

# Tiger Prism User Guide

Analytics Module - Release 2018.R2



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# Analytics

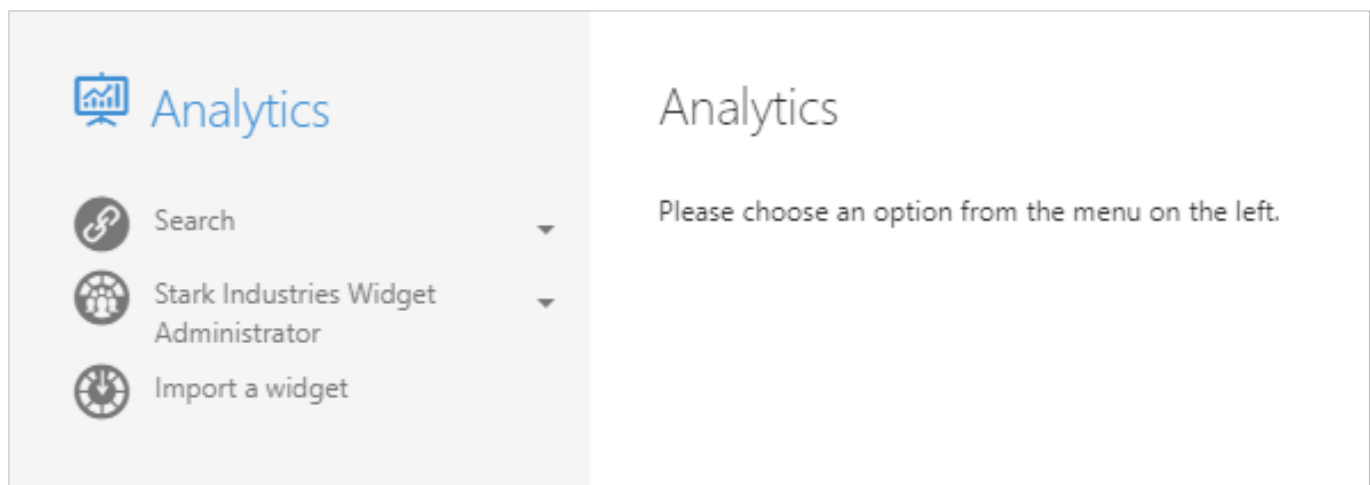
## Overview

The Analytics module gives users a powerful, flexible reporting tool for call information interrogation within all recorded CDR.

To access the Analytics module, either click the Analytics tile on the home page, or click the modules drop-down list, and select Analytics.

Once in the Analytics interface, you will be presented with several options on the left. Depending on your level of access, you will see the Search menu, the Widget Groups that you have access to, and the Import Widget menu.

Click 'Search', and select Leg, Cube Seizure, Fixed Charge, Prism usage, or Collection analysis.



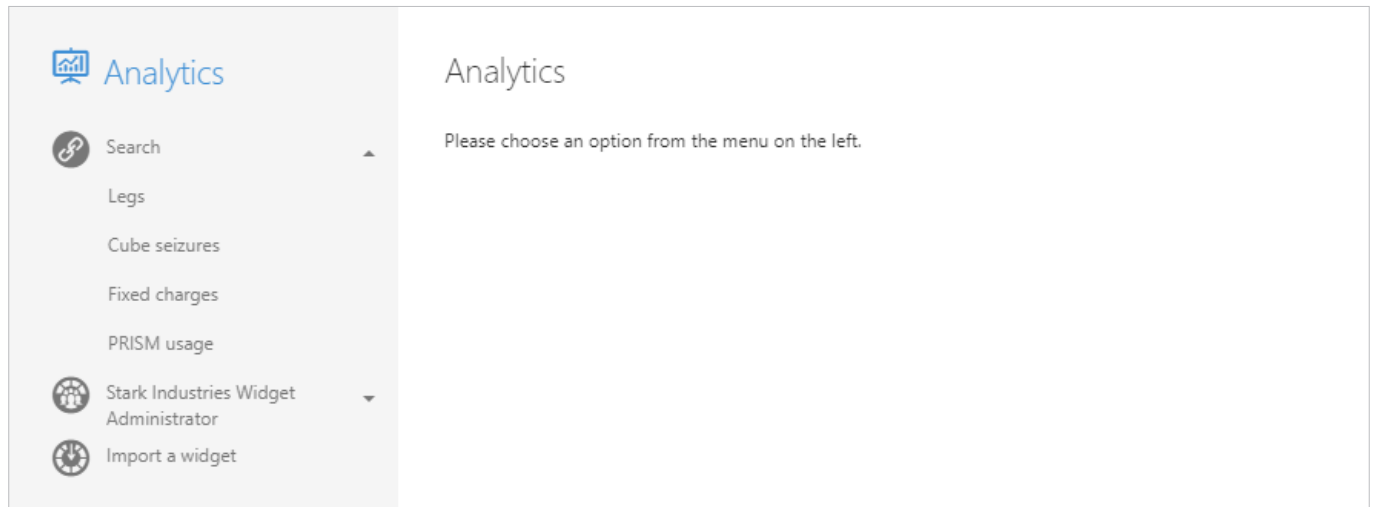
## Training Tutorial



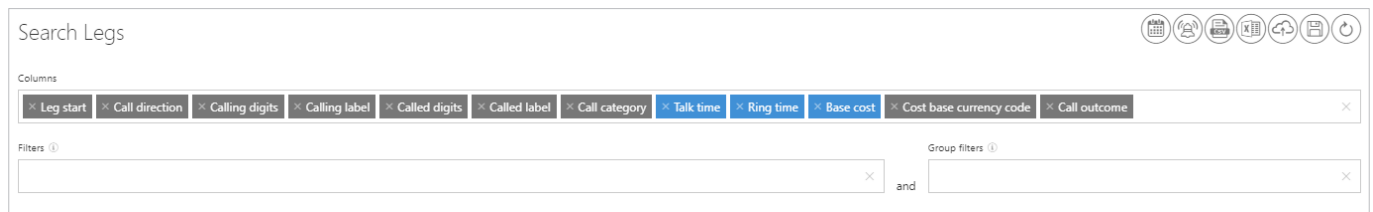
There is an [Analytics video tutorial](#) associated with this module. The tutorial introduces you to Legs, and how they are used within Tiger Prism. In this video, you will learn how to select Columns, filter data through the use of boolean options and parentheses, drill into calls, and how to use Measures to create widgets.

## Legs

The Legs option allows you to build up a picture of anything from individual Call Legs, to trend analysis over any period.

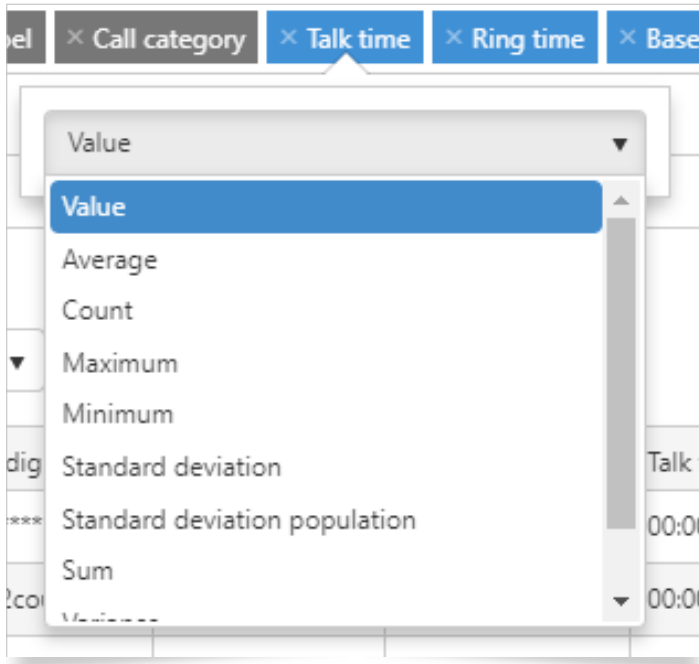


Having clicked 'Legs', the main screen is populated with a set of default fields in the columns section. Items placed in this area will appear as columns in the results. Select from the numerous options for Dimensions (data facets) and Measures (quantification and calculation).



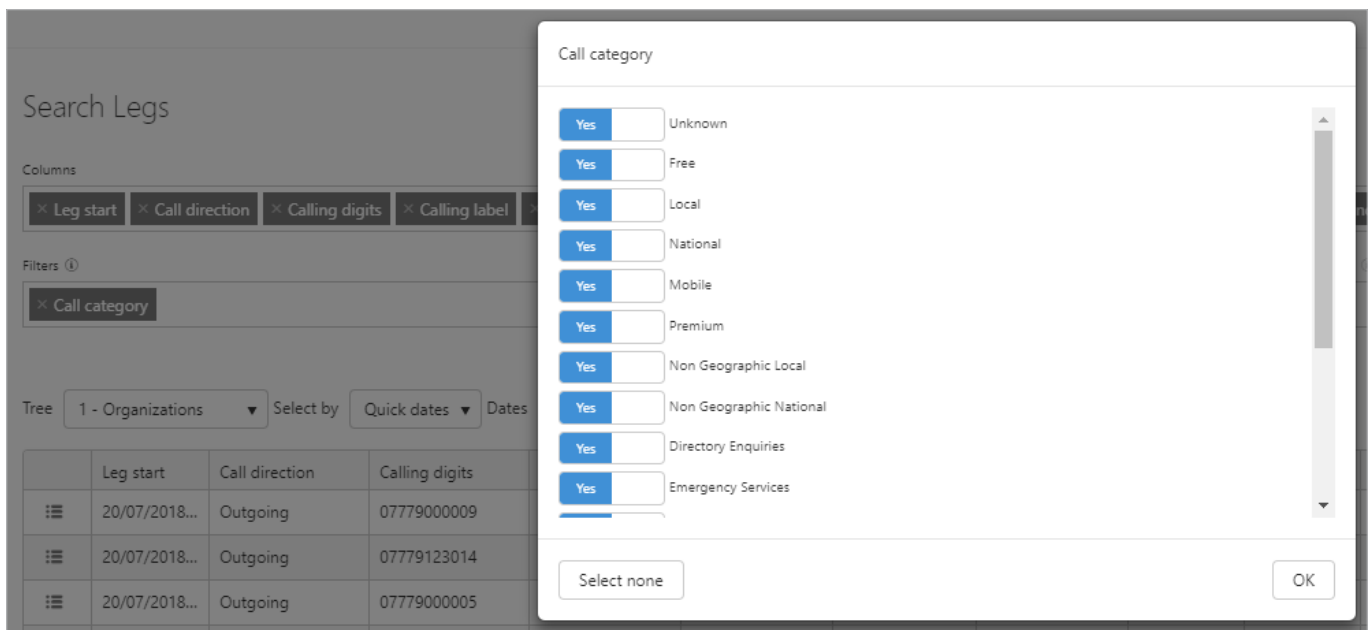
- To add a field, click on the required item, and drag it into the columns area.
- To remove a field, click the 'X' to the left of the field name. X Call outcome
- To remove all fields from the columns section, click the 'X' on the far right. X Call outcome

Measures can have calculations applied within the columns area. Click on a Measure to see the available options:

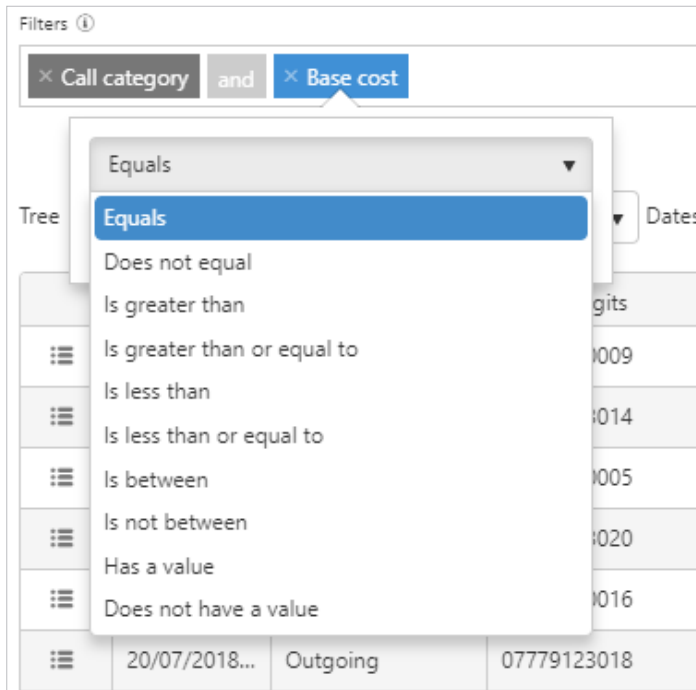


Drag fields from the columns area into the filters section to apply filtering to the results.

Click on the field to access the filtering options relevant to it.



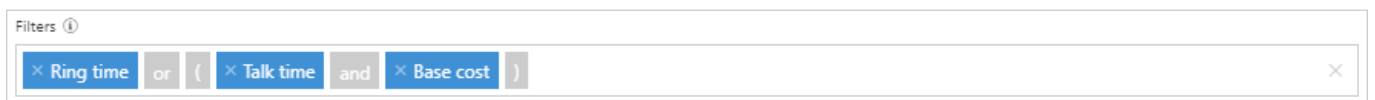
Applying filtering to Measures will present various mathematical options:



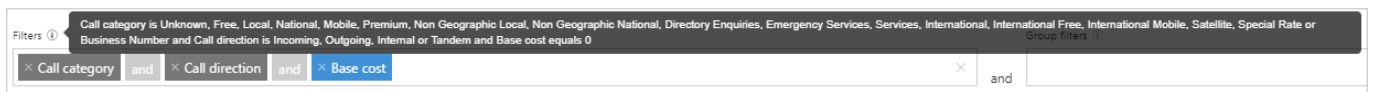
The inclusion of more than one filter will insert a Boolean function defaulting to 'and', but allowing use of 'or' depending on the requirements of the filter: Click on 'and' to change it to 'or' (See [Sample Queries](#) for more details).



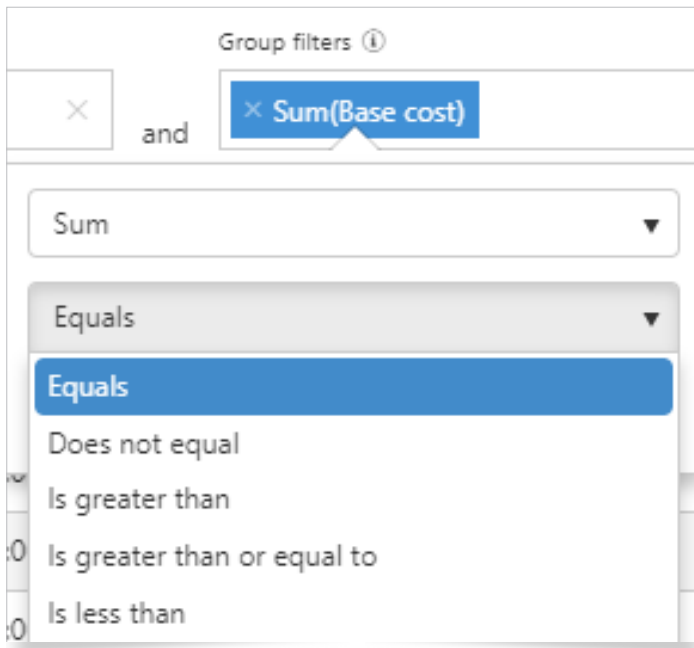
Create more complicated filters with the addition of brackets:




Hover over the 'Information' icon (i) to see applied filter details:



Apply Group Filters to aggregate the results, and filter them. Drag Measures from the columns area to the Group Filters section in order to apply filtering to the results. In this way you can, for instance, group the results to show the Base Cost sum, where the value is greater than £50.00.



Click on the Measure to open up the filtering options relevant to it.


The inclusion of more than one filter will insert a Boolean function defaulting to 'and', but allowing use of 'or' depending on the requirements of the filter: Click on 'and' to change it to 'or'. Having confirmed the contents of the columns, along with any filtering, select the Tree, and either Quick or Specific Dates. Generate the results, by clicking the 'Retrieve' button .

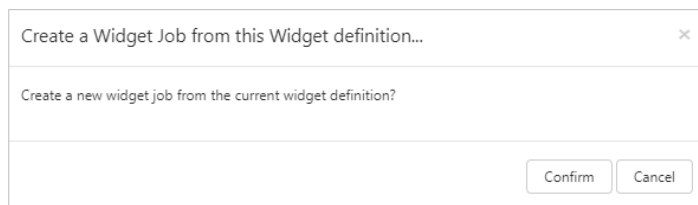
	Leg start	Call direction	Calling digits	Calling label	Called digits	Called label	Call category	Talk time	Ring time	Base cost	Cost base currency code
☰	13/07/2018 23:56:25	Outgoing	07779000034	Daphne Cortez	mobileo*****			00:00:00	00:00:00	0.00	GBP
☰	13/07/2018 23:56:25	Outgoing	07779123006	07703190742	mobileo2couk	mobileo2couk		00:00:00	00:00:00	0.00	GBP
☰	13/07/2018 23:36:19	Outgoing	07779000016	Abel Savage	idatao*****			00:00:00	00:00:00	0.00	GBP
☰	13/07/2018 23:36:19	Outgoing	07779123018	Joesph Kilman	idatao2couk	idatao2couk		00:00:00	00:00:00	0.00	GBP
☰	13/07/2018 23:36:16	Outgoing	07779000005	Claude Mac Do...	idatao*****			00:00:00	00:00:00	0.00	GBP
☰	13/07/2018 23:36:16	Outgoing	07779123020	Obadiah Stane	idatao2couk	idatao2couk		00:00:00	00:00:00	0.00	GBP

At the bottom left of the results table, you can toggle through the pages, and set the quantity of items per page to display. The bottom right of the screen confirms the total number of items in the current view.

Having produced your result set, there are several actions that are available, via the icons at the top of the screen:


**‘Create a Widget Job from this widget definition...’**

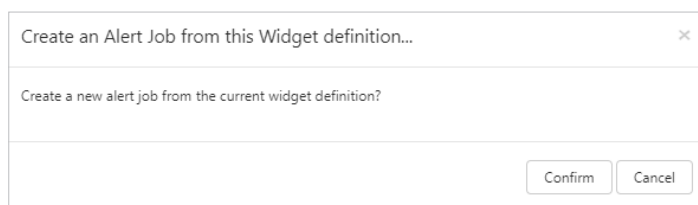
Click on the ‘Calendar’ button  to schedule the widget to run to specific settings. You will be required to confirm your selection:



A new screen will appear at the start of the wizard-driven ‘Create’ process. Follow each step, as detailed in the Scheduler section of the manual.

**‘Create an Alert Job from this widget definition...’**


Click on the ‘Alert’ button  to enable the widget to be used to flag the specified conditions. You will be required to confirm your selection:



A new screen will appear at the start of the wizard-driven ‘Create’ process. Follow each step, as detailed in the [Alerts](#) section of this document.

**i Note:** Alerting functionality is available as a licensed module.

[Export to csv](#)

Click on the ‘Export to csv’ button  to export the Widget results to csv format.

[Export to Excel](#)

Click on the ‘Export to Excel’ button  to export the widget results to Excel.

Export To Excel...

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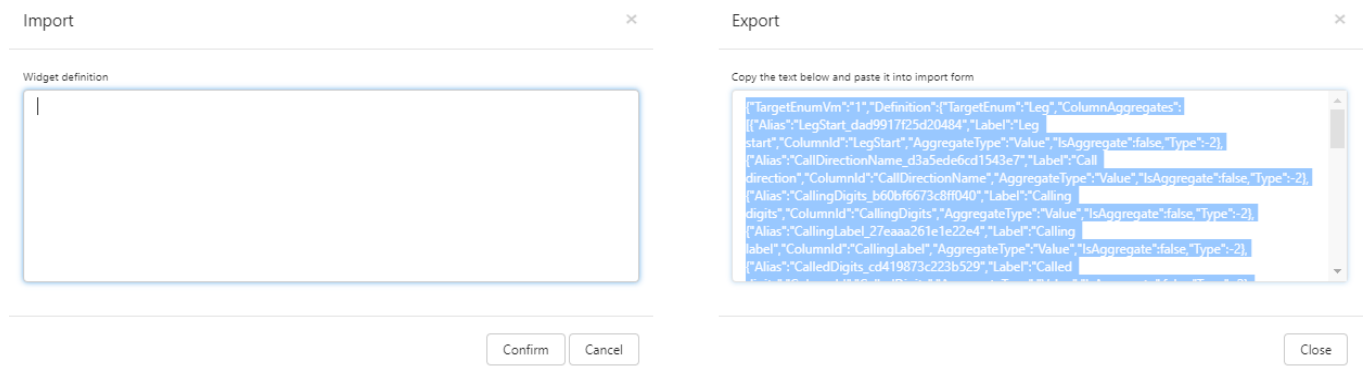
File download started.




## Export

The ability to export Widget code, and re-import it within Prism gives users the ability to share widgets, supporting the creation of them.

Use this function to duplicate widgets, wherever you need to create another that is similar. Follow the instructions below for 'Save as Widget'. It enables Tiger Support to provide assistance, wherever required under the terms of your support contact.



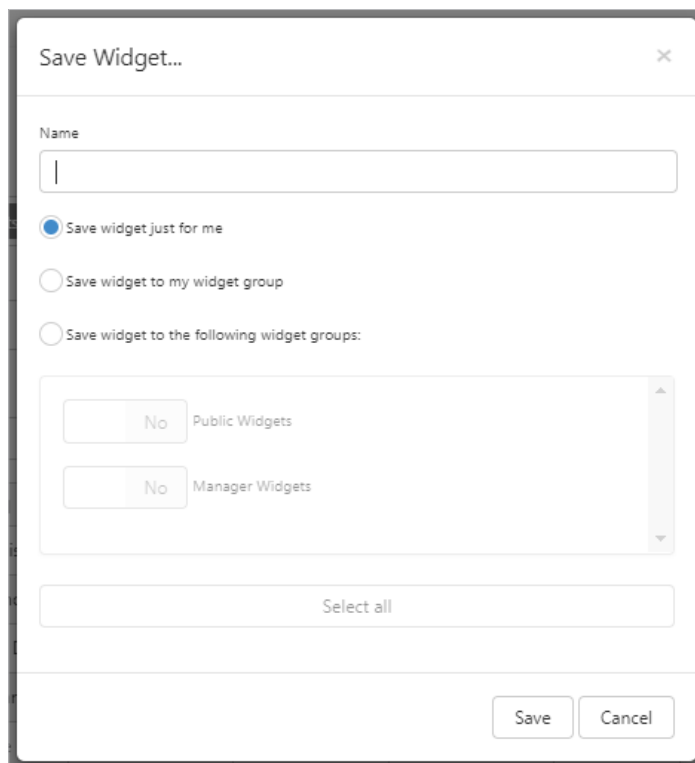
Click on the 'Export' button  to export the widget query. The export can be pasted into an external document, e.g. Notepad++, and can then be imported using the 'Import a Widget' option.

Use Ctrl + C to copy the selected text.

Use Ctrl + V to paste the widget query into the import form, and select 'Confirm' to open the Analytics window with your imported settings, and all available options.

## Save as Widget

Click on the 'Save' button  to save the query as a widget.



The screenshot shows a 'Save Widget...' dialog box. It features a title bar with a close button (X). Below the title bar is a 'Name' input field. There are three radio buttons for saving options: 'Save widget just for me' (selected), 'Save widget to my widget group', and 'Save widget to the following widget groups:'. Below these is a list of widget groups: 'Public Widgets' and 'Manager Widgets', each with a 'No' button. A 'Select all' button is located below the list. At the bottom right are 'Save' and 'Cancel' buttons.

A new form will open within, which you can assign a name to the widget.

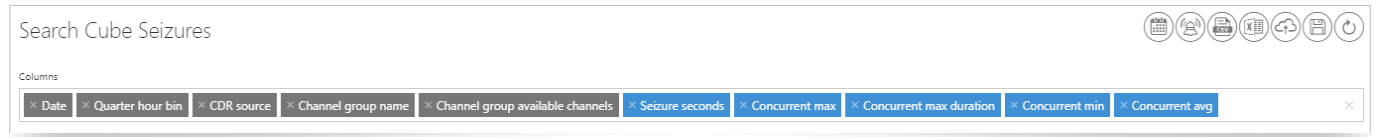
Depending on your access rights, coupled with your Role's widget settings, you need to save the widget with visibility:

- ▶ **Just for me:** The widget will only be visible to your login.
- ▶ **To my widget group:** The widget will be visible to everyone within the widget group, to which you are assigned.
- ▶ **To the following widget groups:** The widget will be visible to everyone within the selected widget groups. Click on the radio button to enable the options.

Widget Group access is defined within People / Roles, and dictates whether the access is read-only, read and write, or full (See the [Create Roles](#) section for more details).

## Cube Seizures

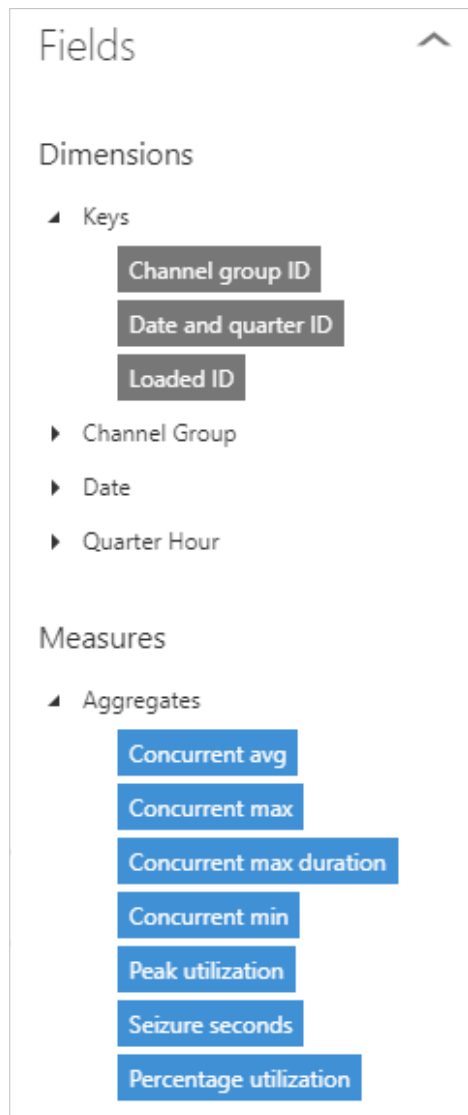
The Cube Seizures option allows you to analyse a fixed period, 'bin' of data, and is therefore useful for repeat, snapshot analysis, and to monitor call concurrency.



When you select 'Cube Seizures', you are presented with a default set of fields, which return some basic information about the call data.

On the right-hand side of the screen is a list of all available data fields that can be used to show extra information, or refine the query by filtering. The list is separated into 2 types of information:

- **Dimensions:** Dimension data is anything that cannot be measured, e.g. dates, keys, groups, etc. Within the list, each Dimension group can be expanded to reveal the individual options.
- **Measures:** Measures are numeric data attributes, which can be used in mathematical calculations, e.g. costs, duration, ring-time.



## Fixed Charges

This options allows for the interrogation of the various fixed debits and credits that have been applied to products in the Prism system. When you select 'Fixed Charges', you are presented with a default set of fields that return some basic information about the charges, and credits applied through the system.

On the right-hand side of the screen is a list of all available data fields, which can be used to show extra information, or refine the query by filtering. The list is separated into 2 types of information:

- ▶ **Dimensions:** Dimension data is anything that cannot be measured, e.g. dates, keys, groups, etc. Within the list, each Dimension group can be expanded to reveal the individual options.
- ▶ **Measures:** Measures are numeric data attributes, which can be used in mathematical calculations, e.g. costs, duration, ring-time.

## Prism Usage

Using Analytics, you can view Prism usage for each user to monitor adoption and usage. This functionality offers system audit, and enables housekeeping of user accounts.

When you select 'Prism usage', you are presented with a default set of fields that return some basic information about the charges, and credits applied through the system.

The screenshot shows the 'Search PRISM Usage' interface. At the top, there are icons for various actions like refresh, save, and print. Below that, the 'Columns' section shows selected fields: Date & time, Party name, Module, Resource, and Action. There are also 'Filters' and 'Group filters' sections. A 'Tree' section shows '1 - Organizations' and 'Select by' options for 'Quick dates', 'Dates', and 'Today'. The main table displays usage records with columns for Date & time, Party name, Module, Resource, and Action. On the right, a 'Fields' sidebar lists available dimensions (Key, Date & Time, User, Activity, Organization) and measures (Quantitative).


Date & time	Party name	Module	Resource	Action
20/07/2018 10:25:07	Morgan Stark	Analytics	Widgets	CreateUserActivitySearch
20/07/2018 10:19:51	Morgan Stark	Analytics	Widgets	CreateCubeSeizureSearch
20/07/2018 10:02:23	Morgan Stark	Analytics	Query	QueryExportFile
20/07/2018 09:57:21	Eddie March	Microsoft Graph	Analytics	CreateGraphSkypeForBusinessActivit...
20/07/2018 09:47:56	Eddie March	Microsoft Graph	Analytics	CreateGraphMailboxUsageSearch

On the right-hand side of the screen is a list of all available data fields, which can be used to show extra information or refine the query by filtering. The list is separated into 2 types of information:

- ▶ **Dimensions:** Dimension data is anything that cannot be measured, e.g. dates, keys, groups, etc. Within the list, each Dimension group can be expanded to reveal the individual options.
- ▶ **Measures:** Measures are numeric data attributes, which can be used in mathematical calculations, e.g. costs, duration, ring-time.

This screenshot shows the 'Search PRISM Usage' interface with a dropdown menu open for the 'Party name' filter. The dropdown menu lists various comparison operators: Contains, Does not contain, Equals, Does not equal, Begins with, Ends with, Is in, and Is not in. The table below shows the filtered results for 'Party name'.

Party name
Morgan Stark
Morgan Stark
Morgan Stark
Morgan Stark
Eddie March
Eddie March
Eddie March

Having set any filtering, and chosen the Tree and required dates, click the ‘Retrieve’ button . The inclusion of more than one filter will require you to specify ‘and’ and / or ‘or’ operators to define how the filtering should work (See [Sample Queries](#) for more details). Based on the default Dimensions for Prism usage analysis, the output confirms the Party name, module, and resource, as well as the action performed within it. The date and time the action took place is also recorded.

Date & time	Party name	Module	Resource	Action
20/07/2018 10:25:07	Morgan Stark	Analytics	Widgets	CreateUserActivitySearch
20/07/2018 10:19:51	Morgan Stark	Analytics	Widgets	CreateCubeSeizureSearch
20/07/2018 10:02:23	Morgan Stark	Analytics	Query	QueryExportFile
20/07/2018 09:57:21	Eddie March	Microsoft Graph	Analytics	CreateGraphSkypeForBusinessActiv...
20/07/2018 09:47:56	Eddie March	Microsoft Graph	Analytics	CreateGraphMailboxUsageSearch
20/07/2018 09:43:54	Eddie March	Microsoft Graph	Analytics	CreateGraphEmailAppUsageSearch
20/07/2018 09:33:22	Eddie March	Microsoft Graph	Analytics	CreateGraphEmailActivitySearch
20/07/2018 09:30:17	Eddie March	Microsoft Graph	Reports	Report
20/07/2018 09:29:53	Eddie March	Microsoft Graph	Reports	Report

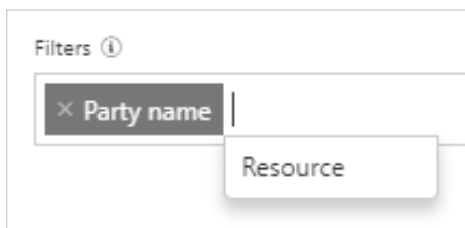
## Collection


Analytics of pre-warehouse collection information is primarily an engineering tool. It allows partially processed data to be analysed, before being committed to the warehouse database. Engineers will use this to ensure, for example, that data manipulation is working correctly – stripping access codes from dialled numbers, or inserting digits to ensure correct costing.

Under normal circumstances, very little or no information will be available in this tool, as certain services have to be stopped to keep records part processed.

## Sample Queries

Drag and drop Dimensions and Measures from the Fields list to the report columns and filters as required. If you know the name of a field, you can also type this into the ‘Columns’ or ‘Filters’ section. Prism will anticipate what you type, and display options for you to select. In this way, you can adjust the default output selection, or create a new bespoke report.



Click the ‘Retrieve’ button  to generate the report, using your selected criteria field from the report criteria. To remove any Dimensions and Measures, click the cross on the left.



Below the Columns section, you can enter report filters. This area is blank when you begin, but nearly any available column can also be used to filter the calls displayed in the results.

CDR source

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/>	Fixed Voice
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/>	Fixed Voice 2
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/>	Mobile Voice
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/>	Mobile Voice 2

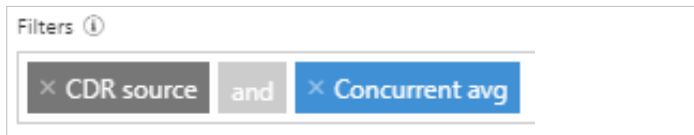
Select none

The fields are added and removed from the filter box in exactly the same manner as the Columns, but once selected, they can be used to narrow down the results of the search. Simply click on a filter field, and the filtering options for that field will be displayed. These will vary widely, depending on the type of field you have selected. More examples of filter types can be found towards the end of this section.

At any stage, you can check a summary of the current filtering, by hovering the mouse over the 'Information' icon  next to 'Filters'.



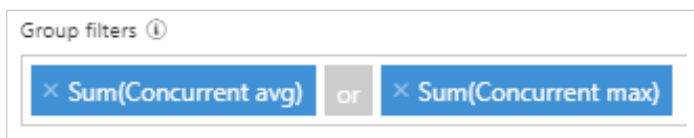
The inclusion of more than one filter will insert a Boolean function defaulting to 'and', but allowing use of 'or' depending on the requirements of the filter: Click on 'and' to change it to 'or'.








Apply Group Filters to aggregate the results. Drag Measures from the columns area to the Group Filters section, in order to apply filtering to the results.

Click the Measure to open the filtering options relevant to it.

The inclusion of more than one filter will insert a Boolean function defaulting to 'and', but allowing use of 'or' depending on the requirements of the filter: Click on 'and' to change it to 'or'.




Data in the columns section will appear as report output, while the filters enable you to manipulate what data is processed, and how it is handled. For example:


Search Legs     


Columns





× Leg start × Call direction × Calling digits × Calling label × Called digits × Called label × Call category × Talk time × Ring time × Base cost × Cost base currency code × Call outcome


Filters  Talk time equals 0.00:00:00

× Talk time and

Group filters 

Tree 1 - Organizations Select by Quick dates Dates Today 

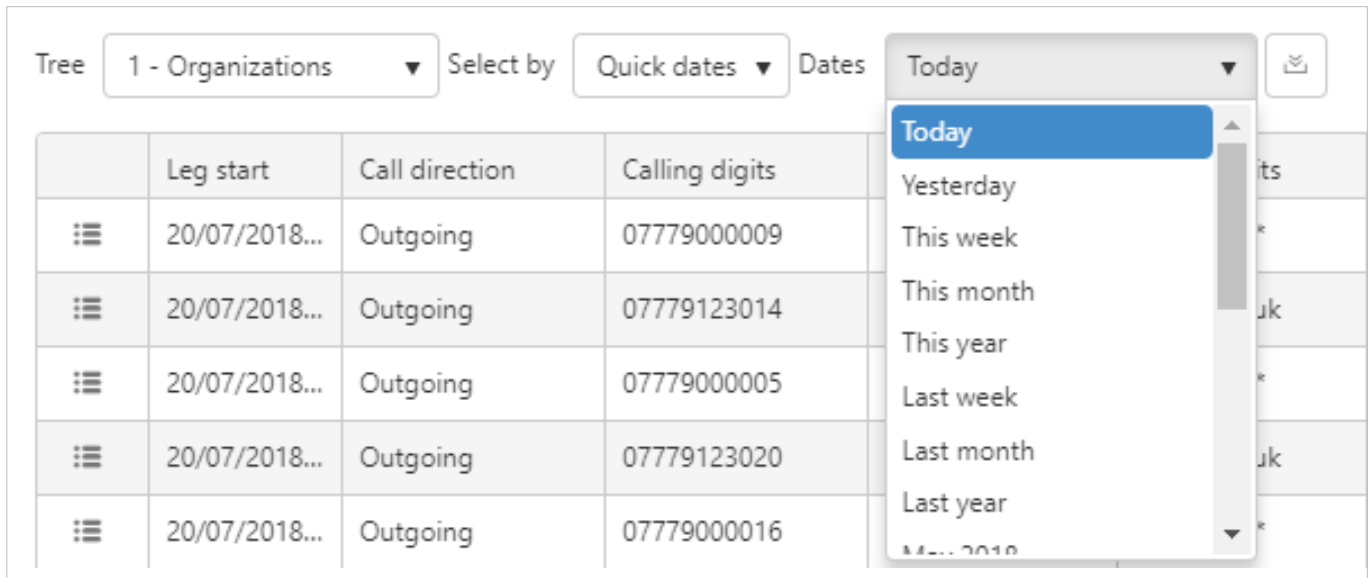
	Leg start	Call direction	Calling digits	Calling label	Called digits	Called label	Call category	Talk time	Ring time	Base cost	Cost base currency code	Call outco
	20/07/2018...	Outgoing	0777900009	Aaron Dennis	idatao*****			00:00:00	00:00:00	0.00	GBP	Connecte
	20/07/2018...	Outgoing	07779123014	Karaguchi Inoya...	idatao2couk	idatao2couk		00:00:00	00:00:00	0.00	GBP	Connecte
	20/07/2018...	Outgoing	07779000005	Claude Mac Do...	idatao*****			00:00:00	00:00:00	0.00	GBP	Connecte
	20/07/2018...	Outgoing	07779123020	Obadiah Stane	idatao2couk	idatao2couk		00:00:00	00:00:00	0.00	GBP	Connecte

 **Note:** You can add as many filters as you like to the search.





If you want to set the selection back to the default columns, click the 'Reset Columns' button .

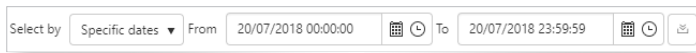
Define the date range for the search.



The screenshot shows a search interface with a table of call records. The table has columns for 'Leg start', 'Call direction', and 'Calling digits'. A 'Quick dates' dropdown menu is open, showing options like 'Today', 'Yesterday', 'This week', 'This month', 'This year', 'Last week', 'Last month', and 'Last year'. The 'Today' option is selected.

Use Quick dates to select from a range of preset options, including Today, Yesterday, This week, Last week, or a specific month. Alternatively, you can select Specific Dates and times.

Simply click the 'Calendar'  and / or 'Time' buttons  to alter the dates and times, or just type directly into the boxes.

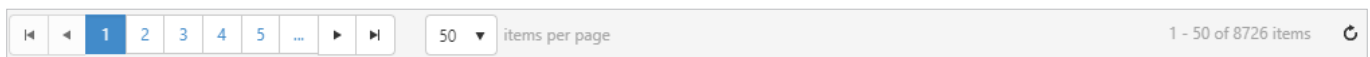


The screenshot shows a date range selection interface. It has a 'Select by' dropdown set to 'Specific dates', a 'From' field with the date '20/07/2018 00:00:00', and a 'To' field with the date '20/07/2018 23:59:59'. There are calendar and time selection icons next to the date fields.

After the date range is selected, click the 'Retrieve' button  to generate your results.

	Leg start	Call direction	Calling digits	Calling label	Called digits	Called label	Call category	Talk time	Ring time	Base cost	Cost base currency code	Call outcome
	20/07/2018...	Outgoing	07779000009	Aaron Dennis	idatao*****			00:00:00	00:00:00	0.00	GBP	Connected
	20/07/2018...	Outgoing	07779123014	Karaguchi Inoya...	idatao2couk	idatao2couk		00:00:00	00:00:00	0.00	GBP	Connected
	20/07/2018...	Outgoing	07779000005	Claude Mac Do...	idatao*****			00:00:00	00:00:00	0.00	GBP	Connected


By default, the results are shown 50 records at a time, with multiple pages of results accessed at the bottom of the page.




The screenshot shows a pagination control with page numbers 1, 2, 3, 4, 5, and an ellipsis. It also shows '50 items per page' and '1 - 50 of 8726 items'.

The number of records on each page can be adjusted here, as can the columns that are included in the output.

The choice of fields is defined by those selected in the columns field, as detailed above.

Click the 'Details' button  to the left of a record you wish to drill-down into to open a new display. A new tab will open for the call:


 This function is not available when data has been aggregated.

Select the leg of the call to look at, and the details will be displayed in the section below. Beyond the initial summary, the detail for individual categories can also be selected.



Only fields with valid information will be populated in the detail section, for example:

Keys	Call category	Called category	Queue time band
Categories	<input type="text"/>	<input type="text"/>	< 5 seconds
Events	Call condition	Calling category	Response time band
Date & time	Costed	<input type="text"/>	< 5 seconds
Flags	Call direction	Destination type	Ring time band
Telephony	Outgoing	Public network on this CDR Source	< 5 seconds
Tariffs	Origination type	Media type	Call termination cause
Equipment	<input type="text"/>	GPRS	0
Timing	Initiation reason	Call outcome	Termination reason
Financial	Normal	Connected	Normal
Bandwidth (MB)			
Quality			
Quantitative			

If you have set up a search, and will want to use its criteria again (column and filter selections), then from the listing page, you can save the search as a widget with the 'Save' button  (See the section [Save as Widget](#) for details).

## Aggregated Queries

Analytics can go beyond a simple filtered list of call legs, allowing for analysis of the data in a number of ways.

Most Dimensions can be used to group records, while Measures can have a variety of functions performed on them within those groups.

It is recommended that all columns are cleared before beginning an aggregated report, and to build them up slowly until you get the required result-set. All Dimensions included will act to group the call legs, so the key is to keep it simple, and use as few objects as possible. It is worth building up the query slowly, and generating results as you build it, to ensure it returns the desired result.

To generate aggregated data, add one or more Dimensions, and one or more Measures to the columns section. Click the Measure, and you will be presented with a selection of mathematical functions: Value, Average, Count, Maximum, Minimum, Standard Deviation, Standard Deviation Population, Sum, Variance, and Variance Population. In the example below, the Dimension 'Call Direction' is used, along with the sum of the Measure 'Talk Time', to display a total talk time for each direction.

Search Legs

Columns

Call direction
Sum(Talk time)
✕

Filters

✕

and

✕

Tree

1 - Organizations
▼
Select by
Quick dates
▼
Dates
Today
▼
🗑️

Leg start	Call direction	Calling digits	Calling label	Called digits	Called label	Call category	Talk time	Ring time	Base cost	Cost base currency code	Call outcome
20/07/2018...	Outgoing	07779000009	Aaron Dennis	idatao*****			00:00:00	00:00:00	0.00	GBP	Connected
20/07/2018...	Outgoing	07779123014	Karaguchi Inoya...	idatao2couk	idatao2couk		00:00:00	00:00:00	0.00	GBP	Connected
20/07/2018...	Outgoing	07779000005	Claude Mac Do...	idatao*****			00:00:00	00:00:00	0.00	GBP	Connected

More Dimensions can be included to increase the granularity of the report, more Measures can give extra information, and filtering can be applied to the results as normal. The example below is limited by filtering to calling digits starting with 25, and grouped by both the calling party and call direction. Note that nearly any Measure can be used for a count value.

Search Legs

Columns

Calling digits
Call direction
Sum(Talk time)
Sum(Base cost)
Count(Base cost)
✕

Filters

Calling digits
✕

and

✕

Tree

1 - Organizations
▼
Select by
Quick dates
▼
Dates
Last month
▼
🗑️

Calling digits	Call direction	Sum(Talk time)	Sum(Base cost)	Count(Base cost)
	Incoming	08:14:39:32		0.00 15443
	Tandem	02:18:45		93.50 269
+213215*****	Incoming	00:28:45		0.00 1
+2136612*****	Incoming	00:46:39		0.00 2
+3023105*****	Incoming	01:06:09		0.00 1

## Filter Types

There are a variety of options when filtering.

The options for filtering Measures are numeric calculations. You can use the raw value, or a calculated value (e.g. average) as the filter.

**Sum**

- Average
- Maximum
- Minimum
- Standard deviation
- Standard deviation population
- Sum**
- Variance
- Variance population

0:00	00:00:00	0.00	GBP
1:17	00:00:14	0.02	GBP

**Equals**

- Equals**
- Does not equal
- Is greater than
- Is greater than or equal to
- Is less than
- Is less than or equal to
- Is between
- Is not between

Outgoing	07779123021	Ban
Outgoing	777900001314	Den

**Wild cards**

**%** Matches any string of zero or more characters. For example, %787% finds all texts containing 787.

**\_** Matches any single character. For example, 1\_3 finds 123, 193, 1a3...

**[]** Matches any single character within the specified range ([a-f]) or set ([abcdef]). For example, 0[1-4]% finds all entries beginning with 01, 02, 03 and 04.

**[^]** Matches any single character not within the specified range ([^a-f]) or set ([^abcdef]). For example, 0[^1-4]% finds all entries not beginning with 01, 02, 03 and 04.

You can also choose the threshold type, for example, equal to, greater than, or between. For the majority of simple searches, you will only need the value. However, when using aggregated result sets, the mathematical functions will allow you to remove outlying data points or focus on specific areas.

When dealing with filtering on Dimensions, the filtering options will vary depending on the field that you are using. Some fields need full or partial strings. These can make use of regular wildcards, the definition of which can be checked at the time by clicking the wild cards link, which will appear whenever they are appropriate to use.

Examples of these fields are Calling or Called digits. You can add multiple entries to the filter by selecting specific details from a list, or by adding multiple records. The example below will include all 020 numbers called, but exclude calls to the specific dialled digits entered.

Calling digits

×


Include

×


Exclude

×

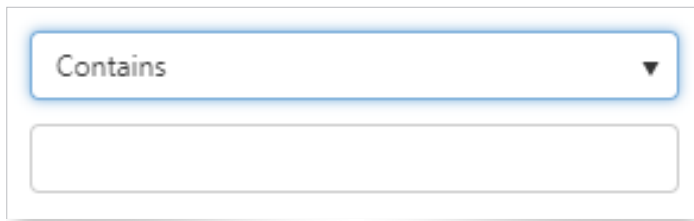

Include

+

[Wild cards](#)

OK

Text filtering options generally allow you to specify free text, and the filter allows for a variety of searches for exact or partial values.

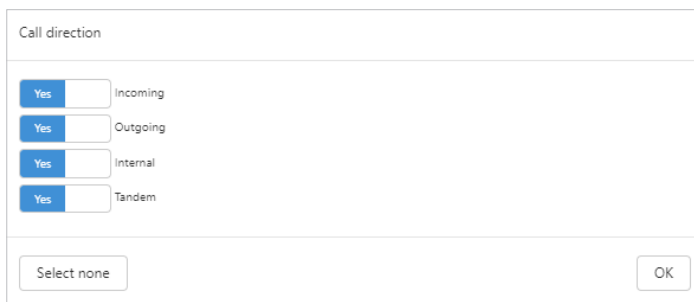


The options are: Contains, Does not contain, Equals, Does not equal, Begins with, Ends with, Is in, and Is not in. You can only enter one value per Dimension in the search.

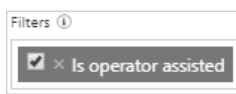
Time / date fields have a range of filtering options. Simply choose one, and enter the appropriate date. If you choose 'Between', a second date selection is made available. There are also two special options: 'Has a value' and 'Does not have a value'. These do not require any specific entries, as they simply select records with populated, or unpopulated fields as appropriate.

Numeric fields work in a very similar way to the date / time selections.

Certain Dimensions have specific options. For example, Call Direction shows only the four call directions, with include / exclude sliders against each, as shown below. Call Outcome has a similar set of options, as pictured earlier in this section.



Finally, there are a few Dimensions that have basic Yes / No options. These simply show a tick box when added to the filter line, for example, 'Is operator assisted' from the flags category of Dimensions.




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