OS.ENGINE

MANUAL

(Optimizer)

Table of content

1. General information

This manual considers the work of the optimizer module.

This module allows testing one robot with different settings, with automatic search parameters.

Unlike the tester, in which it is allowed to run many different strategies at the same time, the optimizer can run only one strategy at a time. But it does it in multithreaded mode multiple times at the same moment. This allows quick identification of good and stable settings for the robot.

In order to be loaded into the optimizer, settings in your strategies shall be implemented through parameters. In the standard build, there are at least five examples of robots as examples of such bots. If the bot has no parameters, these robots will not be reflected in the list of possible bots for optimization.

On our YouTube channel, you will find an example of creating a robot with parameters. https://www.youtube.com/watch?v=2A_hXKNr3G4&t=1s

Attention!!!
Optimization is a very demanding and difficult task for the processor. During which, in some cases, the CPU load will be close to one hundred percent within a few dozens of minutes or even hours. If you have not cleaned your fans and your thermal paste was put on the processor a few years ago: **Now is the time to do routine maintenance of the processor. Before you finish reading this manual and start your reserch.**
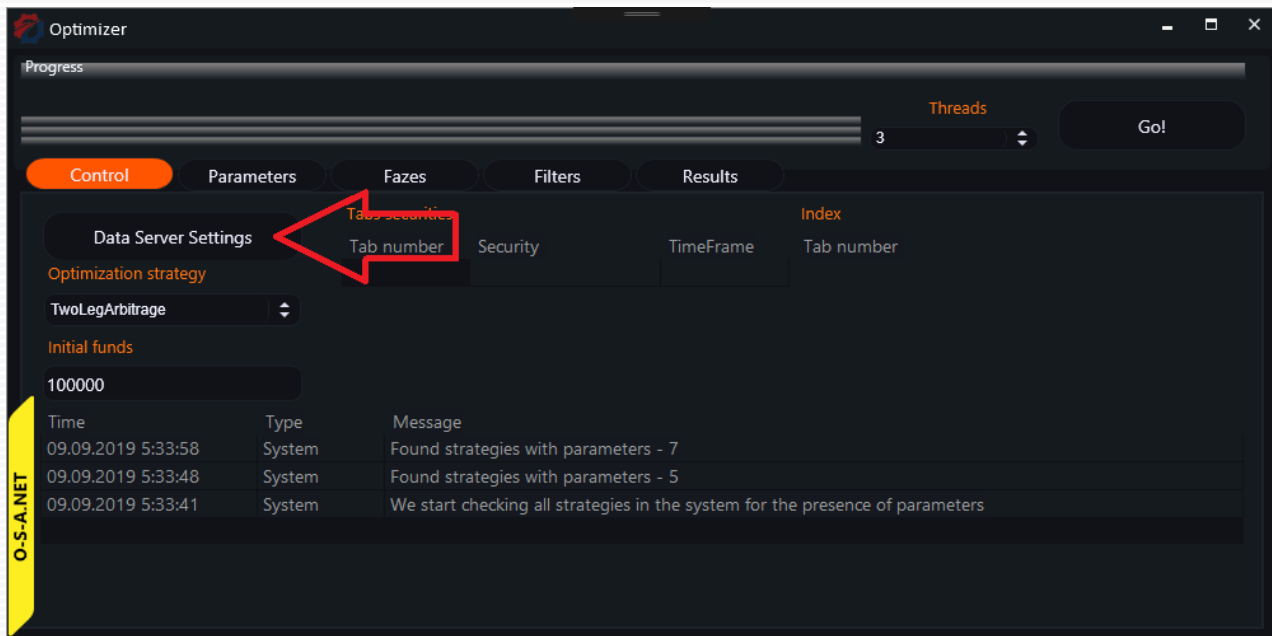
 And don't say we haven't warned you.

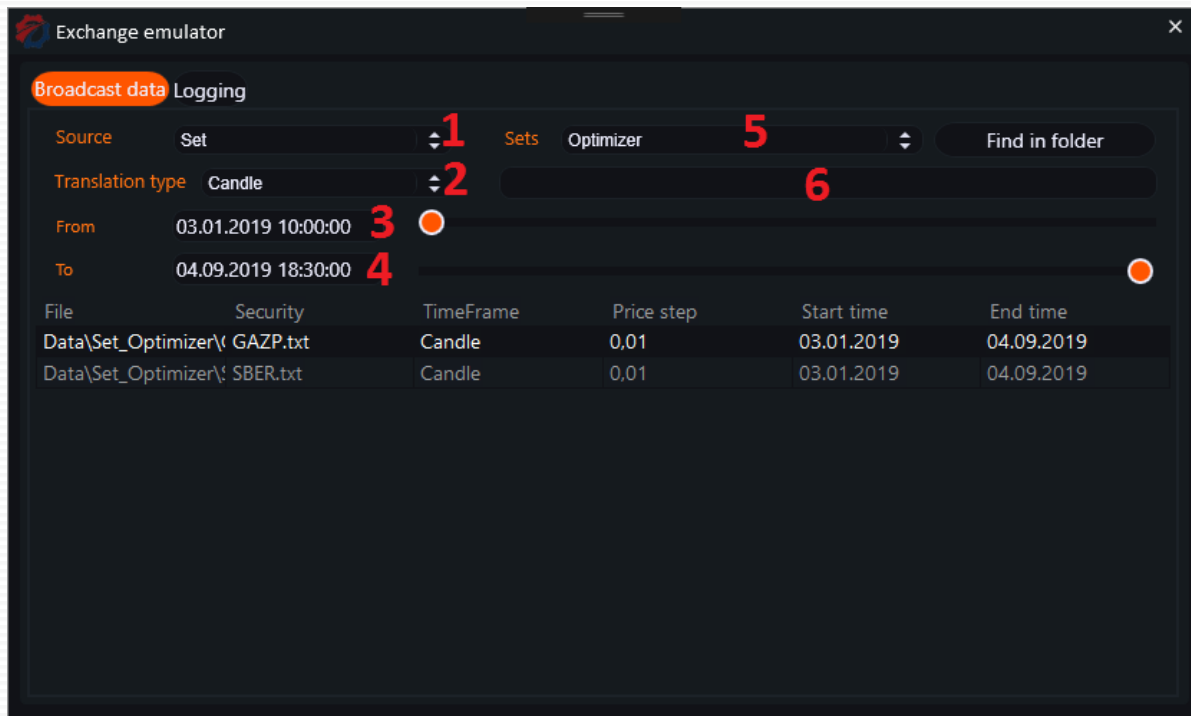To get started we run the exe file with the platform and get to the main menu:
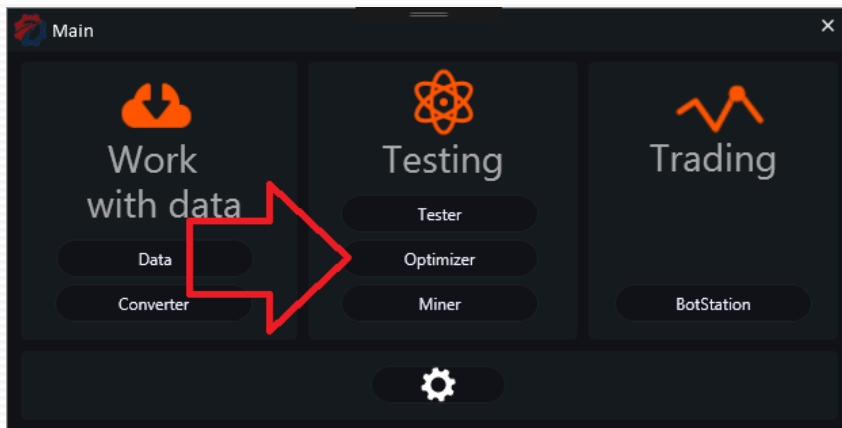
Choose "Optimizer"

2. Data set settings

The first thing to do is to set up a data set from which the robot will take the data:
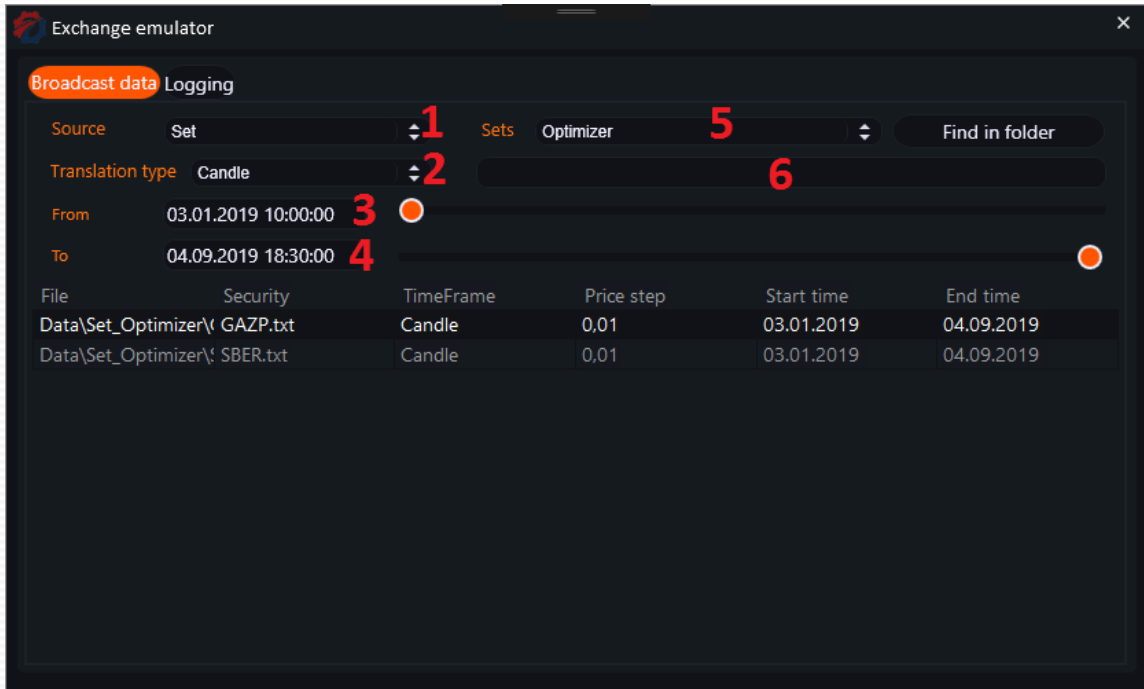

Then select the data set:

2. Data set settings

Then select the data set and configure the data to be broadcast:

1. Selecting a data source
    1. Set – data sets downloaded using OsData
    2. Folder – data downloaded from other sources (it is not recommended, because not all data types are acceptable. See the detailed description of the formats in the OsTester manual)
2. Type of transmitted data
    1. Candle – candles
    2. TickOnlyReadyCandle – tick data
    3. MarketDepthOnlyReadyCandle – glasses.
3. Test start time
4. Test completion time
5. Data set. If Set source is selected.
6. Path to the data folder. If Folder source is selected

3. Choosing a strategy and setting tools

Immediately after starting the program, it begins to check all the strategies for the presence of parameters. After waiting about 10 seconds you can choose a strategy and configure the paper that will be broadcast to the robot:
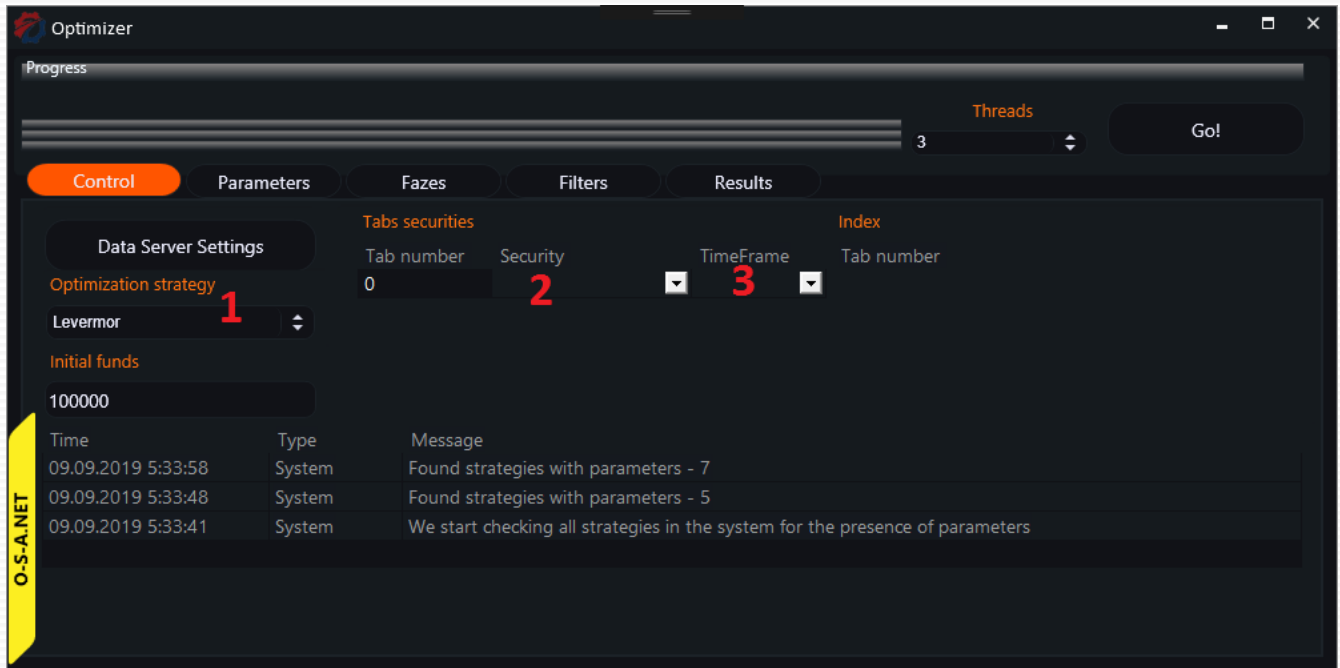
1. Pop-up menu of strategies available for optimization
2. Paper for the first robot tab
3. TimeFrame for the first robot tab

Attention!

If you use candlesticks as the data to be broadcast, in order to avoid looking into the future, choose the same timeframe for all your tabs.

After selecting a paper or timeFrame in the table, press Enter. Otherwise, the data might not be accepted by the robot. This is due to the use of a free default DataGrid. It works that way.
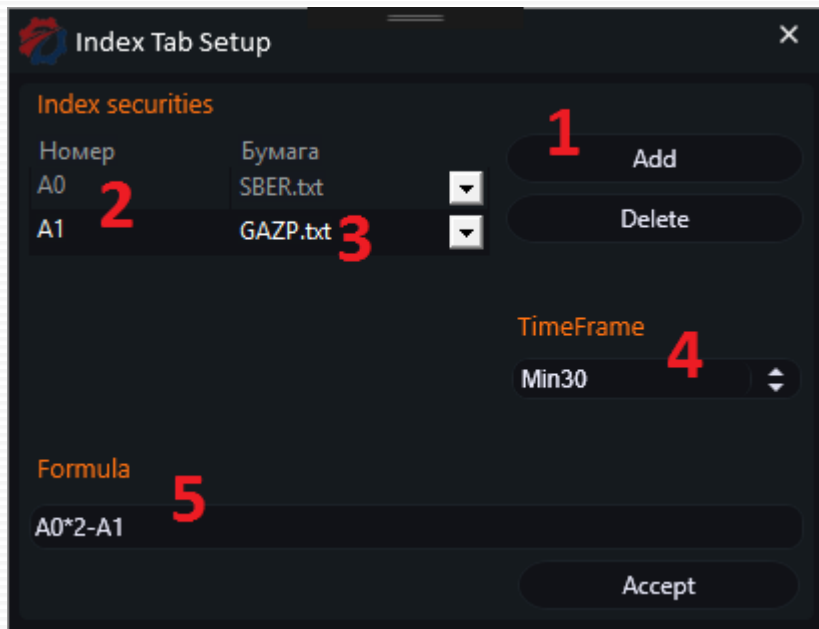
3. Choosing a strategy and setting tools

If you choose a strategy with an index and several tools, you will have to configure indices:
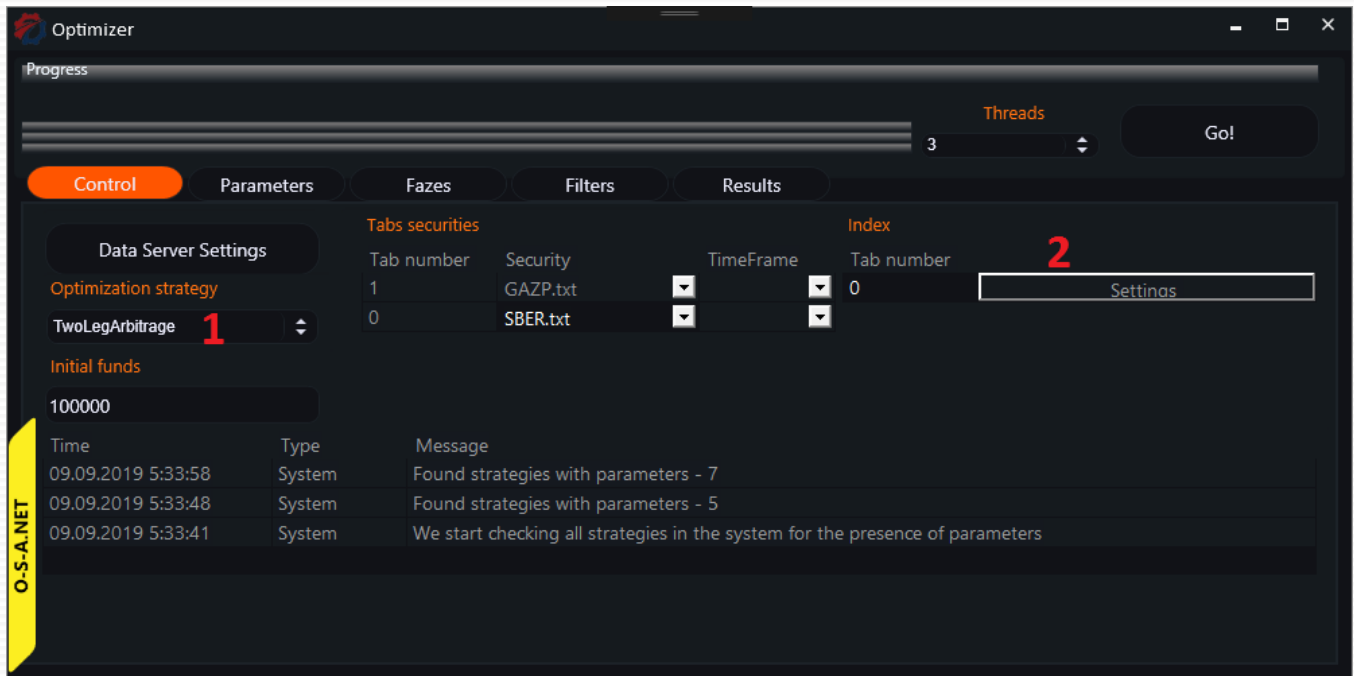
1. Select an arbitrage strategy with an index
2. Adjust the paper into the robot tab and Click on the adjust index button
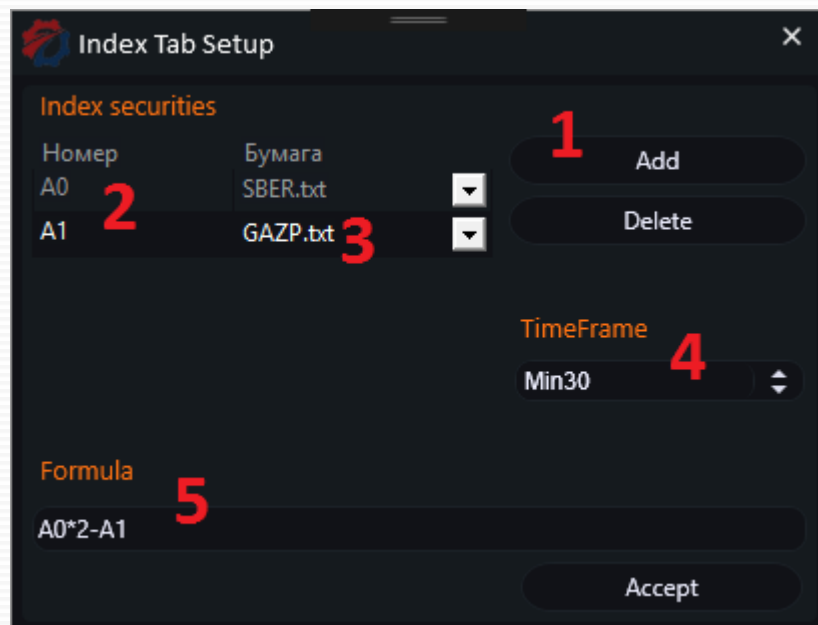
3. Choosing a strategy and setting tools

1. Click on the add button as many times as the number of papers we need in the index
2. Then we will use papers by numbers in the formula
3. Select the paper for the index
4. Select the timeFrame for papers and index
5. Enter the formula for calculating the index. It accepts the following characters:
    1. () brackets
    2. + - */ standard characters
    3. Numbers of format papers from the table
    4. Whole numbers

4. Strategy parameters

Go to the Settings tab and configure:
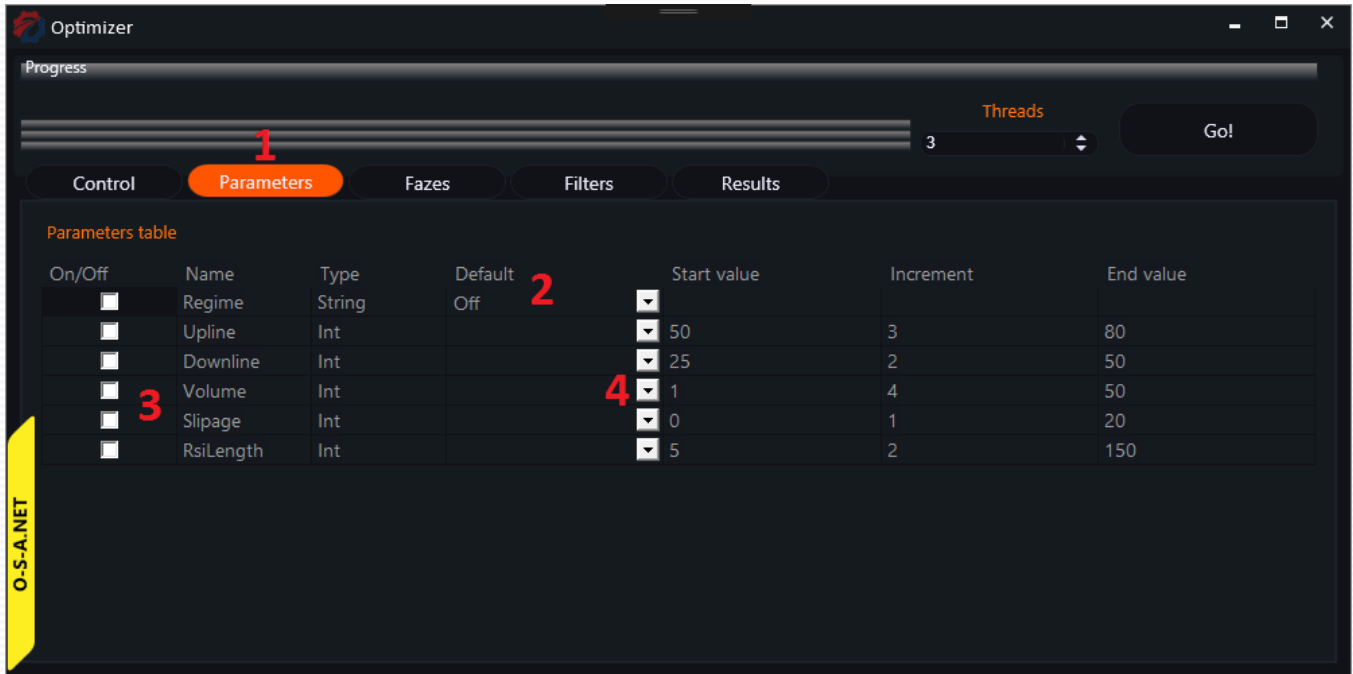
2. Select the values for string and bool parameters that they will have during all rounds. These parameters are not subject to resetting.

3. Turn on the parameters we want to optimize

4. Select the starting value, increment value, and the last value for the optimization parameters.

Attention!

Parameters not enabled by a checkmark for the reset will have Starting values through all iterations.

# 5 Stages of optimization

Next, go to the "Stages" tab:
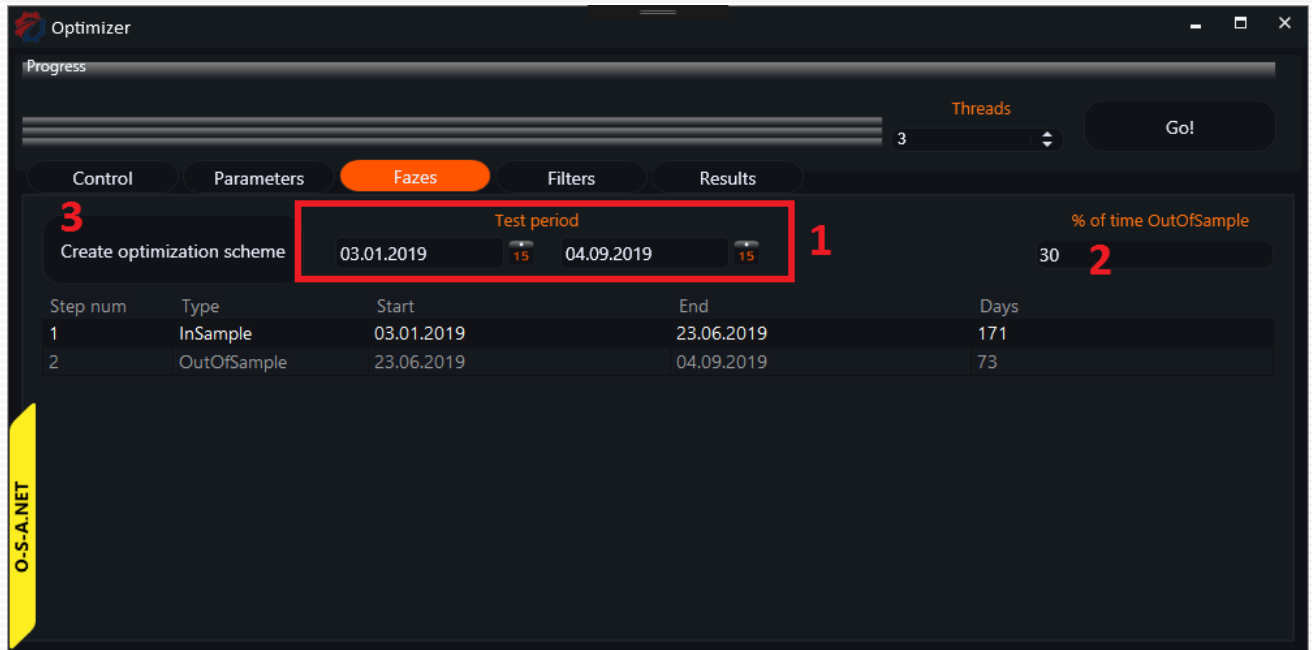
1. Select the period in which the strategy is to be tested. The default here is minimum and maximum data set times
2. Select the period of time in%, which will be given to OutOfSample tests
3. Click on the button "Create optimization scheme"

6 Results filter

This tab is designed to filter some robots from OutOfSample testing, if they pass by some parameters.
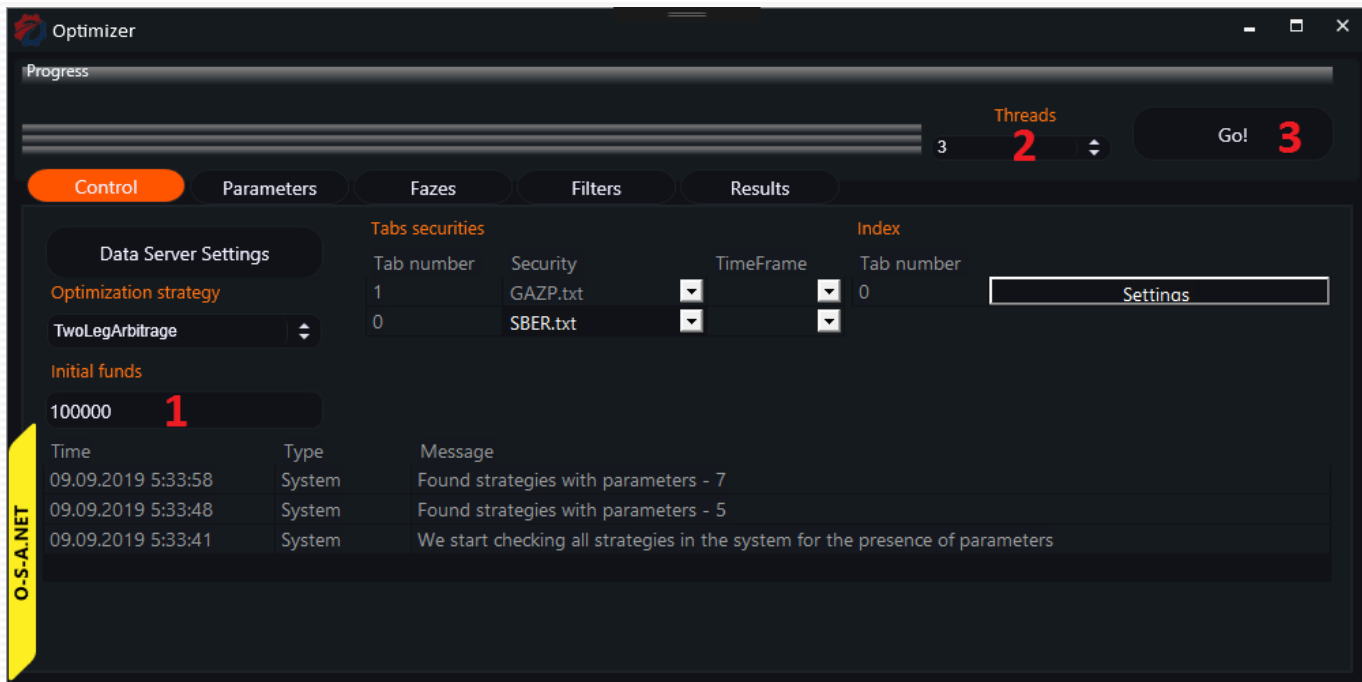
In order to configure these parameters, open the "Filters" tab:
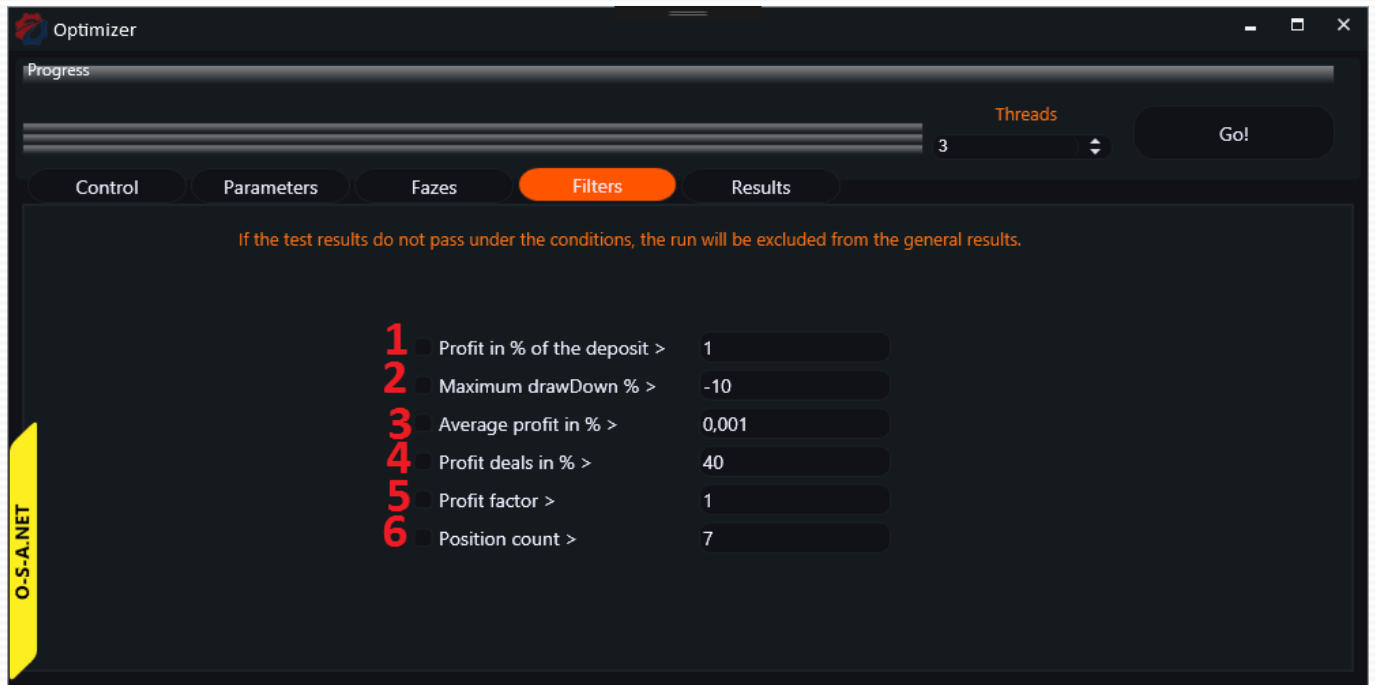
1. Filter by profit.
2. Filter by maximum drawdown
3. Filter by average profit from the transaction
4. Filter by percentage of profitable trades
5. Filter by profit factor
6. Filter by number of trades

7 Running the optimization

After all the settings are done, go to the control tab and run the optimization:

1. Select the initial volume for the portfolio
2. Select the number of threads that will be optimized
3. Click on the "Let's go!" button

Important!

Do not install a large number of threads if you don't want all your Windows processes to freeze up.

Monitor memory consumed by the optimizer. If necessary, restart the program between the restarts of optimization.

Before starting optimization, test the strategy in the conventional Tester, so there are no problems and errors

8 Results

After the program reports on the completion of optimization, go to the "Results" page:

1. Switchboard for test stages. By switching it, the list of robots below will be changed according to the stages. The numbers of robots correspond to robot settings in different stages.
2. The button by pressing which you can see the parameters by which the robot was launched.
3. The button by pressing which you can see the standard robot log.
4. The button by pressing which the transactions chart can be seen