be displayed.



4. Select **Scheduled Report** to enable the scheduled report setup.



5. Set up the scheduled report “Generation Frequency,” time and starting date as you want.
6. **Generation Frequency**—This specifies how frequent the report is generated. The options available are:

Daily	Report is generated every day at the specified time starting from the start date.
Weekly	Report is generated every week at the specified time starting from the start date.
Every 2 Weeks	Report is generated every two weeks at the specified time starting from the start date.
Every 4 Weeks	Report is generated every four weeks at the specified time starting from the start date.
At	Specifies the time at which the report is generated.
From	Specifies the starting date from which the report is generated.

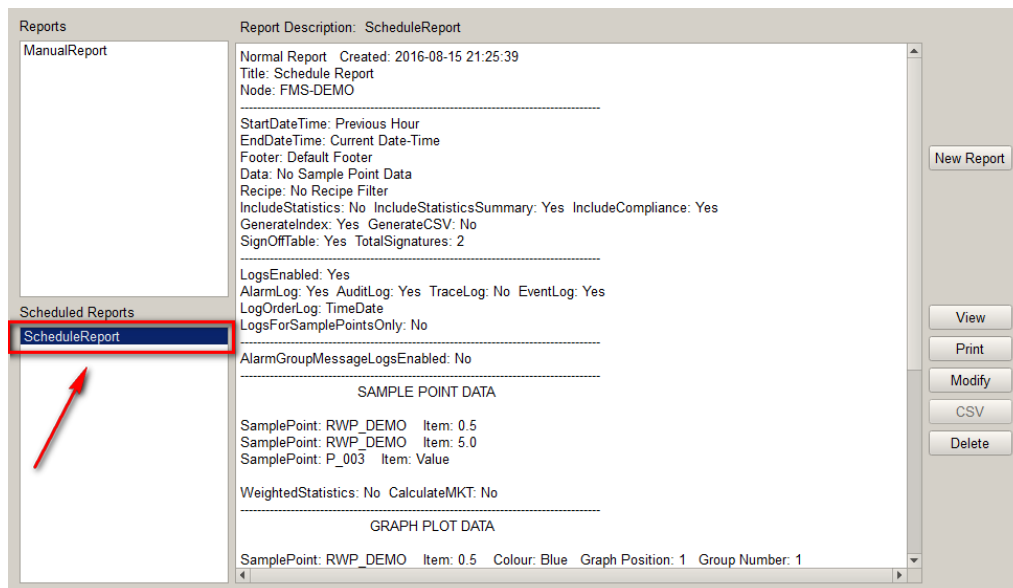
7. Select how the schedule report is received by the user:

PDF File	The report is saved as a PDF file. The location is: Application drive\Fms5\Users\NodeName\UserName\Report Name\pdf
CSV	When the option Generate CSV is selected within the report. Checking CSV will generate the report as a CSV file in the originally specified location.
Printer	The report is printed on the default printer configured for the Client computer.

8. **Scheduled Report Options**—These are enabled if you select either PDF file or Printer, or both:

Add Comments Box	If selected, this adds a comments box page at the end of the report for users to enter any comments, observations.
Add Statistics	If selected, this results in generating the statistics tables for all the sample points selected and adding them to the report.
Add Graphs	If selected, all the graph plots are generated and added to the report.
Add Tables	If selected, sample point data tables are generated and added to the report.
Add Compliance Summary	If selected, this generates a compliance table for the sample points in the report and adds it to the report.
Graphs in Landscape	If selected, this converts the graph layout from portrait to landscape when added to the report.
Add Statistics Summary	If selected, this adds a statistic summary table for all the sample points selected.
Add Sign Off Table	If selected, this adds a sign-off table that people use when the report is printed to enter their name and sign to confirm that they have looked at the report.
Signatures	Maximum number of signatures needed for this report. (Enabled when Add Sign Off Table is selected.)
Email PDF To	Allows users to email PDF files to other people. The recipients will be the people selected from the email list. (Enabled when PDF File is selected as output, if selected.)

9. Click **Ok** button to save schedule report settings. To cancel click **Cancel** button.
10. Click **Ok** button on the report details window to save the scheduled report or **Cancel** button if the scheduled report is not required.



Modify and Delete a Report

1. To modify a report, select report from list and then click the **Modify** button.
 - The report details will be displayed.
 - Edit and save changes same as when creating a new report.

Report Details

Name: ManualReport

Title: Manual Report

Report Type: Normal Report

Footer: Default Footer

Report Data: No Sample Point Data Compliance: Stats: Stats Summary:

Recipe: No Recipe Filter Index:

Start Time: Previous Hour 19:38 15-08-2016

End Time: Current Date-Time 20:38 15-08-2016

CSV file folder

Add Sign Off Table 2 Signatures

Sample Points ... Logs and Messages... Schedule Report...

Ok Cancel

2. To delete a report, select the report from the list and then click **Delete**. The report will be removed from the list.

FMS Client Client

Client Node Windows Help

Configured

FMS-DEMO

Reports

ManualReport

Report Description: ManualReport

Normal Report Created: 2016-08-15 20:40:22

Title: Manual Report

Node: FMS-DEMO

StartDateTime: Previous Hour

EndDateTime: Current Date-Time

Footer: Default Footer

Data: No Sample Point Data

Recipe: No Recipe Filter

IncludeStatistics: No IncludeStatisticsSummary: Yes IncludeCompliance: Yes

GenerateIndex: Yes GenerateCSV: No

SignOffTable: Yes TotalSignatures: 2

Scheduled Reports

LogsEnabled: Yes

AlarmLog: Yes AuditLog: Yes TraceLog: No EventLog: Yes

LogOrderLog: TimeDate

LogsForSamplePointsOnly: No

AlarmGroupMessageLogsEnabled: No

SAMPLE POINT DATA

SamplePoint: RWP_DEMO Item: 0.5

New Report

View

Print

Modify

CSV

Delete

Node: FMS-DEMO is in ALARM STATE

15-08-2016 20:40:34

View a Report

To generate and view a report, click the **View** button. This will generate a PDF report and save it in the folder C:\FMS5\Users\NodeName\System\ReportName_YYYY-MM-DDhhmmss.PDF (Ex: ManualReport_2016-08-15204312.PDF)

Print a Report

There are two ways of printing a report, either by selecting a report and clicking the **Print** button or click on the **View** button to generate the report on the Report Preview window.

Save as CSV

When the option Generate CSV is selected within the report and the report is saved, the CSV button in the main report window is enabled. Clicking the **CSV** button will generate the report as a CSV file in the originally specified location.

Change the Logo in the Report

It is possible to change the TSI logo to another logo in the reports. Edit the desired logo .jpg file in an editing program, such as Windows Paint and size the logo to no more than 40 pixels high. More than 40 pixels might result in un-predictable report layouts. Name the new logo file to logo.jpg and copy that file into the FMS5\Config subdirectory.

References

Refer to Application Note TCC-137, "Alarm Group with Messages Setup and Configuration."



UNDERSTANDING, ACCELERATED

TSI Incorporated – Visit our website www.tsi.com for more information.

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UK	Tel: +44 149 4 459200	China	Tel: +86 10 8219 7688
France	Tel: +33 1 41 19 21 99	Singapore	Tel: +65 6595 6388
Germany	Tel: +49 241 523030		