USER GUIDE

Advanced Customized Reporting Tool



QR-Patrol GOLD

A GOLD opportunity to skyrocket your security services

Table of Contents

Reposit	ory	4
1.1	Navigating the Repository	4
1.2	Using the Resources in the Repository	7
1.3	Moving Folders	7
Opening	g the Report Designer	9
Report	Designer View Types	10
Working	g with Tables	10
2.1	Using Fields in Tables	11
2.2	Groups	12
2.3	Summaries	13
2.4	Column and Header Labels	13
2.5	Managing Column Size and Spacing	14
Working	g with Charts	17
3.1	Using Fields and Measures in Charts	18
3.2	Setting Levels	19
3.3	Types of Available Charts	22
3.4	HTML5 Chart Types	23
3.5	Formatting Chart Labels	28
3.6	Displaying Data Points	28
3.7	Showing data points on a chart	29

Copyright © 2020 All Rights Reserved by Terracom S.A.

3	.8	Formatting the Axes	. 29
3	.9	Changing the Chart's Appearance Using Advanced Formatting	.31
3	.10	Interacting with Charts	.31
4.	Wor	king with Crosstabs	.33
4	.1	Using Fields in Crosstabs	.33
4	.2	Pivoting	.34
4	.3	Summarizing	.35
4	.4	Collapsing and Expanding	.35
4	.5	Merging and Unmerging Crosstab Cells	.35
4	.6	Sorting	.36
4	.7	Changing How Totals Are Calculated Using Time Balance	.37
4	.8	Calculating Fields and Measures	.38
4	.9	The Formula Builder Tab	.40
4	.10	The Summary Tab	.40
4	.11	Planning and Testing Calculated Fields and Measures	.41
4	.12	Summary Calculations	.41
5.	Filte	rs	.44
5	.1	Creating a Filter	.44
5	.2	Relative Dates in Filters	.45
5	.3	Custom Filtering	.45
5	.4	Adding a New Filter to an Existing Custom Expression	.45
5	.5	Removing a custom expression from a view	.46
6.	Rep	ort Templates	.46
7.	Gett	ing New Perspectives on Data	.46
7	.1	Column Formatting	.47
7	.2	Conditional Formatting	.48
7	.3	Interactively Filtering Report Output	.50
7	.4	Interactively Sorting a Report	.50
7	.5	Moving, Resizing and Hiding Columns	.50
7	.6	Setting Output Scale	.50
8.	Run	ning, Navigating and Exporting your Report	.51
8	.1	Opening a Custom Report	.51

Copyright © 2020 All Rights Reserved by Terracom S.A.

	8.2	Navigating the Report	.51
	8.3	Exporting the Report	.52
	8.4	Running a Report with Filters	.53
9.	Wor	king with Dashboards	.54
	9.1	Viewing a Dashboard	.54
	9.2	Creating a Dashboard	.56
	9.3	Edit the Resources in the Dashboard	.57
	9.4	Modify the Dashboard	.59
1(D. So	cheduling	.59
	10.1	Setting up a Job	.60
	10.2	Create a Schedule	.61
	10.3	Setting up the Schedule	.62
	10.4	Setting up the Parameters	.65
	10.5	Setting up the Output Options	.66
	10.6	Setting up the Notifications	.70
	10.7	View your List of Created Scheduled Jobs	.73
	10.8	View scheduled jobs for an individual report or dashboard	.74
	10.9	Editing Schedules	.75
	10.10	Running a Job in the Background	. 76

QR-Patrol Gold Custom Reporting Tool

Repository

1.1 Navigating the Repository

The repository is the storage given to the user so he can create, delete and modify his Adhoc views, reports, dashboards, images and schedules. It is organized as a structure of folders containing the resources similar to a file system. However, unlike a file system, the repository is only accessed by clients who use the gold version of the product.

To browse the repository, go to menu → My Repository. Here you can find the folder with the name of your company and the subfolders it contains. By clicking you can expand and see the contents of each folder.

In the folder Adhoc Views you can save, edit and delete predefined views for future usage. You can also use the search option to find your content by name.

To search all resources in the repository:

- select one of the filters: All available, Modified by me and Viewed by me
- click on the x icon in the search field to clear the search term if there is any
- select All types, as shown in "Search Results Page"
- click on the magnifying glass icon

The search results now appear with all your files that you have permission to view. View the resource by left clicking on it or right click to see what functions are available. Our system also saves your search settings so you can easily view your desired resources the next time you log in.

Filter Search Reports

Entering a search term and pressing on the icon does not cause the server to use filters. It uses the default setting for the search which is:

- Include subfolders
- Start at the top folder visible to the user
- Searches for reports and other resources
- Sorts them alphabetically by name

You can refine your search results using the filters like:

- User
- Resource
- Access time
- Scheduled report

The user type filter contains the following settings:

Filter Setting	Description
All Available (default)	All resources
Modified by me	Selects only resources that were last modified by the ure who's logged in
Viewed by me	Selects only resources that were run and viewed by the user who's logged in. This filter not only appiles to visualization types but also to resources that are included in reports such as images

The resource type filter contains the following settings:

Filter Setting	Description
All types (default)	All resources
Reports	Displays only reports, both JRXML reports and Ad Hoc reports
Report outputs	Displays only the output from reports that were scheduled to run in the background. Report output can be any of the supported export types, such as HTML and PDF
Dashboards	Displays only dashboards
OLAP views	Displays only analysis views
Domains	Displays only domains (unavailable)
Data Sources	Displays only data sources (unavailable)

The access time filter has the following settings. All times are relative to the user's effective time zone:

Filter Setting	Description
Any time (default)	All resources
Today	Resources viewed or modified since the previous midnight
Yesterday	Resources viewed or modified the previous day ending at midnight
Past week	Resources viewed or modified during the past 7 days including today
Past month	Resources viewed or modified during the past 30 days, including today

Finally, the scheduled report filter has the following settings:

Filter Setting	Description
Any Schedule (default)	All resources
Scheduled	Only reports that have scheduled jobs
Scheduled by me	Only reports that have jobs scheduled by the currently logged in user
Not scheduled	Only reports that do not have scheduled jobs and all other resource types

Hints

- Use word fragments
- Search for the display name or part of the display name of resource.
- Search for words or fragments in the description of the resource.
- Use multiple words.
- Use either upper or lower case letters in search terms.
- Do not search for folder names.
- Do not enter quotes.

1.2 Using the Resources in the Repository

After you find your resource you are able to do the following:

- Left click on the name of a report/dashboard/Ad Hoc and view it
- Right click on the name and gain access to the context menu depending on your permissions.
- Click anywhere in the name row (except the name) and select the resource. Use the Control
 +click to select multiple resources. Right click on one of the resources to perform actions for
 every selected one. If you cannot perform an action, it means that the action is unavailable or
 you do not have permission to do so.
- Upload images in the image folder to use on your dashboards.

While you navigate through your folders you can see a clock icon appearing next to your report. That means that the specified report is scheduled to run or it is already running on the background. Click on the icon to view the list of jobs scheduled for the report.

1.3 Moving Folders

With QR-Patrol Gold you will gain permission in creating your own personal files in your repository. You can also edit their name or delete them to make your own customized folder tree.



Finally, to sort your reports or other resources, use the **Sort By** controls:

Click on **Name** to sort alphabetically (A at the top). This is the default sort order.

Click on **Modified Date** to sort by the latest modified time and date (most recent at the top)

QR-Patrol Gold Report Designer - Create your very own personal Reports

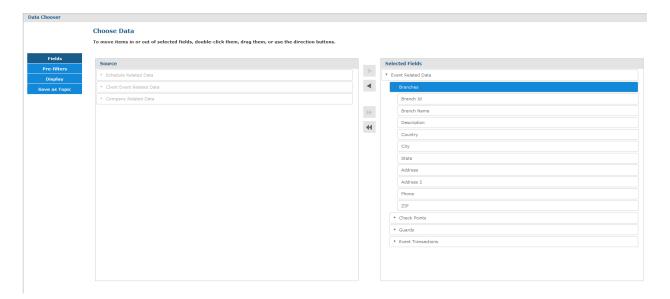
QR-Patrol Gold provides you with the unique ability to create your own personal fully customizable immersive reports that suit your company needs. With our reporting tool you are now able to explore, analyze and visualize your data from your personal company Domain which only you will have access. In the following section we will go thoroughly through every aspect and feature of the Report Designer.

QR-Patrol Gold Report Designer is an interactive tool for creating views of reports: tables, crosstabs and charts. You can easily create these views simply by dragging and dropping the selected elements. You have the option of adding and summarizing various fields, define groups, label your reports and change the format of the data on each field. The effects of your changes take place immediately and you can set your display to show the most compelling and relevant aspects of your data. The Report Designer also provides the analysis option to help you recognize threads and outliers in your data. You are given the opportunity to drill into specific details and analyze your data at a very high level.

Opening the Report Designer

By navigating to the **Bi/Analytics** section in your web app you will have access to our brand new menu about custom reports. Select the **Report Designer** option and a "Select Data" pop-up window will appear; choose your Company's Domain and you will be navigated to the "Choose Data" screen.

On the left of this screen you will be asked to select one of the pre-defined data groups each corresponding to a group of fields available. You can select entire tables of data or specific fields and use them in tables, crosstabs or even charts! Use them as filters to customize your report even more.



The Report Designer page contains these three panels (as you can see in the image above):

- Data Source Selection: contains the fields, dimensions and measures available in your own
 personal Source Domain. You are assigned to your personal Data Source which contains only
 your company's data.
- Ad Hoc View: contains the main view design panel.
- **Filters:** defines a set of data to be retrieved from the data source.

Report Designer View Types

QR-Patrol Gold Report Designer gives you the option to choose one of the following three types of views:

- **Tables:** they are used to view data values from your database and to summarize these values in columns
- **Charts:** they are used to compare one or more measures across multiple sets of related fields.
- Crosstabs: they are used to aggregate data across multiple dimensions.

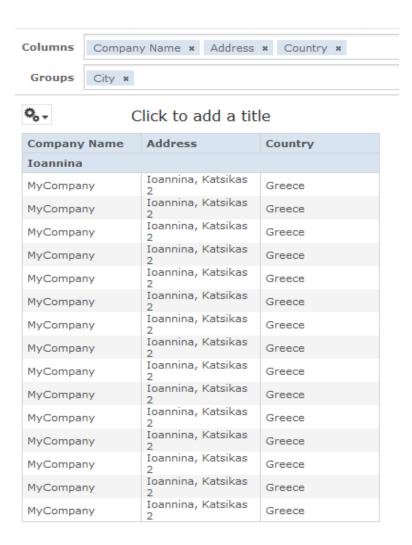
In the following section we will provide an overview for each of these types of views.

Working with Tables

A table consists mainly of columns, rows and groups:

- The columns in the table correspond to the tables in the data source. They are included by adding fields or measures to the table in the Report Designer.
- The **rows** in the table correspond to the rows in the database. The information it has in each row depends on what columns are included in the table.
- The **groups** are used so the rows can be grouped by same values in any of the fields with intermediate summaries for each grouped values.

Page **10** of **77**



2.1 Using Fields in Tables

Insert your data into your table by adding fields. All the available fields that are given to you are listed in the **Data Source Selection** panel, on the left side of the Report Designer.

The available fields are divided into two sections in the panel:

- **Fields**: they can be added to the table as columns or groups.
- Measures: they are specialized fields that contain data values.

Adding fields and measures as columns to a table

- Go to the **Data Source Selection Panel** and click to select the field or measure you want to add to the table. Use the Control + Click combination to select more than one items.
- Drag the selected field or measure and drop it into the **Columns** box in the Layout Band.
- The Field is added to the view as a column.

Removing fields and measures from a table

• In the Layout Band, click the x next to the field or measure's name.

2.2 Groups

Grouping allows you to create detailed data rows. You can, for example, group your company's clients by City of interest so as you can easily manage them. Select the field on the **Data Source Selection**Panel, right click on it and select the **Add as Group** option. You can use multiple fields to make more specific nested groups. Only fields can be applied to a table as a group, measures cannot be used. Your Data is grouped in the tables according to the order you have defined them. This can be changed by dragging them into the position you would like them to be.

Creating a group

- Go to the **Data Source Selection Panel**, right click on the field you want to select as a group and then click on the **Add as Group**.
 - Or
- Go to the **Data Source Selection Panel** and drag the field you want to select as a group and drop it on the **Group Layout Band**.

Removing a group

• In the **Group Layout Band** click on the **x** next to field's name in the Group Box to remove it.

Moving the grouping order up or down in a table

• In the **Group Layout Band**, simply drag the name of the group you want to move in the position you want it to be.

2.3 Summaries

Report Designer gives you the ability to display the summary of your data for any column in your table. It can be in the form of various functions such as the following:

- Sum
- Count
- Distinct Count
- Average

For example if you want to display the number of all the events for the month of November you can now add a Count summary at the field and the number will display at the end of the column.

Adding a summary to a specific column

• Go to the table, right click on the name of the column you want to add the summary and select the **Add Summary** option. (The summary information is added to the group header or it is added to the bottom of the column if there are no groups are included in the table)

Removing a summary from a specific column

• Go to the table, right click on the name of the column you want to remove the summary and select the **Remove Summary** option. That will also remove the summary information from the table.

Adding or removing summaries from all columns

• Click on the icon and select **Detailed Data.**

2.4 Column and Header Labels

The Report Designer Tool gives you the option of editing the names of the columns and headers in your report.

Editing a column or header label

- Go to the Ad Hoc View Panel and right click on the column or header you wish to change the name.
- Select the Edit Label option from the context menu. The Edit Label window will open.
- Inside the text entry box, delete the default or previous name and enter the new one.
- Click on **Submit** to apply the changes.

When you delete a label it will still appear when you look at the view in the Report Designer but will not be displayed when you run the report.

Deleting a column or header label

- Go to the Ad Hoc View Panel and right click on the column or header you wish to delete.
- Select **Delete Label** from the context menu/

Re-applying a label

- Right click on the name of the column or header you want to replace.
- Select the Add Label option from the context menu. The Edit Label window will appear.
- Enter the label name you wish if it is needed.
- Click on **Submit** to apply the changes.

2.5 Managing Column Size and Spacing

QR-Patrol Gold Report Designer gives you the option to change the size of and space between columns to manage the appearance of your table and use the space more efficiently.

Resizing a column

- Go to the Ad Hoc View Panel and click on the column you want to resize.
- Move the cursor to the right edge of the column you have selected.
- When you see the cursor changing into the ↔, click and drag the column right or left until it has the size you want.

Changing the spacing between the columns

• Go to the **Data Source Selection** panel and click on the **Spacer** in the Measures section.

- Drag the spacer into the Columns box in the Layout Band between the names of the two
 columns you wish to move apart.
- → Notice that an * icon will appear inside the label of the table.
 - Repeat this method to add the needed space between the columns you chose.
 - Remove a spacer by right clicking on the spacer column and selecting the Remove from Table
 option.

Using spacers to create table margins

- Go to the **Data Source Selection Panel** and click on the **Spacer**.
- Select and drag the spacer into the Columns box in the Layout Band.
- Repeat this action until your margins are as wide as you wish them to be.
- Repeat the above method to add the spacer to the right edge of your table.

Reordering Columns

→ Move the columns of your table to the right or left and reorder your data the way you like.

Reordering a Column in your Table

- Go to the **Ad Hoc View Panel** and right click to the column you want to move.
- Select **Move Right** or **Move Left** from the context menu.

Sorting the tables

→ Use the Report Designer to sort the rows of a table by any field you select.

Sorting a table

- Click on the 21 icon and the Sorting window will appear. If the table is already sorted then the existing sorting will be displayed on the window.
- Double click on the field in **Available Fields** in order to add a field to sort on. The **Available Fields Panel** is listing only fields not currently in **Sort On.**
- Select one or multiple fields to use your sorting. This can also be done by using Control + Click to select multiple fields.

Click on the icon and arrange the sorting method in the fields. Select each field in the
 Sorting Window and then click on Move to top, Move up, Move down or Move to bottom by clicking on their respective buttons:



- Remove a specific field from sorting by selecting it and clicking on the
- Click on **OK**. Your table will be updated to display the rows sorted by the fields you have selected.

Add a Title to your Report

- Select the area above the table and click on the text **Click to add a title**.
- Enter the new title for your table in the text entry box and press enter.

Showing and Hiding Detail Rows

→ Simplify or expand the information in your table by hiding or showing the detail rows.

Showing the detail rows

- Move your cursor and place it over the icon.
- Select Show Detail Rows to display the detailed information for each group in your table.

Hiding the detail rows

- Move your cursor and place it over the icon.
- Select the **Hide Detail Rows** to display only the summarized totals for each group in your table.
- → The Report Designer will display all the information in each of the table rows.

Controlling the Data Sets

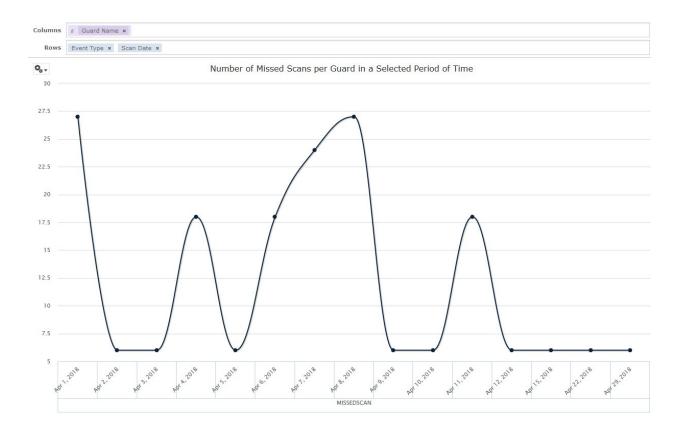
- → The Report Designer gives you the option to control your data that are displayed in the table grid by using the **Grid Detail Selector**
- → You can choose between the following options:
- 1. **Detailed Data** choose this option to display only the table detail.
- 2. **Totals Data** choose this option to display the table totals only.

3. **Details and Total** – choose this option to display both the individual values of each column and the totals.

Working with Charts

QR-Patrol Gold Report Designer offers charts, a flexible and interactive way to explore and visualize your data graphically.

- Choose different levels of aggregation for rows and columns.
- Change a field from a column to a row.
- Pivot the entire chart.
- Hide the chart values.
- Zoom in to see your chart details.



In the following sections we will explain how to populate, edit and format these charts. Many tasks related to working with Charts are identical, if not very similar, to those for tables and crosstabs.

3.1 Using Fields and Measures in Charts

In order to view a chart you must add at least one measure. Before adding the measures in the chart, the Report Designer shall display a placeholder with the legend showing a single entry: "Add a measure to continue". Add your measures and the Designer shall display the total of each measure in the chart. Initially, the Report Designer will only display only the measures you have added regardless of the number of fields you have added. This way you will be able to add, remove and arrange as many measures and fields you want to the chart bar without worrying about waiting the chart to update. When you finish with all the actions you can select the level of detail you want your chart to have by sliding the bar on the right side of the chart (rows and/or columns).

Find all the available standard fields and measures in the **Data Selection Panel**:

- Standard Fields: they can be added as columns or rows.
- Measures: they contain summarized values. They are typically numeric fields that determine:
- 1. Level of bars
- 2. Size of pie charts
- 3. Location of points in line charts
- 4. Height of areas

The measures can be added in both columns and rows but must be in the same target meaning that you can add one or more measures to the chart as columns or add one or more measures to the chart as rows but you cannot have one or more measure as a column and another as a row in the same chart.

Adding a field or measure to a row or a column

- Go to the **Data Selection Panel** and select the field you wish to add to the chart as a group. Use the Control + Click method to select more than one items.
- Select the item you want to display to the chart and drag it into the Columns or Rows box in the Layout Band.

3.2 Setting Levels

Whenever you add a field or a dimension to your chart you can set the level of aggregation with the help of multilevel slider located at the top right of the **Filters Panel**. The number of fields or dimensions in the row or column determines the number of levels on the slider. On the contrast, measures are not reflected in the slider. Also adjusting levels on time series charts are unavailable at the moment.

→ In the following image the effect of the slider on a chart with one level of aggregation for both rows and columns is displayed"



Effects of the Slider on a Chart

Using the Slider

- 1. Go to Reports → Create Report
- 2. On the type of table select the Chart option
- 3. Select the fields or measures you want to display and drag and drop them to the columns or rows of your chart.
- 4. Click on the select one of the many available chart types to display your data.
- 5. Select the depth of aggregation for you rows and columns.
- 6. Use the sliders to see how you chart changes.

The sliders help you display your data in the following ways:

- They reflect the hierarchy of the groups (rows or columns) as they are defined by the order that the fields are arranged in the **Layout Band**.
- If you hover over a setting on the slider you will see the name of the field or dimension corresponding to that value.
- Pivoting a chart causes the slider settings to be preserved and applied to the new target.
- Removing the currently selected level from a row or a column resets the slider to the total, when you remove a field that is not selected then the level remains the same.
- Adding a field or a dimension to a row or column causes the number of levels of the slider to change reflecting your addition.
- Changing the order of the fields in a row or column causes the level of the slider to change to reflect the new level of the field to correspond to the selection.

Changing Date Grouping

If your chart includes data based on a date field, you could change the level of aggregation for the time data. To select the unit of time to chart simply right click on the date field in the **Layout Band** and select the **Change Grouping** option. Select then the time period you want from the cascading submenu. The chart will update reflecting the new date grouping. (Time Series Chart can use only day or smaller intervals)

Changing the Summary Function of a Measure

You can get a new view of your data by changing the summary function of a measure (from sum to average or from count to count distinct). To select a new summary function for a measure:

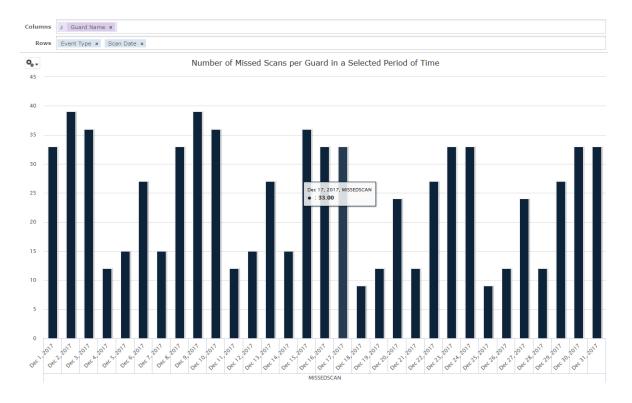
→ Go to the measure you want to select and right click on it. Select the **Change Summary Function** and then the select the function you want from the context menu. The chart will be updated to display the new summary function.

Pivoting a Chart

You can use the Chart Designer to pivot your chart in two ways:

1. You can pivot the entire chart by clicking on the . The row and the column groups will switch places but the slider levels will be maintained. For example the following chart:

Copyright © 2020 All Rights Reserved by Terracom S.A.



will transform into:



- 2. You can pivot only a single group.
 - → Pivot a single row group. You can do that by right clicking on it and selecting the **Switch to Column Group**. Move any field or dimension by dragging it (you cannot drag a measure to a different group though).
 - → Pivot a single column group. You can do that by right clicking on it and selecting the **Switch to Row Group**. Move any field or dimension by dragging it (you cannot drag a measure to a different group though).

3.3 Types of Available Charts

When you are creating your chart you are able to choose one of many available chart types. Click on the icon and select the **Chart Types** option to open the **Select Chart Type** window:

Column and Bar charts:
Line and Area charts:
Dual and Multi-Axis charts:
Time Series charts:
Scatter and Bubble charts:
Pie charts:
Range charts:

→ Hover on the icon of each chart to display the exact type of the chart. Click on the type of chart you want to select for your chart and it will be automatically updated. Bellow you will find a detailed description for each of the available chart types.

3.4 HTML5 Chart Types

Icon	Description	Rules
Column Charts	Column Charts compare values displayed as columns	
a li li	Column . Multiple measures of a group are depicted individual columns.	
ш	Stacked Column . Multiple measures of a group are depicted as portions of a single column whose size reflects the aggregate value of the group.	
Ш	Percent Column . Multiple measures of a group are depicted as portions of a single column of fixed size.	
	Spider Column . Multiple measures of a group are depicted as portions of individual "columns" along a spoked chart.	
Bar Charts	Bar charts compare values displayed as bars.	
圖	Bar . Multiple measures of a group are depicted as individual bars.	
	Stacked Bar. Multiple measures of a group are depicted as portions of a single bar whose size reflects the aggregate value of the group.	
	Percent Bar . Multiple measures of a group are depicted as portions of a single bar of fixed size.	
Line Charts	Line charts compare values displayed as points connected by lines	

∞ €	Line . Displays data points connected with straight lines.	
38 C	Spline. Displays data points connected with a fitted curve.	
	Spider Line . Displays data points connected with straight lines on a spooked chart.	
Area Charts		
	Area. Displays data points connected with a straight line and a color below the line; groups are displayed as transparent overlays.	
	Stacked Area. Displays data points connected with a straight line and a solid color below the line; groups are displayed as solid areas arranged vertically, one on top of another	
	Percent Area. Displays data points connected with a straight line and a solid color below the line; groups are displayed as portions of an area of fixed size and arranged vertically one on top of another.	
	Area Spline. Displays data points connected with a fitted curve and a color below the line; groups are displayed as transparent overlays.	
	Spider Area. Displays data points connected with straight lines and a solid color between the line and the center of a spoken chart; groups are displayed as transparent overlays.	
Dual – and Multi- Axis Charts	You can compare two or more measures, using one charting time or multiple charting types, with the charts listed here	
Him	Column Line . Displays leftmost measures as bars, last measure as a line	Requires two or more measures.

		Measures must be placed
		 Measures must be placed in the Columns location.
		Fields and dimensions can
		be placed only in the Rows
		location
	Stacked Column Line. Displays leftmost	 Requires three or more
	measures as stacked bars, last measure as a	measures.
	line.	 Measures must be placed
Hin		in the Columns location
		 Fields and dimensions can
		be placed only in the Rows
		location.
	Column Spline . Displays leftmost measures	Requires two or more
	as bars last measure as a spline.	measures
		 Measures must be placed in the Columns location.
लीकिन		Fields and dimension can
		be placed only in the Rows
		location.
	Stacked Column Spline. Displays leftmost	Requires three or more
	measures as stacked bars, last measure as a	measures.
	line.	Measures must be placed
HTH		in the Columns location
		Fields and dimensions can
		be placed only in the Rows
		location.
	Multi-Axis Line. Displays each measure as a	Requires two or more
	separate axis line.	measures.
·		 Measures must be placed
:S#:		in the Columns location
		Fields and dimensions can
		be placed only in the Rows
	Multi-Axis Spline. Displays each measure as	location.
	a separate axis spline.	 Requires two or more measures.
	a separate and spirite.	 Measures must be placed
		in the Columns location.
3		Fields and dimensions can
		be placed only in the Rows
		location.

Time Series Charts	Multi-Axis Column. Displays each measure as a separate axis column. Time series charts illustrate data points	 Requires two or more measures. Measures must be placed in the Columns location. Fields and dimensions can be placed only in the Rows location.
Time series diants	at successive time intervals.	
25	Line. Displays date and time data points connected with straight lines.	 Requires a single date/time field in the Rows location. Field must be set to the day group function.
<i>∞</i>	Spline . Displays date and time data points connected with a fitted curve.	 Requires a single date/time field in the Rows location. Filed must be set to the day group function.
	Area. Displays date and time data points connected with a straight line and a color below the line; groups are displayed as transparent overlays.	 Requires a single date/time field in the Rows location. Filed must be set to the day group function.
	Area Spline. Displays date time and time data points connected with a fitted curve and a color below the line; groups are displayed as transparent overlays.	 Requires a single date/time filed in the Rows location. Field must be set to the day group function.
Scatter Charts	Scatter charts show the extent of correlation between the values of observed quantities	
State of the state	Scatter . Displays first measures as the x-axis, the second measure as the y-axis. Other fields and dimensions in the column group become data points.	 Requires exactly two measures. Measures must be placed in the Columns location.
Bubble Charts	Bubble charts show the correlation between three measures, displayed as disks.	

<u> </u>	Bubble. Displays the first measure as the x-axis, the second measure as the y-axis and the third measure determine the size of the disk.	
Pie Charts	Pie charts display values as slices of a circular graph.	
•	Pie. Multiple measures of a group are displayed as sectors of a circle.	
(a)	Dual Pie. Multiple measures of a group are displayed as sectors of concentric circles.	
	Semi-Pie. Multiple measures of a group are displayed as sectors of a half-circle.	
Range Charts	Range Charts display values heat maps	
[mag]	Heat Map. Individual values represented as colors	 One filed, followed by one measure required in the Columns location. One filed required in the Rows location.
	Time Series Heat Map. Individual values across dates/times represented as colors.	 One Measure is required in the Columns location. One Date/Time field is required in the Rows location.
	Dual Measure Tree Map . Displays data as color-coded rectangles; the size of each rectangle is proportional to the first measure and the color represents the second measure.	 Two Measures required in the Columns location. One filed is required in the Rows location.

Tree Map. Displays the data as rectangles; the size of each rectangle is proportional to the measure of the data it represents. The tree map displays nested rectangles when you more than one field; the parent rectangle represents the leftmost measure while the nested rectangles represent the current level of aggregation. Click on a parent rectangle to drill down to the nest rectangles.	 One Measure is required in the Columns location. On field is required in the Rows location.
Parent Tree Map. Displays data as nested rectangles; the size of each rectangle is proportional to the measure of the data it represents. The nested rectangles represent the current level of aggregation while the larger rectangle represents the parent level in the hierarchy. Click on a parent rectangle to drill down to the nested rectangles.	 One Measure is required in the Columns location. Two or more Fields are required in the Rows location.

3.5 Formatting Chart Labels

QR-Patrol Gold Report Designer lets you control the way your data points, fields and labels will be displayed on your chart. This includes the following:

- Enable or disable the display of the label.
- Display the measure name on charts including only a single measure.
- Restrict the number of measures that are being displayed according to your needs.
- Rotate the direction of the label text.
- Edit many of the chart's properties for cases when you want more control over the appearance of your chart.

3.6 Displaying Data Points

Choose if you want to display your data points in your line, time series or your area chart. The data points can help you visualize your data better and with more accuracy.

3.7 Showing data points on a chart

- Go to the **Ad Hoc View Panel** and click on the ⁹ icon to show the **Canvas Options** menu.
- Select the **Chart Format** option from the context menu to open the corresponding window.
- Click on the **Appearance** tab and select the **Show data points on line charts** option.
- Click on **Apply** and then on **OK.** You will see the name appearing along the value axis.
- Remove the data points from your chart by opening the Appearance tab and deselect the Show data points on line charts option.
- → Go to the **Advanced** tab on the **Chart Format** window to obtain more control over the appearance of your chart by allowing you to edit certain chart properties like colors, shadows, 3d graphs etc.

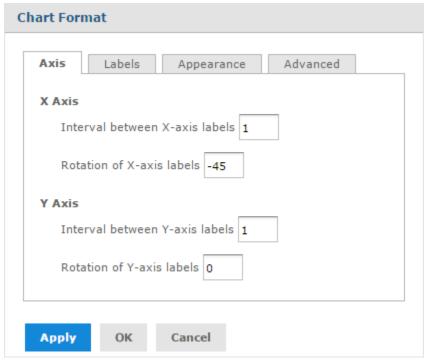


Chart Format Window

3.8 Formatting the Axes

Displaying the Measure Name on the Value Axis

When you create a chart that includes only a single measure, that measure's name will not be displayed. You can however choose to display that measure name to clarify the information on your chart.

Showing a measure name on the value axis

- Go to the **Ad Hoc View Panel** and click on the ⁹- icon to open the **Canvas Option** menu.
- Click on the **Chart Format...** to open the **Chart Format** menu.
- Click on the **Labels** tab.
- Select the **Show measure name on value axis** option.
- Click **Apply** and then click on **OK** to display the name along the value axis.
- Remove a measure name by opening the Labels tab and deselecting the Show measure name on value axis.

Restricting Label Display

When you create your chart, every field that is included in it has a label displayed along either axis. Measures will be displayed as numeric values along the Y axis and fields that are being measured will be displayed along the X axis. In some cases those labels may overlap or become difficult to understand, crowd together or read. This problem can be solved by reducing the number of labels that are being displayed on your chart.

Reducing Label Display

- Go to the **Ad Hoc View Panel** and click on the ⁹- icon to open the **Canvas Option** menu.
- Select the **Chart Format...** option from the menu to open the window.
- Click on the Axis tab.
- Go to the Interval between X-axis labels numeric entry box and select how often you want the
 axis label to appear. The number you will enter shall indicate the frequency of the display (enter
 2 to display every second label, enter 3 to display every third label etc).
- Repeat this process the same way in the Interval between Y-axis label numeric entry boxes.
- Click on **Apply** and then click on **OK** and the labels will appear as entered.
- In order to display every label, open the **Axis** tab and enter **1** in the numeric entry boxes.

Rotating the Label Text

When you create your labels that will be included in your chart they are displayed horizontally by default. When you have more than one label or very long ones it can be sometimes difficult to read. Changing the direction of these labels on both the X and the Y axis can improve the readability of the chart significantly. To rate the Label text you can follow the steps below:

- Go to the **Ad Hoc View Panel** and click on the ⁹ icon to open the **Canvas Option** menu.
- Select the **Charts Format...** option from the menu to open the **Chart Format** window.
- Click on the **Axis** tab.
- Go to the Rotation of X-axis labels and select the degree of rotation to apply for labels. The number you will enter indicates how many degrees the chart will rotate.

- Repeat the same process in the Rotation of Y-axis labels entry box for measures along the Y-axis.
- Click on **Apply** and then click **Close** to rotate the labels.
- Return the labels to their original, horizontal position open the **Axis** tab and enter the value **0** in the numeric entry boxes.

3.9 Changing the Chart's Appearance Using Advanced Formatting

Editing the Chart's properties

- Go to the Ad Hoc View Panel and click on the 🗣 icon to open the Canvas Options menu.
- Select the **Chart Format...** option from the menu and the window will open.
- Click on the Advanced tab.
- Click on the Add New Property.
- In the **Property** field, add the chart property you want to format and enter the values for the property.
- Click on the icon and save the formatting.
- Click on Apply and then Close. The chart is updated with the new formatting.
- Remove the formatting by opening the **Advanced** tab and click on mext to the property you want to remove.

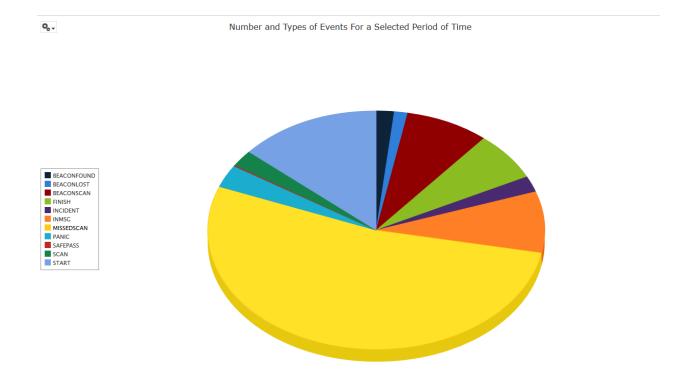
3.10 Interacting with Charts

Hiding Group Members

Use the legends below to hide or show group member.

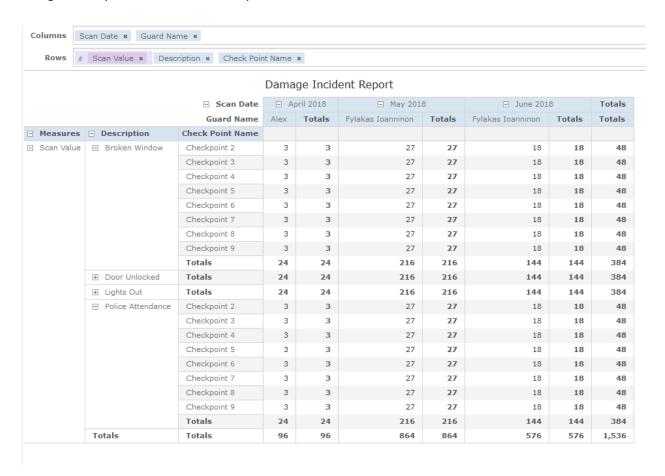
→ To hide a group member, click on the member name in the legend below the chart. The member will be removed and the chart will be updated to display the new view.

→ To unhide a group member that is hidden, click on the grey legend for the member.



4. Working with Crosstabs

In this section we will describe the crosstab type of reports that can be created via the QR-Patrol Report Designer. They have different data, layout and format than the tables and the charts.



4.1 Using Fields in Crosstabs

→ You can add fields to a crosstab as rows or column groups. The measures can be added to the rows or columns of the crosstab but cannot be added to both of them. Either all of them will be added to columns or the rows of the crosstab.

Adding a field or measure to a crosstab group

- Go to the **Data Source Selection Panel** and click to select the fields you wish to add to the crosstab as a group. Use the Control + Click shortcut to select more than one item.
- Drag and drop the selected items into the Columns or Rows box in the Layout Band.

Crosstab Measures

- → Measure labels will be displayed in the crosstab based on their status as a row or column:
 - The measures that are included as rows will appear in the crosstab below the **Measures** heading.
 - The measures that are included as columns will appear in the crosstab to the right of the Measures heading.
- → Right click on a measure in the crosstab to enable the context menu that will provide the following:
 - 1. Change the Summary Calculation
 - 2. Change Time Balance Calculation
 - 3. Change Data Format
 - 4. Remove From Crosstab
 - 5. Create Filter
 - 6. Move up or Move Down or Move Left or Move Right
- → Measure are arranged in cells
- → You are able to add any number of measures you wish
- → All the measures will appear together in every cell
- → Rearrange the measures by dragging them in the measure label area.

4.2 Pivoting

You can pivot your crosstab in the two following ways:

- Pivot the entire crosstab by clicking on the icon to switch the places of rows and columns.
- Pivot a single group.
 - a) Pivot a single row group by right clicking it and selecting the **Switch To Column Group** option.
 - b) Pivot a single column group by right clicking it and selecting the **Switch to Row Group** option.
- → Remember that pivoting will remove any custom sorting applied to headings in your crosstab but will not affect the column or row sorts.

Slicing

You can use the slice feature to keep or exclude group members in your crosstab. To slice, right click on a group member and select one of the following:

- **Keep only**: Select this option to remove all groups except the selected one from the crosstab.
- **Exclude**: Select this option to remove the specific group from the crosstab.
- → You have the option of selecting more than one row or column groups but you cannot slice by both row and column groups at once.

4.3 Summarizing

When you create a crosstab in the Report Designer all the row and column groups are summarized automatically.

- → In order to turn of the a group summary right click on any of the headings in the group and select Delete Row Summary or Delete Column Summary from the context menu.
- → Reapply the summary by right clicking on the heading and selecting the **Add Row Summary** or **Add Column Summary**.
- → In order to select the summary function and data format for a measure right click on the measure label and select from the context menu.

4.4 Collapsing and Expanding

The Report Designer displays by default each row and column group of a crosstab in a collapsed state. The meaning of this is that you can see the totals for the group but not the measures for its individual members. To enable this function right click on the group label you want and select the **Expand Members** option. When the selected members expand, select the **Collapse Members** from the same menu to hide all the measures. If you decide to collapse an outer group, its inner groups will be collided as well. The **Expand** and **Collapse Members** option are available only for outermost groups of for inner groups nested in an expanded outer one. When you collapse a group its summary is automatically displayed. This prevents invalid crosstab layouts in which there are nothing to display for some totals if the summary has been deleted previously.

4.5 Merging and Unmerging Crosstab Cells

The Report Designer by default merges all cells containing the same data into a larger single cell to make the data inside the crosstab easier to read. To display all of the individual cells in the crosstab instead of merged cells and hover over the icon. Then, select the **Unmerge crosstab cells** option. Merge the crosstab cells again by hovering over the icon and select the **Merge crosstab cells**.

4.6 Sorting

The rows and columns that consist of a crosstab are sorted by default in alphabetical order of the group names.

Sorting your crosstab

Select the heading you want to use for sorting, right click on it and select one of these options:

- Sort Ascending
- Sort Descending
- Don't Sort

The crosstab is automatically updated to display your sorting options. A blue dot will appear in the context menu next to the currently applied sort option to indicate that it is used as sorting. If the crosstab includes multiple row or column groups the inner groups are also sorted according to your selection. Finally only one measure can be used for sorting at any one time.

Filtering top or bottom N values

Filter the numeric data shown in a crosstab to show only the rows with the top or bottom N values (N being the number you have specified). In order to do that simply:

- Right click on the heading you want to use for filtering and select one of the following:
 - 1. Filter Top N Values
 - 2. Filter Bottom N Values
 - 3. Don't Filter Values
- Specify the number of values you want to show in the crosstab.
- Choose if you want to show an aggregate of the unranked values in the crosstab.
- Choose if you want to apply the filter in all your created groups.
- Click on OK to finish.

After these steps your crosstab will be displayed updated to show the changes you have made. Notice the TE icon that appears in the heading when you are using a top N values filtering. On the contrary the TE icon will appear If you are using the bottom N values filtering. A blue dot appears in the context menu next to the currently applied filter option. Only one measure can be used to filtering at any one time; changing the filtering or sort order for another measure resets the filtered column.

4.7 Changing How Totals Are Calculated Using Time Balance

By default, crosstab show the Totals of numeric values as the sum of the values in a column. You can change the data that the crosstab displays as the Totals value for a period of time using the **Time Balance** options. These options allow you to change the Totals to display the first and last numeric values for the period. If you want to change the time balance you must require the crosstab to use the Date field. You cannot drill through the data when you are using a **Time Balance** option other than the default or when you are using **Day-of-the-Week** for the grouping.

Changing the totals calculation using time balance:

- Go to the Ad Hoc View and right click on the column or row header you want.
- Select the Change Time Balance option from the context menu that will open.
- Select the option you wish to use. This option can be one of the following:
- 1. **Time Balance Default**: This option will display the summary of all the numeric data for a period of time as the Total value.
- 2. **Time Balance First:** This option will display the first numeric value for a period of time as the Total value.
- 3. **Time Balance Last:** This option will display the last numeric value for a period of time as the Total value.
- → Note: The crosstab will be updated to show the new Total values automatically after your configuration.

Changing the Data Format

→ You can change the formatting of the rows and columns containing numeric data such as dates and monetary amounts. (The default format for non-integer fields use the 1,234,.56 format and the integers use the -1234)

Changing the data format for a column:

- Go to the Ad Hoc View Panel and right click on the column or row header you want to change.
- Select the **Change Data Format** option from the context menu that will open.
- Select the format you want to use.

Resizing and Layout

→ Many of the layout and formatting options that are set manually in tables are set automatically in the crosstabs. The Row and Column sizes are fixed and no spacer is available.

Drilling through Data

→ The Drill through option is available only for crosstabs. A drill through table displays the supporting details for the selected rollup value and opens in its own window or tab, depending on your browser settings.

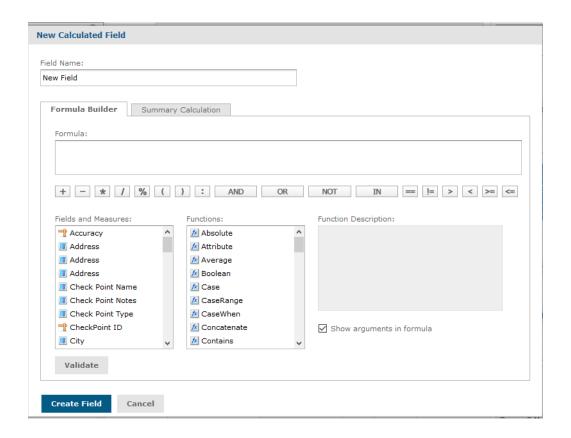
4.8 Calculating Fields and Measures

Using the Report Designer, you can apply formulas to a report's existing fields and measure to help you create new fields and measures that you are able to use. The **Calculated Fields and Measures** are displayed with an icon beside them to differentiate them from the normal ones. The **Calculated Field** and **Calculated Measure** dialog boxes give you the option to create one as such and set its summary function. In this section we will describe the available functionalities in this dialog box.

Opening the calculated fields dialog box:

- Go to Reports → Create new report and click on the option.
- Use one of the following two methods to open the calculated field box:
- 1. Click on the 🗐 icon that is located at the top right of either the **Fields** or **Measures** section of the **Ad Hoc View Panel** and select the **Create Calculated Field**... option from the context menu.
- 2. Select an existing calculated field (shown by the existing calculated field (shown by the icon) or calculated measure (shown by the icon) and right click on it. Then select the **Edit** option to open the **Create Calculated Field...** window.
- → The window that will open will display a text field for the name and two tabs, Formula Builder and Summary.

Copyright © 2020 All Rights Reserved by Terracom S.A.



- → Note: Report Designer has some reserved words and cannot be used as field name:
 - And
 - AND
 - And
 - In
 - IN
 - In
 - Not
 - NOT
 - Not
 - Or
 - OR
 - Or
- → Names containing these strings such as "Not Available" can be used.

4.9 The Formula Builder Tab

The Formula Builder Tab is where you can create the formula for your calculated field or measure. This tab includes the following:

- Formula Entry Box: This box displays the current formula that you use to calculate the fields or measures. Edit the formula by typing directly in the panel. You can add Fields, Measures and Functions by double clicking on them. The buttons below help you add operators in your formula. All formulas must use the following syntax rules:
 - → Field and Measure Labels must be in double quotes (")
 - → Text must be in single quotes (')
 - → Levels must be in single quotes (')
- Operator buttons: These buttons are used to insert the operators in the Formula Entry Box.
- **Fields and Measures**: Here you can see all the listed fields and measures currently available in the Report including any calculated fields or measures that you have already created.
- Functions: Here you can see listed all the available functions that can be used in your formula.
- **Function Description Panel:** Provides you with a brief description of the function selected in the Functions list, if there are any.
- Show arguments in formula checkbox: Select this checkbox and double click a function name in the Functions list to add the full description of the Formula Entry Box. If you do not select the checkbox double clicking a function name adds only the function.
- **Validate:** This button will check if your formula has any syntax error like missing parentheses or quotes.

4.10 The Summary Tab

This tab includes summaries that show a result applied to all data values. It also lets you set the default summary function for your calculated filed or measure.

- Calculation list: Displays allowed summary functions for you calculated field or measure. The available options depend on the data type of the calculation. Depending on what you have selected you will see the following additional options:
 - → Custom selection: Displays the same options available in the Formula Builder Tab.
 - → Weighted Average: Displays a Weighted On drop-down list which allows you to choose another field or measure to use as the weight for the average.

4.11 Planning and Testing Calculated Fields and Measures

When you create calculated fields and measure there is a possibility you will need to follow an iterative process: first create your new fields and measures, then view the results and finally adjust as needed. We provide you with some practices that may prove useful:

- → Reduce the size of your data set. Select the **Sample Data** form drop-down menu in the **Report Designer** tool bar. Create one or more filters. This is especially useful for tables which display all data by default. Finally limit the number of field and measures to add your test reports to restrict the number of summary levels to one or two.
- → Create one or more formulas
- → After creating your fields and measures add them to a table and crosstab in your report designer and verify that they behave as you want.

Hints

- When creating a calculated field remember that it appears at the bottom of the list.
- Calculated fields that use aggregate functions cannot be added to groups and should not be used as filters.
- The Report Designer supports by default only two decimal places.
- You cannot delete a calculated field that it is in use (you can see the fields being used have their names in italics).

4.12 Summary Calculations

Summary calculations are aggregate functions used for sub-totals and totals. Summary calculations can be set in the **Ad Hoc View Panel**.

- → In the table views, each field can display a single summary calculation. It is automatically applied to all groups in the table. Summaries appear at the bottom of each group as well as the bottom of the view. When a new group is being added it will include a summary for each column.
- → In the crosstabs, each measure will display a summarized value. They will determine the values of the Totals at the intersection of each row and column.
- → In charts the type of the chart shall determine whether the measures are summarized.

Default Summary Functions in Calculated Fields

Datatype	Default Summary Calculation	Description
Numeric	Sum	Display the sum of all values in the set.
Date	CountAll	Displays the total number of values in the set.
String	CountAll	Displays the number of values in the set.
Boolean	CountAll	Displays the number of values in the set.
Aggregate	AggregateFormula	Uses the aggregate formula as the summary.
Combined	None	The summary calculation is null.

Setting a measure's summary function in any type of view

Function	Meaning	Available for
AggregateFormula	Uses the same aggregate formula as the summary	Aggregate
Average	Displays the average of all values in the set.	Numeric
CountAll	Displays the number of rows in the set.	Boolean, Date, Numeric, String
CountDistinct	Displays the number of unique values in the set.	Boolean, Date, Numeric, String
Custom	Allows you to enter an aggregate calculation for the summary.	Aggregate, Date, Numeric
Max	Displays the highest value in the set	Date, Numeric
Median	Displays the median value in the set	Date, Numeric

Min	Displays the minimum value in the set	Date, Numeric	
Mode	Displays the value that occurs most frequently in the set.	Boolean, Date, Numeric, String	
None	The aggregate function is null	Aggregate, Boolean, Date, Numeric, String	
Range	Displays the difference between the minimum and maximum values of the set	Numeric	
RangeDays	Displays the difference in days between the minimum and maximum values of the set	Date	
RangeHours	Displays the difference in hours between the minimum and the maximum values of the set	DateTime	
RangeMinutes	Displays the difference in minutes between the minimum and the maximum values of the set	DateTime	
RangeMonths	Displays the difference in months between the minimum and the maximum values of the set	Date	
RangeQuarters	Displays the difference in quarters between the minimum and maximum values of the set	Date	
RangeSemis	Displays the difference in semi-annual periods between the minimum and maximum values of the set	Date	
RangeWeeks	Displays the difference in weeks between the minimum and maximum values of the set	Date	
RangeYears	Displays the difference in years between the minimum and maximum values of the set	Date	
Aggregated Formula	Uses the aggregate formula used to define the calculated field as the summary function	Aggregate	
StdDevP	Displays the standard deviation for the population of the set	Numeric	
StdDevS	Displays the standard deviation on a sample for the set	Numeric	
Sum	Displays the grand total for the set	Numeric	
WeightedAverage	Displays the weighted average for the set based on a second numeric field or expression.	Numeric	

Hints

- If you select a summary calculation other than the default one, that calculation is shown in parentheses after the field name in the fields picker.
- Create a custom Summary calculation for a field or measure.
- Remove summaries by setting the summary function to **None.**
- Only **AggregateFormula**, **Custom** or **None** are supported as summary calculations for aggregate functions.

5. Filters

Report Designer provides you the option of applying filters in your reports to return only specific data each time.

5.1 Creating a Filter

- Go to the **Ad Hoc View Panel** and right click on the field you want to use as a filter for your report. Click on **Create Filter** and you will see a new filter appearing in the **Filter Panel** on the right side of your report. If you already have created a filter the new filter you will create will be displayed below the old one.
- Use the fields in the filter to change its value. Depending on the datatype of the field you have selected the filter maybe multi-select, single-select or text input.
- Click on the 🗐 icon and select **Minimize All Filters** or **Maximize All Filters** to do the corresponding actions.
- Click on the 🖳 icon and select the **Remove All Filters** option to remove the filters.
- Click on the ▼ icon in order to hide the filter's details and on the ▶ icon to display them again.
- Click on the Select All check box to select all values that are available in the dataset.

5.2 Relative Dates in Filters

You can filter information in you view based on a date range relative to you current system date. You can enter a text expression describing the relative date you want to display using the format:

<Keyword> +/- <Number>

Keyword → the time span you want to use (DAY, WEEK, MONTH, QUARTER, SEMI AND YEAR)

+ or - → indicates whether the time span occurs before or after the chosen date

Number → indicates the number of the time spans you want to include in the filter

Creating a relative date filter:

- Create a filter based on a Date field.
- In the filter's first text entry box, enter an expression describing the relative date you want to display
- In the filter's second text entry box, enter the date you want to base your filter on.

5.3 Custom Filtering

When you create multiple filters they are connected with an implicit AND operator. The data that will be displayed in the table, chart and crosstab will be what remains after all the filters are applied. You can change that by applying custom filtering that includes more complex, nested AND, OR and NOT operators as well as by applying filters to a single field. To create and apply a custom filter:

- Create at least two filters for your data
- Go to the bottom of the Filters panel and expand the Custom Filter Expression section.
- In the text entry box, enter a filter expression using the letter designations and including the AND, OR, NOT and Parentheses to create your own custom filter.
- Click on the **Apply** option and you will see your report updated with the new filters.

•

5.4 Adding a New Filter to an Existing Custom Expression

- Create a new filter in the **Filter** panel if it is necessary.
- In the **Custom Filter Expression** section click inside the text entry box to edit expression.
- Add the newly created filter to the expression.
- Click on the **Apply** option to apply the new filter.

5.5 Removing a custom expression from a view

- Go to the **Filter** panel and expand the **Custom Filter Expression** section.
- Clear the expression from the text entry box (select and press delete or click inside and use the backspace button).
- Click on the **Apply** option to remove the expression, leaving the remaining filters intact.

6. Report Templates

After you have created your report you are given the option of selecting layout options for generating and exporting the report:

- **MyTemplate**: select your own very personal template displaying the logo and information about your company. (this template is created by the developers team of QR-Patrol and provided to you for the complete personalized view of your reports)
- **Default Report Template**: select this template to apply the most basic layout options. No filters or extra information will be displayed in your report, just the data table.

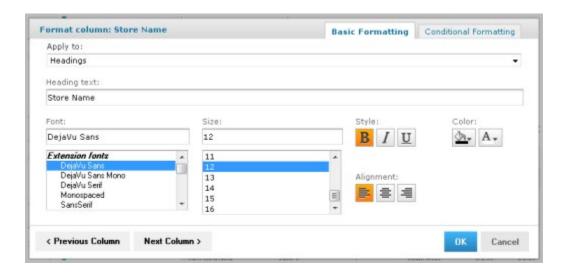
7. Getting New Perspectives on Data

QR-Patrol Gold gives you the unique functionality of accessing your reports (after you have created them) and formatting them in the way you want your data to be shown. In this section we will see the following customizations you can apply to your reports:

- Column Formatting
- Conditional Formatting
- Interactively Filtering Report Output
- Interactively Sorting a Report
- Moving, Resizing and Hiding Columns
- Setting Output Scale
- Exporting Options

7.1 Column Formatting

To customize the basic formatting of column heading and fields you can use the Format dialog. Hover over the ticon and click on the **Formatting...** option. The window that will appear is the following:



The column formatting includes the following options:

- Apply To: select the part of the column you want to apply the formatting.
- Heading Text: add a new Heading Title to replace the old one.
- **Font**: select one of the available fonts for your formatting.
- Size: define the size of the font.
- **Style**: select Bold, Italic or Underline text.
- Background Color: click to open the background color picker and select the color you want.
- Font Color: click to open the font color picker and select the color you want.
- Alignment: click to select Left, Center or Right alignment.
- → Click on the **Previous Column** or **Next Column** to navigate through your columns and apply your formatting if needed.
- → Click on **OK** to apply your changes.

7.2 Conditional Formatting

Creating a condition

To create a condition, follow the steps below:

- Run your report
- Click on the header or field of the column you want to format.
- Move your mouse over the me icon and select the Formatting... option.
- Click the **Conditional Formatting** tab and you will see the formatting window opens.
- Go to the **Apply to** box and select the part of the column you want to apply your formatting to.
- Click Add to add a line item in the Conditions List.
- Fill the following information:
- → Operator: use the drop down menu to define how the condition is compared to the column data.
- → Condition: enter the criteria
- → **Format**: select the formatting applied to fields meeting the defined conditions.
- Repeat the process to add multiple conditions.
- Click on previous and next columns to add conditions there.
- Click on **OK** to apply the changes.



With conditional formatting you can apply the options listed in the Column Formatting but also includes some more advanced options including:

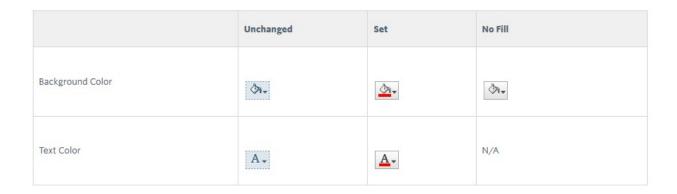
- Condition Hierarchy: after you create your formatting you can move the conditions on the top or the bottom of the other conditioning. Then the top condition will override the bottom ones.
- Condition Button States: conditions that are higher up in the hierarchy can affect those below them so the font style selection buttons each have three states:

- → Unchanged: It inherits the previous condition based style if it exists.
- → **Set**: the style is applied to the text matching the condition.
- → **Not Set**: the style is not applied to the text that meets the condition and is removed if a confliction condition is lower in the hierarchy has marked that style as **Set**.



The Background Color Picker has the same buttons but the three states are slightly differentiated:

- → Unchanged: the field inherits the previous condition based style if it exists.
- → Set: the color is applied to text or background on the field that meets the condition.
- → No Fill (background only): no color is applied to the background that meets the condition.



7.3 Interactively Filtering Report Output

When your report contains more data that you want you can interactively filter it to display only the data you need. Apply conditions by selecting the column to use as basis for filtering. Enter a filter condition then a value for comparison. Below you can see the conditions available for each type of column: numeric, data and text.

Numeric	Date	Text
Equals	Equals	Equals
Does not equal	Is not equal	Is not equal
Greater than	Is between	Contains
Greater than or equal to	Is not between	Does not contain
Less than	Is on or before	Starts with
Less than or equal to	Is before	Does not start with
Is between	Is on or after	Ends with
Is not between	Is after	Does not end with

7.4 Interactively Sorting a Report

→ Sort your data in the report alphabetically in ascending or descending order by using the ♣ and the
 ‡ icon respectively when you click on the header of a column

7.5 Moving, Resizing and Hiding Columns

- → To move a column, click on the column you want to move and drag the column left or right to the desired position.
- → To resize a column, click on the column you want to resize and drag the ▼icon until the column is the size you want.
- → To hide a column, click on the column you want to hide and move your mouse over the tion and select the Hide Column option.

7.6 Setting Output Scale

Determine the display size for any report by using the report scaling options, located in the **Report Viewer Tool Bar**.

→ Click on the icon to zoom in the report.

- → Click on the = icon to zoom out of the report.
- Click on the menu to open the Zoom Options drop-down menu and select the percentage by which you want to increase or decrease the size of your report.

8. Running, Navigating and Exporting your Report

8.1 Opening a Custom Report

- Go to Reports → My Reports and locate the report you want to open.
- Click on the name of the report to display it.

Or

- Go to Reports → My Repository → Reports and locate the report you want to open.
- Click on the name of the report or right click on it and select the **Run** option. Your report will be displayed on screen. You can also select the report you want to view and click on the **Run** button located in the **Tool Panel** above the reports.

8.2 Navigating the Report

When you create a report with multiple pages you can use the pagination controls to move through the report quickly and easily.

- Use the icon located at the top of the **Report Viewer** to navigate to the previous page of the report.
- Use the icon located at the top of the Report Viewer to navigate to the next page of the report.
- Use the icon located at the top of the Report Viewer to navigate to the last page of the report.
- Use the icon located at the top of the Report Viewer to navigate to the first page of the report.

8.3 Exporting the Report

To export the report:

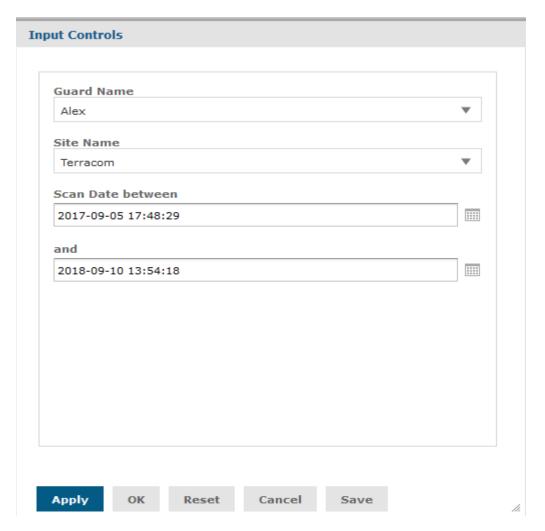
- Click on the **Export** icon, located on the top left of the screen.
- Select one of the following export formats from the drop down menu:

Option	Format Name	Usage
PDF	Adobe Acrobat	Choose a report template based on report size. Use the Actual Size report template for reports with dimensions less than or equal to 14400px by 14400px.
Excel (paginated)	XLS	Not recommended for exporting most tables or crosstabs. Repeats headers and footers on each page.
Excel	XLS	Ignores page size and produces spreadsheet-like output.
CSV	Comma Separated Values	Characters outside Latin 1 character can cause the Excel spreadsheet to look unacceptable. Try saving the file and importing it using Excel's import functionality
DOCX	Word	Do not export report having more than 63 columns.
RTF	Rich Text Format	Creates a large output file and therefore takes longer to export than other formats.
ODT	OpenDocument Text	For better results, minimize the number of rows and columns and make sure they don't overlap.
ODS	OpenDocument Spreadsheet	Same as ODT.
XLSX (paginated)	Microsoft Open XML Format Spreadsheet	Not recommended for exporting most tables or crosstabs. Repeats headers and footers on each page.

XLSX	Microsoft Open XML Format Spreadsheet	Ignores page size and produces spreadsheet-like output.
PPTX	Microsoft PowerPoint Presentation	Each page of report becomes a slide in the Power Point presentation.

8.4 Running a Report with Filters

When you have created a report using filters these filters will be available also when you select to view your report. To run the report using the filters you want simply go to the **Options** button on the top of the screen and open the **Filters** window.



- → Select the values of the filters you want to apply to your report and click on **Apply** to apply them.
- → Select the **Save** option to save your filter options and have them as they are in future uses.

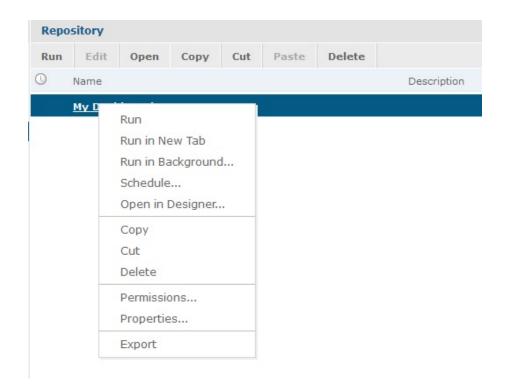
9. Working with Dashboards

In this section of the manual we will describe in depth the functionalities of QR-Patrol Gold dashboards. A dashboard offers an immersive view of various elements a user can choose to display. A Dashboard can include filters for choosing the data that will be displayed in one or more dashlets and also customized dashlets that point to other resources like other reports, Ad Hoc Views, dashboard or even URL. Combine all those and create immersive, appealing, data-rich dashboards and make your data so much easier to analyze.

9.1 Viewing a Dashboard

QR-Patrol Gold gives you access to the dashboards section. The following procedure will guide you on how to open a sample dashboard called **My Dashboard**.

- Login to the web app with your credentials.
- Go to Reports → Custom Reports → My Repository. There you will find your own personal cluster of folders. Navigate to the Dashboards Folder. You will find a resource named My Dashboard. Left click on the name to open the dashboard. Right click on the name to open the menu:



Resource Options

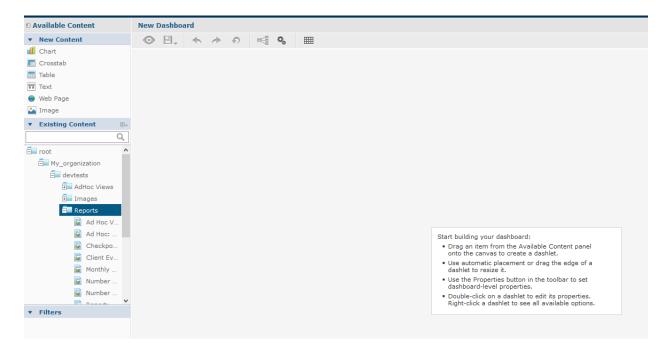
Run	View the dashboard
Run in New Tab	Opens a new window tab and displays the dashboard there
Run in Background	Opens the dashboard but keeps it open in the background. You have the option to open it any time you wish
Schedule	Navigates you to the schedule menu where you can create a job where you decide when and how often your dashboard will be executed, printed, sent to an email etc.
Open in Designer	Edit your dashboard by adding, deleting and modifying its elements.
Сору	Move your resource to another file but still have it in your original one
Cut	Move your resource to another file but removes it from your original one
Delete	Remove your resource permanently. You cannot retrieve it somehow afterwards.

Permissions	See what you are allowed to do with the selected resource
Properties	Opens a window where you can see the following properties of the resource:
	Name: displays the name of the Dashboard Description: displays info and the elements of the Dashboard Path: displays the relative path of the Dashboard in our Server Resource ID: displays the unique ID of the chosen Dashboard Type: displays the type of the resource Created Date: displays the month and day when the Dashboard was created User Access: displays the permissions that the user has on this Dashboard

9.2 Creating a Dashboard

To create a simple Dashboard:

- Go to Reports → Custom Reports → Create Dashboard
- You will see the dashboard designer will appear, displaying the list of all available content and the canvas.
- In **Available Content**, navigate to the /Reports folder and right click on the report you want to add to the dashboard.
- Select the **Add to Dashboard** option:



 Select all the resources you want to add to your dashboard from the panel on the left side and drag them to the desired position in your dashboard.

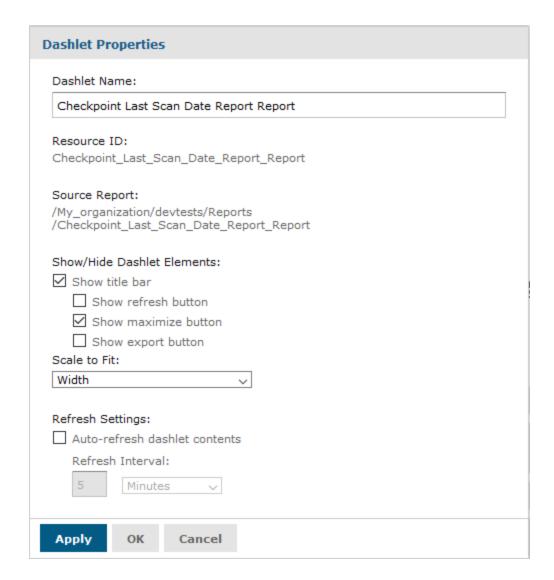
Hints

- You can select the icon to resize the report to your needs.
- Press the Ctrl key while dragging for a smoother cursor movement. (this will disable the default snap-to-grid behavior).
- Add Filter to your dashboard after you select a Report with Filters. The Filters will be displayed on the bottom left of the screen. Drag them inside the dashboard to be able to apply them when you preview your dashboard.

9.3 Edit the Resources in the Dashboard

To edit the resources:

- Right click on the dashlet you want to edit.
- Select the **Properties** option from the menu that will open.



- Edit the Name of the Dashlet by removing the existing name from the **Dashlet Name** property and adding your own title.
- Choose to hide or show the title bar, along with the Show refresh button, Show maximize button and Show export button.
- Select the Scale to Fit. Choose one of the following options: None, Width, Height and Dashlet. If
 you select the Dashlet option the resource will automatically fit in the size of the dashlet and
 will change accordingly when the dashlet changes size.
- Set a refresh rate by clicking on the **Auto-refresh dashlet contents** and set how often you want your dashlet to refresh.
- Click on the **Apply** option to apply your changes in the dashlet.

9.4 Modify the Dashboard

When you create or edit a dashboard with QR-Patrol Gold Report Designer, it is suggested that you keep the following tips in mind:

• Alignment of items:

- → Use the computer's arrow keys to move selected content one grid at a time.
- → Press the Ctrl key to move the selected content a single pixel at a time.

Selection of items:

- → The items on the context menu change depending on your selection. For example, the context menu might include the **Delete Item** or **Delete Frame** option, depending on whether you select a button or a frame.
- → If you select multiple items or frames, the context menu includes only options that apply to all selected items.
- → When you select multiple frames, the context menu includes several options that apply to the frames as a group, such as **Hide all Scroll Bars** and **Delete Items**.
- → Select multiple frames to change their sizes all at once. When you drag the edge of one frame, the other frames resize as well.

Relocated or deleted reports in dashboards:

- → When you delete a report with input controls from the dashboard, the controls are also deleted, but their labels remain.
- → Delete labels manually.
- → If a custom URL frame is mapped to a deleted input control, the server shows the default URL but does not pass the parameter.
- → Keep track of reports used in dashboards to prevent inadvertent deletion. The server deletes a report from a dashboard when you delete it from the repository or move it to a new location.

• Embedded Dashboards:

- → A dashboard can include other dashboards, unless a circular dependency is created. Do not attempt to add a dashboard to itself.
- → Multiple reports in a dashboard that refer to the same input control are controlled by that single input control.

10. Scheduling

Scheduling allows the user to organize and execute his created reports in a predefined manner that will make his life easier. Using the report scheduling wizard you can set up a job, report parameters and output options.

Copyright © 2020 All Rights Reserved by Terracom S.A.

- Set up a Job: Provide a job name, when will this job run and how often.
 Report Parameters: Define which report parameters will be used (as long as the report has input controls)
- Output Options: Define the location of where the report will be saved, the formats (pdf, excel etc), and the e-mail options for sending the output as an attachment.
- When you set up a job you don't need to worry about its execution, all the jobs run at the background so you can easily continue with your work while it executes automatically.

10.1 Setting up a Job

The first step you have to take in order to schedule your work is to set up a job. To set up a job simply go to your repository, then to the file where you have your reports. Select the report you want to execute and right-click on it. You will see a menu. Click on the Schedule option.

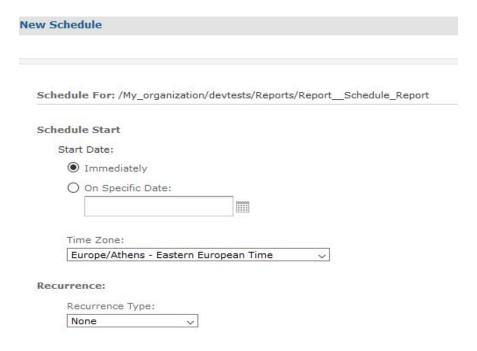


(This will automatically put a clock image on the left of your report's name to show that is a part of a schedule. You can press on the icon to add, modify or delete the schedule).

You will be then navigated to a screen with four tabs: **Schedule, Parameters, Output Options and Notifications.**

10.2 Create a Schedule

Click on the "Create Schedule" on the screen:



- Schedule Start: here you can select the time when you want the schedule to start. You can either select the Immediately options which will start the schedule the moment you are done with the configuration or the On Specific Date option which lets you define the exact date when you want it to start, e.g. 2018-11-17 12:30:00. You also have the option by clicking on the calendar icon to open the calendar and choose the date from there. Select time and date and press close to choose or click on the "now" option to automatically set the date/time to the current one.
- **Time Zone**: here you must select the Time Zone your company belongs to so you can get correct results in your scheduling and the data results.
- **Recurrence Type:** here you can define how often the report will be executed. By clicking on the drop-down arrow the following menu appears:

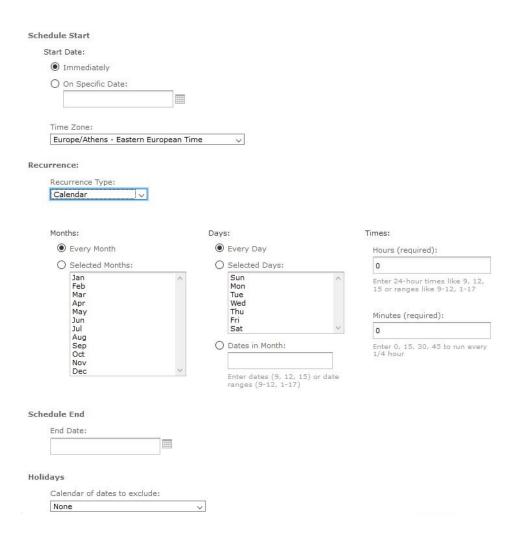
10.3 Setting up the Schedule

Simple



- Repeat every (required): number + minutes/hours/days/weeks. Choose the number of a specific date type and how many times your resource would be repeated.
- Schedule End: here you can define when the schedule of your resource will end. You can decide one out of three ways. You can choose a number of times it will execute and then stop. You can choose to run until a specific date (it will run every time you have specified in the step before). Finally you can choose to run it indefinitely. This option allows you to run the schedule without ever stopping. It will continue to execute it until you decide to choose to stop it.
- Holidays: here you have the option to skip some specific dates when you do not want your schedule to apply like New Year's Days. The schedule will not be executed on the chosen dates and will continue normally afterwards.

Calendar



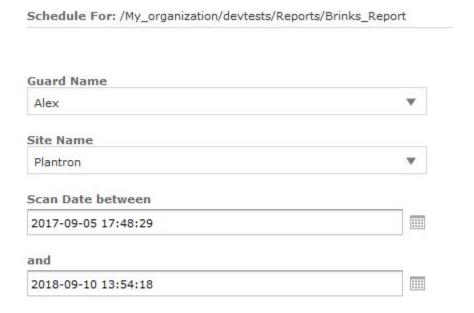
By selecting the Calendar as the Recurrence Type, the following menu will appear.

Recurrence Time (Simple)

Months	You can either select to run your schedule every month or only selected months from the list below. For example if you only want to see your data for next summer you can select Jun, Jul, Aug from the list.
Days	Same as month, you can decide to run your schedule either daily, on selected days (except Saturday and Sunday) or on certain dates in month, for example every first day of each month. Enter specific date like 9, 12, 15 or date ranges like 9-12, 1-17.
Times	With this option you can define the exact hour and minute your schedule will be executed. Again you can enter either specific hours like 9, 12, 15 or ranges like 9-12, 1-17. When you define the minutes option you can enter 0,15,30,45 to run every ¼ hour.
Schedule End	Here you must select when you want your schedule to end.
Holidays	Select specific dates that you do not want your schedule to run

10.4 Setting up the Parameters

In this page you will be asked to pass parameters in your resource (according to the input controls you have created while you were building your report, dashboard etc).



You have the option to save your settings for future usage by clicking on the grey button on the top right of the screen.

Save Current Values

10.5 Setting up the Output Options

In this section we define the forms in which we want our resource to be exported as:

Demo_Report				
Description:				
Time Zone:				
Europe/Athens - Eastern E	uropean Time	~		
Output Locale:				
(Default)		~		
formats:				
□ csv	☐ HTML		RTF	
Docx	ODS		☐ XLSX	
Excel (Paginated)	□ opt		XLSX (Pi	aginat
Excel	☑ PDF		□ PPTX	agmaci
ile Handling:				
Overwrite Files				
Sequential File Names b	ov Timestamn			
Timestamp Pattern:	, , , , , ,			
yyyyMMddHHmm				
ut Destination				

• File name (required): in this field you are asked to fill a name for your exported resource.

- **Description:** in this field you are can add a description for your resource with information so you can arrange them and easily access them the next time you will be connected.
- **Time Zone:** here you must select your location. Define your country and Time Zone. Your data and reports will work and synchronize according to your selection. The available time zones are:

Europe/Athens	Eastern European Time
America/Los Angeles	Pacific Standard Time
America/Denver	Mountain Standard Time
America/ Chicago	Central Standard Time
America/ New York	Eastern Standard Time
Europe/ London	Greenwich Mean Time
Europe/ Berlin	Central European Time
Europe/ Bucharest	Eastern European Time

• **Output Locale:** in this field you can select from a variety of languages in which the resource will be exported. The available languages are:

```
en – English
de – German
es – Spanish
fr – French
it – Italian
ja – Japanese
pt_Br – Portuguese (Brazil)
zn_CN – Chinese (China)
```

• **Formats**: presents the available formats in which you want your resource to be produced (you may select more than one output format). The available output formats are:

CSV
DOCX
Excel (Paginated)
Excel
HTML
ODS
ODT
PDF (pre-selected)
RTF
XLSX
XLSX (Paginated)

PPTX

- **File Handling:** here you can choose if your resource will be saved every time in a different file when executed or it will overwrite every time the old file. When you choose to save as a different file every time you are given the option of adding a date/time (you can also choose the exact expression of it) to differentiate each file. The file that is being produced will have the original name with a date extension to it.
- **Output Destination:** configure the location on where your resource will be saved (according to your permissions as a user). You are provided with three options:

Output in Repository – select a destination in your provided repository to save your schedule. If you do not have permissions to save on the selected file you will get an error message informing you about it.



Output To Host File System – select a destination on the Server host machine. This option must be configured by the administrator of the system. If the check box is greyed out that means saving to the host file is not enabled.

Output to FTP Server – select a specified FTP server to save your schedule. You must have the write permission to the selected directory on the FTP server. Enter the following properties:

Server Address	The host, IP address or the URL of the FTP Server
Port	Specifies the FTP connection port. The default port for FTP is 21, for FTPS the default port is 990 and for SFTP the default port is 22
Transfer Protocol	Defines the transfer protocol that the server uses. You can either select FTP, FTPS (FTP over SSL) or (FTP over SSH). If you select the last option, the SSH Key Authentication and SSH Private Key field will appear (image)
SSH Key Authentication	check this box if the server requires a SSH private key for SFTP transfers
Path to SSH Private Key	after you check the SSH Key Authentication box you must locate the SSH private key in the repository
SSH Key Paraphrase	after you check the SSH Key Authentication box enter the passphrase for the SSH private key if there is one
Directory	define the location of where the report output would be saved on the FTP server
Username	enter your username here
Password	enter your password here

Output To F Server Add			
		SSH Key Authentication	
		Path to SSH Private Key:	
Port:	Transfer Protocol:		Browse
22	SFTP (FTP over SSH)	Hint: /sshKeys/myOpenSSHKey	
Directory:		SSH Key Passphrase (optional):	

Output to FTP Server

10.6 Setting up the Notifications

On this page you are given the option to set up email notifications to the recipients of the resource you have created.

(Notifications are sent to all users within the organization with the role of Administrator, who belong to the same organization as the user who created the schedule)

I Notification		
To:		
Use commas to separate addresses		
cc:		
BCC:		
Subject:		
Message:		
 Include reports as repository links in er 	ail body	
O Include report files as attachments		
O Include report files as ZIP attachment		
Include HTML report in email body		

Email Notification

Send report when schedule runs.

In this page section you can select one or more email addresses and your report will be sent there after the schedule completes.

То:	Select the email addresses you want to send your report. Separate by using commas
CC:	Here you can add the subject line of the notification email
BCC:	Select the email addresses (separated by commas) you want to send Blind Carbon-Copy email notifications; the addresses in this field are not revealed to the other recipients
Subject:	Here you can add the subject line of the notification email
Message:	Here you can add the content of the notification mail

Choose one of the radio button s bellow to specify how each email recipient will access the output.

- Include reports/dashboards as repository links inside the email body sends a link to the report in the repository. This option is only available if the "Output to Repository" is selected in the Output Options page.
- Include report/dashboard files as attachments sends the output as attachments to the notification email. If you have selected multiple output formats (like pdf and excel), each one of them will be attached as a separate file to the email.
- Include report/dashboard files as ZIP attachment zips all attachments into a single archive file before adding it as an attachment to the notification email.
- Include HTML report in email body currently unavailable.
- **Do not send emails for empty reports** check this box if you want to prevent the server from sending empty report output files to email notifications. This also applies to parametrized reports where there is no data that matches the parameters. This option is only available for reports and cannot be used on dashboards.

Send job status notifications

Add one or more email addresses to send notifications of schedule success or failure to administrators.

e commas to separate addresses	
bject:	
Send success notification	
Success Message:	
Send failure notification	
Send failure notification Failure Message:	

То	Add one or more email addresses separated by commas to send email notifications
Subject	Add the subject of the notification email
Send success notification	When you check this box it sends a notification when the schedule job runs
Success Message	Add your message to the body of the notification email when it is sent successfully
Send failure notification	When you check this box it send a notification when the schedule job fails to run.
Failure Message	Add your message to the body of the notification email when it fails to be sent
Include report job/dashboard information	Add your message to the body of the notification email when it fails to be sent
Include stack trace	Check this box to include the stack trace for failed jobs inside the body of the notification email

After you complete your configuration click on the **Save** button and your schedule job is ready.



10.7 View your List of Created Scheduled Jobs

After you are done with the creation of the schedules jobs you are able to see them in your repository. Go to the folder you have defined in the previous step (**Output Destination**) and you there you can see a list of your scheduled jobs.



QR-Patrol users will have the option to see the jobs that only they have created so your work is safe. You can use the search option inside the page to look for specific jobs that you want to see.

The Schedules page shows (as you can see in the picture above) the name of the scheduled report or dashboard, the repository URL of the job, the internal ID number of the job, the user who created the job (who is also the owner of the job) and the state of the job. The job states are the following:

NORMAL	The job in normally scheduled
EXECUTING	The Server is generating the output
COMPLETE	The Server has finished running the job and has moved the output to the folder you have decided in your repository
PAUSED	The job has been stopped (disabled). Click on the Enabled option to continue running it.
ERROR	The scheduler has encountered an error while scheduling or starting the job. This only applies when the job fails on those steps, it will not show an error if the job has successfully started but encountered the error while it runs

UNKNOWN	The scheduler encountered an unknown error while trying to start

The Scheduler page also contains the following controls:

Enabled Checkbox – When you check this checkbox, the job will run normally at the scheduled times. If you uncheck it, the job will pause.

- by clicking on this icon, you can edit your schedule and apply the changes you have made.
- by clicking on this icon, your schedule will be deleted permanently.

10.8 View scheduled jobs for an individual report or dashboard

O Report: Schedule Report

Scheduled jobs will appear in the repository folder along with an icon which will appear on the left of the report or the dashboard. In order to view the list of the jobs for a report or a dashboard find its location inside the repository, click on the icon or right click on the name of the report and select the **Schedule** option from the context menu. After that, the schedule page will appear on your screen displaying information just like the Schedule page.

Filtering

You can filter the search results for your scheduled jobs in your repository using the following available options:

Any schedule	Shows both scheduled and unscheduled reports
Scheduled	shows all the scheduled reports
Scheduled by me	shows only the scheduled reports that were created by the user
Not Scheduled	shows only the reports that are not assigned to run by a schedule

The Scheduled Jobs page also includes the following buttons:

Back	takes you back to your repository
Create Schedule	Opens the Schedule tab to create a new Job
Run Now	opens the scheduler and allows you to run the job immediately
Refresh List	refreshes the list of jobs

10.9 Editing Schedules

If the starting date of the schedule is not yet configured, you can edit the schedule. After the starting date has been configured, create new schedule instead of changing the starting date.

Edit a Schedule:

- → Click on View → Schedules
- → Click on In the row of the Job you want to change
- → Apply the changes you want on the Schedule, the Parameters, the Output and Notifications pages.
- → Click on **Save** and the update occurs immediately

To stop a job from running without deleting it pause the job.

Pausing a Job:

- 1. Click View → Schedules.
- 2. Select the row of the job you want to pause and uncheck the **Enabled** option.

Resuming a Paused Job:

- 1. Click View → Schedules.
- 2. Select the row of the job you want to resume and check **Enabled**. When you resume a paused job it waits until the next scheduled time and runs again.

To stop a job from running and delete it permanently delete the job.

Deleting the Job:

- 1. Click View → Schedules.
- 2. Select the row of the job you want to delete and click on $\overline{\blacksquare}$

10.10 Running a Job in the Background

Running a job in the background generates your report or exports your dashboard without interrupting your workflow. You can keep working and the job will run at the same time. When it ends you can then export the job directly to one of the available formats you want and save it inside the given repository. You can then share it with your own customers via email. Running a job in the background is the same as scheduling it to run immediately without recurrence.

Running a Job in the Background:

- 1. Find the report or dashboard inside your repository.
- 2. Right click on the report or dashboard and select the **Run in Background** from the menu.
- 3. Configure the location and the format of the output as described before (by default the output is saved inside the repository).
- 4. If the job you are running has input controls, click the Parameters tab. Select the values of the filters you want to apply to your report or dashboard.
- 5. Click on the Notifications tab to set up the email notifications
- 6. Click on **Save**. Your job begins to run immediately.

Event Messages

Whenever an event takes place, like a scheduled report returning error, you receive a notification message. You can browse these messages to troubleshoot report scheduling problems on the server. You could determine for example that your job is failing because of a problem in the data source configuration is passing incorrect credentials. The Message page shows displays the list of events logged for the current user.

Opening the Messages page:

- → On any page of your repository click on **View** → **Messages** and the Messages page will appear.
- → To view a message left click on its name and it will open in the Message Detail page.
- → To activate the buttons on the error row simply click on a blank area of the message that you want to configure. The button become enabled (they turn to bold black from gray and are clickable).

→ Use the buttons to perform the following actions:



- Mark the message as read you state that the message has been read and therefore turns to gray to help you differentiate it from the other messages.
- Mark the message as unread you state that the message has not been read and therefore has a black bold font.
- **Delete** permanently deletes the selected message.