

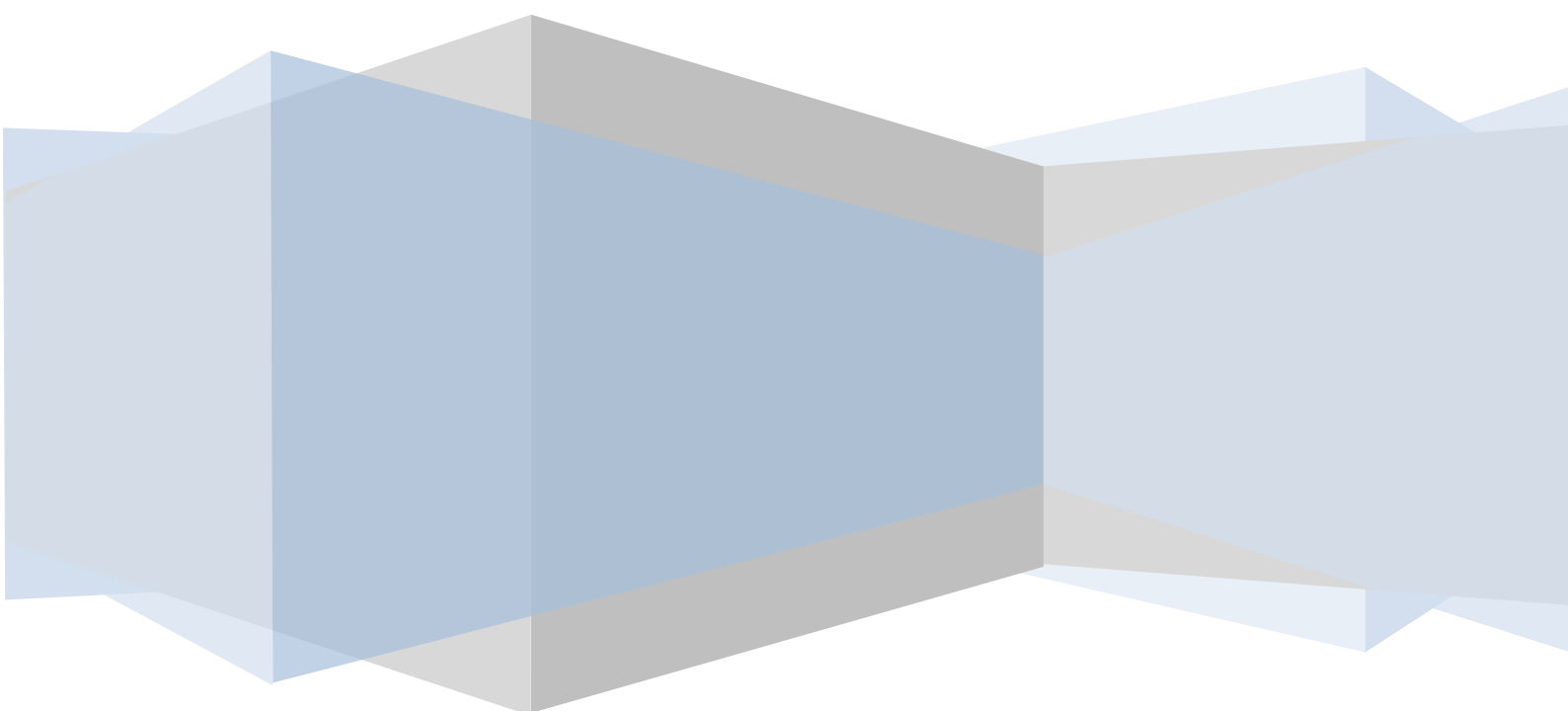
KEYSOFT

Servicing The Best Brokers

Smart Hedger Plugin

Installation and User Guide

Copyright © 2025 KEYSOFT HOLDING Ltd. ALL RIGHTS RESERVED



Chapter 1: Installation and Setup

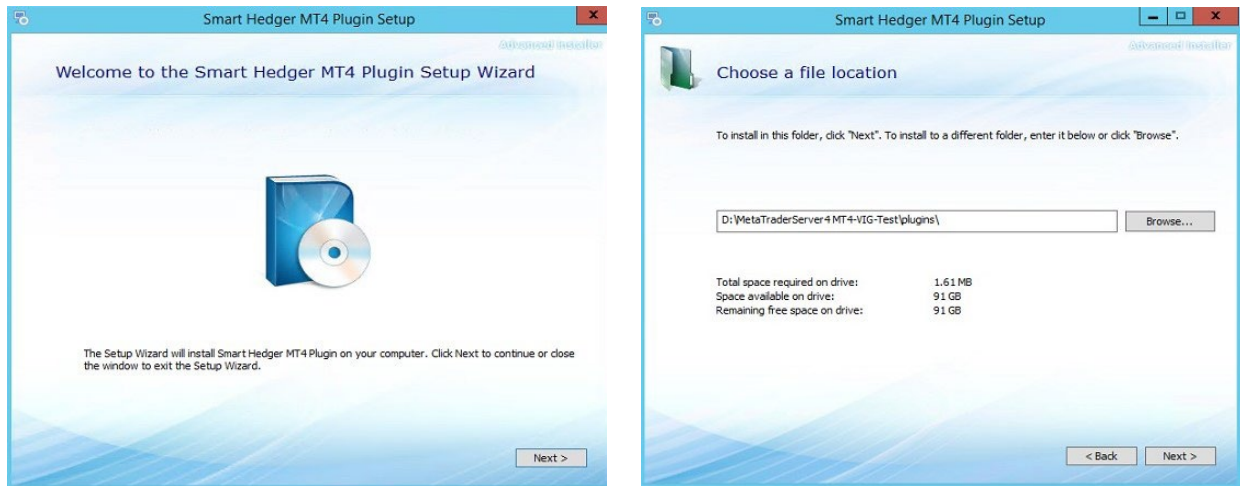
Introduction to Smart Hedger

Smart Hedger is a plugin for the MT4 server. It performs automatic real-time analysis of the Client Order Requests, and separates client orders into A and B books according to internal algorithmic logic. For B-book Client Orders, Smart Hedger performs auto-dealing, this feature requires a connection to at least one MT4 Liquidity Provider (LP).

Smart Hedger performs automatic risk management for open Client B-book orders. In order to do that, it automatically opens Hedge trades for the Broker against LP that will protect Broker from adverse price movements on the Client B-book accounts. These Hedge trades are booked in a special Coverage Account.

Installation of Smart Hedger plugin

Use the provided installation file SmartHedgerPlugin.exe to install the Smart Hedger MT4 plugin. The installation menu will ask to specify the directory where you wish to install the plugin.

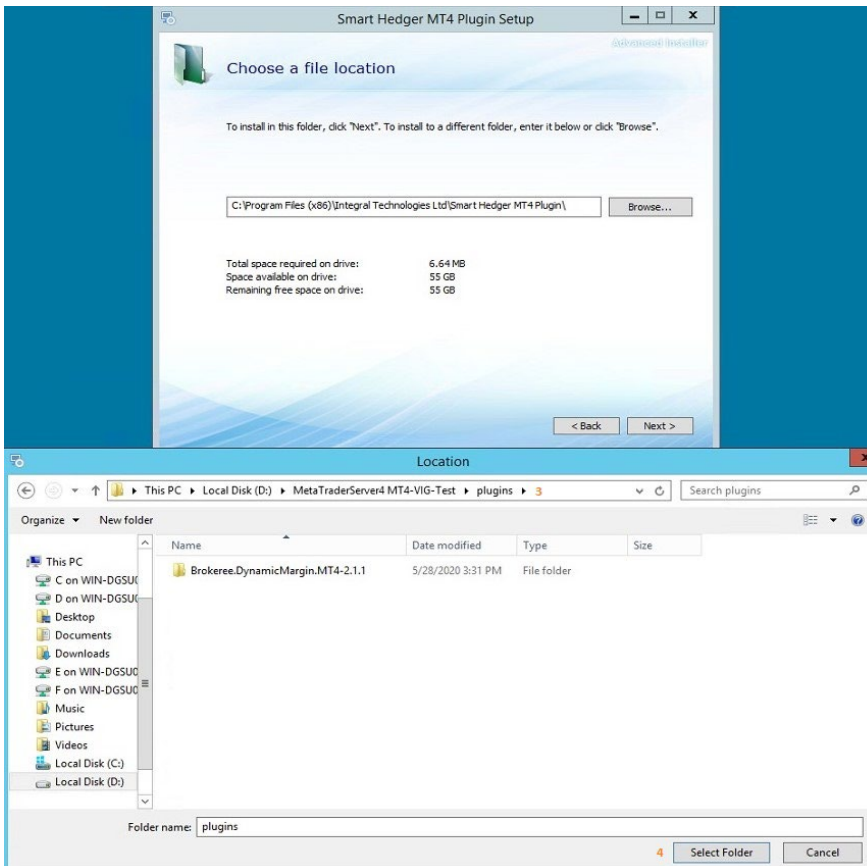
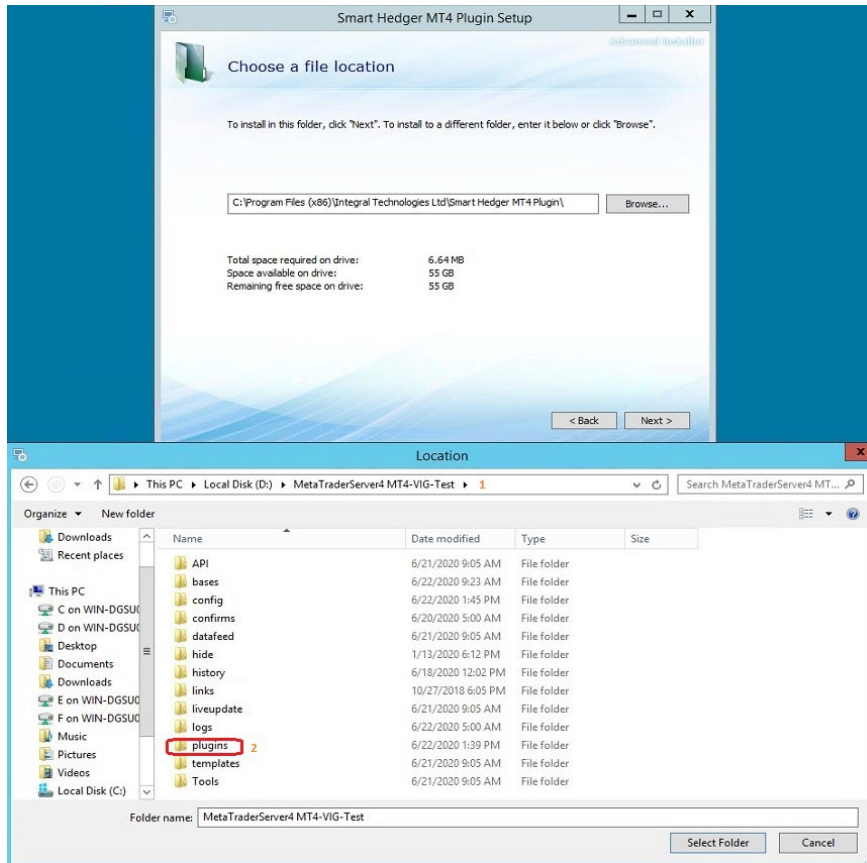


Critical: Please select the plugins folder of your MT4 install directory to install the plugin!

The correct directory to install the plugin is

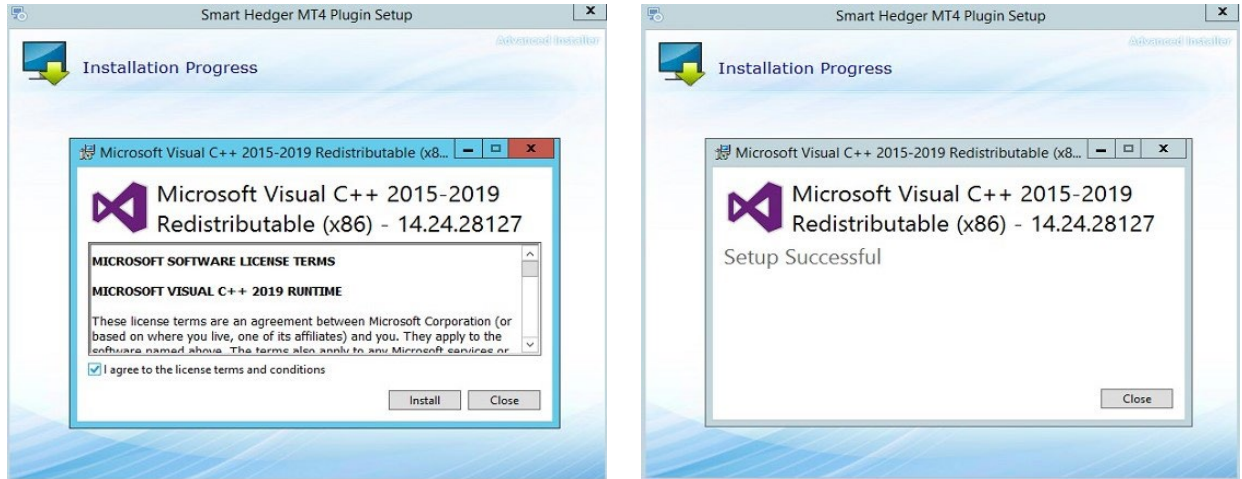
MT4ServerInstallationDirectory/plugins

Please see the image below for the example of the correct directory to install the plugin. The indicated steps 1 through 4 show the sequence of the steps to follow to select the correct directory.



After you select the correct folder, the file SmartHedger.dll will be installed in your directory
MT4ServerInstallationDirectory/plugins

After this the installer will guide you to install the Microsoft Visual Studio Redistributable (x86).
Please accept the license conditions and proceed with the installation of the redistributable.



Installing the redistributable completes the installation of Smart Hedger Plugin.

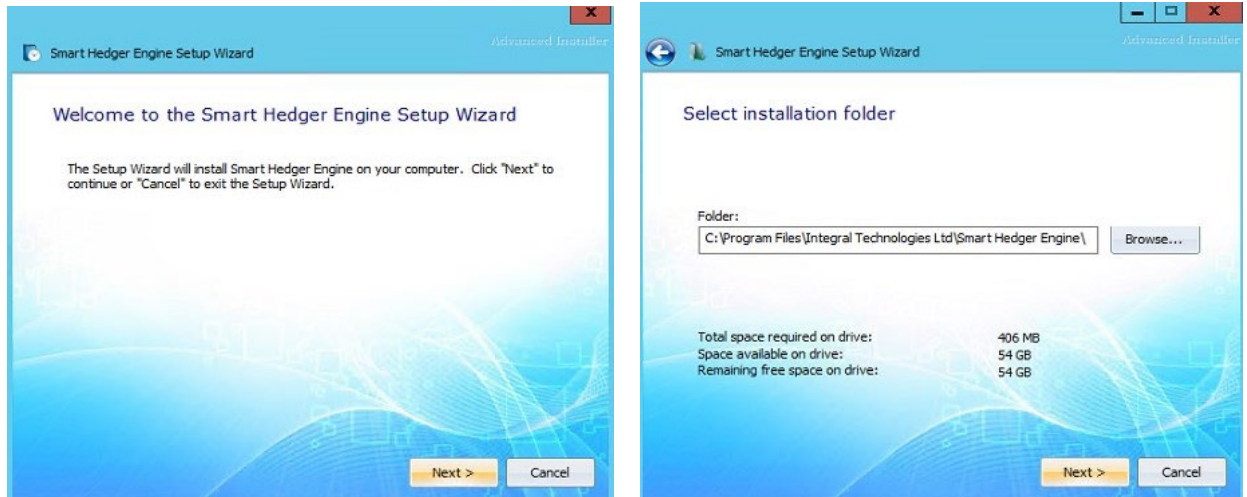


Installation of Smart Hedger Engine

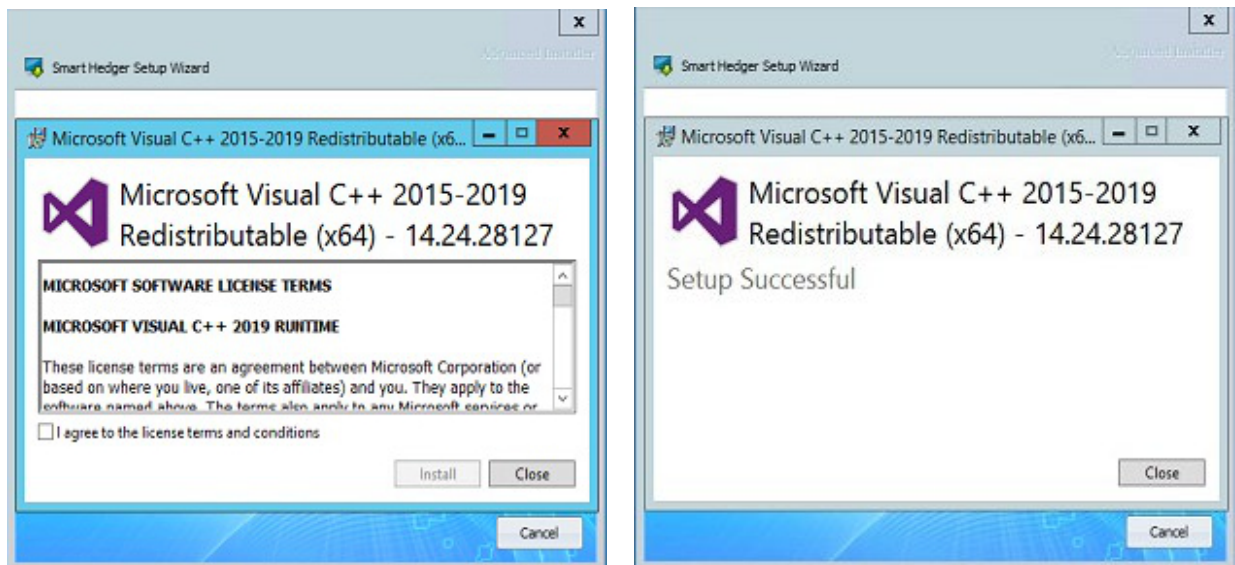
Smart Hedger Engine is a standalone process that provides analytics inputs to the auto-dealing and risk-management algorithms of Smart Hedger plugin.

In order to install Smart Hedger Engine, please run the provided installation file setup.exe. The following screenshots walk you through the installation steps.

The installer will suggest a default location to install Smart Hedger Engine on your computer:



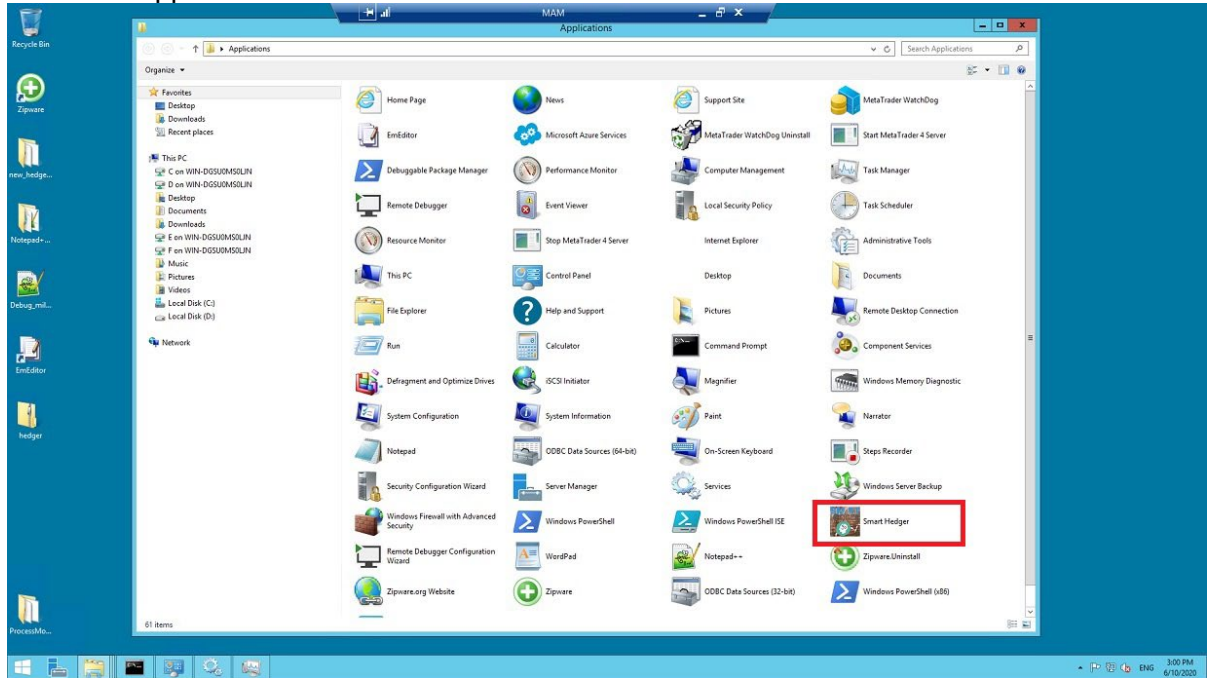
After you confirm the location of the installation, you will be asked to install Microsoft Visual Studio Redistributable (x64). Please accept the installation.



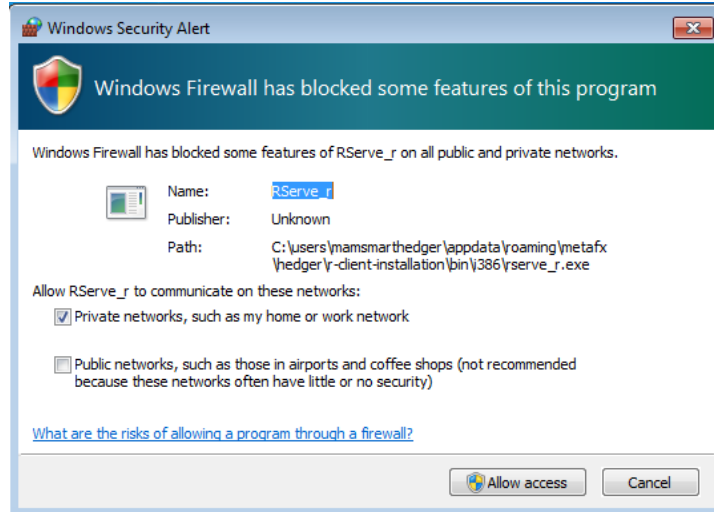
After this step you will get a prompt "Smart Hedger has been successfully installed". This completes the installation of Smart Hedger Engine.

First Launch of Smart Hedger Engine

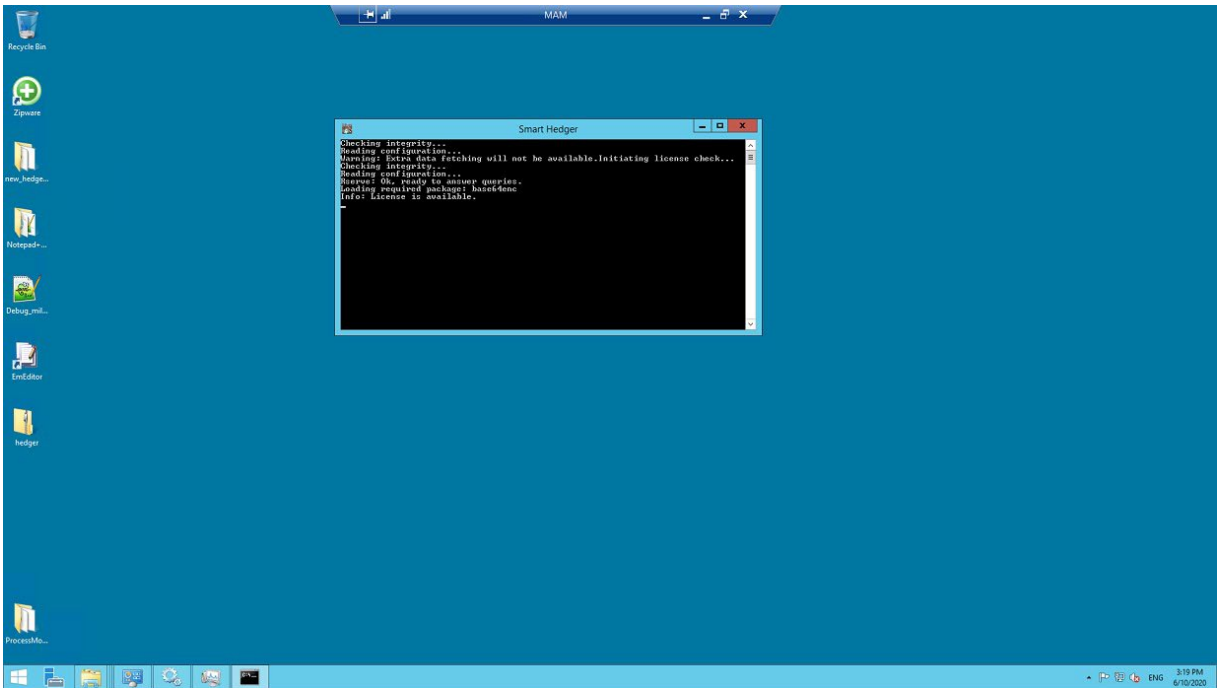
After you install Smart Hedger Engine, you will have a new application **Smart Hedger** in your Windows Applications folder.



Please select Smart Hedger executable from this folder to start Smart Hedger Engine. If you have Windows Firewall enabled on your PC, during the first start of the program you will need to give permission to the Smart Hedger Engine executable to access the network.



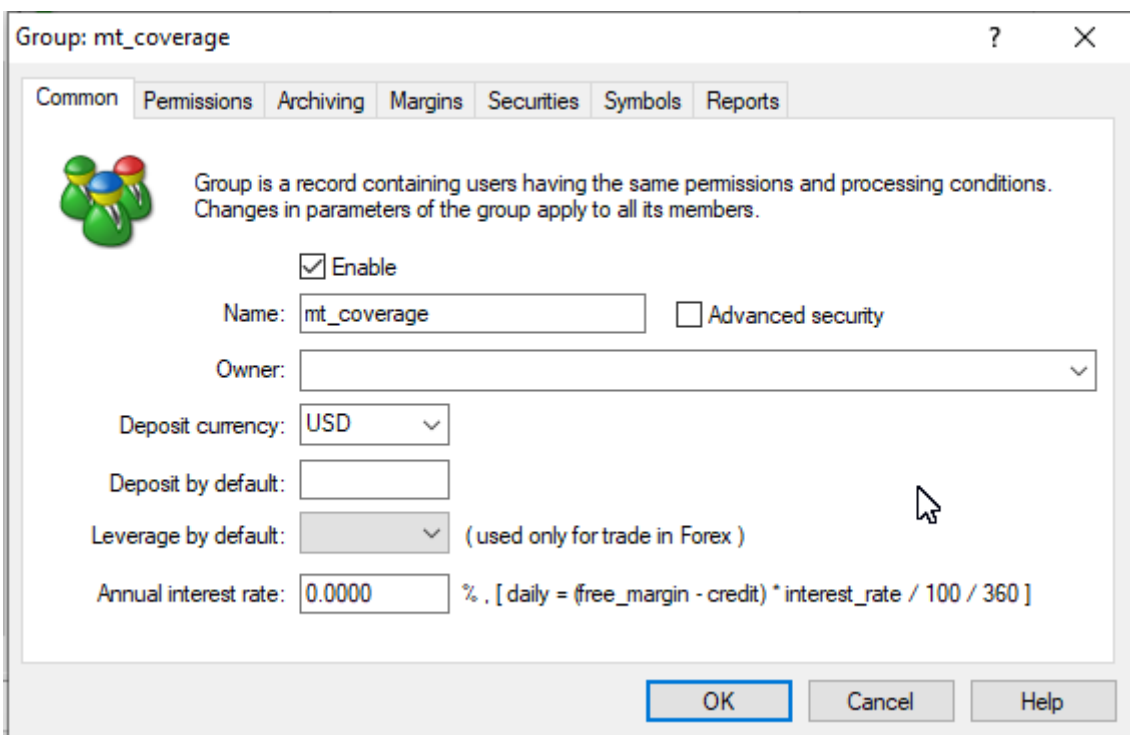
After you give permission, you will find a Windows Command window running on your PC. This window will show the most important information and reflect the health of the running Smart Hedger Engine process. You can minimize the window, but please keep it running at all times.



First Set-Up of Smart Hedger in MT4

The Broker Cover account will hold Hedge orders with the LP. This account needs to be set up separately by the Broker in a separate group. The MT4 account setup procedure is as follows:

1. Create a client group (if not created already) and coverage group.



2. If trades on the Coverage Account are going to be routed to the LP (A-Book execution) then set up the security groups for the coverage group to Manual execution.

3. For the client groups, set execution type for all the security groups which are going to be processed by Smart Hedger to Manual execution as well.

Setting parameters of trading with symbols of the group. Appoint type of order execution, spread, and commissions.

Enable

Trade Use confirmations in REQUEST mode

Execution: manual only, no automation

Spread difference: 0 points Do not check free margin after dealer's answer

Maximum deviation: 4 points (IE only) Fast confirmation on IE with deviation specified

Close by

Enable Multiple Close by orders

Auto close-out: FIFO, first bought/sold against first sold/bought

Lots

Minimum: 0.01 Maximum: 10000.00 Step: 0.01

Commissions

Standard: 1.00000 pt, points per lot Taxes: %

Agent points: 1.00000 pt, points per lot

OK Cancel

4. It is advisable to restart the MT4 Server after the groups are created.
5. Add an account to the Coverage Group and deposit money to it.

Account: 2223, Coverage Account 1, USD, 1:100

Personal Trades New Order Security

Enable Registration date: 2010.12.30 17:58

Name: Coverage Account 1 Phone password:

City: State: Country: United States

Address: Zip-code:

Phone: Email:

ID number: Status: RE Color: None

Group: mt_coverage Comment:

Leverage: 1 : 100 (forex only) Tax rate: % Agent account:


Allow to change password Read only (without trading) Send reports

Journal Update

Cancel Help









6. Setup Smart Hedger plugin to work with the new Coverage Account.

Plugin: SmartHedger 1.00 ? X

 The server plugin is intended for enrichment of the server functionality and represents an external program with remote configuration management.

Load at server startup
 Configurable by managers

Parameters:

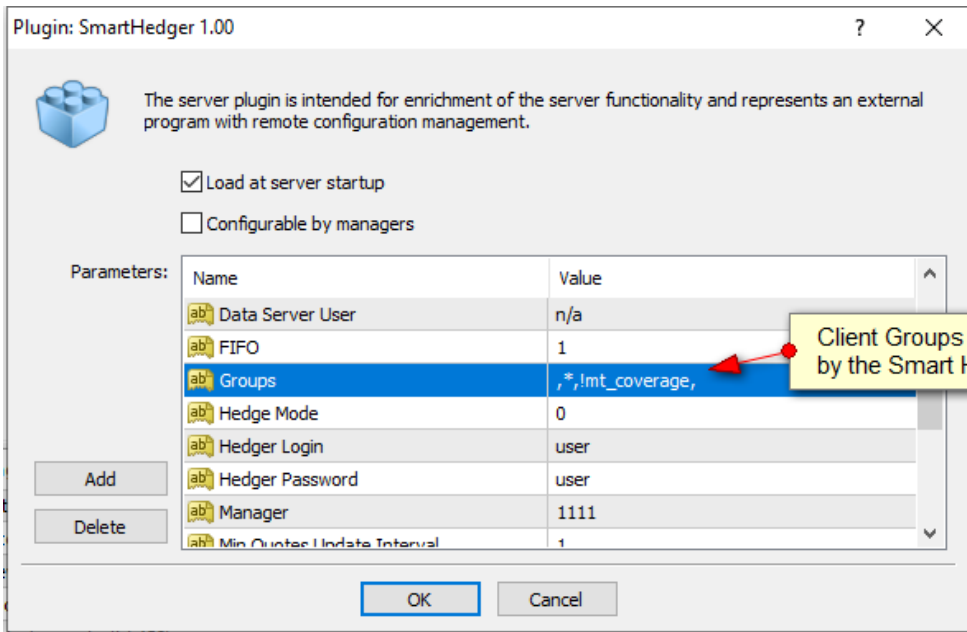
Name	Value
 Auto Update Calendar	1
 Calendar Events Duration	30
 Cover Account	2223
 Data Server Host	50.18.216.85
 Data Server Password	n/a1
 Data Server Port	6310
 Data Server User	n/a
 EFO	1

Add Delete

OK Cancel

Coverage Account Number

7. Setup the Client Groups which will be processed by Smart Hedger. Use Group Masks for this.



Chapter 2: Features

Description of Hedge and STP modes

There are two main modes of operation of Smart Hedger – **STP** and **Hedge** modes. Smart Hedger Plugin allows flexible switching between STP mode and Hedge mode. This switching happens entirely automatically, in real-time based on the smart logic of the Plugin, and based on some predefined rules and settings (discussed below).

Usually, all orders are opened in the **Hedge mode**. In this mode an order is opened on the client account according to the current active prices in MT4, and according to the spread settings in MT4. This mode is beneficial because it allows us to insulate Clients from LP order rejects, and to provide near-instant execution to clients. A Smart Hedger algorithm is monitoring the overall position on the accounts under Smart Hedger management. When Smart Hedger decides that a Hedge order versus LP is necessary it opens such Hedge orders and books them in the Coverage account.

In the **STP mode**, every trade request from the clients is forwarded to the LP for execution. After Execution Price for the requested Symbol/Size is obtained from the LP, this trade is reflected in the Coverage account. To calculate the Execution Price for the Client order we use a special Configuration Variable [Pip Spread](#). See [below](#) for information on Pip_Spread configuration.

Smart Hedger uses certain [pre-configured rules](#), as well as internal logic based on continuous market monitoring to switch from **Hedge mode** to **STP**.

When **STP mode** is automatically enabled (this happens either for a period of time, or for individual orders deemed particularly risky), execution for these orders is carried out based on the STP mode, described above. An order will remain in the STP mode until it is closed. In particular, this means that before the Client can close his STP mode order a Hedge order execution is required on the LP side.

The price of the Client orders is computed as

For opening buy orders and closing sell orders:

$$\text{Client Price} = \text{LP Price} + \text{Pip Spread}[\text{Symbol}] * \text{Pip_Size}[\text{Symbol}]$$

For closing buy orders and opening sell orders:

$$\text{Client Price} = \text{LP Price} - \text{Pip Spread}[\text{Symbol}] * \text{Pip_Size}[\text{Symbol}]$$

Description of Smart STP Switch Feature

Clients can configure when **STP mode** is enabled.

Currently, two switching cases are configurable: STP Mode on Special Calendar Events and STP Mode for Large orders.

STP mode on Special Calendar Events:

We use a market standard source of calendar events data to anticipate upcoming market events:

<https://www.forexfactory.com/>

This calendar is automatically downloaded every Monday at around 12 AM server time and saved in the location

[MT4 Server folder]\plugins\HedgerData\calendar.xml

Users can edit this file to add their own upcoming calendar events.

Note: Times in the calendar are in the GMT time zone.

If you wish to add your own calendar events you need to

- 1) Edit the file calendar.xml according to the existing XML format
- 2) Save the file
- 3) Edit SmartHedger.ini :
 - a. [Auto Update Calendar](#) = 0
- 4) Restart MT4

Note: Please revert Reload Calendar = 1 by next Monday 12 am server time and restart MT4 to get the updated calendar for the upcoming week.

Smart Hedger monitors upcoming events for each currency (e.g. upcoming events for EUR).

Smart Hedger uses the init parameter [Calendar Event Duration](#) to determine the duration of time when STP mode is enabled for all currency pairs that include the affected currency.

The next example illustrates how parameters in calendar.xml and SmartHedger.ini work together to control the STP mode of Smart Hedger:

Suppose calendar.xml has the following entry:

```
<event>
  <title>FOMC Member Williams Speaks</title>
  <country>USD</country>
  <date><![CDATA[01-05-2020]]></date>
  <time><![CDATA[6:15pm]]></time>
  <impact><![CDATA[Medium]]></impact>
  <forecast />
  <previous />
</event>
```

and SmartHedger.ini has the following entry:

[Calendar Events Duration](#) = 10

This means that for all Client order requests coming between 6:10:00 PM and 6:20:00 PM and for all currency pairs that contain USD STP mode will be applied to these orders.

STP mode for Large orders

We allow the Broker to specify the [Threshold Lot Size](#) for every traded symbol. Orders that exceed the Threshold Lot Size will automatically switch to the STP Mode.

See [below](#) for the information on Threshold Lot Size configuration.

Chapter 3: User Configurations

Description of symbols.csv – the general configuration of Smart Hedger Plugin

File symbols.csv is located in [MT4 Server folder]\plugins\HedgerData\symbols.csv

It is a comma-separated file, with one row for each traded Symbol processed by Smart Hedger.

The columns of this file are:

Column 1, Symbol: Symbol 6-character code

Column 2, Base Currency: 3-character code of the Base currency for this Symbol (do not change)

Column 3, Symbol Role:

- 1 - Symbol is used for hedging in Hedge mode (do not change)
- 2 - Symbol is not used for hedging, but symbol prices are send to Smart hedger
- 0 - Symbol is not used for hedging, and symbol prices are not sent to Smart hedger

Please consult with us if you wish to change these settings.

Column 4, Symbol tick size: smallest price change for the symbol

Column 5, Minimum Hedge Trade Size Multiple: this value is directly proportional to the size of the minimal Hedge order in this Symbol

Column 6, Symbol Lot Size: Lot Size for the Symbol

The minimal size of the Hedge order for the Symbol is calculated as

$$\text{min Size} = (\text{column 5}) * (\text{column 6}) * (\text{MT4 Lot Step for the Symbol}) / 100$$

Column 7, Threshold Lot Size: for each Symbol we need to provide a Threshold Lot Size. Client orders for this Symbol that are larger than Threshold Lot Size will automatically be executed in **STP mode**.

Column 8, Pip Spread: This is extra Spread (units of Symbol tick size) that will be added to orders in this Symbol in **STP mode**.

Description of SmartHedger.ini – Initialization of Smart Hedger Plugin

File SmartHedger.ini is located in [MT4 Server folder]\plugins\SmartHedger.ini

It is a regular MT4 plugin configuration file. Here are the entries of this file:

Cover Account – the coverage account on the MT4 Server which will be used by Smart Hedger plugin to hedge client's exposure. Smart Hedger plugin will trade on this account. These trades can be further routed by the liquidity bridge to the LP side.

Data Server Host – IP address of the Remote Risk Server which will provide risk data for Smart Hedger plugin. Set this value according to the instructions from us.

Data Server Port – port number of the Remote Risk Server. Set this value according to the instructions from us.

Data Server User – user login for the Remote Risk Server. Set this value according to the instructions from us.

Data Server Password – password for the Remote Risk Server. Set this value according to the instructions from us.

FIFO – if set to 1 it will instruct Smart Hedger plugin to open/close trades according to the FIFO rule (which needs to be set up in the Group parameters of the MT4 Server as well). This makes it compatible with the FIFO execution mode of the MT4 Server.

If this parameter is set to 0 Smart Hedger will close Orders with the most negative PnL first.

Groups – this parameter defines the client groups which will be covered by Smart Hedger plugin. You can use * sign to define group masks as well.

VaR Limit – Smart Hedger aims to prevent possible PnL loss on the total combination of the Client and Cover accounts. This parameter sets the worst-case PnL loss due to adverse market movements in the next 5-minute window (so-called Value-At-Risk).

This is always a negative number since it describes the anticipated worst-case PnL loss.

Set this parameter closer to zero to ensure that Cover account Exposures match more closely to the Client account Exposures. This results in a potentially higher traded volume turnover on the Cover account.

Set this parameter to a large negative value to allow Hedger some freedom in not immediately hedging Client trades on the Coverage account. This results in a potentially smaller traded volume turnover on the Cover account.

Proc Server Host - hedger standalone process (RServe.exe) which is usually running on the same server as MT4. So it can be set to 127.0.0.1 by default.

Proc Server Port – port number used by the hedger standalone process (RServe.exe)

Hedger Login – user login for the hedger standalone process (RServe.exe). Set this value according to the instructions from us.

Hedger Password – user password for the hedger standalone process (RServe.exe). Set this value according to the instructions from us.

Manager – MT4 manager account assigned to Smart Hedger plugin.

Min Quotes Update Interval – minimal interval (in seconds) between updates of the quotes of each symbol from the MT4 Server to Smart Hedger plugin. The shorter this interval is, the more processing is required by Smart Hedger and its underlying process (RServe.exe). This may affect CPU load.

VaR Percent – When Smart Hedger detects that Value-At-Risk exceeds VaRLimit (most often this happens after a Client trade), it will perform several Hedge trades to reduce the Value-At-Risk by the percentage described by VaR Percent.

Update Interval – your installation of Smart Hedger will query Remote Risk Server according to this setting. Set this value according to the instructions from us.

Hedge Mode – internal parameter. Set this value according to the instructions from us.

Calendar Events Duration – this parameter controls the Start and End Time of the Special Period. The role of the Special Periods for a given Symbol is to enable STP mode for all orders during the Special Period. The Event Time of the Special Period for each symbol is given in the file calendar.xml. The Start Time of the Special Period is given by Event Time – (Calendar Events Duration)/2 and the End Time is given by Event Time + (Calendar Events Duration)/2

Auto Update Calendar – if this is set to 1, calendar.xml file is taken from the web-reference (on-disk version is overwritten) (see [description](#)). If this is set to 0, calendar.xml is read from disk. This mode allows users to insert their own upcoming Special Events into the calendar. Please be sure to observe the specified XML format. Please be sure to set this value to 1 at the start of the business day on Monday to receive the upcoming events for the week