# FastReport.Desktop
Documentation

Contents

About

The software package *FastReport.Desktop* includes a range of products:

- Designer (`Designer.exe`) - tool for creating report templates;
- Viewer (`Viewer.exe`) - tool for viewing your reports.
- Builder (`BuilderC.exe` and `BuilderW.exe`) - console utility for building reports in the background;
- Configurator (`Configurator.exe`) - tool for creating configuration files for the Builder;
- Scheduler (`Scheduler.exe`) - task scheduler for building, processing and sending reports;

How does it work?

For example, it is needed to create a task to build a report in "PDF" format. First of all, a report template should be created, if it is missing. A report designer is used for this. Next, a configuration file should be made to specify actions with the report. When the configuration is ready, schedule the task.
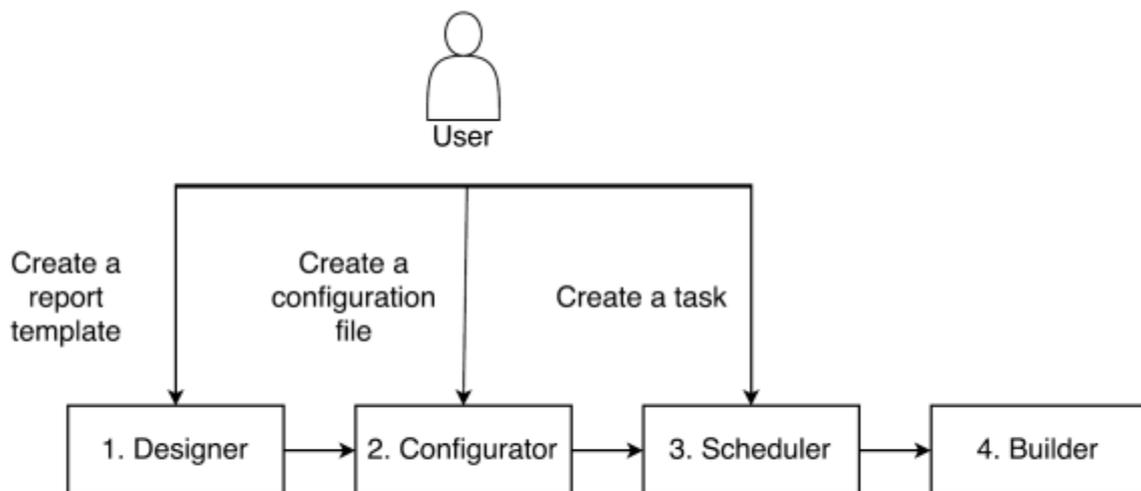
Console builder

Builder - the program to automate operations on reports.

There are two executable files:

- `BuilderC.exe` - console mode executable.
- `BuilderW.exe` - console-less mode executable.

Capabilities:

- Batch processing of reports;
- Export to all available formats;
- Setting the report parameters;
- Sending results by e-mail;
- Storing the result locally, on ftp or in the cloud storage.

To perform actions with the report you need to run the builder from the command line and pass the configuration file to it:

```
BuilderC.exe path/to/config.fcx
```

You can override the configuration file settings in the command line:

```
BuilderC.exe path/to/config.fcx --Export-JpegQuality=80 --Save-Path=path/to/folder
```

To override the attribute you need to use the following scheme:

```
--{command name}-{parameter name}={value}
```

As it is shown above:

```
--Export-JpegQuality=80
```

It is possible to choose not using a configuration file. Then, you need to set all settings in the command line. In this case, you don't have to transfer the path to the configuration file. You will need to define a few parameters for a single command, for example, for export. Then, the command for the Report Builder will look like this:

```
BuilderC.exe --Report-Path="report.frx" --Export-As=image --Export-ImageFormat=Jpeg
--Export-JpegQuality=80 --Save-To=folder --Save-Path="path/to/folder"
```

Commands

These are the commands, which can be passed into the builder:

Config

The command to load a configuration file. Parameters:

- `Path` - path to a config file.

Parameters

The command to set parameters to the report. There might be several parameters. Parameters:

- `Name` - parameter name.
- `Value` - parameter value.
- `Type` - parameter type.

If you want to pass several parameters, it will look like this:

```
BuilderC.exe config.fcx --Parameters-Name1=param1 --Parameters-Value1=value1
--Parameters-Type1=String --Parameters-Name2=param2 --Parameters-Value2=value2
--Parameters-Type2=String --Parameters-Name3=param3 --Parameters-Value3=value3
--Parameters-Type3=String
```

Connections

The command to set data sources. There might be several data sources. Parameters:

- `Name` - connection name.
- `Type` - connection type.
- `ConnectionString` - connection string.

If you want to pass several connections, it will look like this:

```
BuilderC.exe config.fcx --Connections-Name1=name1 --Connections-Type1=MySql
--Connections-ConnectionString1=123 --Connections-Name2=name2
--Connections-Type2=MySql --Connections-ConnectionString2=123
--Connections-Name3=name3 --Connections-Type3=MySql
```

Export

The command for report export. Each export has its own set of parameters, you can see them by creating sample configuration file with enabled export. For example, image export:

```
BuilderC.exe config.cfx --Export-As=image --Export-ImageFormat=Png
--Export-PageRange=All --Export-SeparateFiles=false
```

Save

The command for report saving.

Parameters for saving method **Folder**:

- `Path` - directory for file saving;
- `Timestamp` - timestamp, which is attributed to the filename. The timestamp consists of a date and the time you saved the file.

Parameters for saving method **FTP**:

- `Server` - ftp server;
- `Username` - user name;
- `Password` - password.

Parameters for saving method **Box.com**:

- `ClientID` - client id;
- `ClientSecret` - client's secret code;
- `Token` - access key.

Parameters for saving method **Dropbox**:

- `AccessToken` - access token.

Parameters for save method **FastReport Cloud**:

- `Login` - user's ID;
- `Password` - password.

Parameters for save method **Google Drive**:

- `ClientID` - client's ID;
- `ClientSecret` - client's secret code;
- `Token` - access key.

Parameters for save method **One Drive**:

- `ClientID` - client's ID;
- `ClientSecret` - client's secret code;
- `Token` - access key.

SendEmail

The command to send an e-mail. Parameters:

- `Address`
- `CC`
- `Subject`
- `MessageBody`
- `AccountAddress`
- `AccountName`
- `AccountHost`
- `AccountPort`
- `AccountUserName`
- `AccountPassword`
- `AccountMessageTemplate`
- `AccountEnableSSL`

Configuration file

Let us examine the configuration file. It is an `xml` document.

Example:

```xml
<?xml version="1.0" encoding="utf-8"?>
<Config>
    <Report
        Path="report.frx" />
    <Export
        As="image"
        PageRange="All"
        ImageFormat="Jpeg"
        SeparateFiles="false"
        ResolutionX="96"
        ResolutionY="96"
        JpegQuality="100" />
    <Save
        To="folder"
        Path="./output"
        Timestamp="True" />
    <SendEmail
        Address="testuser@gmail.com"
        CC=""
        Subject="Test"
        MessageBody="Test message"
        AccountAddress="user@gmail.com"
        AccountName="User"
        AccountHost="smtp.gmail.com"
        AccountPort="587"
        AccountUserName="UserName"
        AccountPassword="Password"
        AccountMessageTemplate="Hello!"
        AccountEnableSSL="true" />
</Config>
```

The body of the file is located in the tags `<Config> ... </ Config>` The number of internal tags depends on the options that were selected. For example, if you did not choose the export report, the tag `<Export>` will not appear in the document.

Let us study the internal tags:

Report

```xml
<Report
    Path="report1.frx;report2.frx;another_report*.frx" />
```

The `Path` attribute specifies the path to one or more reports.

Parameters

```xml
<Parameters
    Name1="param1"
    Value1="123"
    Type1="String"
    Name2="param2"
    Value2="123"
    Type2="String"
    Name3="param3"
```

```
    Value3="123"
    Type3="String" />
```

Name - parameter name

Value - parameter value

Type - parameter type

Connections

```
<Connections
    Name1="conn1"
    Type1="FastReport.Data.XmlDataConnection"
    ConnectionString1="..."
    Name2="conn2"
    Type2="FastReport.Data.CsvDataConnection"
  ConnectionString2="..." />
```

Name - connection name

Type - connection type

ConnectionString - connection string

Export

```
<Export
    As="image"
    PageRange="All"
    ImageFormat="Jpeg"
    SeparateFiles="false"
    ResolutionX="96"
    ResolutionY="96"
    JpegQuality="100" />
```

Attributes of the Export tag depend on the type of the export file. If you changed the export settings, they will be there.

Save

The contents of the tag depend on a chosen saving method. Attribute To contains the name of a saving method.

Folder

```
<Save
    To="folder"
    Path="./output"
    Timestamp="True" />
```

Path - directory of file save.

Timestamp - a timestamp, which is attributed to the filename. The timestamp consists of a date and the time you saved the file.

FTP

```
<Save
    To="ftp"
    Server="..."
    Username="..."
    Password="..." />
```

`Server` - FTP server address.

`Username` - user's name.

`Password` - password.

Box.com

```
<Save
    To="box"
    ClientID="..."
    ClientSecret="..."
    Token="..." />
```

`ClientID` - client identificator.

`ClientSecret` - client's secret code.

`Token` - access key.

Dropbox

```
<Save
    To="dropbox"
    AppKey="..."
    AppSecret="..."
    TokenKey="..."
    TokenSecret="..." />
```

`AppKey` - application key.

`AppSecret` - application secret key.

`TokenKey` - access key.

`TokenSecret` - access secret key.

FastReport Cloud

```
<Save
    To="fastreportcloud"
    Login="..."
    Password="..." />
```

`Login` - user identificator.

`Password` - password.

Google Drive

```
<Save
    To="googledrive"
    ClientID="..."
    ClientSecret="..."
    Token="..." />
```

`ClientID` - client identificator.

`ClientSecret` - client's secret code.

`Token` - access key.

OneDrive

```
<Save
    To="onedrive"
    ClientID="..."
    ClientSecret="..."
    Token="..." />
```

`ClientID` - client identificator. `ClientSecret` - client's secret code. `Token` - access key.

SendEmail

```
<SendEmail
    Address="testuser@gmail.com"
    CC=""
    Subject="Test"
    MessageBody="Test message"
    AccountAddress="user@gmail.com"
    AccountName="User"
    AccountHost="smtp.gmail.com"
    AccountPort="587"
    AccountUserName="UserName"
    AccountPassword="Password"
    AccountMessageTemplate="Hello!"
    AccountEnableSSL="true" />
```

Attributes of the tag `SendEmail` are mail client settings and mail message settings.

Configurator

Configurator is a program that allows creating and editing custom configuration files.

The configuration file specifies the actions with a report:

- Export;
- Set parameters;
- Set connections;
- Send by e-mail;
- Save report;
- Open report after building.

The main form of the program looks like this:
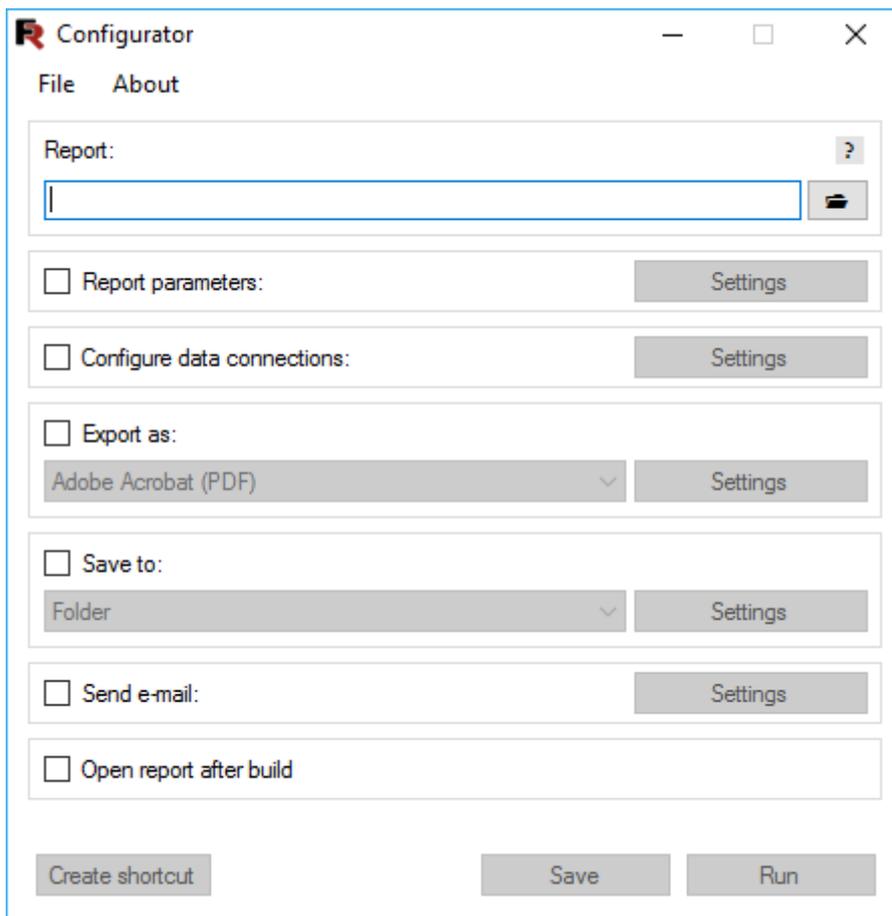
To enable the action click on the checkbox.

Run configuration file

You can run a configuration file from the main window by clicking **Run** button.

It is necessary to mention, that you need to save your configuration file before runnig it.

Shortcut creation

After a cteation of the configuration file, it is also possible to create a shortcut to run it by clicking **Create shortcut** button.

Remember to save your configuration file before creating a shortcut.

Scheduler

Scheduler - is a program for creating tasks and running them on a schedule. During the task the scheduler calls console builder and passes configuration file to it.

it is important to mention, that the scheduler requires administrator rights.
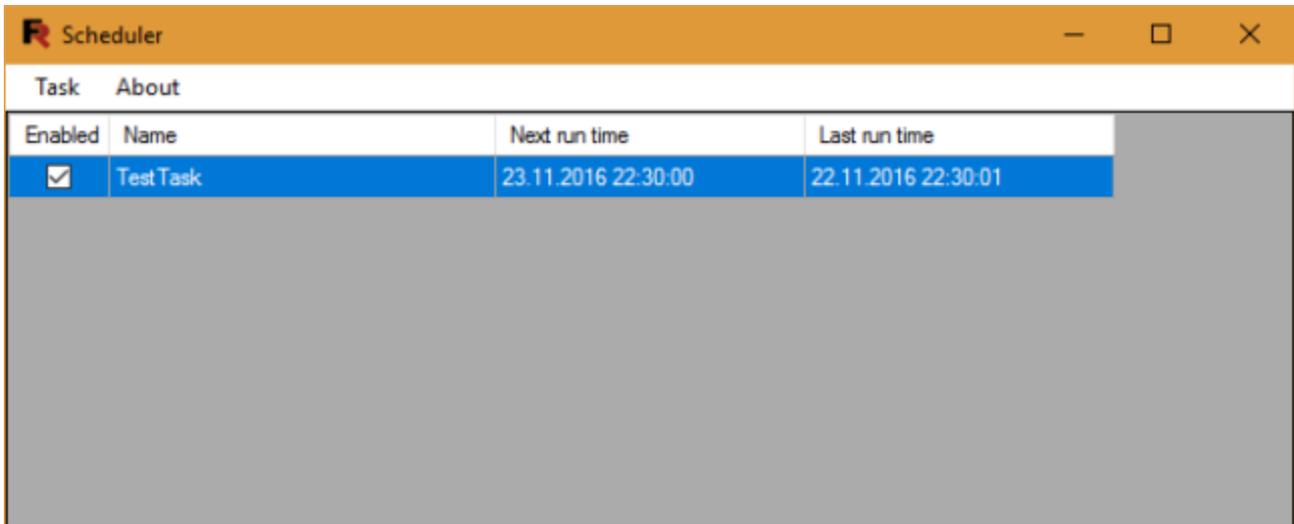
The scheduler allows you to:

- Create a new task;
- Edit an existing task;
- Delete a task;
- Execute a task.

Click **Create new task** button in the main window to create a new task:
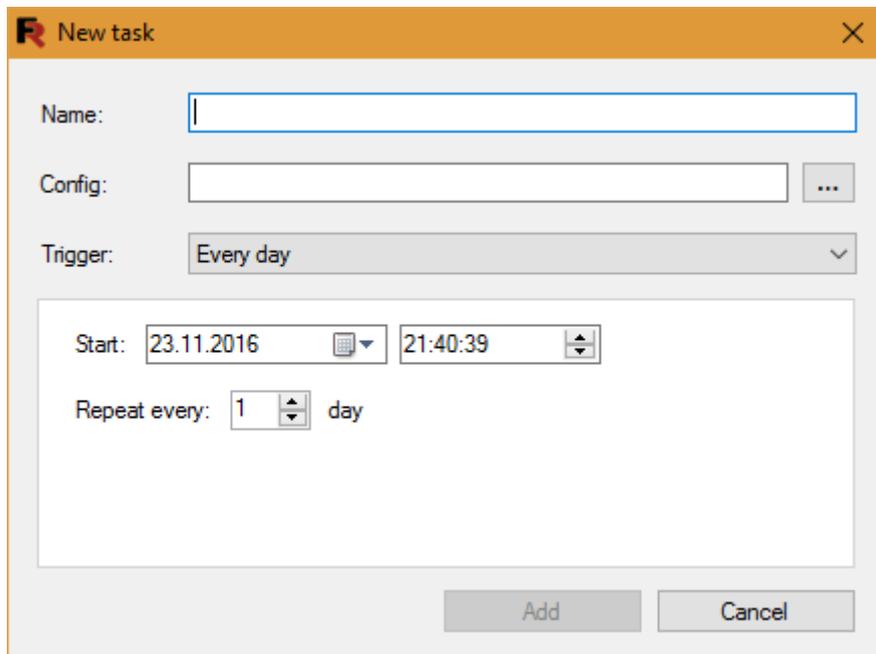
Forming of creation of a new task allows setting the following parameters:

- `Name` - the name of the task;
- `Config` - the path to the configuration file;
- `Trigger` - the period of execution tasks:

- Every day:

- Every week:

- Every month:

- Time:

- On the start of the computer. In this case, the panel with time settings and period of the task execution will not be displayed:

- On windows log in. In this case, the panel with time settings and period of the task execution will not be displayed:

To edit a task, you should select it from the list and click **Edit task** button. This will display a form, identical to the form of adding tasks. To delete a task, select it from the list and click **Delete task** button. To execute the task immediately, select it from the tasks list and click **Run the task** button. All these actions can also be performed from the context menu.

Designer

The description of report designer can be found in the **FastReport.Net** user guide.

Viewer

Viewer is a program for viewing reports in FPX format. It is a special format to store prepared reports.
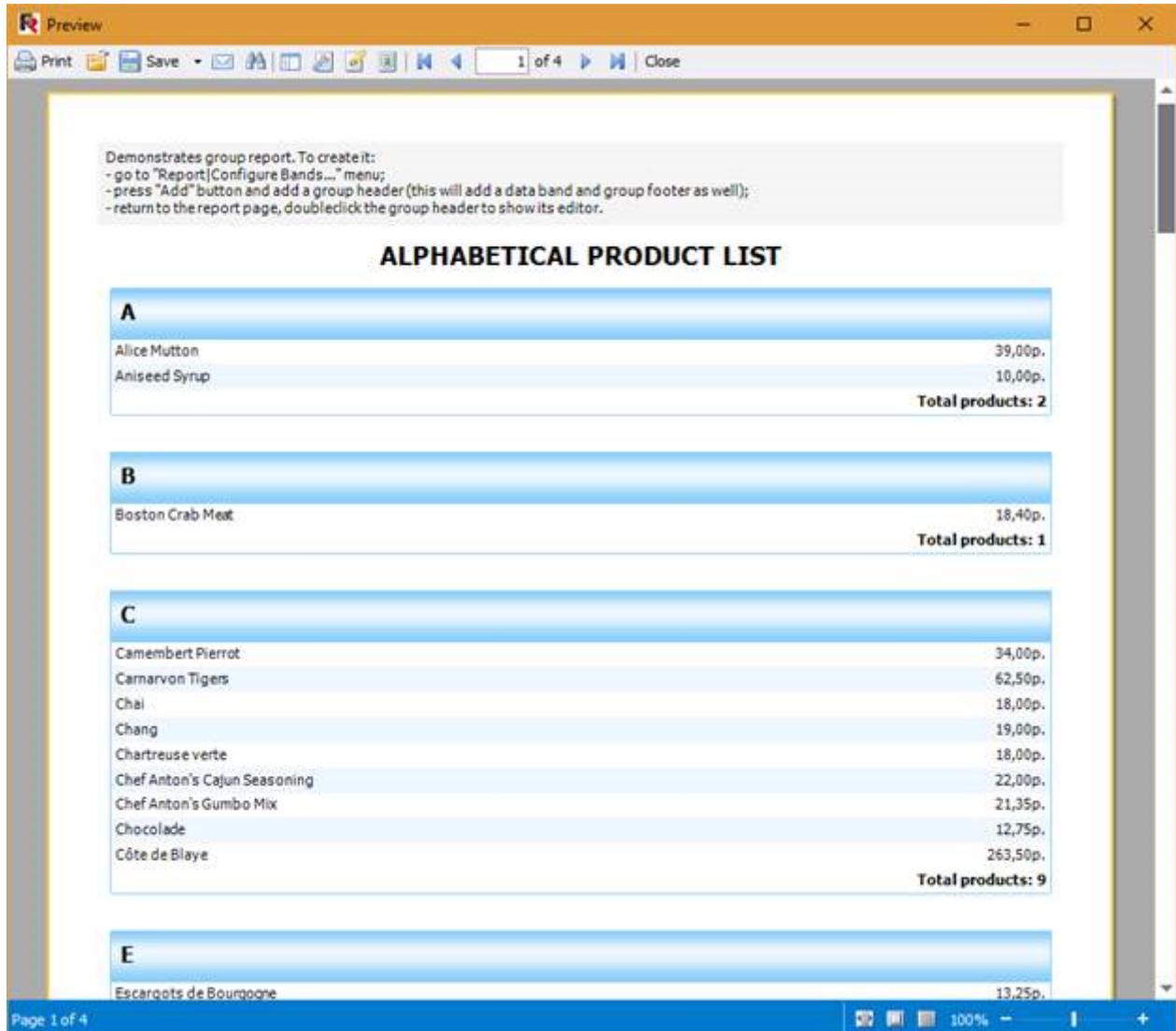
At the top of the window there is a toolbar. The toolbar contains the following features:

- Print report. When you click on it the Print dialog box is opened;
- Open report. When you click on it the File Open dialog is opened;
- Save report (Export Report). When you click on it a drop-down list of formats available for saving is opened:
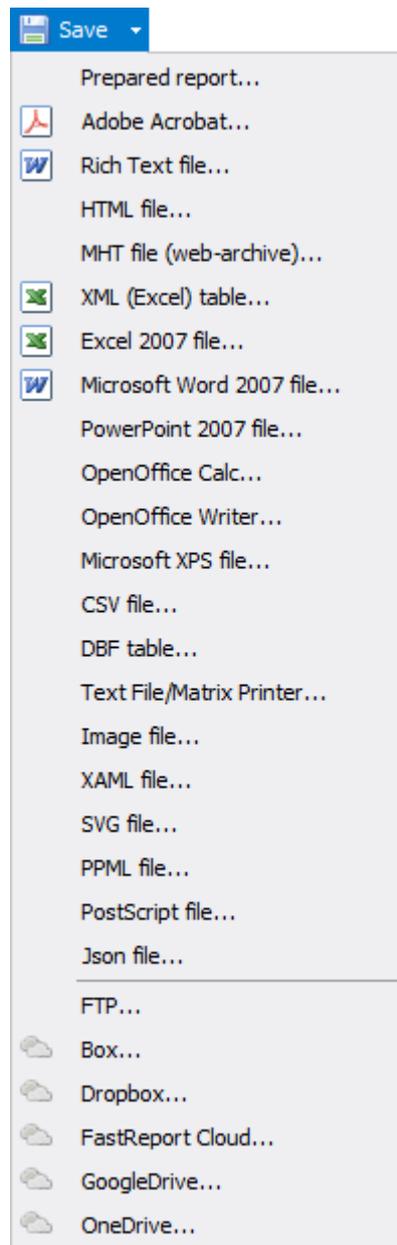
- Send report by E-mail. When you click on it the e-mail settings window is displayed. On the Account tab it is necessary to set your mail client:
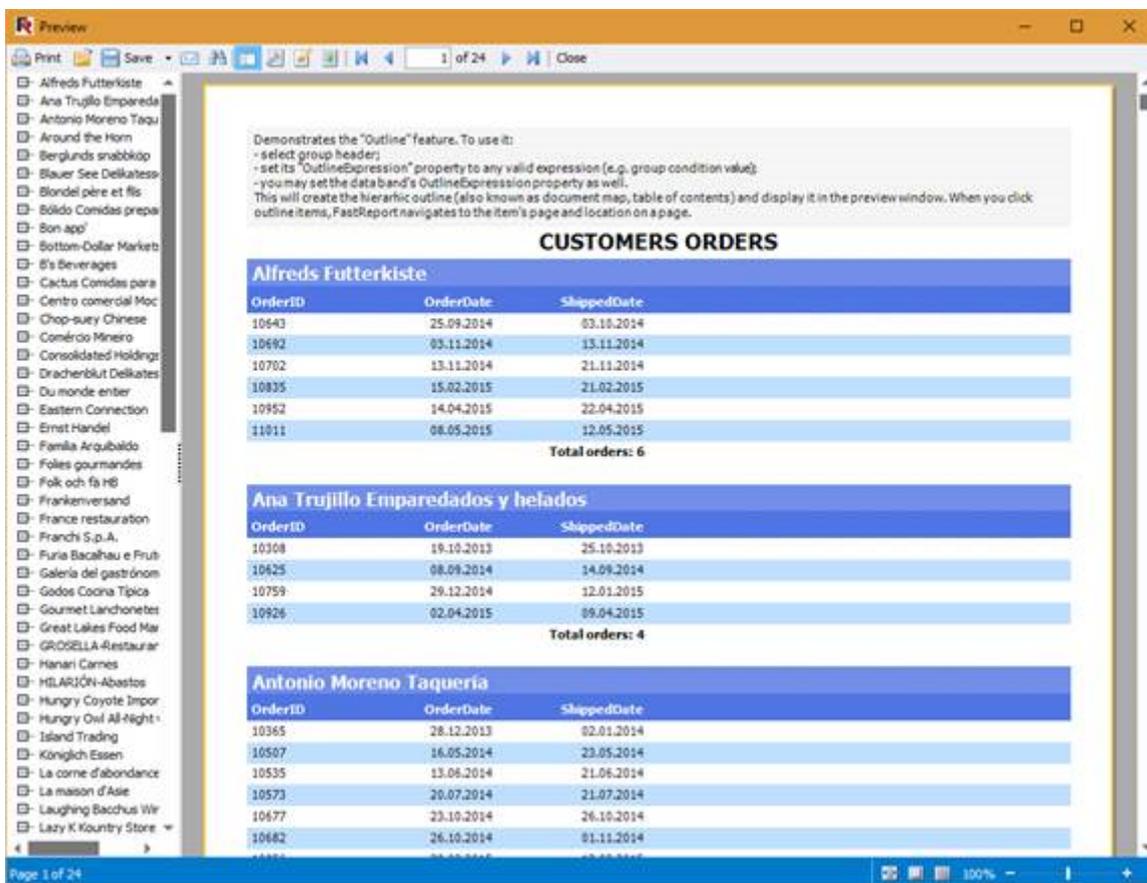
On the E-mail tab you need to set the message settings:

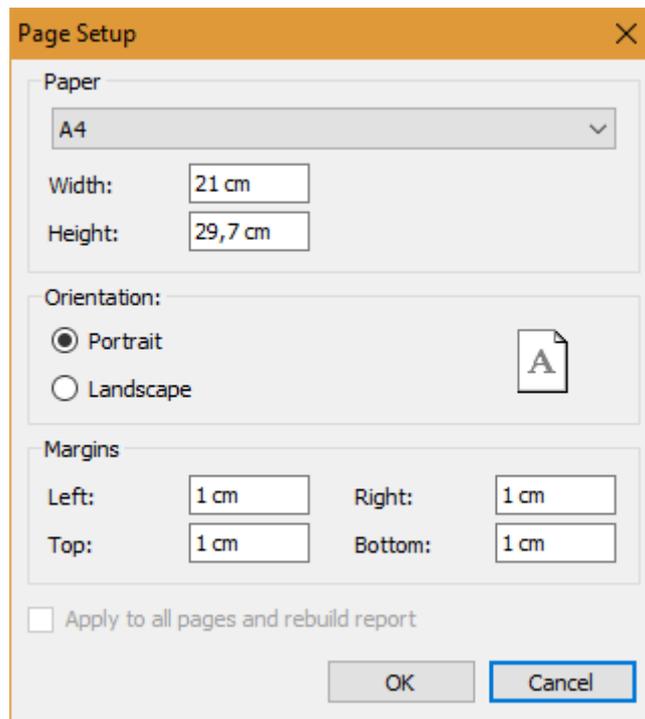- Find text. When you click on it the search form is displayed:
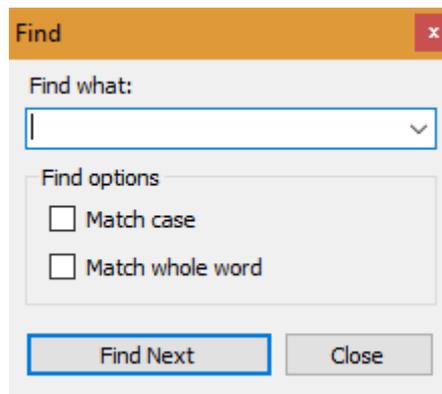
It allows specifying a text expression to search and using search options: case sensitive and the whole word match.
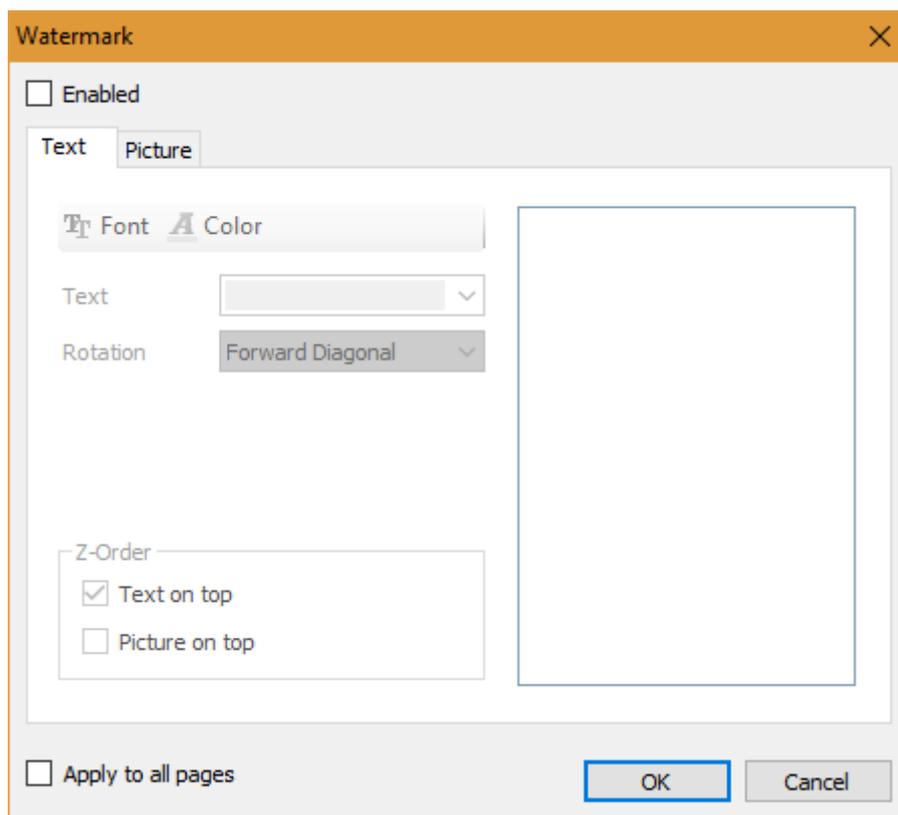
● Display report outline. When you click on it the report outline in the list at the left is displayed:

● Customize page settings. When you click on it the page set up dialog box appears:

- Edit Report. When you click on it a report designer is launched with the loaded current report.
- Set watermark. When you click on it a window with watermark settings appears:

The watermark may be either a text or a picture.

- Navigate through the pages of the report. You can move through the pages of the report by clicking on the icon. You can specify a specific page number in the entry field;
- Close the program. When you click on it the application closes.

Report Viewer can be called from the command line with by following command:

```
Viewer.exe report.fpx
```

where **report.fpx** is a path to the report in FPX format.

The zoom bar is located at the bottom of the window:

The current report page and the total number are located on the left. On the right there are page scale settings. Three icons allow selecting a preset page zoom: page on the entire width of the "Viewer" window and the whole entire page (100%).

Tutorials

Using report builder from the command line

FastReport.Desktop includes a console report builder. Report Builder is a console utility for automating operations on reports. It can do the following operations:

- Batch processing of reports;
- Export to all available formats;
- Data source connection;
- Sending the result by e-mail;
- Saving the result locally to ftp and to cloud storages.

The report builder is closely associated with the Configurator, which creates special configuration files with instructions. These instructions allow specifying the export of the report, selecting the location, where the report will be saved and sending reports by email. The builder receives these instructions and executes them on a schedule, which is created in the Scheduler.

But nothing prevents working with the builder directly through the command line. This can be useful if you want to export or send reports from your own application.

Let us take a look at three options of interacting with the Report Builder:

1. Send the configuration file to the builder.

To do this, run the Report Builder with command line and pass the configuration file:

```
Builder.exe path/to/config.xml
```

Now, let us analyse calling a builder with one parameter: the path to the configuration file.

2. Send the configuration file to the builder and override some of its parameters.

You have the option to load the configuration file and replace the required parameters, for example, the directory for saving the export of the report:

```
Builder.exe path/to/config.xml --Save-Path=./dir
```

To override the attribute, use the following pattern:

```
--{command name}-{parameter name}={value}
```

And it turns into this:

```
--Save-Path=./dir
```

3. Send command parameters to the builder.

With this approach, we do not load the configuration file, but ,in fact, we formulate the instruction for the builder in the command line. We pass the parameters as well as how we define them in the Configurator. Let us analysre the following example:

```
--Report-Path="report.frx" --Export-As=image --Export-ImageFormat=Jpeg
--Export-JpegQuality=80 --Save-To=folder --Save-Path ="path/to/folder"
```

It should ne mentioned, that we have used the command "Export" three times. For each export property that you want to override (as opposed to the default values), you need to write a command name. In this way, you can define any parameter available in the Configurator. A complete list of commands and properties (attributes) can be found in the documentation of FastReport.Desktop.

Summing up, in this work various options for working with the console report builder have been examined. Now you are able to use it in combination with your programs. It is onle needed to transfer a set of parameters.

Sending reports on a schedule by email

Often the company needs to generate periodic reports, send them to e-mail or save to a certain place. Having a report generator, it's easy to do. However, you need to create an application that will work with the report generator. This requires some programming skills and experience with the programming environment. But what if you don't have this experience, or don't want to purchase an expensive development environment license?

FastReport.Desktop allows you to solve these issues. This is a stand-alone software package that doesn't require the creation of a custom application. Accordingly, no programming skills are required. FastReport.Desktop allows you to: create reports, create them on a schedule, export reports to various formats, send a report by email, save reports on a local disk or on remote resources.

So, we are faced with the task of organizing a daily report and sending it by e-mail.

1. From the diagram above it is clear that in the beginning it is necessary to create a report with the designer. I created a simple report of the Master-Detail type, which displays a list of categories of goods.
2. Now you need to create a configuration file.

Run the configurator:
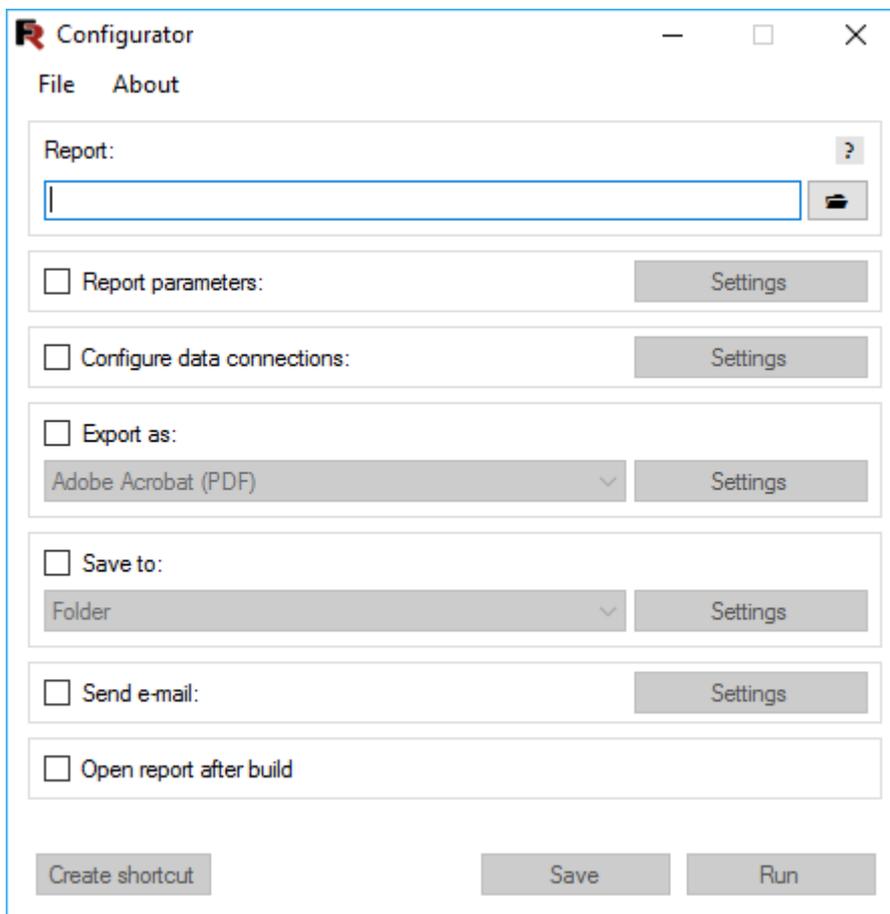
Select the report file in the "Report" section by pressing the button.

Then in the "Export as" section: click the checkbox to enable export and select PDF export from the drop-down menu. You can set the PDF file settings:
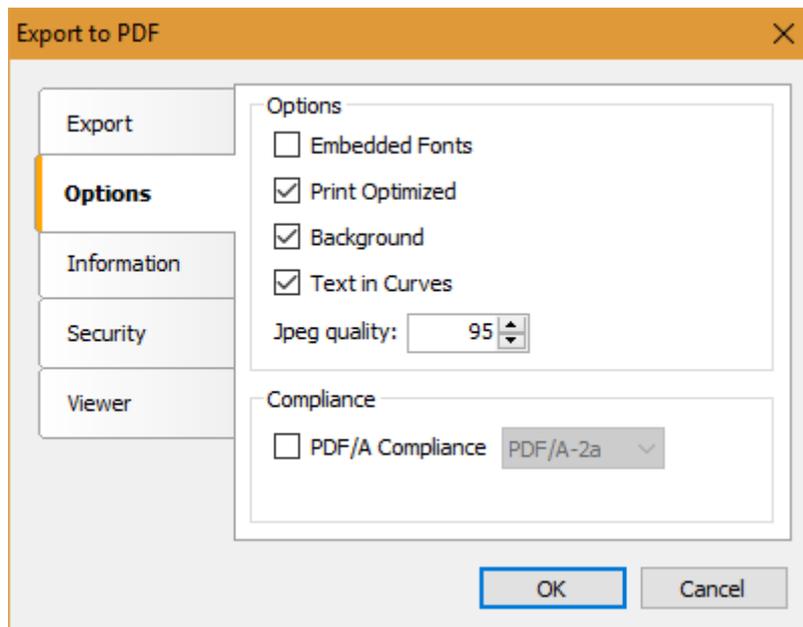
For example, the "Text in Curves" option. In this case, all the text in the report will be drawn with curves, which makes copying the text impossible. We proceed further.

The next step is to set up the email settings. The report file will be attached to the email.
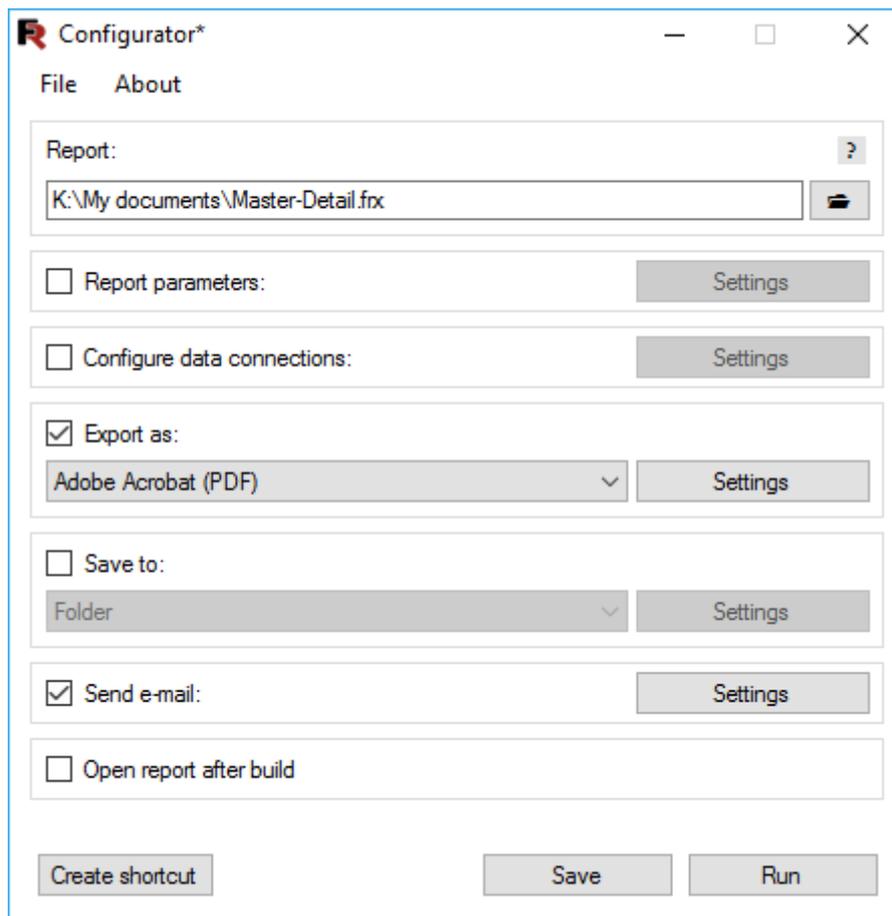
Check the checkbox in the "Send e-mail" section. You must fill out the settings of the outgoing e-mail server:
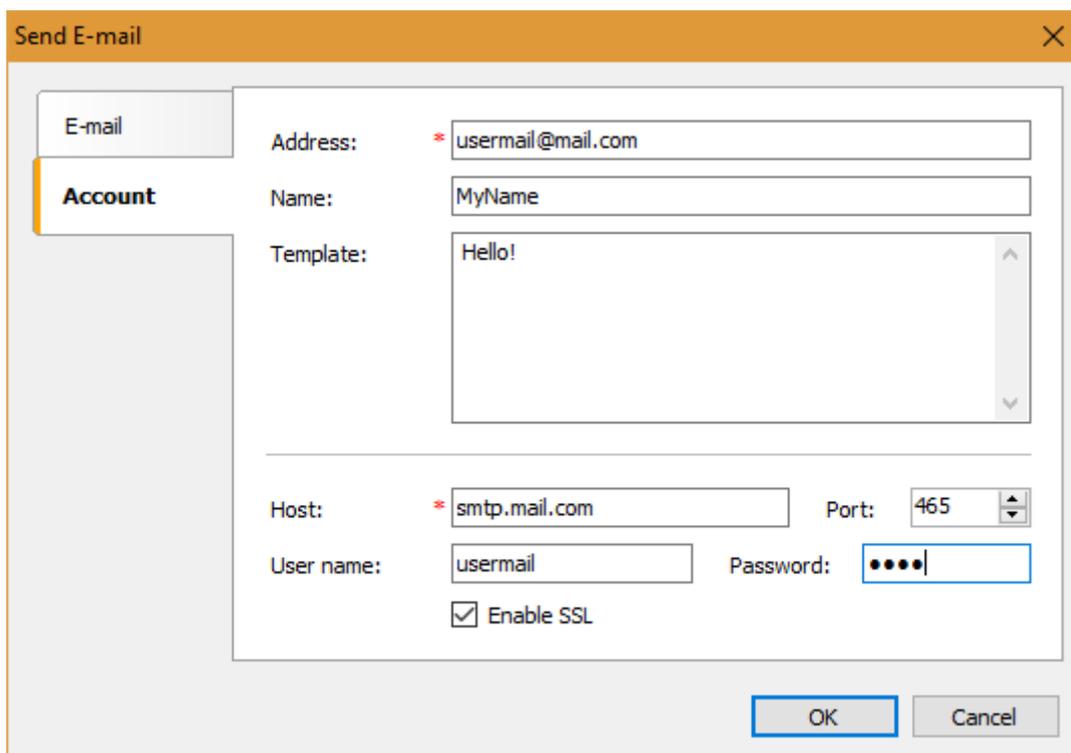
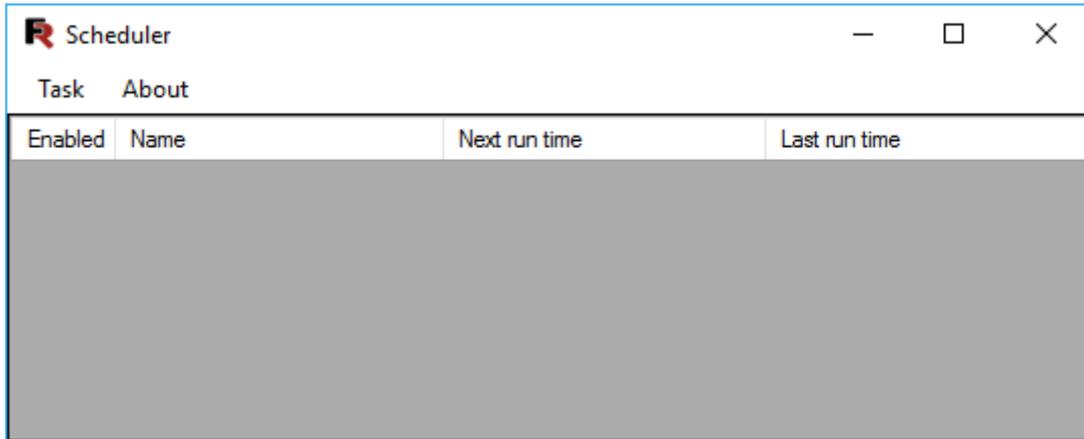On the E-mail tab, fill in the email parameters:
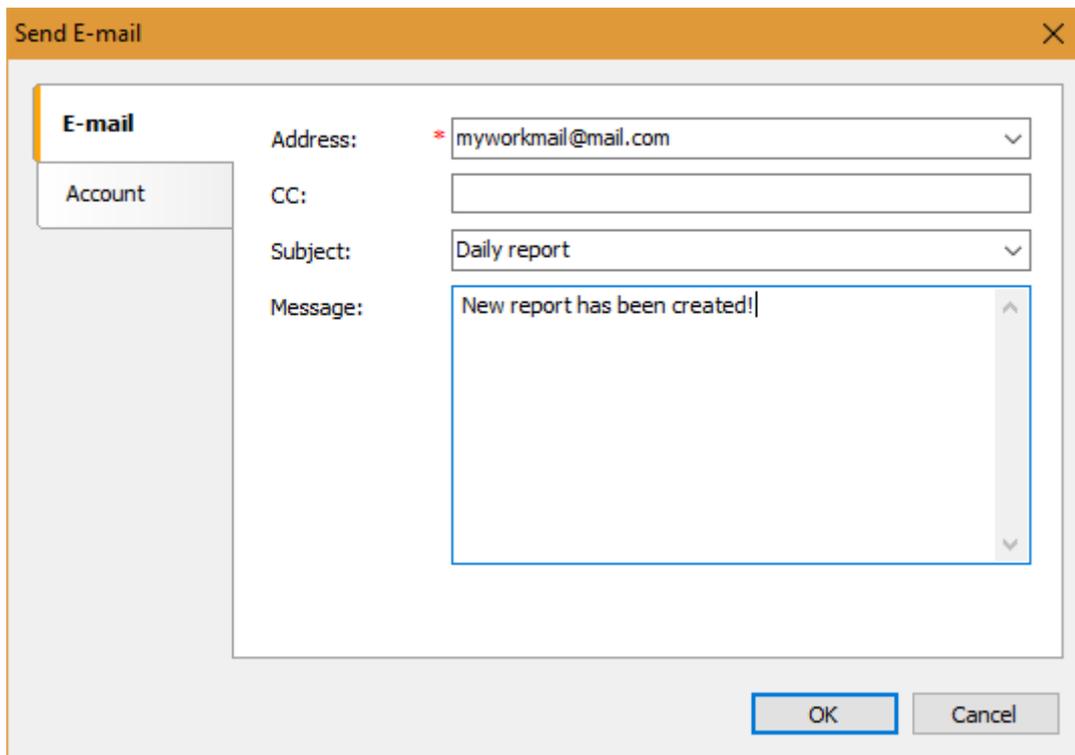
This is the main form of the program that displays all the settings:
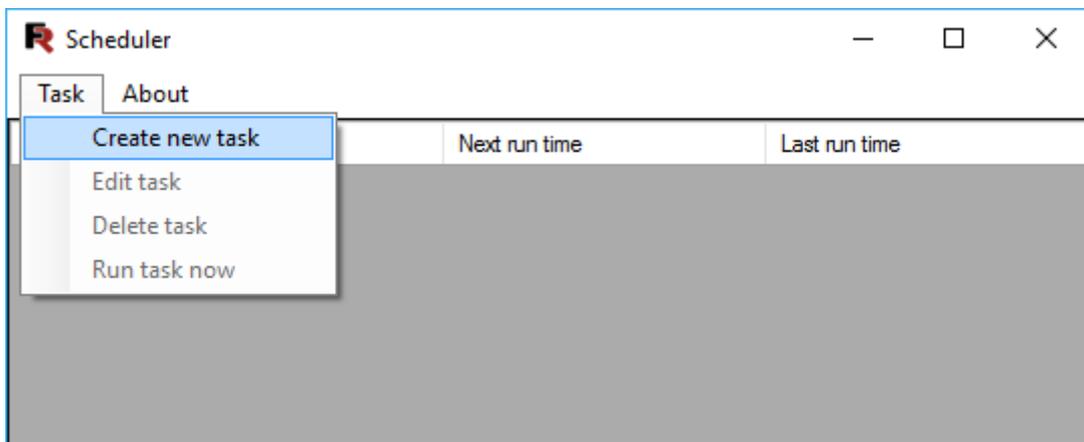

You need to save the configuration to a file. By the way, the "Run" button allows you to run the configuration immediately. Close the program and proceed to create a task in the Scheduler.
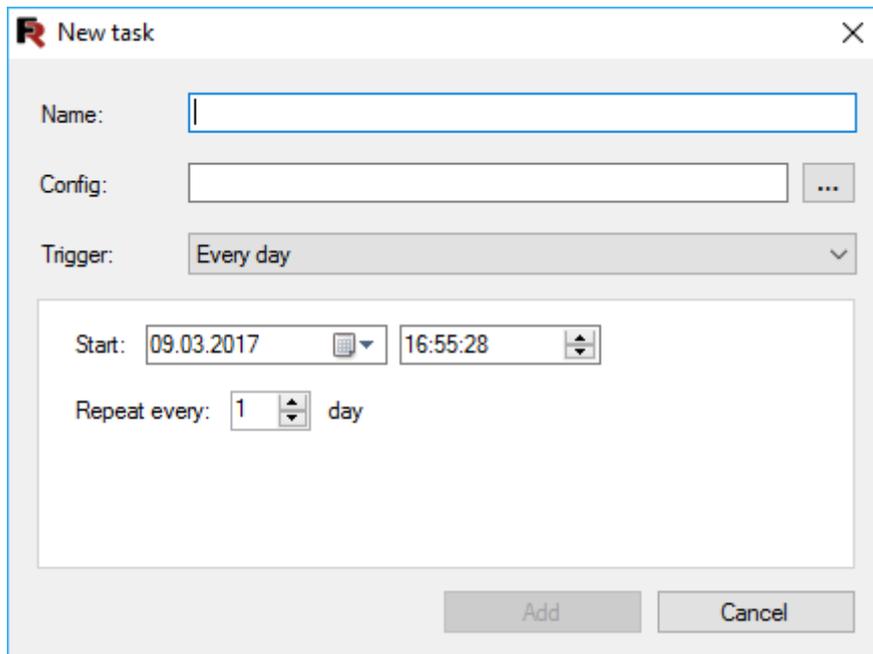
---

3. Run the Scheduler:

The interface is simple and straightforward. Add a new task using the "Task" menu:

The form of creating a task is also intuitively clear:

The task name, configuration file, and trigger are specified. By default, the desired trigger is selected - "Every day". For this trigger, the date and time of operation, the frequency of the recurrence are specified.
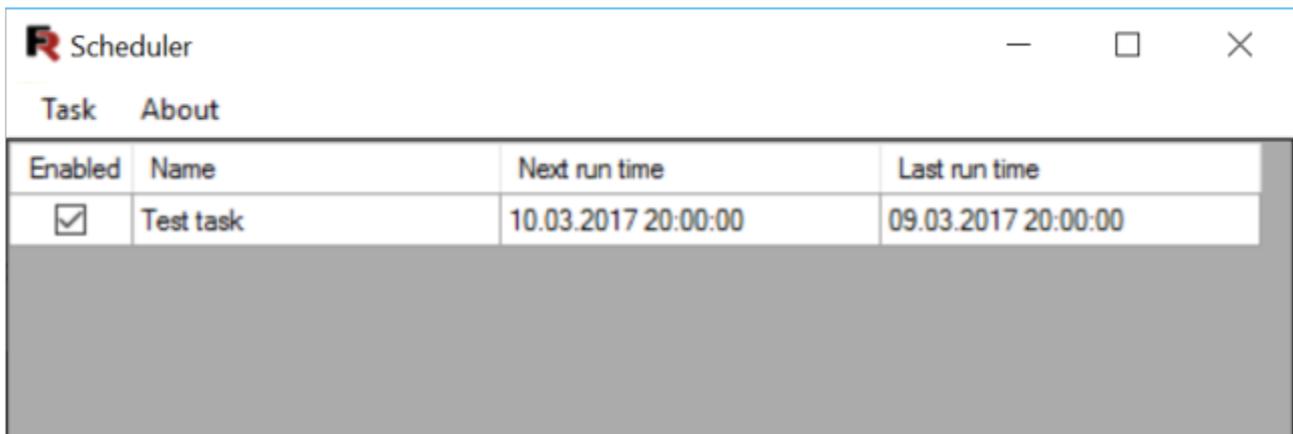

A set of triggers covers all possible needs:


```
Every day
Every week
Every month
Time
On computer start
On windows logon
```

We press the button "Create". In the main form a new task has appeared:

Enabled	Name	Next run time	Last run time
☑	Test task	09.03.2017 20:00:00	
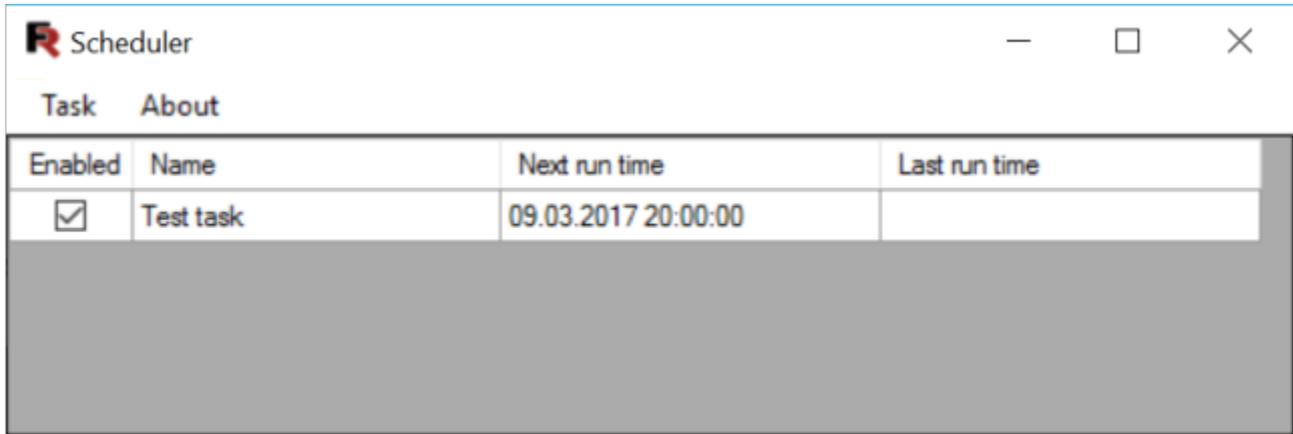
So, we see that the task is enabled and the time of the last run is still empty. Well, wait a bit.

Enabled	Name	Next run time	Last run time
☑	Test task	10.03.2017 20:00:00	09.03.2017 20:00:00

The task worked at a given time. A note about this appeared in the field "Last run time". Now, the report will be formed every day and sent at this time. And now check the mailbox:
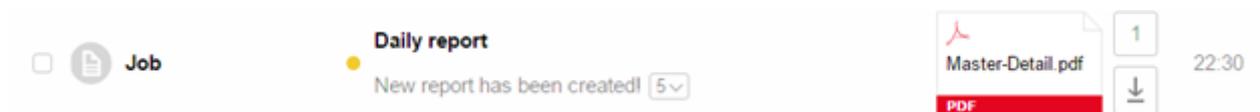
And we see a letter with our report in PDF format. Convenient and simple.

Support

If you have any questions, feel free to contact: **support@fast-report.com**