

# Factors Watcher

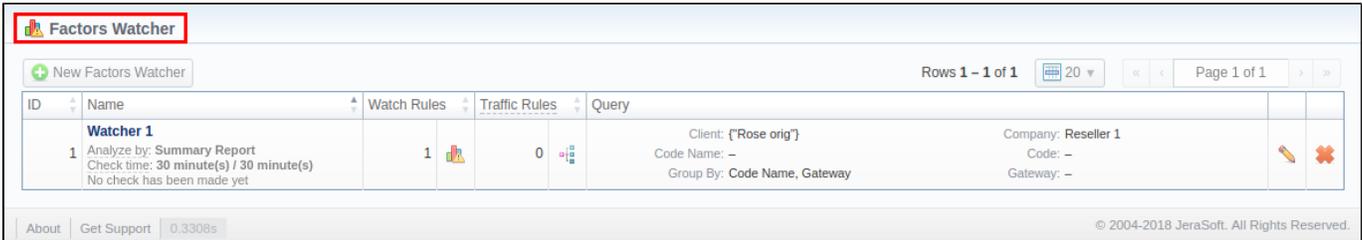
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## Factors Watcher List

This section represents a built-in tool to monitor statistics and generate alerts, as well as block numbers, codes/code names, destinations, clients, or accounts, if some conditions are met. The section is presented in a form of a table with the following columns:

Screenshot: *Factors Watcher main section*



ID	Name	Watch Rules	Traffic Rules	Query
1	<b>Watcher 1</b> Analyze by: Summary Report Check time: 30 minute(s) / 30 minute(s) No check has been made yet	1	0	Client: ["Rose orig"] Code Name: - Group By: Code Name, Gateway

Column	Description
<b>ID</b>	Identification number of a factors watcher
<b>Name</b>	Name of a factors watcher
<b>Watch Rule</b>	Total number of watch rules within a factors watcher
<b>Presets</b>	Total amount of traffic rules, created by a factors watcher
<b>Query</b>	Factors watcher query

Functional buttons/icons, presented in the section, are as follows:

Icon	Description
	Allows editing existing watch rules
	Allows viewing traffic rules, created by a factors watcher
	Allows editing a factors watcher
	Allows deleting a factors watcher

## Creating a New Factors Watcher

The tool is based on periodical queries in the [Summary](#) or [xDRs List](#) sections. To create a new query, click the **New Factors Watcher** button and specify parameters in the following form:

Screenshot: *Adding a New Factors Watcher*

**Factors Watcher**

Name:

Analyze by:

Report Template:

Analyze interval of:

Period Offset:

Check every:

Period Start:

Time Zone:

Time Profile:

**QUERY**

Client:

Code Name:

Company:

Group By #1:

Account:

Code:

Code Deck:

Group By #2:

Gateway:

Group By #3:

Test Query

OK

Cancel

Apply

Field	Description
<b>Name</b>	Factors watcher's name. This field is mandatory. The name must be no longer than 128 symbols.
<b>Analyze by</b>	Select a report ( <a href="#">Summary</a> or <a href="#">xDRs List</a> ), a new factors watcher will be based on  Different reports provide a different set of parameters that are available for monitoring. For instance, <b>xDRs List</b> allows you to work with service sources (phone numbers, data) while <b>Summary report</b> allows such operations with ACD and ASR.
<b>Report Template</b>	Specify the template for further usage (optional)  <div style="background-color: yellow; padding: 5px;"><b>⚠ Attention</b>  Please note that the system enables to set a limited number of parameters overridden from the assigned template. For example: If there are 2 or more clients assigned to the respective template, the system will use the first client for Factors Watcher settings, all others will be ignored.</div>
<b>Analyze Interval of, min</b>	Interval of time to check. Please note, this option checks <b>a current period, not the past hour</b> .
<b>Period Offset</b>	This period is used to compare results of different intervals. It deducts a specified period from the <b>Period Start</b> date, then takes the statistics according to the <b>Analyze interval of</b> value and the date calculated above.
<b>Check Every, min</b>	Frequency of checks, performed by a factors watcher
<b>Period Start</b>	Enter the specific time to set a factors watcher starting date
<b>Timezone</b>	Specify a timezone that will be used for reports queries/blocking routes
<b>Time Profile</b>	When you choose the time profile, it will use the statistics in the factors watcher according to the chosen value, for example, at peak times. However, if you click on <b>Test Query</b> , it will display the statistics without the selected time profile.
<b>Query information block</b>	<b>Indicate the query fields that will be used for generating a selected type of report</b>
<b>Client</b>	Select a client. You can specify multiple clients.  <div style="background-color: yellow; padding: 5px;"><b>⚠ Attention</b>  If you specify a client(s), the <b>Account</b> field becomes unavailable and vice versa.</div>
<b>Account</b>	Select a target client's account

<b>Code Name</b>	Indicate a code name  <div style="background-color: yellow; padding: 5px;"><b>⚠ Attention</b> The <b>Code</b> and <b>Code Name</b> fields are mutually exclusive</div>
<b>Code</b>	Define the code
<b>Company</b>	Specify a Reseller
<b>Code Deck</b>	Indicate a target code deck
<b>Gateway</b>	Select a respective gateway
<b>Group by #</b>	Group query by a selected parameter ( <b>client</b> , <b>account</b> , <b>code name</b> , <b>code</b> or <b>gateway</b> ). Pay attention that based on selected parameters, respective <b>Action</b> options will be available. For instance, if you group by <b>Code</b> , in the rule settings you will have the <b>Block Code</b> option and so on.
<b>Test Query button</b>	Click on this button to perform a test query in the Summary or xDRs List Report for the period, specified in the <b>Check Every</b> and <b>Analyze Interval of</b> fields

When you click **OK**, the new factors watcher will be created. You can edit properties of this watcher later by clicking the edit  icon.

## Configuring Watch Rules

Next, you need to configure the watcher rules – parameters, under which conditions are monitored. To do this:

1. choose the already existed Factors Watcher from the list or create a new rule;
2. click on the name of the Factors Watcher or the **watch rule**  icon;
3. in the appeared window, click the **Add Rule** button and fill in the following fields:

Screenshot: *Editing Factors Watcher rules*

 **Factors Watcher**
Watcher 1

+ Add rule
Rows 1 – 0 of 1

Priority	Match					Factors	Action	Lock Period	Periodic lock	Expiration Date	
	Service	Origin	Gateway	Account	Code						
0	Calls	origination	GW Calls			acd_cur < 80	Alert	0 min	<input type="checkbox"/>		

Match — you can use "\*" wildcard in these fields.

Factors — you should list watch rules in this field delimited by ";". List of correct fields:  
 - volume\_total, volume\_billed, acd\_std, acd\_cur, pdd, scd, package\_volume - with measurement unit specified in service  
 - records\_total, records\_notzero, records\_success, records\_busy, records\_nochannel, records\_error - with measurement unit: numbers;  
 - cost\_total, rate\_avg - with measurement unit: money;  
 - asr\_std, asr\_cur - with measurement unit: percentage (%).

OK
Cancel
Apply

Field	Description	
<b>Priority</b>	Define a priority of rules execution if they have the similar <b>Match</b> parameter	
<b>Match</b>	A set of parameters that are used as a basis for checks	
	<b>Service</b>	Determine the type of service (e.g., <b>calls</b> , <b>SMSs</b> , <b>data</b> )
	<b>Origin</b>	Type of route to check ( <b>Origination/Termination</b> )
	<b>Code Name</b>	Indicate the code name to apply a rule to
	<b>Gateways</b>	Specify the gateway to apply a rule to

 **Tip**

To create a temporary rule that will override other rules with the same match parameters, you need to set up the rule with the highest priority and specify an appropriate **Expiration Date**. Therefore, the existed multiple rules with the same match parameters will override each other and the rule with the highest priority will be applied.

**Factors** Enter factors that will be applied to a current rule.

Parameters must be listed with a semi-colon “;” as a delimiting symbol.

The list of parameters available for usage:

- **volume\_total, volume\_billed, acc\_std, acc\_cur, pdd, scd, package\_volume** - with a measurement unit specified in the service
- **records\_total, records\_notzero, records\_success, records\_busy, records\_nochannel, records\_error** - with a measurement unit: numbers;
- **cost\_total, rate\_avg** - with a measurement unit: money;
- **asr\_std, asr\_cur** - with a measurement unit: percentage (%).

For example, if you enter **total\_volume > 100**, it means that when the total event volume (e.g., call time) count for respective match parameters goes over 100 (here - minutes), the system will create an alert.

It's possible to add a factors watcher rule with negative values. For example, **total\_cost < -10**.

**Factors with a reference to the side-by-side reports:**

You can adjust these factors on your own, using the next formula and pre-existing factors mentioned above: **factors\_name\_1** - value for the first period; **factors\_name\_2** - value for the second period; **factors\_name\_diff** - difference between periods.

For example: **total\_cost\_1** (of the 1<sup>st</sup> period), **total\_cost\_2** (of the 2<sup>nd</sup> period), **total\_cost\_diff** (difference in %).

 **Tip**

Users can add the Factors Watcher based on the side-by-side Summary Report. All you need to do is:

- click the **New Factors Watcher** button;
- fill in the **Name** field and others according to your needs;
- specify intervals in the next fields: **Analyze Interval of, Period Start** and **Period Offset**;
- click the **Test Query** button.

**Action** An action that must be taken if a matched rule is found.

There are respective options: **Alert, Block Code Name/Account/Client**

When one of these options is applied, the message will be shown in the **Events log** section.

 **Attention**

The **Block Code Name/Client/Account** options will be invisible if the **Group By #** field in factors watcher rule is empty. If you group by the **Client**, the **Block Account** option won't be visible in the drop-down list of the **Action** field.

**Lock Period** Defines the lockout time in minutes for analyzed route in case of a block action (0 value means infinite lockout)

**Periodic Lock** If enabled, the rule will expire at the end of a period specified in the **Analyze interval of** field in the Watcher settings. Please note, that this option has higher priority than the **Expiration Date**.

**Expiration Date** Specify date when the rule must be automatically deleted

 **Attention**

Please note that the **set of rules** in the **Action** field depends on how many parameters you defined in the **Group by #** field when a current query was created.

The **Block Code** option is available only if you set respective grouping in the factors watcher settings. For example, if you defined a code in the query, you will be able to block codes in watcher rules, etc.

