
Project Traffic Light

Project Traffic Light is calculated based on the values and color signals of the project's **scalar metrics**.

The values that the project traffic light can take are: GREEN , YELLOW , RED . A project may not have a traffic light.

The value (color) of the project traffic light is determined according to the **rule** that the user creates. The rule defines the logic for transforming the set of values and/or color signals of the project's scalar metrics into a final signal (red/yellow/green).

Example of a rule for calculating the project traffic light

If all scalar metrics of the project are "green", then green; otherwise, if all are "not red", then yellow; otherwise - red.

The set of scalar metrics of the project involved in calculating the traffic light, their aliases, and the calculation rule are specified during [Creating a Monitoring Project](#).

The value of the project traffic light is displayed in the [Project Catalog](#) and corresponds to the result of the last project run.

The value of the traffic light can **change from run to run of the project**, thus reflecting changes in the monitored metrics.

How to Write a Rule

Rule Creation Form

After creating all nodes and edges of the project, expand the **settings**, and select the **Traffic Light List** field, after which the following form will open:

Светофор ×

* Название

Поле обязательно для заполнения

* Тип

Главный ▼

Правило вычисления светофора

In this form, you can configure the traffic light for your project. The form contains the following fields:

- **Name** (mandatory field) - enter a name for the traffic light
- **Type** (mandatory field) - select the type of traffic light from the dropdown list (Main or Additional)
- **Traffic Light Calculation Rule** - a large text field for entering the rule that will determine the state of the traffic light

At the bottom of the form, there are buttons:

- **Cancel** - closes the form without saving
- **Set Default Rule** - fills the rule field with a standard template
- **Validate** - checks the correctness of the entered rule
- **Add** - saves the traffic light settings

Metric Values

You can refer to both the **numerical value** of the metric and the value of the simple traffic light of the metric (**signal color**).

To refer to the value of the metric, you need to use the method `scalar(...)`, parameterized by the alias of the metric. To refer to the color of the signal of the metric, you need to use the method `signal(...)`, parameterized by the alias of the metric.

Example

There is a metric with the alias MAE.

To refer to the value, you need to write `scalar(MAE)`.

To refer to the color of the simple traffic light, you need to write `signal(MAE)`.

Rule Syntax

Expression Structure

If condition **then** action [**elif** condition **then** action] **else** action

The condition can be a regular logical expression with parentheses, and/or, comparisons `>`, `<`, `=`, `!=` and references to metric values (`signal(...)` / `scalar(...)`).

The action can be a result or another if-expression, each if-expression (including the initial one) can contain as many (including 0) elif and must close with else.

The result, which is the project traffic light, can be specified as `result = GREEN`, `result = YELLOW`, `result = RED`.

Rule Examples

Simple Example

Available metric aliases: MAE, MEAN

```
if signal(MAE) == GREEN and scalar(MEAN) > 0
  then result = GREEN
else result = RED
```

Complex Example

Available metric aliases: MAE, MSE, MEAN

```
if signal(MAE) == GREEN or (signal(MSE) == GREEN and signal(MEAN) ==  
GREEN)  
  then  
    if scalar(MSE) < 10  
      then result = GREEN  
    elif signal(MSE) == YELLOW  
      then result = YELLOW  
    else result = RED  
else result = RED
```