FastReport Cloud
User Guide

Foreword

Any code fragments that may be found in this documentation are only for demonstration purposes. These examples are meant to illustrate the functionality of the FastReport Cloud product. Fast Reports Inc. does not guarantee the accuracy and completeness of these examples and is not responsible for any direct or indirect damage that may be caused by them.

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Terms

TERM	DESCRIPTION
Report (Prepared report)	A report is a document that can be generated from a set of data obtained from any application, file, or DBMS. The report is usually generated from a pre-defined template, but it can also be built from application code. The report can be interactive and can be restructured (modified) based on user commands (manipulations). The prepared report is a generated document saved in the internal format of the report generation system. The prepared report cannot be restructured or modified, but can be exported to files of other formats.
Template	A pre-defined layout for further report generation. The template can be stored in a file, DBMS, or network resource. The report template may contain bindings to external data, their description, parameters, and script. A special program—designer—can be used for template editing.
Export	A document or file in any format, created based on a prepared report. For example, these can be PDF, Excel, JPEG files, etc. The creation of the file can be combined with its sending as an email message or storage in network repositories.
Designer	Program for creating and editing report templates. It can be installed on a computer or run in a browser (online designer).

Key features

This section will help you learn about the main features of FastReport Cloud, get acquainted with the product, and quickly jump to the article you are interested in. You can learn about FastReport Cloud in this article.

Report Builder

The builder is based on the FastReport .NET report generation library, it allows you to create reports and documents according to pre-prepared templates.

Cloud Solution

The entire infrastructure is located in the cloud, just connect to FastReport Cloud from your application or open it in a WEB browser from a mobile phone or computer. Anytime. Anywhere. And you will have all reporting and document generation power.

Template and Report Management

FastReport Cloud allows you to store templates and reports in a virtual file system. You have all common file actions: upload, copy, rename, and transfer.

Sharing

You can share templates, reports, and other files via the link. The person accessing the link may have a minimal set of read-only permissions or may be allowed to edit through the Online Designer.

We will provide a detailed description of the feature later.

Multi-user work

Several users can be added to a workspace, and everyone will be able to access it, including templates, reports, data sources, and other resources.

Permission system

A flexible permission system allows you to set different access levels for team or group members. For example, one user group will be able to create new reports in the designer, and another group will be able to build and print PDF reports from templates.

Data sources

Data sources can be created directly in the FastReport Cloud infrastructure. An already configured data source gets into the report template. And from the report itself, you can connect to MySql, MsSql, PostgreSQL, OracleDB, Json, XML, CSV.

Online designer

You can create and edit report templates on any platform and even from a mobile device.

What is FastReport Cloud?

FastReport Cloud, provided by Fast Reports Inc., is a set of cloud services that can be used by programmers, report developers, and end users. The main list of services includes:

1. Storage of reports and templates (report template—internal storage format frx) with the possibility to upload, copy, move, rename, change attributes, delete, and download report files.
2. Differentiation of access permissions to user cloud resources.
3. Report builder. The service allows you to generate a report or a printed document based on a template that is located in the internal storage.
4. An Online Designer that offers to create a new template or edit an existing one.

The report builder is based on the FastReport .NET report generator library. The builder offers access to shared resources with a single service queue. This means that at the time of the request to the builder, the request will be put into the service queue and will be processed in a while.

> As for the waiting time for report building, we will do our best to minimize the time and provide transparency on the waiting time and queue position.

How does FastReport Cloud work?

FastReport Cloud provides a REST API for integration into any server application. Below is an example workflow.
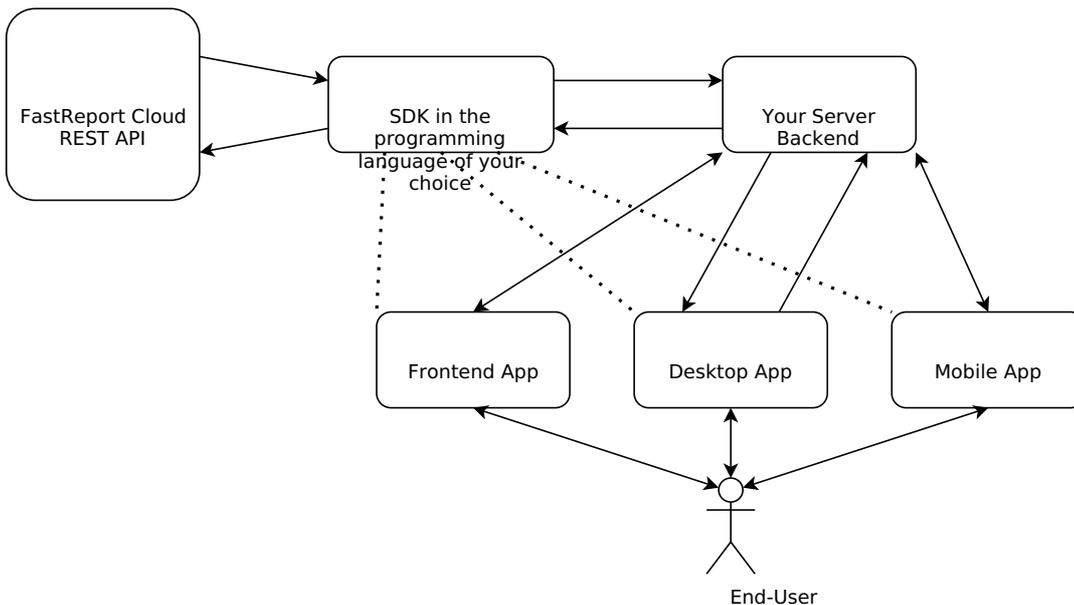
> There is opportunity to embed in a client application, however, for security reasons, we do not recommend giving access to your account through client applications.

Let's look at a simple example of receiving a report in a PDF file by an end user. This is not the only solution to this problem, but a recommended one.

1. The end user opens the client application. It can be any application with Internet access: Android, iOS, TV, Windows, WEB, PWA...
2. The end user requests the application to view the report (PDF file).
3. The application connects to the backend server, where the connection string to the FastReport Cloud access point is specified. This approach will secure your access keys to your FastReport Cloud account.
4. The server, using FastReport.Cloud.SDK or directly with an HTTP request to the FastReport Cloud access

point via the REST API protocol, accesses the builder and requests a PDF file. Then it goes into the waiting response mode for some time.
5. The builder is processing the task.
6. The server downloads the task execution result (PDF file) and returns it to the client application.

How is FastReport Cloud different from the FastReport .NET library?

FastReport Cloud services use the FastReport .NET library, transferring the reporting load from the client application to the server cloud power. The following table shows the differences between the cloud solution and the embedded solution:

	FASTREPORT CLOUD	FASTREPORT .NET
Programming language	Any, it allows you to use the service from any application	C#, VB, other .NET languages
Report builder	Remote, on the computing power of the cloud	Locally on the server or in the client application
Access control	Provides flexible resource access control	Must be developed manually
Internet access	Requires internet access to work	Can work without network access

Workspace

Workspace is a unit of access to FastReport Cloud resources. To be able to create templates, build reports, work with files and use other FastReport Cloud features, you need access to the workspace.

There is a direct relationship between a cloud access subscription and a workspace. Once the subscription is paid and issued, the user will be given administrative access to the workspace.

You can connect multiple users to a workspace. The user limit is specified in the subscription plan.

Terms

TERM	DESCRIPTION
Workspace	A unit of access to FastReport Cloud resources. It contains only one subscription. The identifier matches the subscription. The workspace stores rights and user settings.
Subscription	Access to resources limited in time. Contains only one workspace. The identifier matches the workspace. It stores information about the history of subscription periods. There can be only one active period, which allows you to clearly differentiate access to resources based on the subscription plan.
Subscription period	The duration of a specific subscription plan. During the subscription period, FastReport Cloud resources are accessed according to the list specified in the subscription plan.
Subscription Plan	A set of paid resources that are accessed, as well as a set of restrictions on these resources.

Subscription plan

The subscription plan contains information about the following resources:

1. File storage limit. Separately, its shows the size of templates, prepared reports and export results.

2. The maximum size of a template or report to be uploaded to FastReport Cloud, files cannot be uploaded to the export storage.

3. Time period — the time the subscription plan is valid.

4. The duration of the read-only period. Read-only mode will be enabled at the end of the subscription period. After this mode expires, the workspace will be locked.

   > Note! There is no access to a locked workspace, for example, you cannot download or delete files stored in FastReport Cloud. After some time, the locked workspace will be deleted automatically or at the user's request.

5. Number of groups — the maximum number of groups that can be created in the workspace.

6. The option of using the online designer — activation of the option to use the online designer in the workspace.

7. Number of data sources — specifies the maximum number of data sources that can be created for the workspace. Does not affect the number of data sources within a report.

8. Number of users (slots) — specifies the maximum number of users that can be added to one workspace.

9. Ability to use infinite pages in reports — enables or disables the ability to use infinite pages in reports. If

this feature is disabled, reports with an infinite page will be marked as invalid.

10. Number of pages in the report — specifies the maximum number of pages that can be in the report. If the number of pages exceeds the allowable one, then the report is built with the available number.

11. Access to the API task system — contains a list of tasks allowed for a call.

12. Preparing a report from a template.

13. Template export.

14. Report export.

15. Transporting the result via Email.

16. Transporting the result via Webhook.

17. Check data source.

Properties

The workspace contains the following properties:

1. Name.

   For ease of identification, users can assign a name to the workspace themselves. This name will be displayed in the user panel. In addition to the workspace name, the user can also see the subscription plan name.

   This property is not set by default, and the workspace will be identified by either the subscription plan name or an identifier number.

2. Root directories.

   This property cannot be set manually. It stores information about the identifiers of the root directories of the virtual file system. There are 3 root directories in total: templates, reports, and exports.

3. User invitations.

   In addition to manually adding users to a workspace, you can generate up to five invitations. They are used to automatically add users by link. Each invitation has an expiration date and a number of uses.

4. Default permissions.

   They replace all unspecified access parameters of a resource during checks. For example, if you specify `Other.Get = Download` in the default permissions for files, then subscription users will be able to download all files. To make an exception to these rules, you need to configure access permissions to a specific resource. See the User permissions section for more information about rights.

5. Default language. It specifies which localization to use when exporting or rendering a report, for example, for the date and time format. The default language will be used if the export request or build request does not specify which locale to use.

6. Active subscription plan. Information about the active subscription. Please note that only one subscription plan can be active at a time. For example, if the old period is still valid, but a new subscription has been issued, then the old period will be archived, and the new subscription plan will be named as active.

User permissions

User permissions of the subscription are divided into 5 groups.

1. `Get` — getting information.
   1. `Entity` — getting information about subscription and workspace.
   2. `Users` — getting a list of workspace users.
   3. `Permission` — getting information about user permissions in a workspace.
   4. `RootDirectory` — getting information about the root directories of a workspace.
   5. `DataSources` — getting a list of workspace data sources.
   6. `Groups` — getting a list of workspace groups.
   7. `DefaultPermissions` — getting a list of permissions to resources for users, such as files.
   8. `Invites` — getting a list of invitations.

2. `Update` — updating any properties of a workspace.
   1. `Name` — the name of a workspace.
   2. `DefaultPermissions` — regulating default access permissions to workspace resources, such as files.
   3. `Locale` — changing the language and localization for building reports.

3. `Create` — creating or adding some information to a workspace.
   1. `DataSource` — creating a new data source.
   2. `Group` — creating a new group.
   3. `User` — adding a user to a workspace.
   4. `Invites` — creating new invitations to a workspace for users.

4. `Delete` — deleting information directly related to a subscription.
   1. `Users` — deleting a user from a workspace.
   2. `Invites` — deleting an issued invitation.

5. `Administrate` — administrative access to subscription rights.
   1. `Owner` — editing the owner of a subscription and its related rights.
   2. `Group` — editing the rights of user groups.
   3. `Other` — editing the rights of subscription users.
   4. `Anon` — editing the rights of anonymous access to a subscription.

The rights work model is the same for all cloud elements and is described in the puser permissions section.

File storage

FastReport Cloud has a cloud storage within the infrastructure with virtual file system support. The storage is divided into three types of categories, each of which has its capacity limit:

1. Report templates.
2. Reports.
3. Exports from reports.

Each category uses an isolated file system with directories and files.

There are no nesting restrictions for directories, but we recommend that you do not nest more than 3 levels. It will not work to create files and directories indefinitely since the minimum size of an empty directory and any file is 16 KB.

Basic file and directory properties

Here is a list of basic properties that are common to all directories and all storage types.

1. `Name` — display name of the file or directory.

   - The file name cannot be empty.
   - The file name cannot be longer than 250 characters.
   - o The file name cannot contain the following characters: double quote `"`, less-than sign `<`, greater-than sign `>`, vertical bar `|`, colon `:`, asterisk `*`, question mark `?`, backslash `\`, forward slash `/`, character `\0` and a number of other function characters.
   - The virtual file system imposes a restriction on the same name of files, i.e. two files cannot have the same name.

2. `Type` — type, stores information about whether this resource is a file or a directory.

3. `Id` — an impersonal identifier unique for any file.

4. `ParentId` — parent identifier, based on which the file system is built.

   Each file or directory has a parent directory that contains that file or directory. The root directory is an exception, it has no parent and cannot be assigned a parent.

5. `Tags` — a list of tags.

   A displayed list of any data for convenient filtering and viewing in the user panel.

6. `Icon` — a file or directory icon, no icon by default.

7. `Size` — the size of a file or directory.

   The size of a directory is always 16 KB, and the size of nested directories and files is not automatically calculated. For a file, the minimum size is 16 KB.

8. `SubscriptionId` — the identifier of a subscription or workspace.

   Each file or directory must belong to a workspace.

9. `CreatorUserId` — the identifier of the user who created a resource.

10. `EditorUserId` — the identifier of the user who last modified a resource.

11. `CreatedTime` — the date and time a resource was created.

12. EditedTime — the date and time a resource was last edited.

User permissions

User permissions for files are divided into 6 groups.

1. Get — getting some information about a file or directory.
   1. Entity — information about a file or directory as a whole: name, size, icon, etc.
   2. Count — the number of child directories and files inside a directory. Not applicable to files.
   3. Download — the ability to download a file.
   4. Permission — information about user access permissions to a file or directory.
   5. Thumbnail — low-resolution preview icon.

2. Update — updating information about a file or directory.
   1. Place — the ability to transfer a file or directory to another directory.
   2. Name — renaming a file or directory.
   3. Icon — changing an icon.
   4. Tags — editing the list of tags.

3. Create — creating or changing any data directly related to a file or directory.
   1. Entity — creating new child elements inside the directory.

4. Delete — deleting the data directly associated with a file or directory.
   1. Entity — deleting a file or directory.

5. Execute — launch of applications or tasks to process a file or directory.
   1. Export — export of a template or report.
   2. Prepare — preparing a report from a template.
   3. Design — template design.

6. Administrate — administrative access to the rights of a file or directory.
   1. Owner — editing the owner of a file or directory and the rights associated with them.
   2. Group — editing the rights of user groups.
   3. Other — editing the rights of users of the workspace.
   4. Anon — editing the rights of anonymous access to a file or directory.

Webdav and network directory connection

Now FastReport Cloud does not support such functionality.

Report template

The report template is a file in `.frx` of the FastReport .NET report generator (`.xml` file with a specific structure).

FastReport Cloud processes the `.frx` and gets meta information from the report.

Properties

In addition to the main file properties the report template stores `ReportInfo` meta-information.

1. `ReportInfo` — information from `.frx`.
   1. `Author` — the author of the template. Display name
   2. `Created` — date and time when the template was created.
   3. `CreatorVersion` — FastReport .NET version in which the template was created.
   4. `Description` — description of the template.
   5. `Modified` — date and time when the template was last edited.
   6. `Name` — the name of the template.
   7. `Picture` — thumbnail, screenshot, template preview.
   8. `PreviewPictureRatio` — thumbnail scaling factor from 0 to 1.
   9. `SaveMode` — report saving mode, used by FastReport .NET desktop designer.
   10. `SavePreviewPicture` — indicates whether the thumbnail will be saved when saving the report.
   11. `Tag` — any additional information.
   12. `Version` — version of the template.

Creating a new template

There are following ways to create or modify report templates:

1. Using the FastReport Cloud user panel, you can both create and edit templates.
2. Using the FastReport .NET designer.
3. Using the free version of the FastReport Community designer.

To edit a template on a computer, you will first have to download it, modify it using the designer, and then upload it back to the cloud. In this case, the template will have a different identifier. When editing a report template in the online designer the template identifier will be saved, so you don't need to update the identifier in your applications.

Building a report

Inside FastReport Cloud, there is a builder based on FastReport .NET Core that allows you to generate reports (`.fpx`) from templates. Building one report cannot exceed 15 minutes (for security reasons).

Also, according to the report template, you can build a report in other formats without saving the prepared report.

User permissions

User permissions are common to all file types. The list is available in the file storage section.

Report

A report (prepared report) is a file in `.fpx` of the FastReport .NET report generator (`.xml` file with a specific structure).

FastReport Cloud processes the `.fpx` and gets meta information from the report.

Creating a new report

You can create a report:

1. Using the FastReport Cloud user panel when building a report template.
2. 2. Download a ready `.fpx` file obtained with the FastReport .NET library.

Properties

In addition to the main file properties, , the report stores the `ReportInfo` meta-information, the identifier of the template from which a report was built, and the status of a report.

1. `ReportInfo` — information from `.frx`.
   1. `Author` — the author of a report. Display name.
   2. `Created` — date and time when a report was built.
   3. `CreatorVersion` — version of FastReport .NET in which a report was built.
   4. `Description` — description of a report.
   5. `Modified` — date and time when a report was last edited.
   6. `Name` — the name of a report.
   7. `Picture` — thumbnail, screenshot, report preview.
   8. `PreviewPictureRatio` — thumbnail scaling factor from 0 to 1.
   9. `SaveMode` — report saving mode, used by FastReport .NET desktop designer.
   10. `SavePreviewPicture` — indicates whether the thumbnail will be saved when saving a report.
   11. `Tag` — any additional information.
   12. `Version` — version of a report.

2. `TemplateId` — template identifier in FastReport Cloud storage.
3. `Status` — the status of what exactly is happening with the report at the moment. It can have one of the following values:
   - `None` — no information.
   - `InQueue` — in the queue, waiting for its build turn.
   - `InProcess` — the report is running, is at the build stage.
   - `Success` — the report has been successfully built.
   - `Failed` — the build failed.

4. `StatusReason` — indicates the reason for the status (usually for `Failed`), or supplements it.
   - `None` — no information.
   - `AllRight` — nothing interrupted a successful build
   - `Hang` — means that the report was processed too long and was removed from the build.
   - `Error` — there was an error in a report.
   - `NotFound` — the handler did not find the provided file, or the export file was lost.
   - `NotEnoughSpace` — the storage does not have enough free space for a report.
   - `PreparationStarted` — the build has started.

5. `Thumbnail` — low-resolution preview icon.

Report export

Inside FastReport Cloud, there is a builder based on FastReport .NET Core that allows you to export reports (.fpx). For security reasons, the export of one report cannot exceed 15 minutes.

You can find the list of available exports in the export section.

User permissions

User permissions are common to all file types. The list is available in the file storage section.

Export

Export (report in export format) is a file obtained in the FastReport .NET report generator. Now it is not possible to upload your files to this repository. The only way a file gets into this storage is when the file is generated as a result of export.

Properties

In addition to the main properties of files, the report export result stores a link to the report from which it was exported, the format that was used during export, and the status—what is currently happening with the file.

1. `Format` — export format. It can have one of 23 values: `Pdf`, `Html`, `Mht`, `Image`, `Biff8`, `Csv`, `Dbf`, `Json`, `LaTeX`, `Odt`, `Ods`, `Docx`, `Pptx`, `Xlsx`, `Xps`, `Ppml`, `PS`, `Richtext`, `Svg`, `Text`, `Xaml`, `Xml`, `Zpl`.
2. `ReportId` — identifier of the report in the FastReport Cloud storage from which the export result was received.
3. `Status` — the status of what exactly is happening with the export at the moment. It can have one of the following values:
   - `None` — no information.
   - `InQueue` — in the queue, waiting for its export turn.
   - `InProcess` — the export is at the build stage.
   - `Success` — the export has been successfully built.
   - `Failed` — the build failed.
4. `StatusReason` — indicates the reason for the status (usually for `Failed`), or supplements it.
   - `None` — no information.
   - `AllRight` — nothing interrupted the export process.
   - `Hang` — means that the report was processed too long and was removed from the build.
   - `Error` — there was an error in the report.
   - `NotFound` — the handler did not find the provided file, or the export file was lost.
   - `NotEnoughSpace` — the storage does not have enough free space to export.
   - `ExportStarted` — export has started.
5. `Thumbnail` — low-resolution preview icon.

User permissions

User permissions are common to all file types. The list is available in the file storage section.

Groups

A user group is an association of FastReport Cloud users who have the same access permissions to workspace resources. In other words, these are several users with the same access level, for example, Administrators, Managers, Designers, and Developers.

The workspace does not have groups by default.

Each workspace can have from 0 to N user groups, the total number is regulated by the subscription plan. To add a new user to a group, it must be added to the workspace. This means that a group user is a workspace user and part of the subscription to which the group belongs.

A user can belong to multiple groups.

Properties

The group contains several properties for convenient work.

1. `Id` — a unique impersonal identifier.
2. `Name` — display name, used in the user panel.
3. `Icon` — a group icon.

User permissions

User permissions for groups are divided into 5 categories.

1. `Get` — getting some information about a group.

   1. `Entity` — information about a group: group identifier, display name, etc.
   2. `User` — a list of group users.
   3. `Permission` — information about the user's access permissions to a group.

2. `Update` — updating group properties.

   1. `Name` — changing the name of a group.

3. `Create` — creating or modifying resources directly associated with a group.

   1. `User` — adding a new user to a group.

4. `Delete` — deleting resources directly related to a group.

   1. `Entity` — deleting a group and all connections with users.
   2. `User` — removing a user from a group.

5. `Administrate` — administrative access to group rights.

   1. `Owner` — editing the owner of a group and the rights associated with it.

   2. `Group` — editing the rights of user groups for this group.

      > This property is used to assign administrators to a group. For example, there is a group called "Designers" and a group called "Administrators". The administrators are listed in the "Administrate" permissions as a group that can edit permissions for the "Designers" group.

   3. `Other` — editing the rights of workspace users.

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4. `Anon` — editing the rights of anonymous access to a group.

Data source

A data source (DataSource) is a resource for accessing data. This resource stores a connection string compatible with FastReport .NET library connections.

Each source is tied to a subscription, a subscription has no data sources by default.

Properties

The data source contains the following properties.

1. `Id` — a unique identifier for the data source.
2. `Name` — display name, used solely for the convenience of users.
3. `ConnectionType` — connection type, connector name from the FastReport .NET library, can take one of the following values: `JSON`, `MSSQL`, `CSV`, `XML`, `MySQL`, `PostgreSQL`, `OracleDB`.
4. `ConnectionString` — a connection string compatible with the FastReport .NET library.
5. `DataStructure` — a data structure, a piece of information from a report `.frx` template, used by the online designer. It is generated automatically after creating a new data source.

User permissions

User permissions for sources are divided into 4 categories:

1. `Get` — getting some information about the data source.
   1. `Entity` — information about a data source: data source identifier, display name, etc.
   2. `Permission` — information about the user's access permissions to a data source.

2. `Update` — updating the properties of a data source.
   1. `Name` — changing the name of a data source.
   2. `SubscriptionId` — changing the workspace of a data source.
   3. `DataStructure` — changing the data structure.
   4. `ConnectionString` — changing the connection string.

3. `Delete` — deleting resources directly related to a data source.
   1. `Entity` — deleting a data source.

4. `Administrate` — administrative access to data source rights.
   1. `Owner` — editing the owner of a data source and related rights.
   2. `Group` — editing the rights of user groups.
   3. `Other` — editing the rights of workspace users.
   4. `Anon` — editing the rights of anonymous access to a data source.

Online designer

The online designer is the html5 version of the report designer in `.frx`, see more on the [FastReport Online Designer](#).

API access key

An access key (API Key) is one of the ways to get access to FastReport Cloud resources, most often used to authorize an application. Each user can request up to 5 access keys.

If the application uses an access key, then all actions in FastReport Cloud will be performed by the user to whom the key was issued.

You can read more about the authentication and authorization processes in the guide section: Authentication and authorization.

Properties

1. `Value` — the key itself, generated automatically, it is unique.
2. `Description` — the description of the key, displayed to the user.
3. `Expired` — time and date when the key will stop working. Expired keys are not automatically deleted.

User permissions

Does not have any permissions, because only the user can access it.

User permissions

User permissions, access permissions — a system for differentiating and managing access to FastReport Cloud resources. Access permissions are differentiated according to subjects-to-objects principle, where the subject is a user, a group of users, other workspace users, anonymous, and the object is the FastReport Cloud resource.

Unique access permissions can be assigned to each resource. However, if they are not specified, the default rights specified in the workspace will be used. You cannot adjust the rights of each resource separately through the user panel, but it can be done via REST or SDK.

Properties

Each FastReport Cloud resource has a user permission model and contains the following data:

1. Owner ID—an impersonal user number.
2. Owner permissions. Please note that the user panel does not allow you to remove the rights for the owner, however, this can be done through REST or SDK (it is highly not recommended to do this, because you can lose access to the workspace).
3. List of groups.
   1. Group identifier.
   2. Permissions for this group.

4. Permissions for workspace users. It affects all users of the workspace, regardless of group. All workspace members have full rights by defaults.
5. Permissions for anonymous users.

Permission properties

Property categories are common for each FastReport Cloud resource.

1. `Get` — getting information about a resource, for example, the name of a file.
2. `Update` — updating any resource properties, for example, the name of a subscription.
3. `Create` — creating or adding any information to a resource. Also, it maybe be adding new resources related to the specified one, for example, creating a subscription group.
4. `Delete` — deleting information directly related to a resource, for example, removing a user from a subscription.
5. `Execute` — launching the execution of a task, for example, report build.
6. `Administrate` — administration of permissions. Having access to these permissions, you can change other permissions, they allow you to fully administer the properties of permissions.

> Each category has the `All` permission, which will give all rights to the resource, including those that may be added later.

Sharing Keys

For some types of models (files, for example) a list of sharing keys may be created. Sharing keys are objects with following properties :

1. `Name` - User-created name for a key, to indicate what this key was created for.

2. `Expires` - Date and time, when this key will stop working.

3. `Permissions` - List of permissions, that this key gives, when used.

4. `Key` - The key itself, which must be specified in the query parameters to use it.

To use a sharing key you can set a request's query parameter `accessKey`, equal to sahring key's `Key` value. In that case all permissions, that this key is granting will be given to a user (even anonymous one's) until request resolves.

Check procedure

When a user submits any get request to get, change, or delete a resource associated with a workspace, a permission check takes place. If the resource access permission property is not set, it is taken from the default permissions in the workspace. Also, if the sharing key was specified in the query parameters of a request - all checks for permissions, specified in the key's model will succeed.

Requesting your rights

Each user can request their rights to a resource using REST or SDK. The returned model will have an aggregation of all available rights. If the resource is not found or the user does not have rights to the resource, then an empty model will be returned.

Tasks

A task is a unit of work in FastReport Cloud. All transformations, whether it is creating a report from a template, exporting to various formats, or sending a file to the mail, are tasks.

There are the following types of tasks:

- transformer tasks (transformers);
- transport tasks (transports).
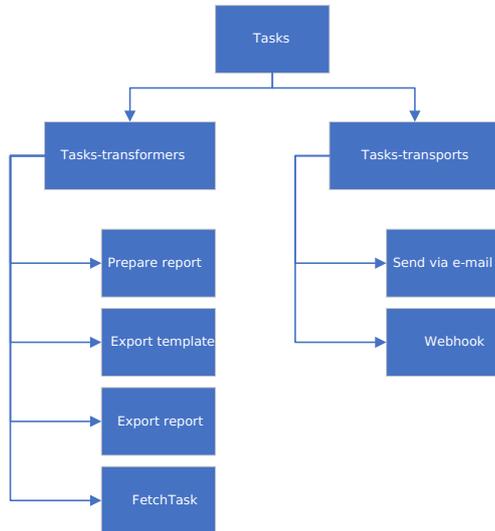
Task properties

All tasks have the following properties:

1. `Name` - task name (for example, "Distribution of pay slips to employees");
2. `Locale` - localization that should be used when building a report;
3. `SubscriptionId` - the identifier of the workspace where the task is launched (if not specified, the default workspace for the user running the task will be used).

The remaining properties are unique for each task type.

Transformers

Transformers are designed to transform source objects into final objects through some transformation function.

There are the following transformers:

- report preparation (`PrepareTemplateTask`) - template -> report;

- template export (`ExportTemplateTask`) - template -> a file in the required format (pdf, html);
- report export (`ExportReportTask`) - report -> a file in the required format (pdf, html);
- adding a data structure to a data source (`FetchTask`) - a data source without a structure -> a data source with a data structure that can be used further in the Designer.

The properties of transformers

All transformers, in addition to the main properties of the tasks described above, contain the following properties:

1. `InputFile` - information about the template from which the report should be created; it contains the following fields:

   - `EntityId` - template identifier;

   - `Type` - file type (in this case, the type should be `Template`);

   - `Content` - template content as a byte array (can be passed instead of an identifier);

   - `FileName` - template name (optional).

2. `OutputFile` - information about the report generated by the task (apart from fields similar to the `InputFile` fields, it also contains the `FolderId` field—the folder where the report should be saved. If it is not specified, the report will not be saved);

3. `Transports` - a list of transport tasks called after report preparation.

Thus, the result of each transformer task can be sent using transport tasks (by mail, webhook).

> Note that the Content field is only available when starting a task from the request body.

> If you do not specify OutputFile, then it will be saved to a temporary folder (the id of which is the same as the id of the running task), if you specify an empty OutputFile—to the root folder, otherwise—to the specified folder.

PrepareTemplateTask

`PrepareTemplateTask` converts a template (.frx file) into a report (.fpx file).

In addition to the general properties of tasks, transformers, it contains the following properties:

1. `PagesCount` - the number of prepared pages (if not specified, a report with all pages will be generated);

2. `ReportParameters` - a dictionary of parameters passed during the build;

3. `Exports` - a list of exports (tasks of the `ExportReportTask` type) called after the report is prepared;

As can be seen from the specified properties, the result of the report preparation task, in addition to its sending by transport, can be additionally exported (and then saved or sent to the recipient in the same way).

ExportReportTask

`ExportReportTask` converts a report file (*.fpx) into a file in the specified format (pdf, html, jpeg, etc.).

In addition to the general properties of tasks, transformers, it contains the following properties:

1. `ExportParameters` - export parameters unique for each export (specified in FastReport .NET documentation);
2. `Format` - export format (pdf, html, svg, and others);

3. `PagesCount` - number of exported pages starting from the first one;

ExportTemplateTask

`ExportTemplateTask` converts a template (*.frx file) into a file in the specified format (pdf, html, jpeg, etc.).

Before exporting, the template is converted into a report, populating the necessary data. Thus, the template export task, in addition to the general task properties, transformers, and report export task properties, contains the `ReportParameters` property, which specifies the report preparation parameters.

Fetch task

This task adds a structure (tables, their column names, and data types) to the data source, which can be used further in the Designer or in the user panel.

Transports

Transports are designed to deliver objects generated by transformers to the final destination, whether it be a group of users, data storage, or another program.

There are the following transports:

- Email (`EmailTask`);
- webhook (`WebhookTask`);

All transports have the following properties:

1. `Files` - a list of files to be sent (templates, reports or exports. The properties of each item are the same as `InputFile` properties of transformers);
2. `Type` - transport task type (`Email`, `Webhook`).

EmailTask

`EmailTask` allows you to deliver the results of transformers to email. It is possible to send templates, reports, and exports both to one recipient and to a group.

In addition to common properties for all transports, it contains the following properties:

1. `Body` - the text of the message;
2. `IsBodyHtml` - format email text as html markup;
3. `Subject` - the subject of the message;
4. `To` - a list of email addresses;
5. `From` - sender's email address;
6. `Username` - email username;
7. `Password` - user password;
8. `Server` - email server smtp address;
9. `Port` - server port;
10. `EnableSsl` - whether ssl encryption is enabled;

Properties 5–10 are optional. The Fast Reports Inc. email server parameters are used by default.

Webhook

`WebhookTask` or a custom callback task delivers the results of transformers to a third-party server by making an HTTP POST request at the specified address. It is possible to send templates, reports, and exports.

`WebhookTask`, in addition to the basic ones for all transports, contains the `Endpoints` property, which is a list of objects containing the following fields:

1. `Url` - the address of the server and application to which the POST request from FastReport Cloud comes;
2. `BearerToken` - token if authorization is required.

The data sent to the third-party server is of type `multipart/form-data`, that is, it is a list of files (templates, reports, or exports). The name of the list passed in the request is `files`. The receiving party must implement a method that processes the POST request at the specified address using the resulting list.

For example, for ASP.NET, the Web API function, to which the webhook is assigned, might look like this:

```
[HttpPost]
public ActionResult<List<long>> Receiver(IFormFileCollection files)
{
    List<long> fileLengths = new List<long>();
    foreach (var img in files)
    {
        using (MemoryStream ms = new MemoryStream())
        {
            img.OpenReadStream().CopyTo(ms);
            fileLengths.Add(ms.ToArray().Length);
        }
    }
    return Ok(fileLengths);
}
```

Tree tasks

Tasks can have a tree structure and contain subtasks. For example, *the report preparation task* may contain the following subtasks:

1. List of transports (email, webhook) that send the finished report;
2. List of export tasks (`ExportReportTask`)—export to pdf, html.

Export tasks, in turn, can have a list of transports.

Thus, the sequence of execution of the report preparation task may look like this:
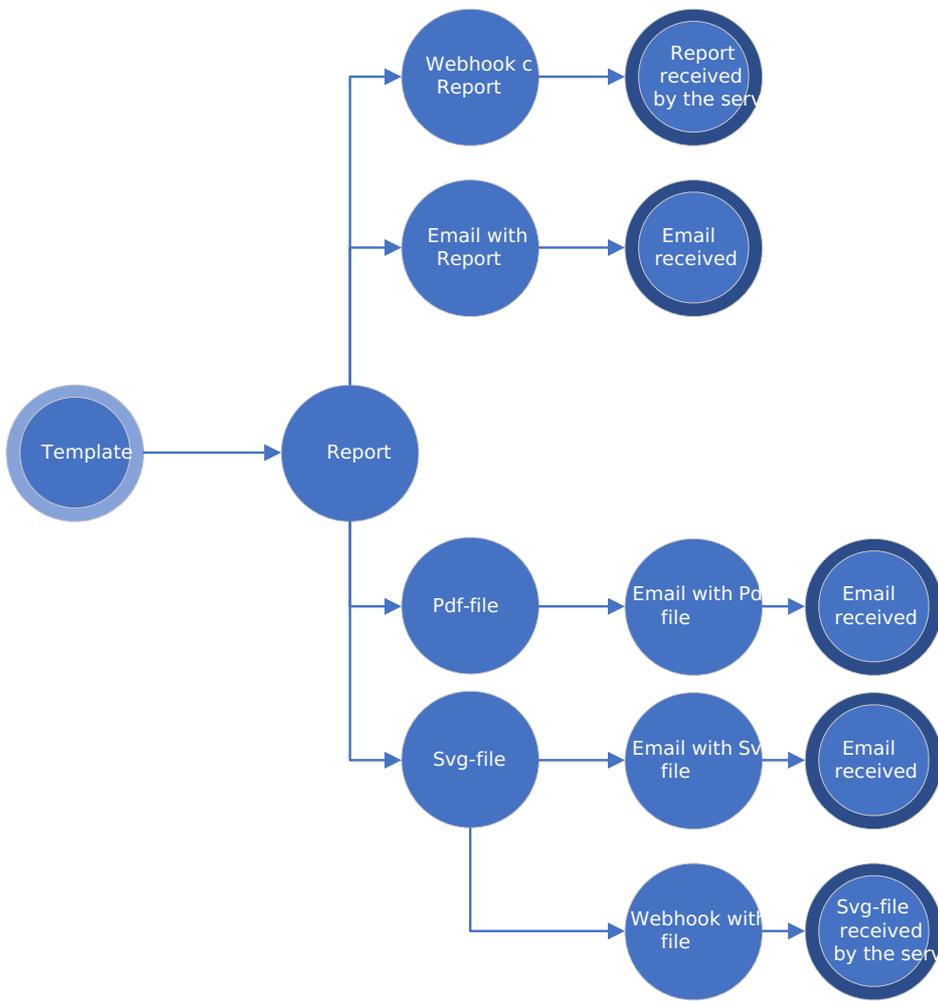
That is, the task of converting from a template to a report, after its execution, will call the PDF export task and SVG export task. And those, in turn, will call email or webhook tasks.

Saving and reuse

Tasks can be saved to cloud storage and run on demand or a schedule (task scheduler feature will be implemented in future builds). You can find examples of how to work with tasks in the Guides section.

Task interactions scenarios

There are 2 work modes:

1. Running a task from the request body;
2. Running a previously saved task.

In the first case, all parameters are determined at the time of sending a request to run a task, in the second case, the task is saved in the cloud storage and called by a unique identifier.

User panel

The user panel is a visual interface for interacting with FastReport Cloud.

The top panel of the interface has a logo (a home page button), a workspace display item, a user avatar, a notification indicator.
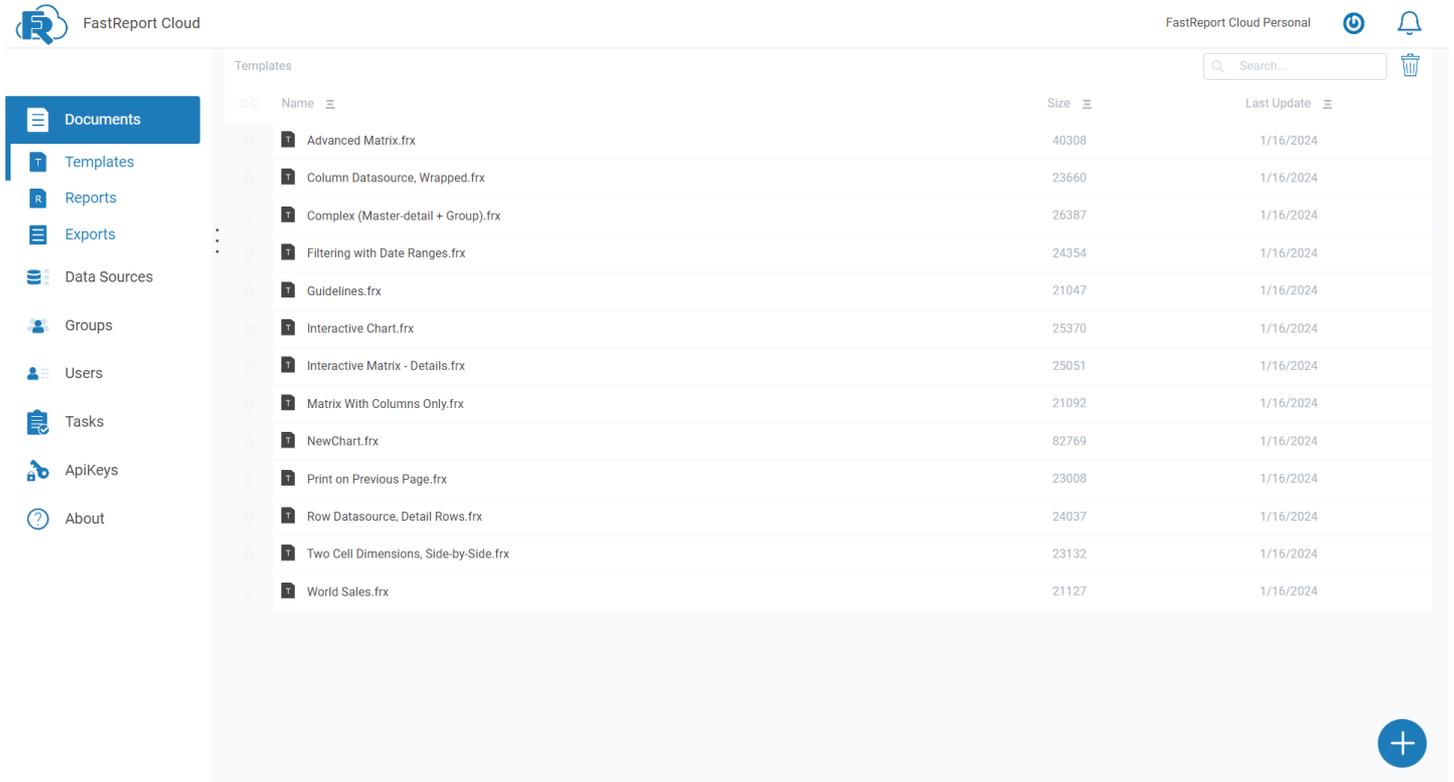
Clicking on the workspace display item opens a list with all available user spaces. Clicking the Details button opens the workspace information page.
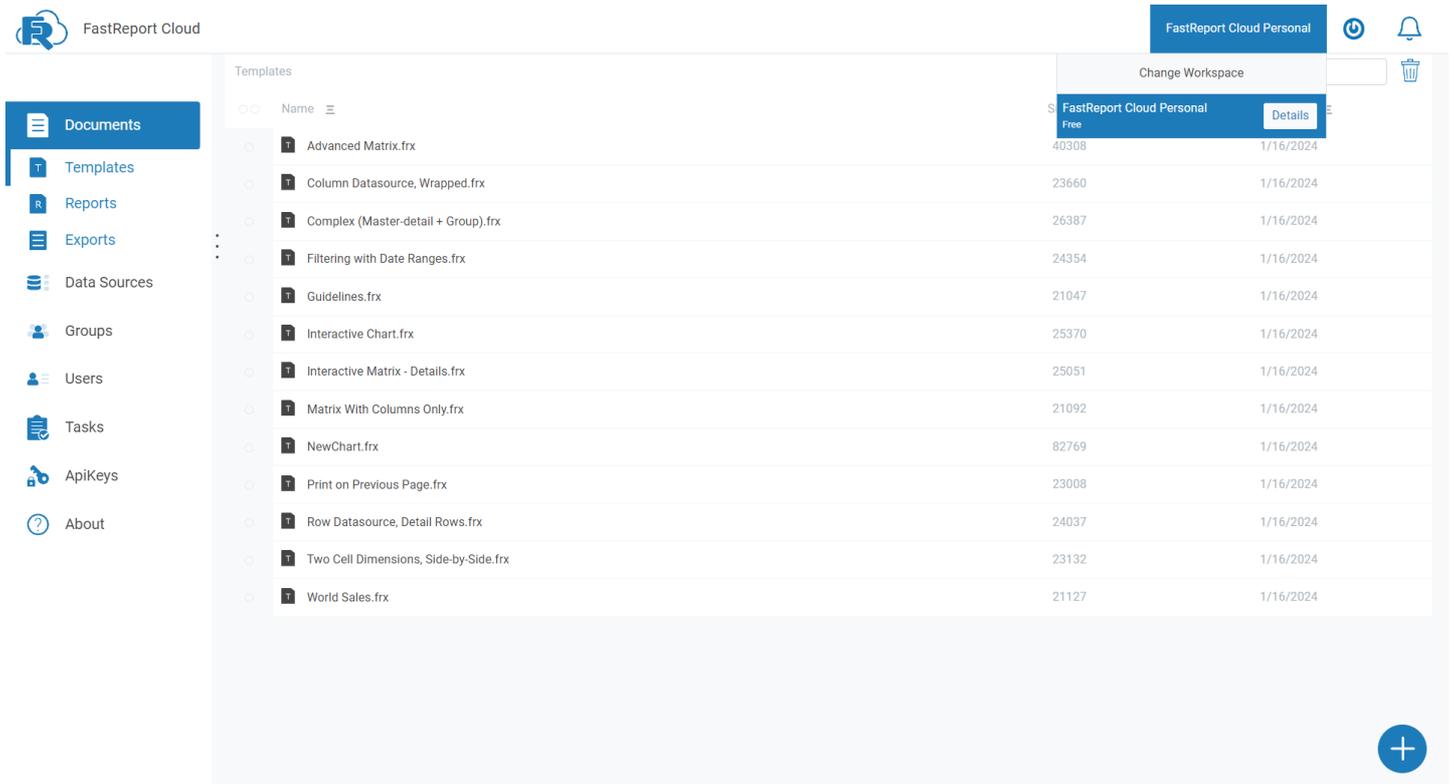
Clicking on the user's avatar opens a panel with information, an exit button and user settings.

If you click on the notification indicator, you will see the latest notifications. If there are none, you will see a message that there are no new notifications.

Workspace

On the workspace page, you can see the following information:

- the name of the workspace;
- start and end time of its work;
- the number of users that can be added to the workspace;
- whether it is possible to use the designer for editing.

Next there is a block with information about available Tasks.

The following shows how much workspace storage (templates, reports and exports) has already been used up.

User profile

On this page, you can configure the settings associated with a specific user who opened this page, namely:

- show hidden files and folders (hidden files and folders start with a dot);
- default workspace (the space that opens automatically when the user panel is launched and is used for API requests if the workspace is not explicitly specified);
- profile visibility allows you to show and hide information about yourself for other users.

Documents

FastReport Cloud has 3 types of documents: templates (.*frx), reports (.*fpx), and exports (various formats from pdf to html). Switching between file types is done on the panel located on the left of the screen.

In the central part of the screen, you can see a list of files, a search field, and a bin icon for deleted files.

When you click on the "+" button in the lower right corner of the screen, the creation menu opens: file upload, its creation in the designer, and folder creation. It is prohibited to upload on the exports tab.
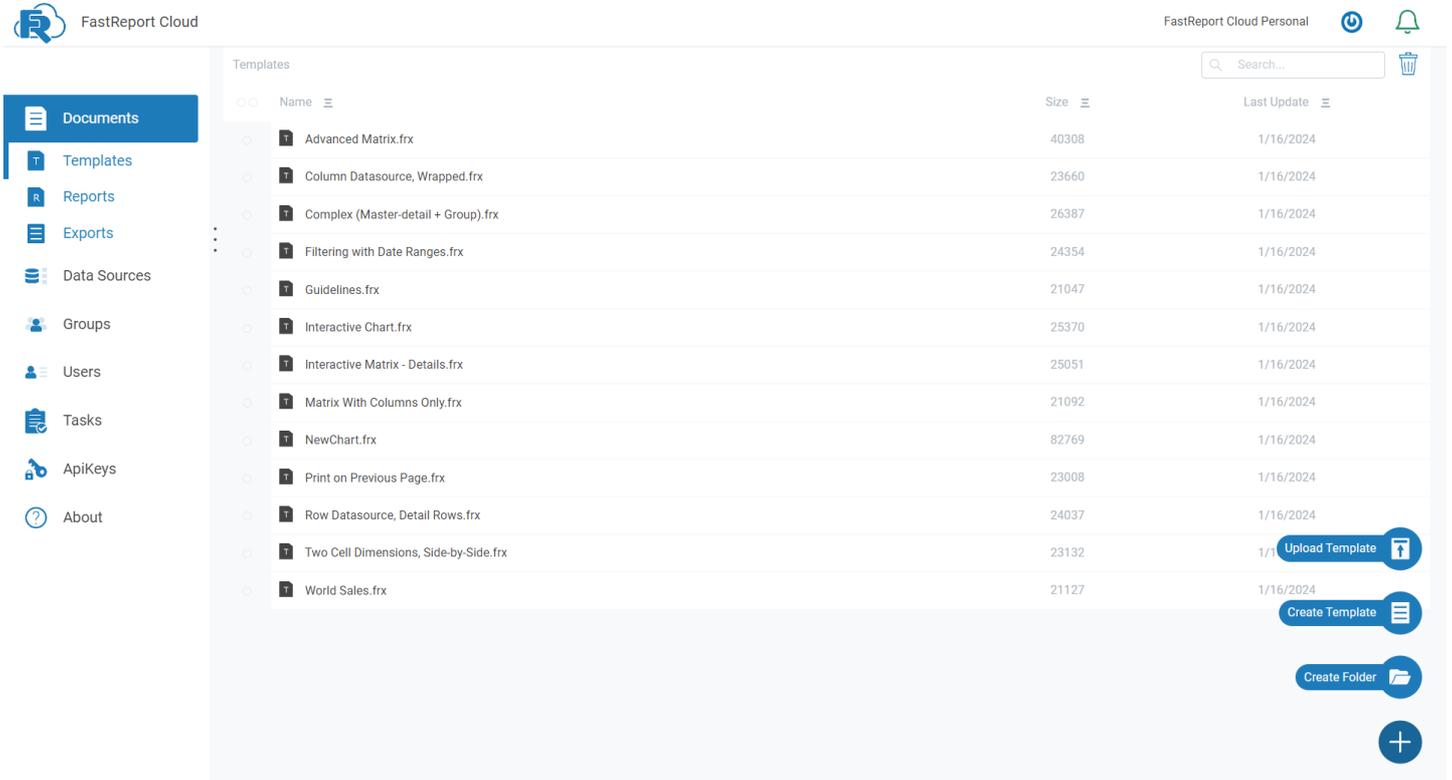
If you click once on a file, you will see a panel with information about it and a download button.
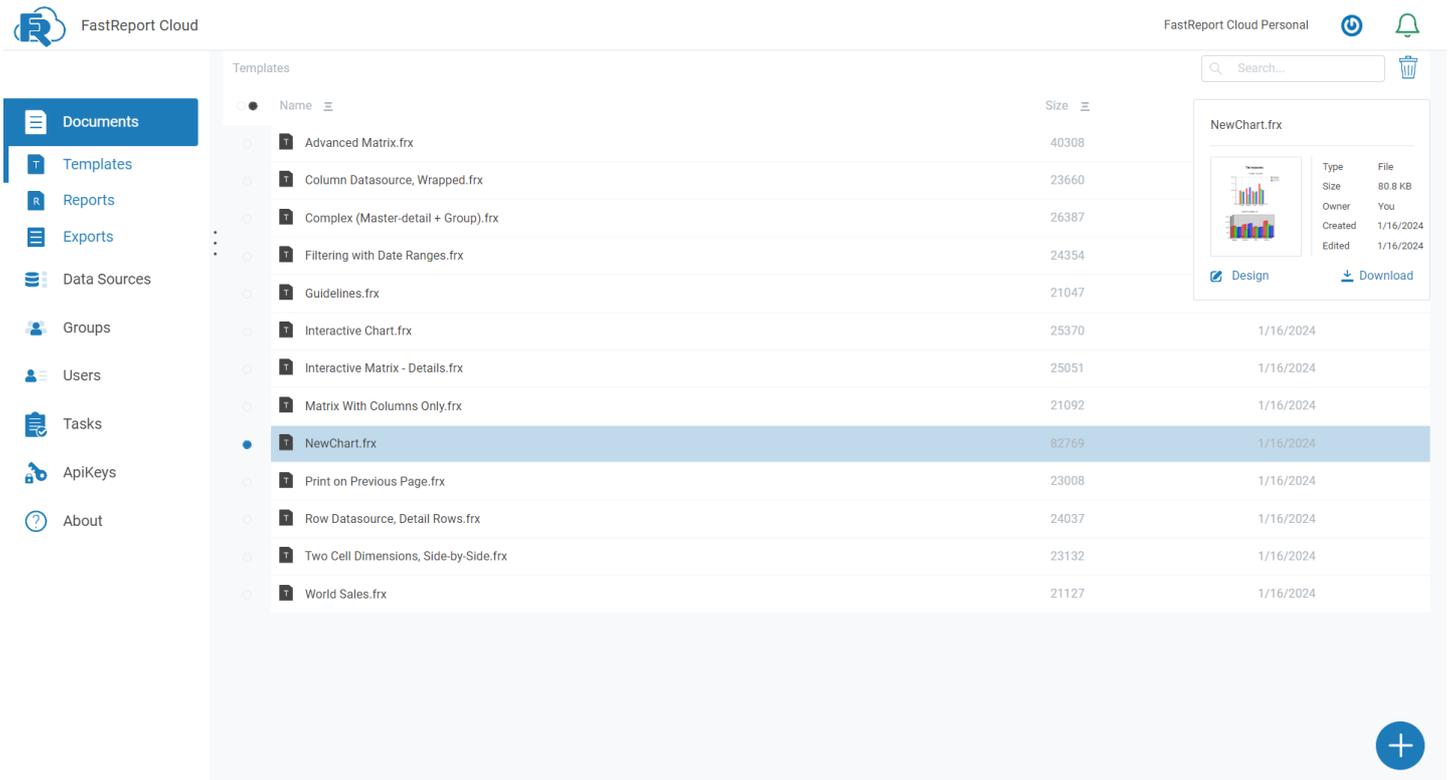
When you right-click on a file, a context menu appears with a list of actions that can be performed with the file.
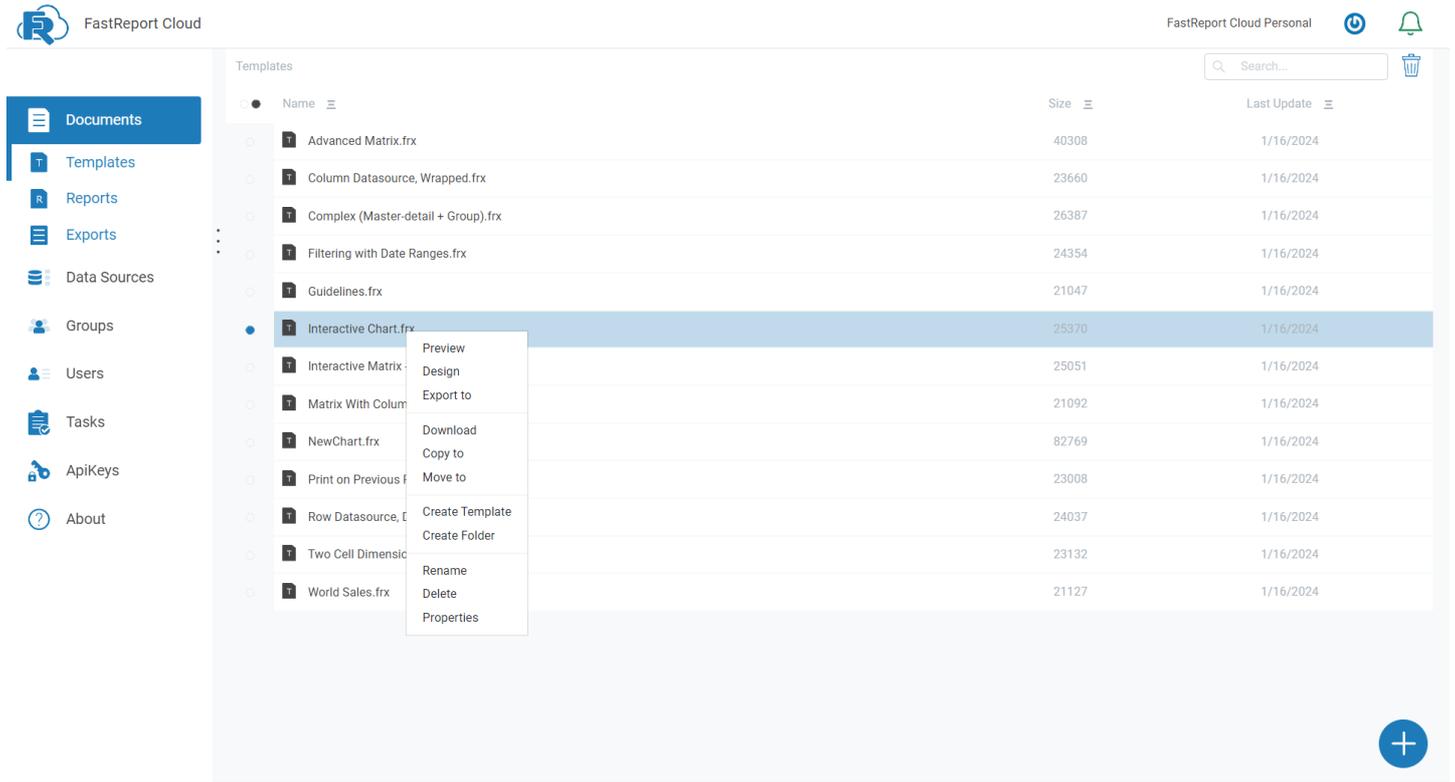
Clicking on the "View" button opens a window displaying the template or report. From there you can send the file for printing.
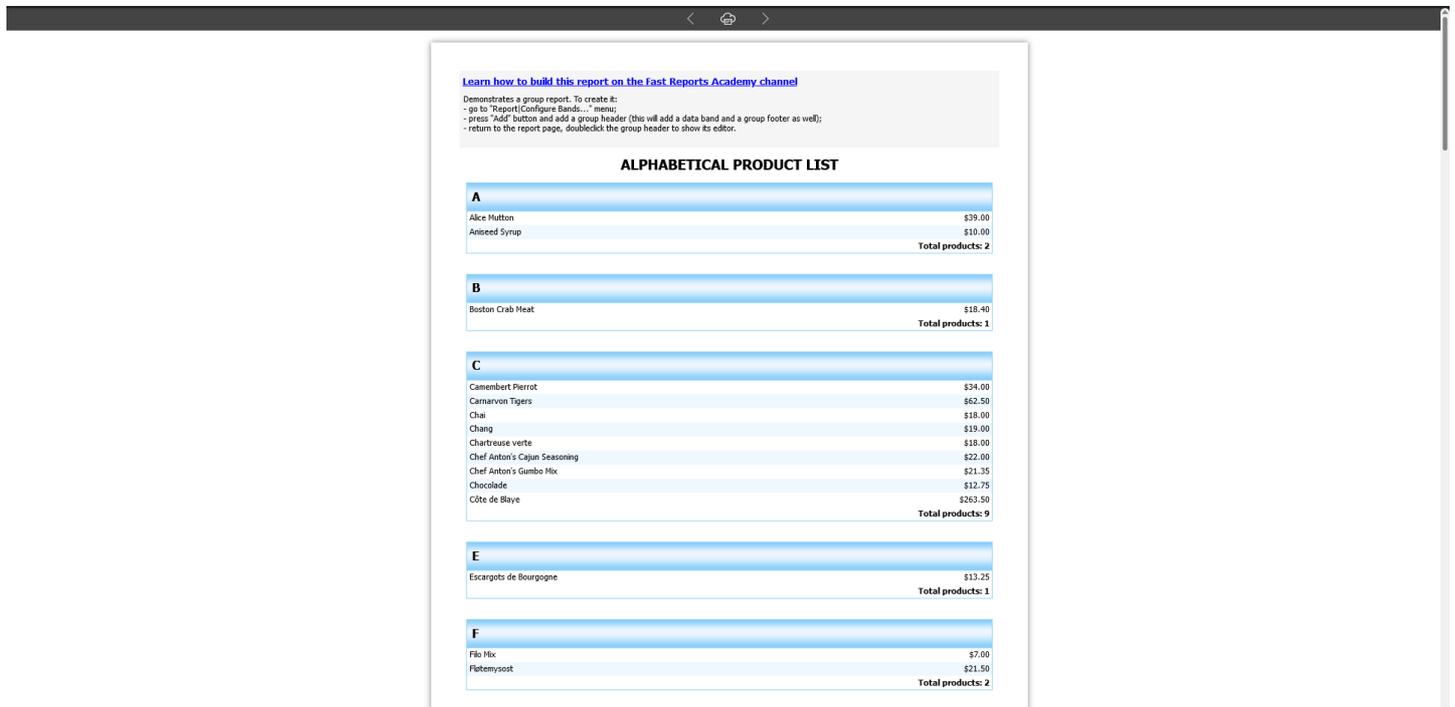
Clicking on "Design" opens the Report designer. It allows you to add various report objects, data sources, and layout reports.
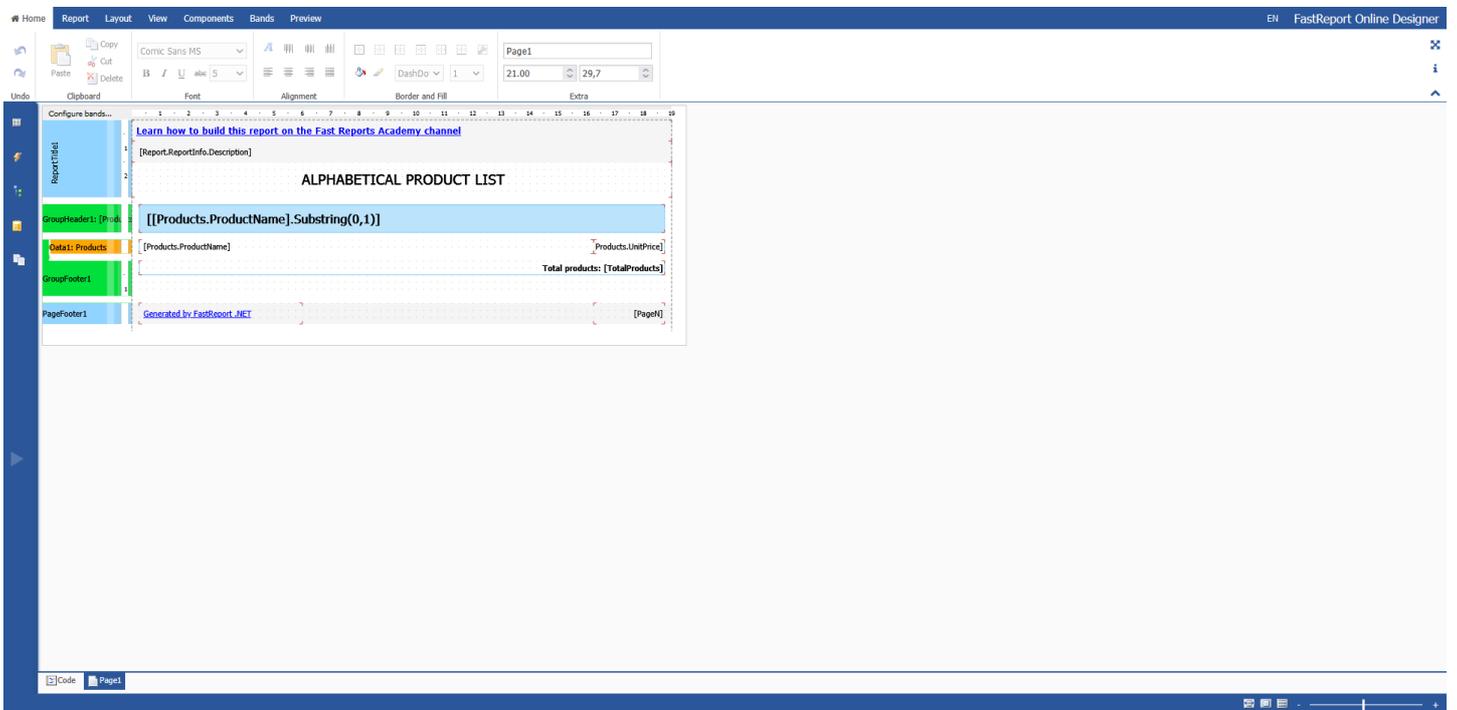
When the "Export" item is selected, the export format selection menu opens. The first item is the prepared report (*.fpx), the rest are external document formats. If the required export is not in the list, it can be used from the API.
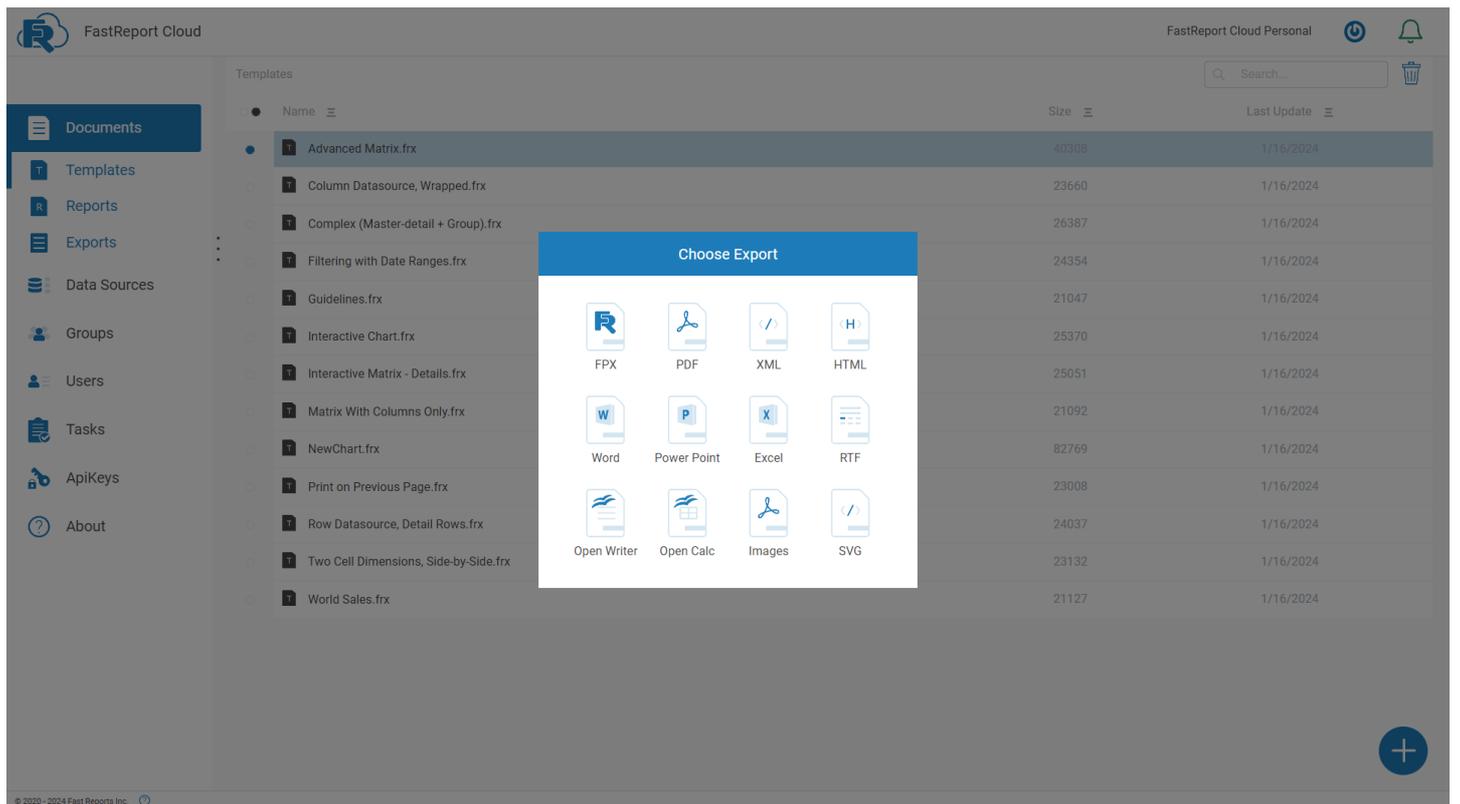
After export selection, the settings window opens, and the required parameters are set.
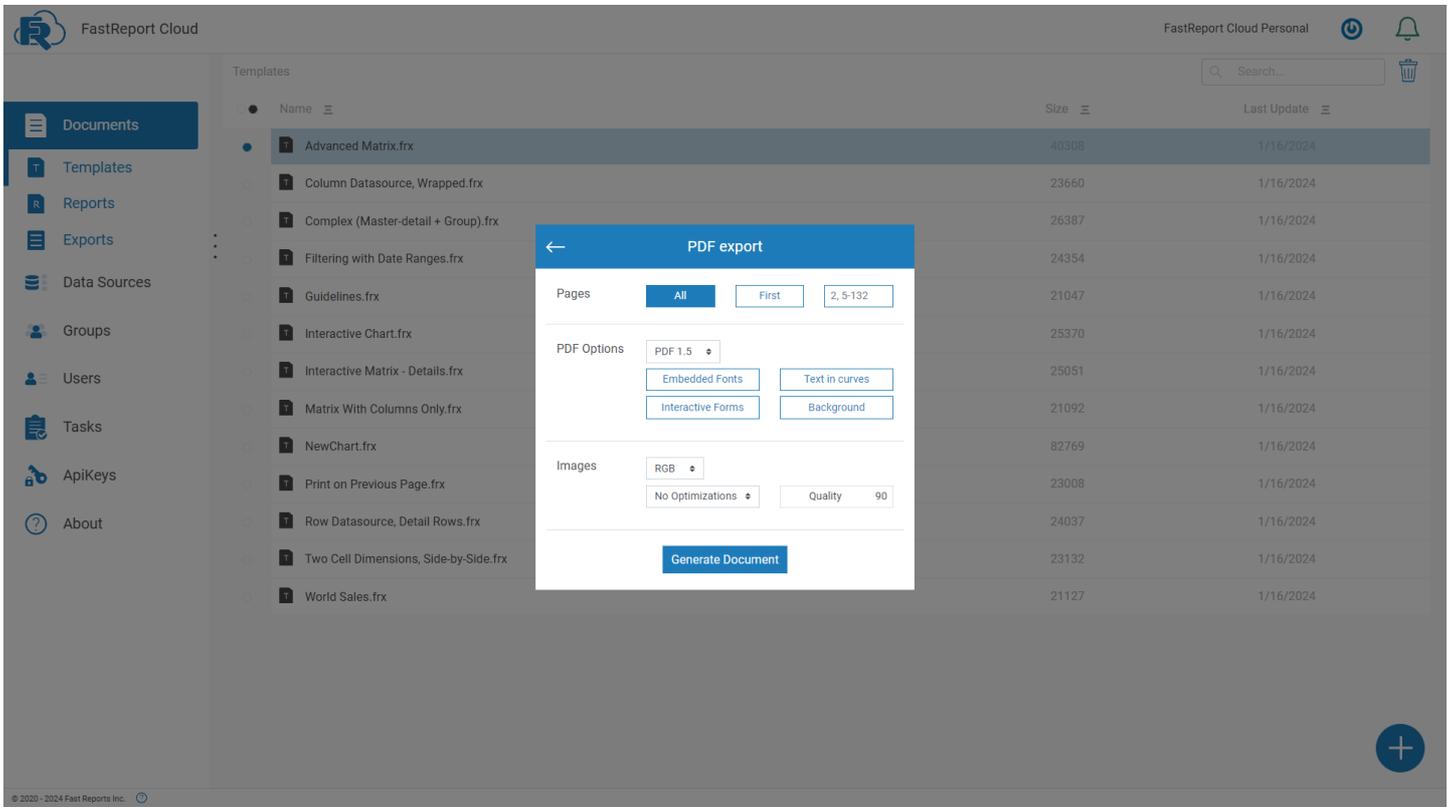
Next, a window for selecting an export folder opens up.
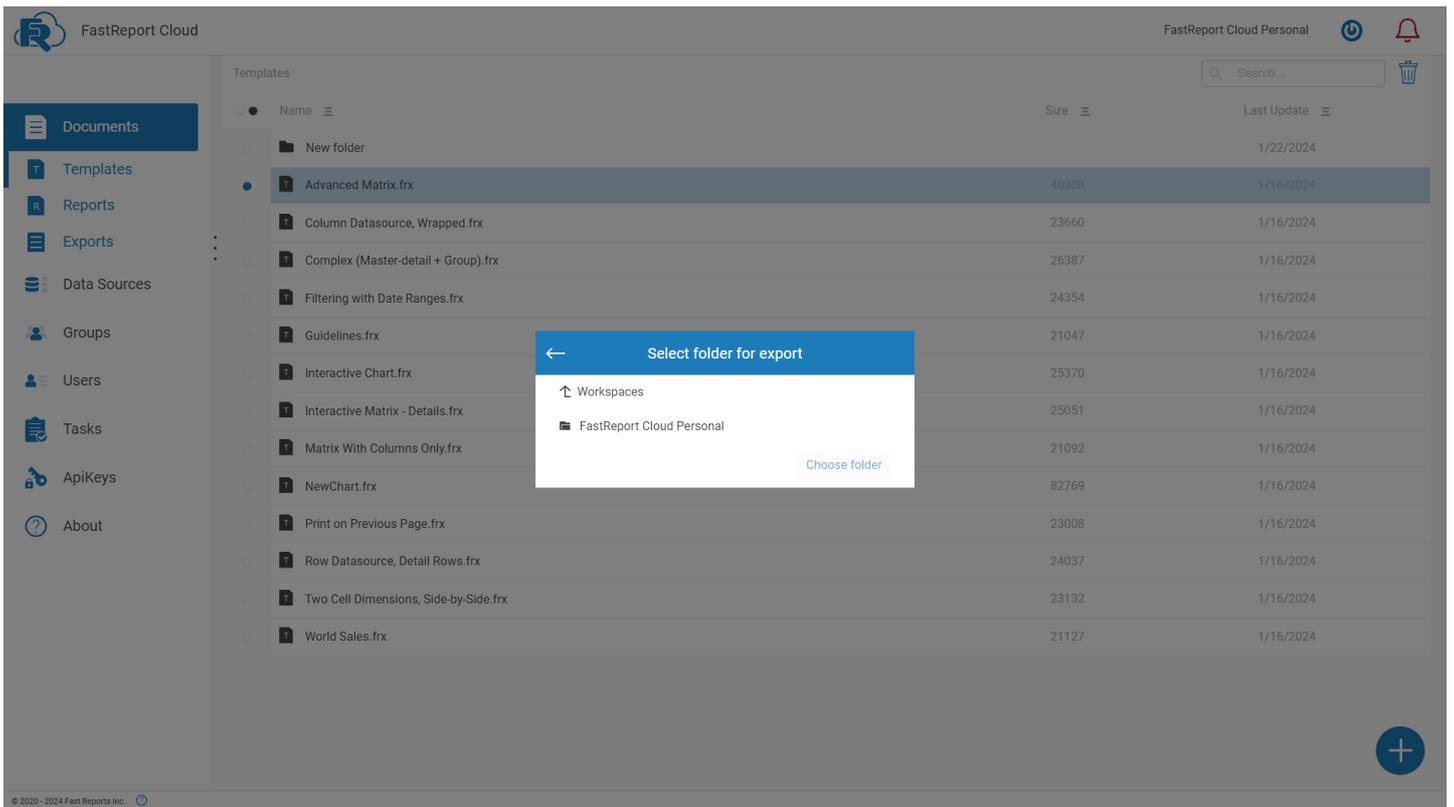
After the export process is completed, a window will open that displays a preview of the result and buttons to download the export or go to the folder where it is located.

If you click on the "Properties" menu item, a new window will open, in which you can view detailed information about the file and perform several actions on it.

Further on the page you can see the permission settings for this file.

At the bottom of the page, there is the history of actions performed on the file.

Deleted files are stored in the trash bin. You can access it by clicking on the bin icon next to the list of files. You can delete or restore files in the bin.

FastReport Cloud

FastReport Cloud Personal

Templates 〉 Recycle bin

Recover all   Clear bin   Search...

Name ☰	Size ☰	Last Update ☰
T Advanced Matrix.frx	40308	1/22/2024
T Interactive Matrix - Details.frx	25051	1/22/2024
T World Sales.frx	21127	1/22/2024
T new report (1).frx	151933	1/22/2024

Documents

Templates

Reports

Exports

Data Sources

Groups

Users

Tasks

ApiKeys

About

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Name ☰	Size ☰	Last Update ☰
T Advanced Matrix.frx	40308	1/22/2024
T Interactive Matrix - Details.frx	25051	1/22/2024
T World Sales.frx	21127	1/22/2024
T new report (1).frx	151933	1/22/2024

Data sources

Data sources are what provide information for building documents. They can be both databases (MySql, MS Sql) and other sources (JSON, CSV).

The page contains a list of data sources added to the system, their type and status (connected or an error occurred while connecting).
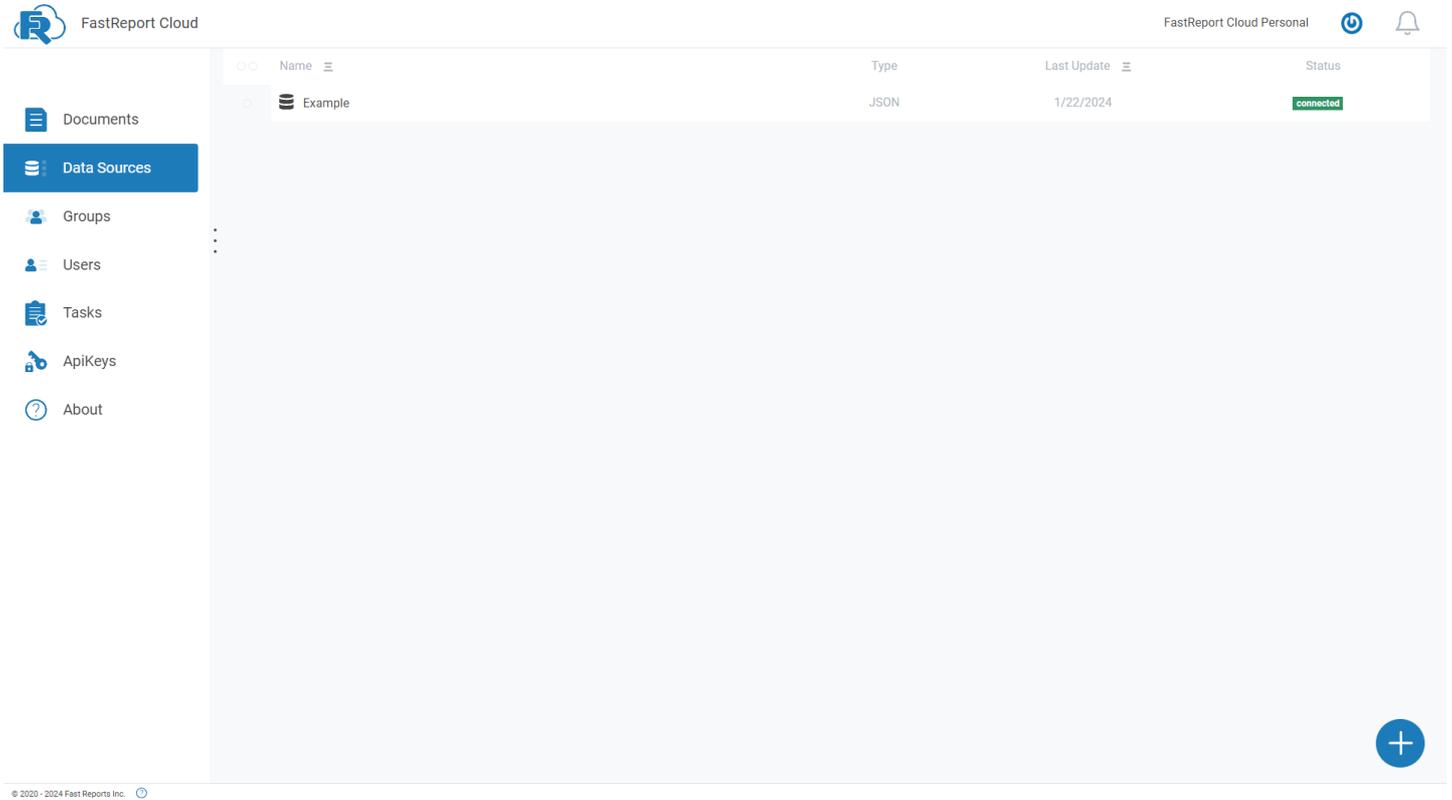
Clicking the "+" button opens a menu for selection from a number of available sources. If one of them is not here, then it can be used in the API.
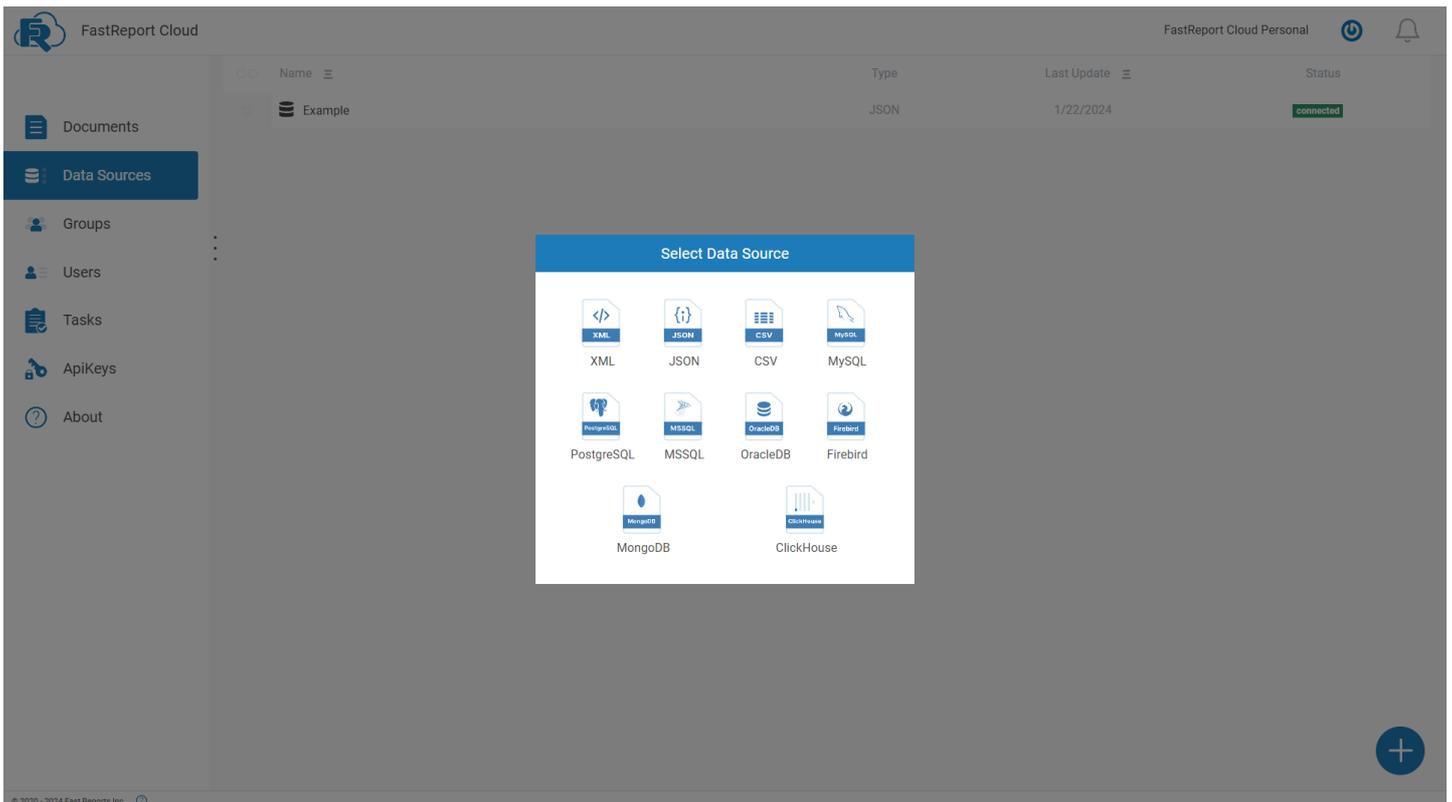
After choosing a source, you need to configure it. Enter the connection string or the data itself.
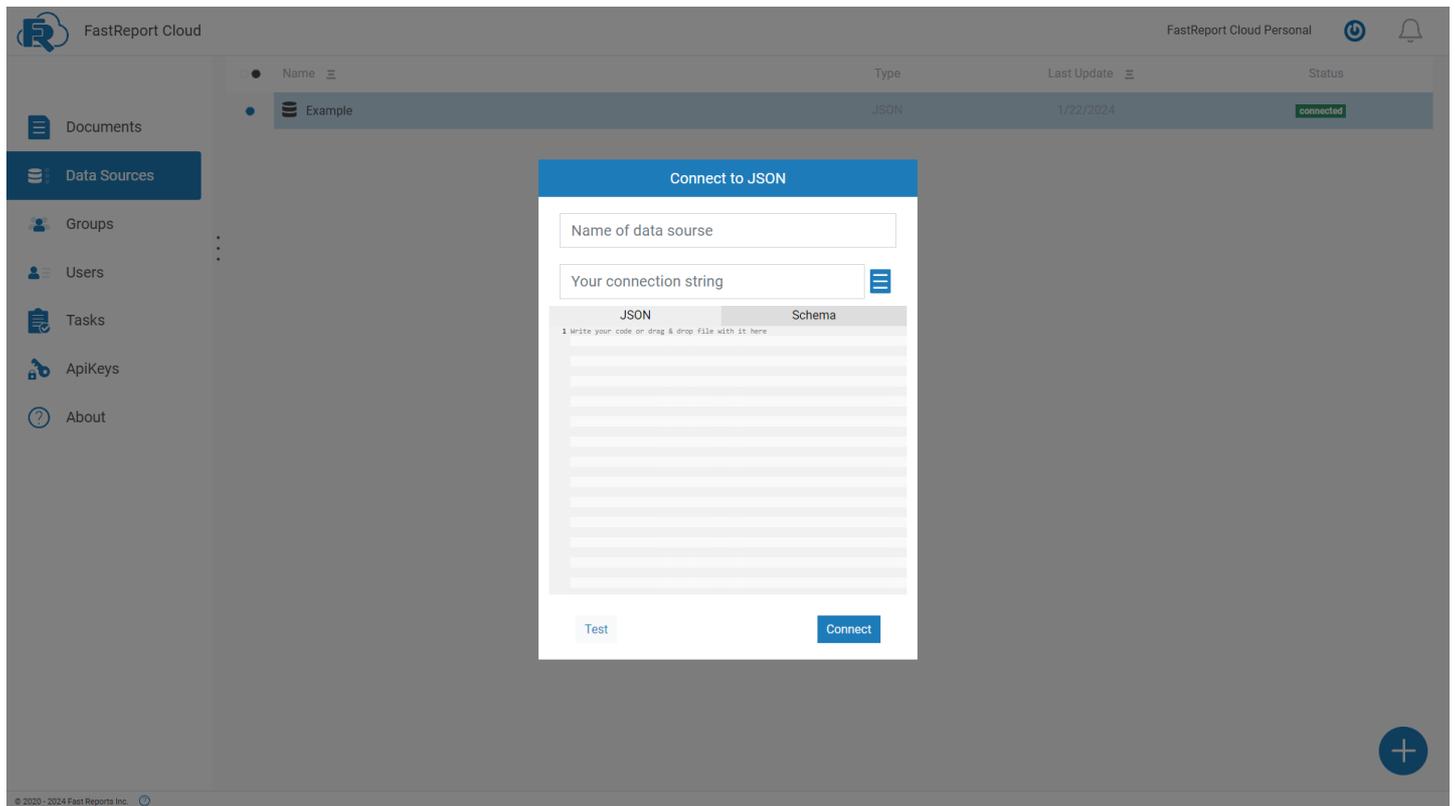
In the context menu, you can see a list of available actions on the source.
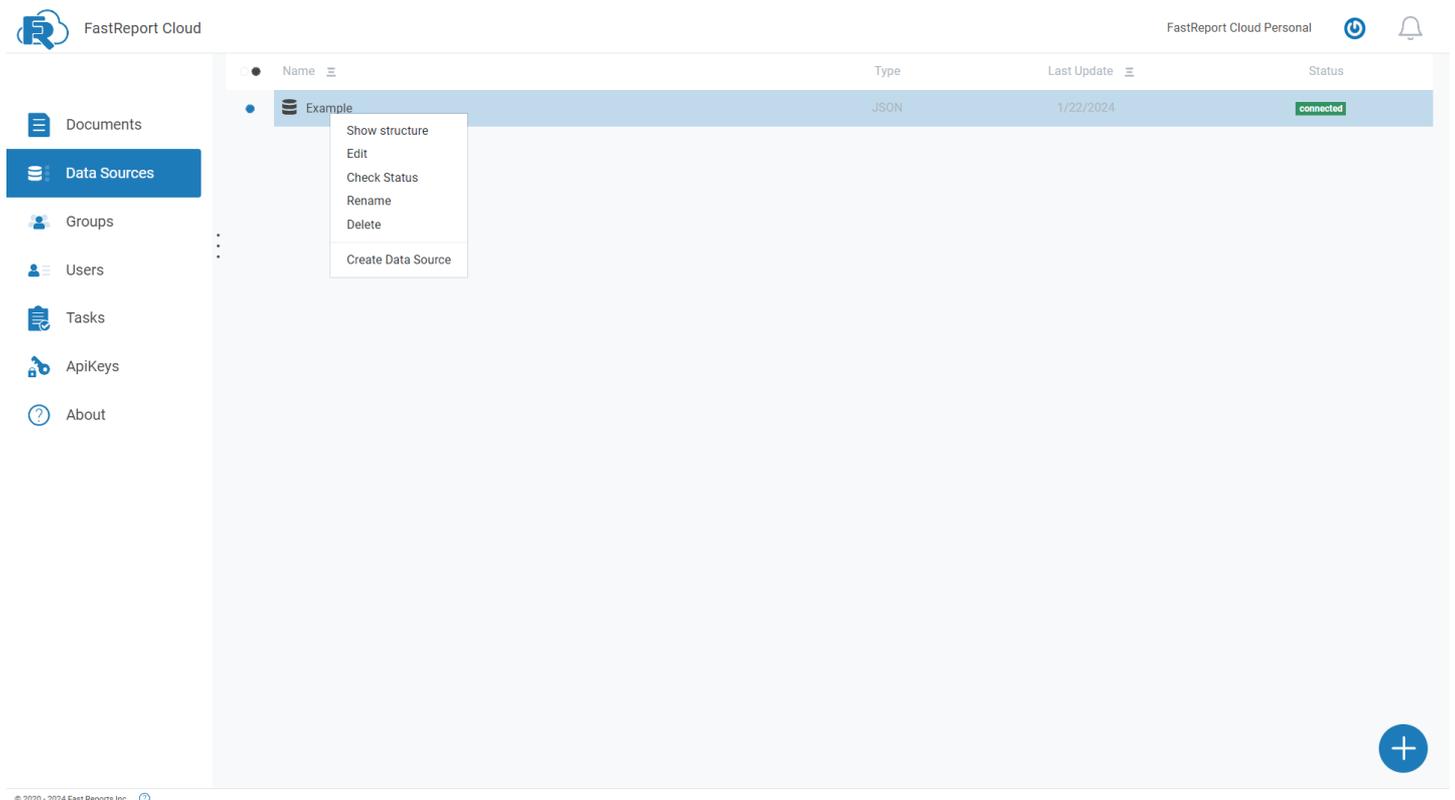
The data structure is a table representation that the source is converted to after connection.
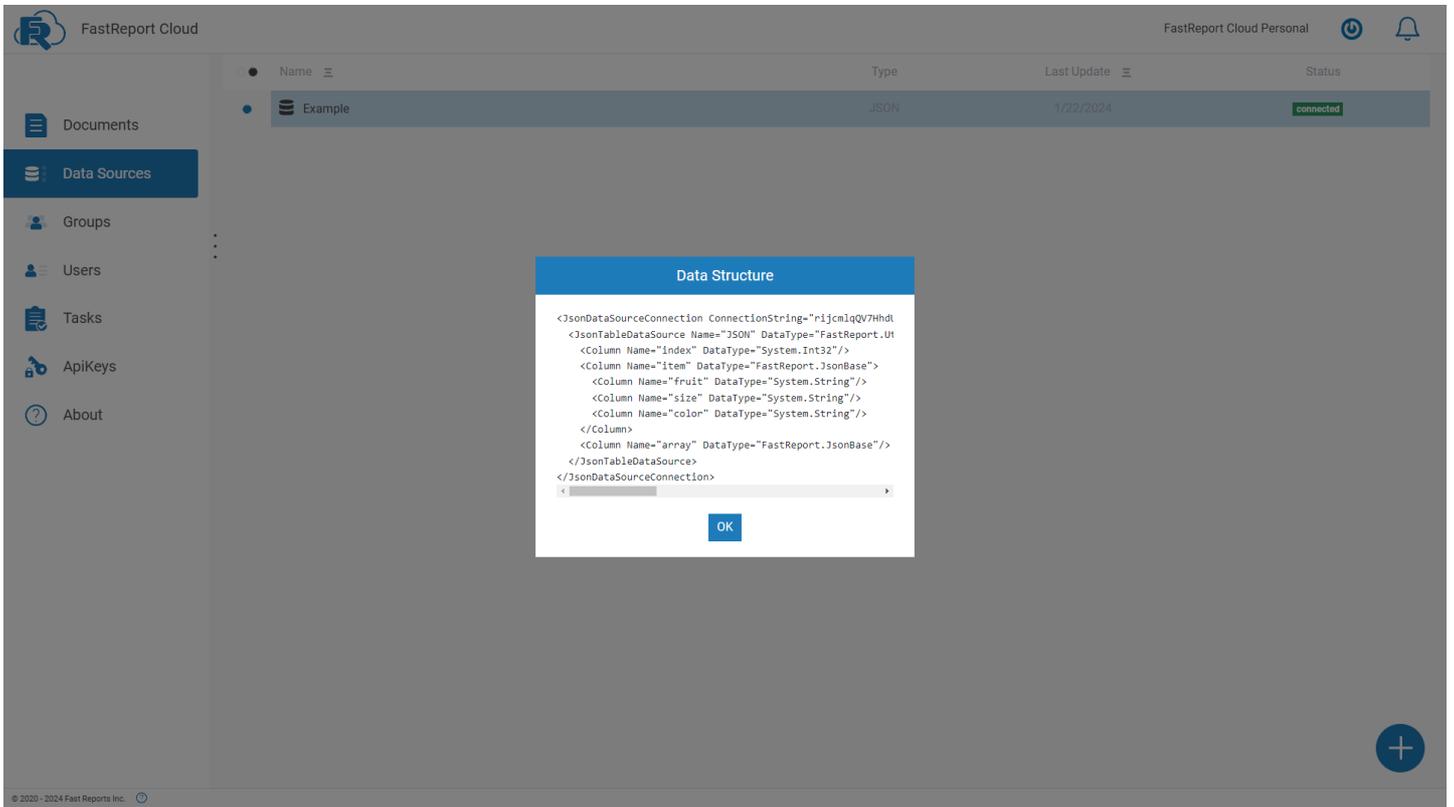
Data sources can be edited.
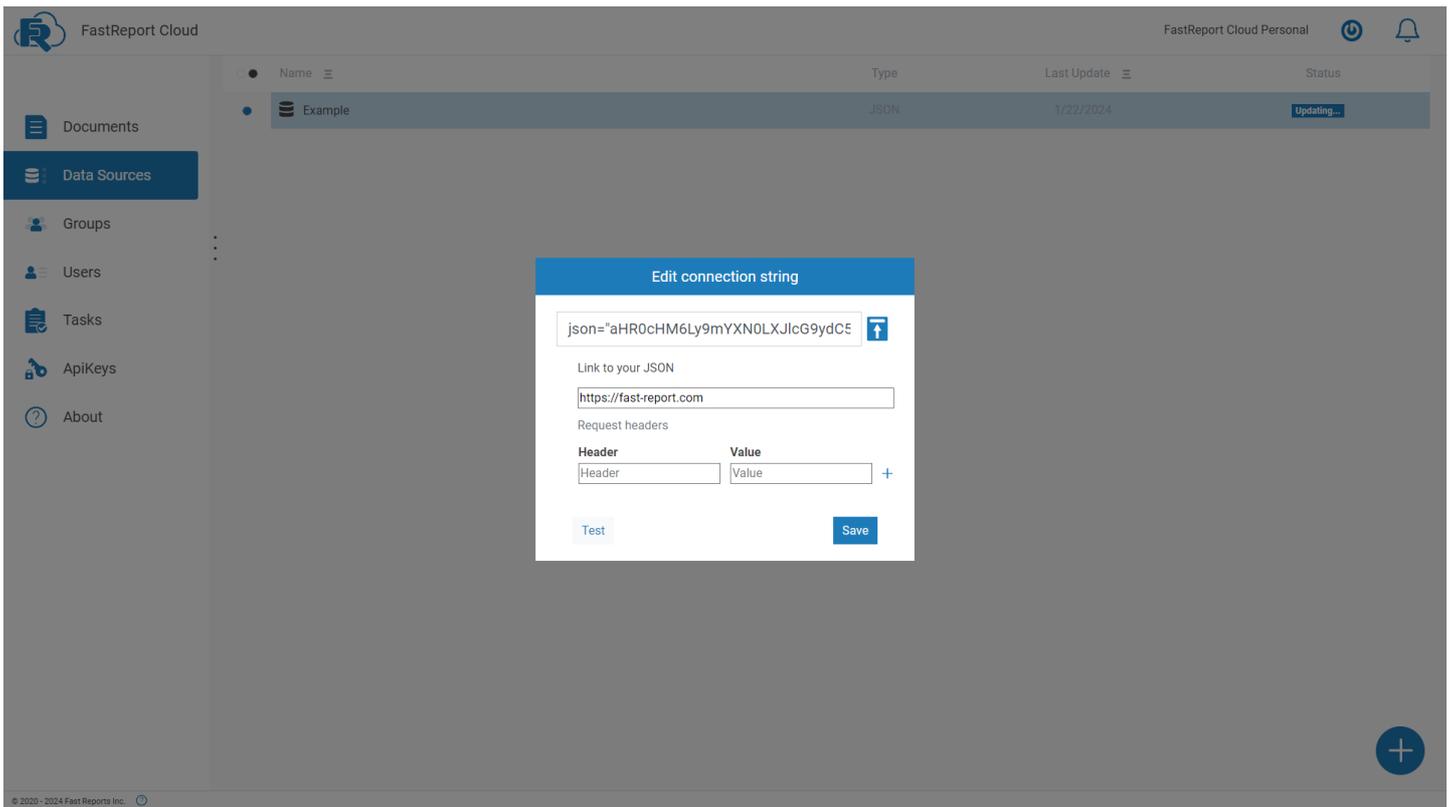
If you click the "Check status" button, you will connect to the source and rebuild its structure.

Data sources can be renamed to make them easier to use.

Groups

A user group is an association of FastReport Cloud users who have the same permissions to workspace resources. In other words, these are several users with the same access level, for example, Administrators, Managers, Designers, and Developers.

Users

On the left, there is a list of workspace users and a button to invite new ones. On the right—information about the selected user.

If you switch the tab, you can see a list of groups in which the user is a member.

Tasks

Tasks - are repetitive complex actions that may include exporting, saving to a specified location, sending to email, and more.

On the left of the page, there is a list of tasks and a button to create a new one. On the right—task settings, start task buttons, and schedule settings.

API keys

API keys allow you to use API systems and are a text string.

The list of keys displays their description and the date until which they are valid.
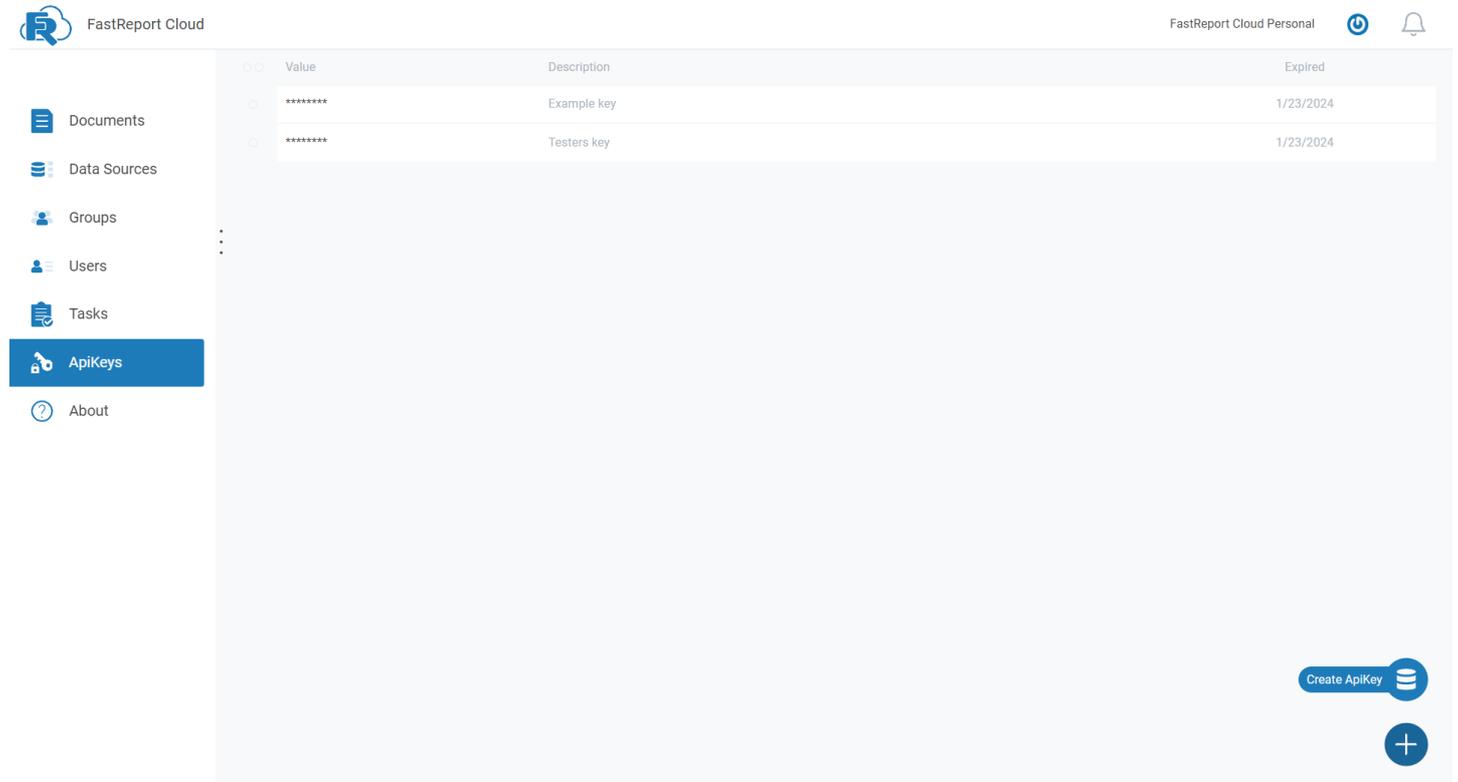
Clicking on the "+" icon opens the menu for creating a new key.
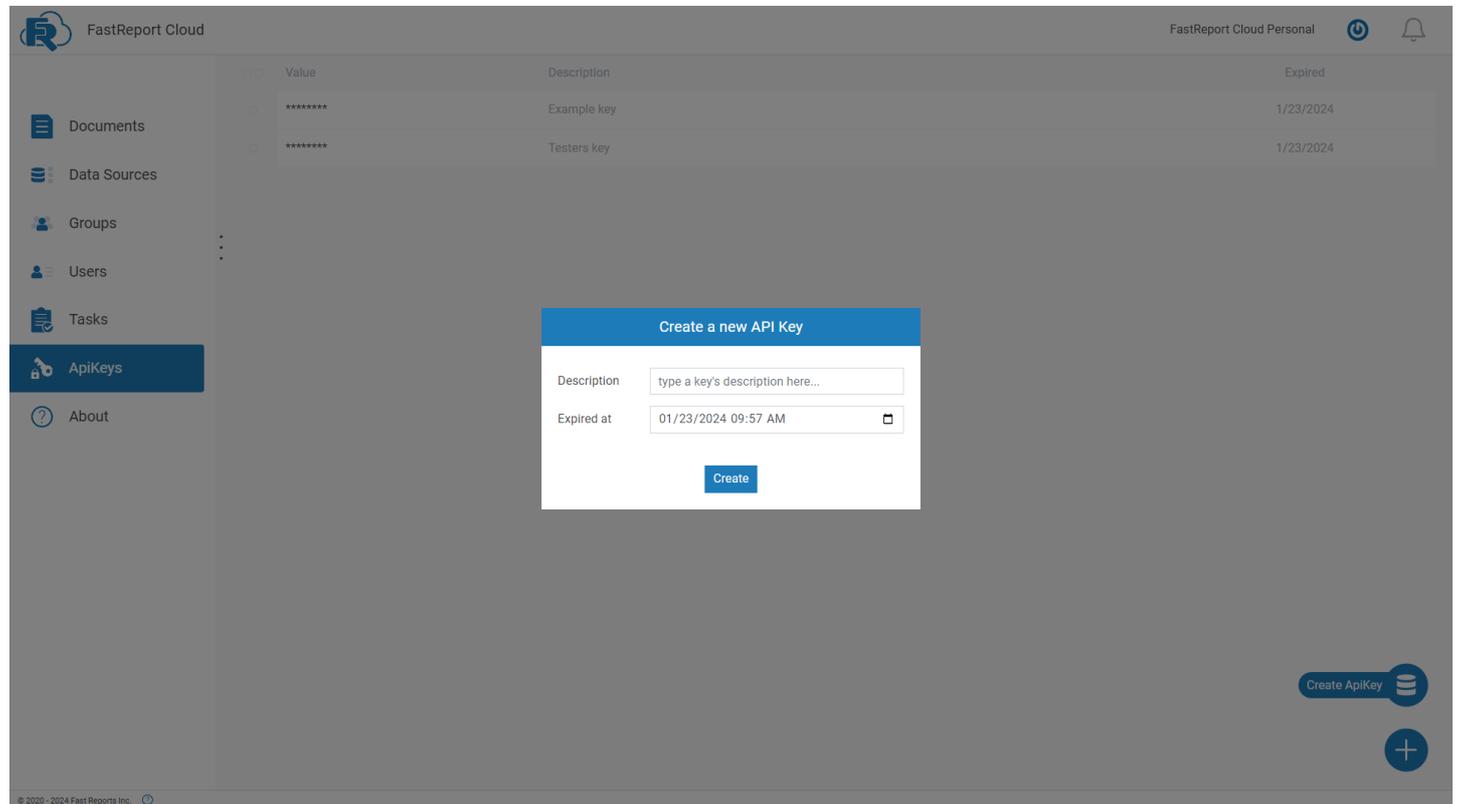
Release information

Version 2022.2

Version 2022.3

Version 2023.1

Version 2024.1

Fast Report Cloud 2022.2

Added Task Scheduler API

With the 2022.2 version, it became possible to prepare, export, and send the results of your actions via email or to a scheduled webhook.

There are 3 types of task launches:

1. Fire-and-Forget—the task starts when the API method is called with its id value.
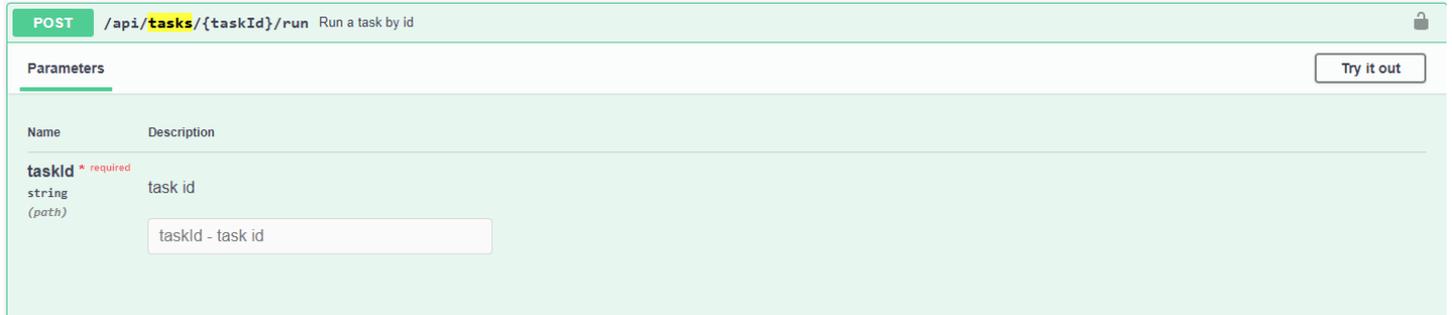
2. Delayed—starts the task execution at the specified time.

3. Recurrent—starts scheduled tasks using CRON expressions.

```
1   curl -X 'POST' \
2     'https://fastreport.cloud/api/tasks' \
3     -H 'accept: application/json' \
4     -H 'Content-Type: application/json' \
5     -d '{
6     "type": "ExportTemplate",
7     "name": "SendExportViaEmail",
8     "inputFile": {
9       "entityId": "608480a68b632c000135a128"
10    },
11    "transports": [
12      {
13        "type": "Email",
14        "from": "test@fr.com",
15        "to": ["user1@gmail.com", "user2@gmail.com"],
16        "subject": "Test message",
17        "EnableSsl": true,
18        "username": "test@fr.com",
19        "password": "password",
20        "server": "smtp.fr.com",
21         "port": 587
22      }
23    ],
24    "format": "Pdf",
25    "delayedRunTime": "2022-04-26T13:40:20.220Z",
26    "cronExpression": "*/30 * * * *"
27  }'
```

The screenshot above shows an example of sending a PDF report export to email every 30 minutes. It will be sent at the specified time.
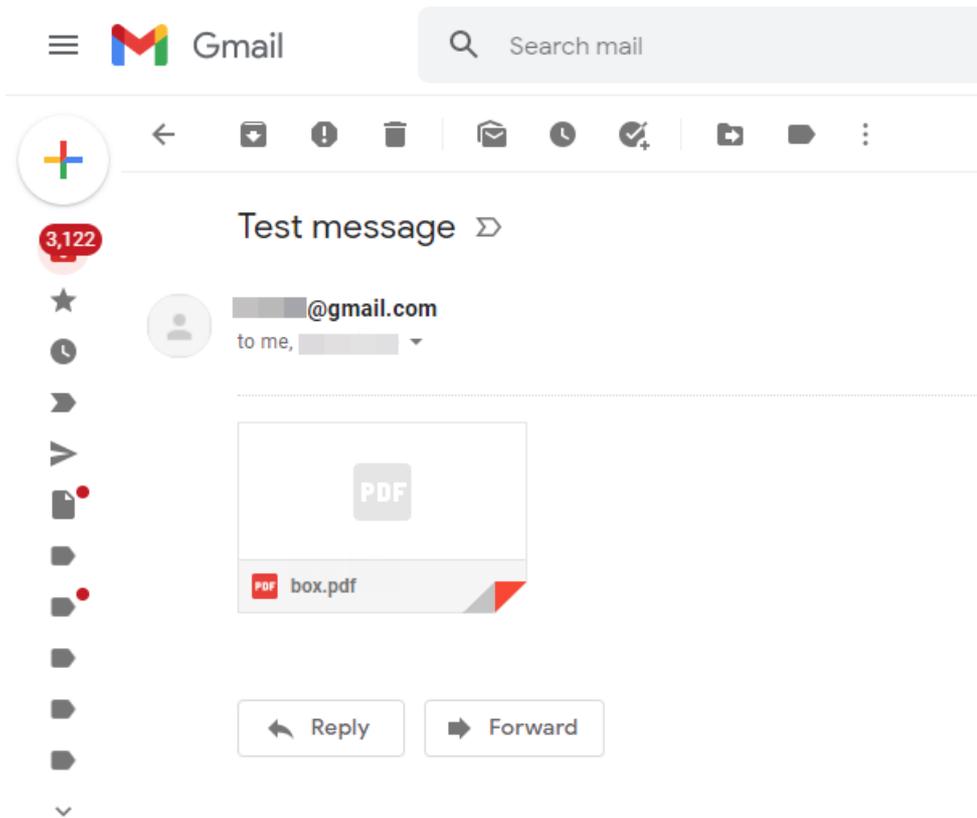
Added connection to Firebird

Now you can link information from the Firebird database to your reports. For stable work, you need to activate the WireCrypt property in firebird.conf.

	Name ☰	Type	Last Update ☰	Status
	MySQL connection	MySQL	8/17/2021	connected
	JSON connection	JSON	10/14/2021	connected
	Logs	JSON	10/19/2021	connected
	JSON connection	JSON	12/26/2021	connected
	stickerStats	JSON	12/30/2021	connected
	PostgreSQL connection	Postgres	3/30/2022	connected
	JSON connection	JSON	4/26/2022	connection error
	MongoDB connection	MongoDB	4/26/2022	connected

Added connection to MongoDB

In addition to Firebird, we set up a data connection from MongoDb. Just add it on the Data Sources page, and it

will be available for use in the online designer.

Name	Type	Last Update	Status
MySQL connection	MySQL	8/17/2021	connected
JSON connection	JSON	10/14/2021	connected
Logs	JSON	10/19/2021	connected
JSON connection	JSON	12/26/2021	connected
stickerStats	JSON	12/30/2021	connected
PostgreSQL connection	Postgres	3/30/2022	connected
JSON connection	JSON	4/26/2022	connection error

Added form for editing JSON connection

We've improved the JSON connection by adding the ability to edit text, schemas, and request headers.

Name	Type	Last Update	Status
MySQL connection	MySQL	8/17/2021	connected
JSON connection	JSON	4/26/2022	Updating...
Logs	JSON	10/19/2021	connected
JSON connection	JSON	12/26/2021	Updating...
stickerStats	JSON	12/30/2021	connected
PostgreSQL connection	Postgres	3/30/2022	connected
MongoDB connection	MongoDB	4/26/2022	connected
Firebird connection	FirebirdDB	4/26/2022	connected

Changed editing default permissions

There are 2 types of permissions in FastReport Cloud:

- entity permissions;
- default permissions that are used if the first permission type is not set.

With this update, you can edit permissions on the Groups page.

Now there is the dialog for user removal from the workspace

The button to remove a user (or leave, if you try to remove yourself) is available via path: Groups -> Others -> Users.

Click on the name of the required user, and you will see a confirmation window.

New SDK for PHP language along with demo application

On our GitHub page, you will find numerous SDKs available for development in various programming languages.

This list was added with the PHP kit, available at the following link.

A demo application for using this SDK is available on our GitHub at the following link.

Full list of changes:

[Backend]
+ added font microservice that returns CSS styles by font name;
+ added permissions for the TaskModel;
+ added methods for getting and changing permissions in the TasksController;
+ added an ability to call webhooktask with headers;
+ added an ability to update Tasks from API;
+ added sorting function in file list request via API;
+ added support for connections to firebird on the server (the WireCrypt property in firebird.conf must be Enabled for them to work);
+ added license check for corporate server;
+ added a scheduler to run delayed tasks;
+ added connection to MongoDB;
+ added the ability to run scheduled tasks using CRON expressions;
*now you can use regular expressions when searching for files and folders. For this, you need to set the useRegex parameter to true;
* added logic to prevent the creation of files and folders with the same names (when downloading, copying, moving, exporting, preparing, renaming);
- fixed a rare bug that caused workers to stop functioning;
- fixed a bug where files were set to Success status immediately upon creation;
- fixed a bug when a thumbnail was prepared by an anonymous user;
- fixed a bug due to which incorrect thumbnails were built for FRX files;
- fixed a bug when MyPermissions sometimes returns 500 error instead of user permissions;
- fixed a bug, when rights combined with the default rights were returned when requesting model rights;
- fixed a bug when download errors always returned 406 status code;
- fixed the launch of a sequence from identical tasks;
- fixed a bug, which caused all data sources to always show their connection type as JSON;
- removed the HasSpaceOverdraft field in subscription plans and subscriptions;
- removed Default service;

[Common]
+ added PHP SDK toolkit and demo application to it;
+ added basic article about using REST API Tasks;
*changed export and preparation folder id description in documentation;
* red favicon replaced with blue ones;

[Frontend]
+ added redirect from/app/signin page if user has already logged in;
+ added a context menu when right-clicking on an empty space;
+ added the ability to change the default permissions in the admin panel;
+ added permission management for Tasks on the "Groups" page;
+ added a tutorial for starting the application, posted on the "About product" page;
+ added a dialog message after clicking on the bell when there are no notifications;
+ added the ability to set the folder name directly during creation;
+ added user removal dialog. To remove a user, click on it in the list of workspace users ("Groups" tab);
+ added a Firebird connection interface;
+ added a button to check the connection string before creating a data source;
+ added a form for creating a JSON connection;
* settings and scheduler menu items are temporarily disabled;
*calculation of selected files is now much faster if the "Select All" button was not used;
*deletion of several files will now not be stopped if any file is not found;
*description of user lists on the "Groups" page;
*right-clicking on an empty space on the page will now open a context menu with creation options;
*now, when clicking outside the list of items, the selection will be reset;
- fixed a bug with the absence of a subscription id when starting a thumbnail prepare task;
- fixed Null Reference bug on the "Groups" page;
- fixed a bug when the thumbnail was not requested for the report;
- fixed the creation of an extra folder in the folder creation dialog;
- fixed a bug when several extra folders were created during folder creation;
- now in the preview, you can see more correct messages about errors when they are detected;
- display of the file owner has been fixed, now it is correctly written who is the owner.

FastReport Cloud 2022.3

Added report parameters to static preview

Now, when previewing, you can set report parameters. They are represented in the URL as follows:

rp =Param 1:parval1

, where rp—query-parameter, Param1—parameter name from the report template, parval1 — parameter value.

For example, the URL of a preview page with parameters might look like this:

```
https://fastreport.cloud/staticpreview/t/62bed678f0469b491580ea6c?rp=Parameter1:parval1&rp=Parameter2:parval2
```
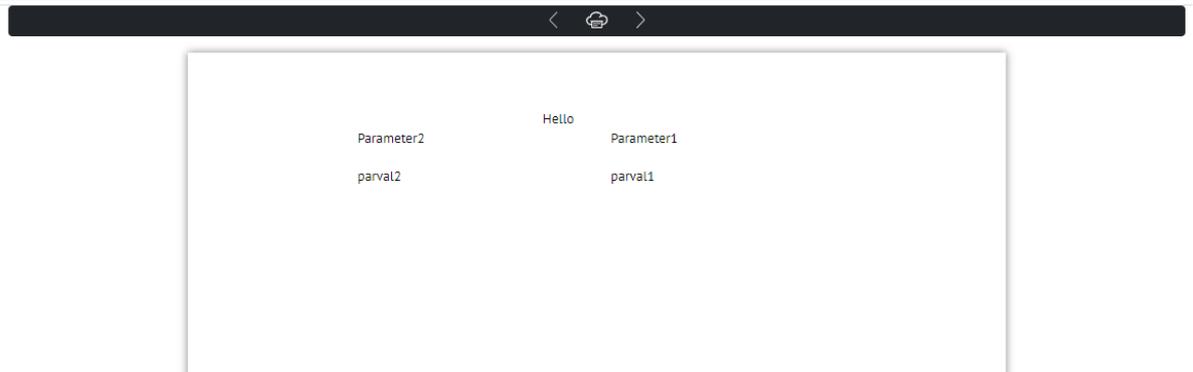

Added a new type of transport task—upload to ftp/sftp server

The ability to upload files to an ftp server has been added to the Tasks system.

The task object structure is represented by the following fields:

string FtpHost—ftp server address;

int? FtpPort—ftp server port;

string FtpUsername—ftp server username;

string FtpPassword—password;

string DestinationFolder—path to the folder where the files will be uploaded;

bool? Archive—whether files should be archived;

string ArchiveName—archive name;

bool UseSFTP—whether to use sftp.

Added bin for deleted files

Now the files, when you click on the delete button, do not disappear forever, but are placed in the bin. After that, the bin can be emptied or the files can be restored.

	Name ☰	Size ☰	Last Update ☰
T	Column Datasource.frx	23929	7/20/2023
T	Box.frx	23476	7/20/2023

Recover all   Clear bin   🔍 Search...

Added the ability to print a report from the preview window

A button for printing a report appeared in the preview window.
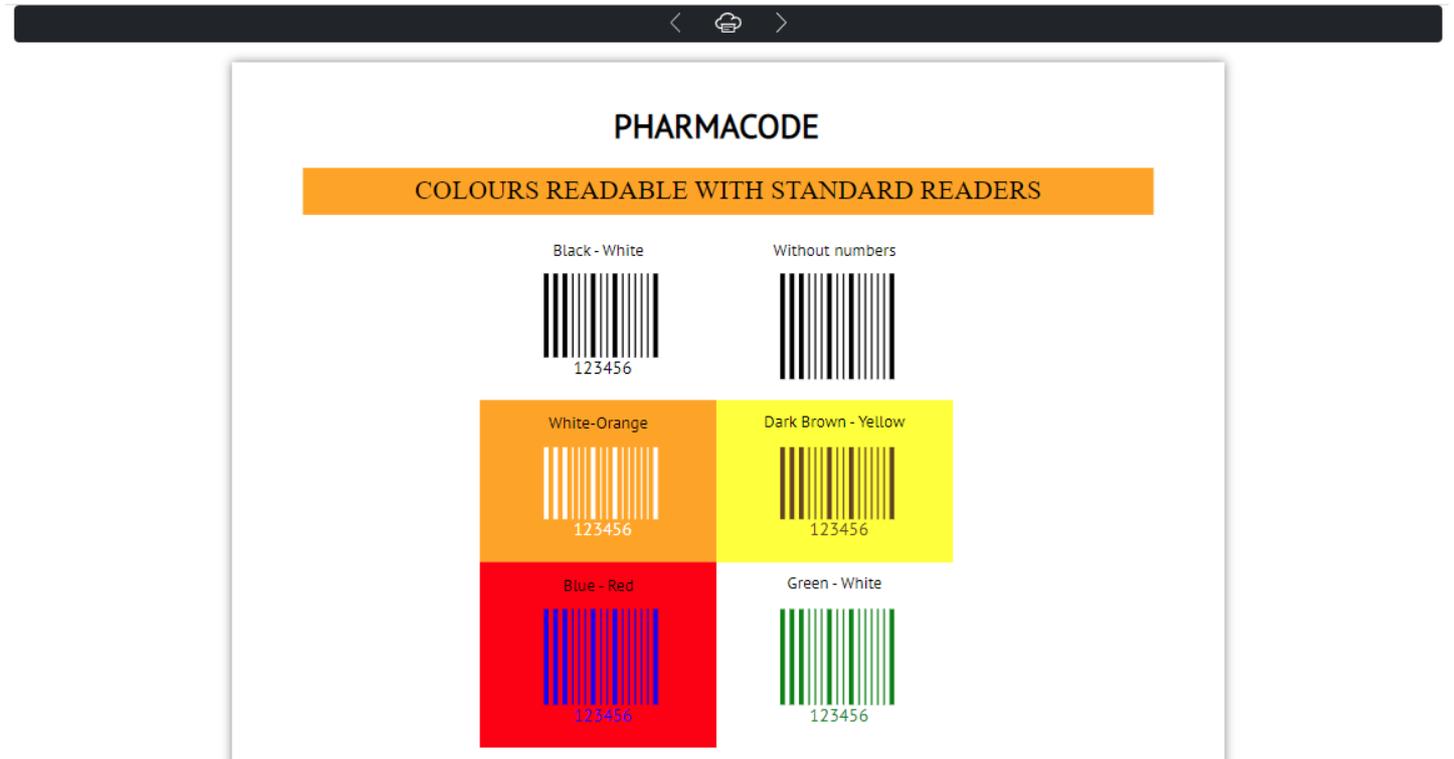
Added hotkey system

Now you can copy (Ctrl + C), cut (Ctrl + X), paste (Ctrl + V), delete (Del), rename (F2), select all (Ctrl + A) and deselect (Ctrl + D).

Added a page with a detailed file description

See the description of the docs page for more details.

Added user settings page

See the description of the user profile page for more details.

Added Tasks page

A user interface appeared for the task system.

Added workspace info page

Information about the workspace is on this page.

Added connection string editors for all types of data sources

Full list of changes:

[Backend]
+ added restriction on the use of permanent localization on the frontend in the license
+ added restriction on the use of the Designer by anonymous users in the license
+ added restriction on the number of workspaces in the license key
+ added restriction on the number of administrators in the license key
+ implemented showHiddenFilesAndFolders parameter in the user settings on the backend
+ added report parameters to the static preview
+ added a link to your logo and your text in the footer (for copyright) to the server config
+ added a restriction on the use of the White Label in the license key
+ added updating the template content in TemplatesController
+ added audit messages related to soft deletion
+ added messages related to errors in the license key
+ added a dialog box when restoring a file from the bin
+ added a new type of transport task—upload to ftp/sftp server
+ added more understandable error messages in the script checker
+ added the ProblemDetails object to the messages about errors from the backend
*the logic of resetting properties in the Update TasksController method has been changed (if RecurrentRunTime < DateTime.UtcNow => the time in the database is reset)
* now file checks have become much stricter during upload
*FastReport version has been updated from 2022.2.5 to 2022.2.12
*now when previewing a report again, staticpreview will load resources from the previous preview, which is much faster
* fixed all C# demos
*added a Preview button for the templates context menu
*fixed a bug when creating a folder with a non-existent parent returned 500 status code
*added filenames in the admin audit panel
* added a bin for user files on the frontend
* added a bin to the backend
*removed the recursive parameter from actions with folders, now they are always recursive
*removed the ability to delete the RootFolder in the admin panel
* now the files in the bin are displayed correctly and cannot be lost
*added logs to the audit for actions in admin file and folder controllers
*added the ability to filter files in FoldersController.GetFolders
*fixed a check of task permissions
-fixed a bug when API key authentication did not work in Corporate Server
-now files and folders are restored in the parent folder according to the standard
- fixed a bug where you could not rename a file in the admin panel
- fixed a bug where you could create files and folders with the same name using the bin

- fixed a problem when the task format was reset after changing another parameter
- a missing letter in localization was returned for CL_SubscriptionsCountExceeded
- fixed breadcrumbs on the Edit Plan page
- fixed a bug when audit returned 500 when drawing graphs

[Common]
+ added continuous localization set in config file
+ added new config file for python sdk, which fixes generation errors
+ added documentation for installation via docker compose
+ added c# sdk on nuget.org
+ added tests of Russian Linux distributions
+ types of entities for audits
+ added user panel documentation
*added the ability to print a report from the preview window
*updated designer to the 2022.1.5 version
*added a new icon
- fixed coding in documentation
- fixed documentation on Corporate Server deployment

[Frontend]
+ added hotkey system, now you can copy (Ctrl + C), cut (Ctrl + X), paste (Ctrl + V), delete (Del), rename (F2), select all
(Ctrl + A) and deselect (Ctrl + D)
+ added a page with a detailed description of the file, where you can perform any actions with this file
+ added an icon for the default user profile
+ added a user settings page
+ now users can see file change history on the properties page
+added the "Tasks" page
+added "Back" button in the export dialog
+added an open folder button in export results dialog
+ added a dialog for selecting an export folder
+added tooltips for buttons that are not explicitly described
+added an action when changing workspace in the bin
+ added deleted parameter to the address bar
+ added a page with information about a workspace
+ added scrollbars to the admin panel
+added an option to select a workspace in file view inside the admin panel
+added More and Delete buttons on the group members page
+added Rename button to the workspace info page
+added connection string editors for all kinds of data sources
+added a window to export dialog for 403 error
+all search options in the admin panel added to address bar
*added a small indent in the list of group users
* removed duplicate fields on the plan update page
* Delete button on the documents page puts them in the bin, where it deletes them
* more descriptive errors on the pages of the admin panel
*the file download dialog will now close automatically
*added workspace search for files in the admin panel
*more descriptive admin panel errors
-when requesting to rebuild the cover (by clicking on it), it was not updated automatically
-fixed a bug when the EmbedPictures property was not applied in HTML export
- fixed a bug when the file properties page could stop working
–fixed a bug when the default subscription was not switched in the settings
-fixed a bug when the "create a new data source" button showed the wrong address
-fixed the height and width of the preview window in the designer
-removed an empty context menu in the bin
- fixed a bug with ShowDeleted checkbox when it didn't work on the first click
- fixed a NullRef bug and a few bugs on the expired subscription page
- fixed empty context menu in reports and exports bins
-fixed a bug when it was impossible to update permissions for custom groups
-fixed a move dialog
- fixed pagination and double fetch request on files pages in the admin panel
-fixed a window creation dialog header
–fixed pagination in the admin panel, pagination variables added to link parameters, created 404 page

FastReport Cloud 2023.1

Folder export

We added the ability to export the entire folder with templates or reports. This preserves the structure of all subfolders. To do this, just right-click on the folder (or long tap) and select export from the menu.
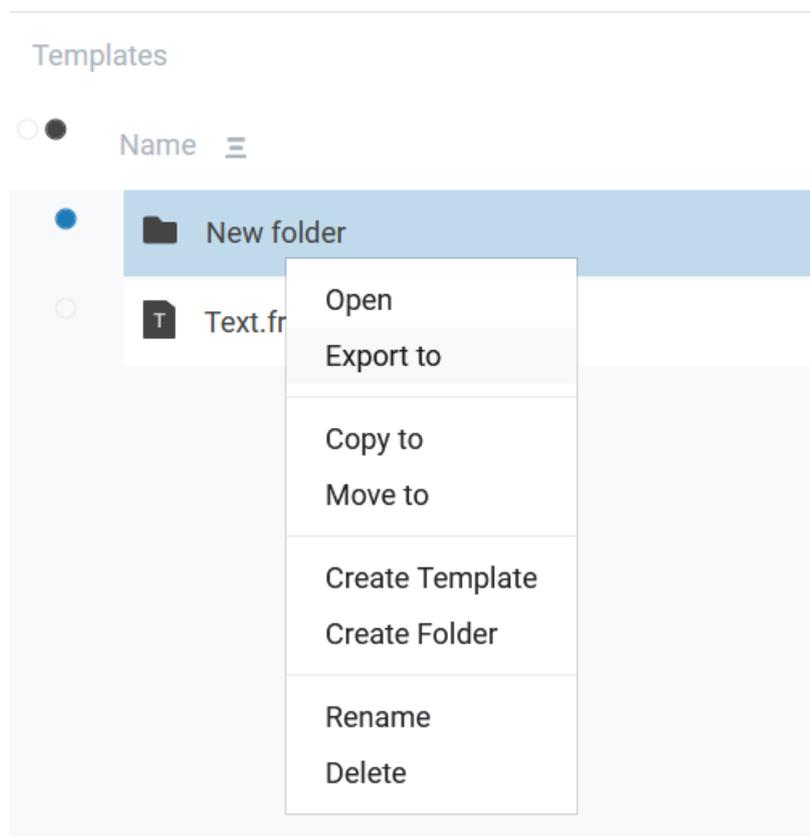
Work on mistakes

In this version we have worked on quality, fixed many bugs, and improved localization and icons.

Full list of changes:

Version 2023.1 — 11/1/2023

[Backend]
+ added AdminAction field for all audit types
+ added a new entity type—contacts
*now when previewing .preview folder will be cleaned up when needed
* improved file sorting performance
- error notifications now appear when creating and moving files to the bin
- fixed a bug where the user could create an expired workspace
- creating a folder copy did not copy its contents
- fixed a bug when all entities created by anonymous users were fully accessible to all users

[Common]
+ added folder export
+ added the messageId field and related audits to the Audit Details page for tasks
+ added the messageId field to all task audits
* now some fields cannot be null when creating and updating a user
* disabled deleting users and subscriptions when the server is not in corporate mode
- user creation and update pages now show error warnings

[Frontend]
+ added the Name field when creating a data source
+ added missing fields to the Audit Details page
+ added a new icon with bold edges
+ added a dialog for agreeing to the license agreement
+ added search to the Workspaces page in the admin panel
+ actions with the bin added to document permissions
+ added Russian translation to statuses and file sizes
*the search bar has been pinned to the top of the screen on file pages
*identifiers replaced with names in the breadcrumb admin panel
* export error message changed and became more descriptive
*sort buttons are now fixed on the screen
-subscription storage capacity on the Workspace Info page is now updated after switching tabs
-fixed redirection to outdated page when the group limit is exceeded
-fixed a bug related to anonymous users—pop-up error about the lack of permissions hidden in the console
-fixed a bug related to anonymous users—getting root folder without id when exporting
-fixed checkboxes on the Edit Plan page of the admin panel
-fixed export from the page file properties for anonymous users
-fixed available storage values in workspace plans card
-fixed overfilled Owner field in File Info
-"Export Folder" replaced with "Report" on the edit permissions page of the report
-fixed incorrect file cover width in the File Info window
- workspace info page didn't update content when switching space
-fixed bug when the admin panel side menu didn't redirect to the proper page
- it was possible to create multiple modal windows on top of each other, which caused visual errors

FastReport Cloud 2024.1

With this version, the cloud service for document generation and storage has introduced the following features: integration with ClickHouse, interactive preview from WASM, a new notification service, bulk file deletion, email notifications, and much more.

Integration with ClickHouse

We have added connection to the ClickHouse columnar database. Go to the "Data" panel and click on the "+" button. You will see a menu for selecting available sources.

Notification service

Added the ability to receive notifications about various events: successful document exports, creation or deletion of files, and others. You can set up the display of notifications on the Profile Settings page.

The simple version will look like this:

Settings
These settings may take some time to update

Show hidden files and folders
If false, you will not see file or folder, if it's name starts with '.' symbol.

Default workspace
You can choose workplace, that should be selected by default, when performing requests.

FastReportCloudTeam ⌄

Profile visibility
Select which parts of your profile is publically visible.

☑ Id only   ☐ Full name   ☐ Username   ☐ E-mail

Notifications
Select events you want to recieve notifications about

Export and preparation

Task completed succesfully
Task failed

More options...

It will look different in the expanded format:

Notifications

Select events you want to recieve notifications about

Template export progress ⬤

- ⬤ Created export template task
- ⬤ Export template task was deleted
- ⬤ Export template task completed successfully
- ⬤ Export template task failed
- ⬤ Export template task is in process
- ⬤ Export template task is in queue
- ⬤ Export template task was updated

Report export progress ⬤

- ⬤ Created export report task
- ⬤ Export report task was deleted
- ⬤ Export report task completed successfully
- ⬤ Export report task failed
- ⬤ Export report task is in process
- ⬤ Export report task is in queue
- ⬤ Export report task was updated

Template preparation progress ⬤

- ⬤ Created template preparation task

Bulk file deletion

Our team has optimized the application. Now, instead of requests to delete each file, you can create 1 single request. So the files can be moved to bin and deleted several times faster.

Folder properties page

We have improved information about already created folders. Now there is a properties page with a description of the creator and owner of the folder and the size and location of the folder in the workspace.

Created by John Doe
3/19/2022 5:53:06 PM

Edited by alexey_kea8f857d
11/13/2023 10:46:00 AM

Owner - John Doe

Size - 102.4 KB *(22.4 KB)*

Workspace - FastReportCloudTeam

→ Export   ⊗ Delete

Permissions settings ▾

Who can get this folder's model? (and therefore access this page)

🔵 Anonymous users (everyone on the web)
🔵 This workspace users
Groups ▾

Folder size calculation

Added an API that calculates how much space a folder's contents take up (relevant for templates, reports, and exports).

`GET` `/api/rp/v1/Templates/Folder/{id}/size`

You can see its size on the folder properties page.

Templates 〉 Dashboards ✎

Created by John Doe
3/19/2022 5:53:06 PM

Edited by alexey_kea8f857d
11/13/2023 10:46:00 AM

Owner - John Doe

Size - 102.4 KB *(22.4 KB)*

Workspace - FastReportCloudTeam

⤴ Export   ⊗ Delete

The size after downloading the folder is shown in brackets.

Interactive preview

Added a beta microservice for viewing reports in a browser based on WASM technology. Unlike the current static preview, it can work with interactive objects: maps and drop-down lists. To use it, you need to replace the word staticpreview with wasmpreview in the browser line (/staticpreview/t/6235f34d935bef40aa09e8c3 -> /wasmpreview/t/6235f34d935bef40aa09e8c3)

Learn how to build this report on the Fast Reports Academy channel

Demonstrates how to print a hierarchic list.
To create hierarchy, the FastReport engine needs two values: the row ID and its parent row ID. In this report, the row ID is represented by the Employee.EmployeeID column; its parent row is Employees.ReportsTo column. To create the report:
- select the databand and go to the Properties window;
- set the "IdColumn" property to "Employee.EmployeeID";
- set the "ParentIdColumn" property to "Employee.ReportsTo";
- the "Indent" property will be used to shift the databand rows according to hierarchy level. Set it to a desired value.

EMPLOYEE HIERARCHY

Andrew Fuller
Vice President, Sales

Janet Leverling
Sales Representative

Margaret Peacock
Sales Representative

Steven Buchanan
Sales Manager

Anne Dodsworth
Sales Representative

Michael Suyama
Sales Representative

Robert King
Sales Representative

Apikey in staticpreview

Added the ability to use apikey in staticpreview. This way you can give preview access only to users with this key.

The key is sent as follows:

```
https://fastreport.cloud/staticpreview/t/6235f34d935bef40aa09e8c3?apikey={your key}
```

New task page design

The Task system has been significantly redesigned. The user interface has become more ergonomic and intuitive for users.

Tasks

Add task

🔍

∨ Closed tasks statistics   ▶ ▦

∨ Email sender   ▶ ▦

∨ Salary report   ▶ ▦

Closed tasks in a month.frx ✎   ▶ **Run task**   ▦

Folder

📁 RootFolder/Reports

Delete path

File name

Name not provided

Report parameters

| startDate | 2023-10-01 | Delete |
| endDate | 2023-10-31 | Delete |

Add parameter

Format and export settings

Xml   Select another export format

Distributions

Select distribution type ▾

Mailings by email

A page for setting up mailings has been added. Now you can send letters with templates, reports, and exports. You can also set up a newsletter once and reuse it for other tasks.

Closed tasks in a month.frx ✎   ▶ Run task   ⊞

Email settings

Email subject

    Closed tasks in October 2023

Email text

    The task report made by our department is attached

HTML-tags   🔵

Your E-mail

    alexey@fast-report.com

Receiver E-mail

    boss@fast-report.com, buh@fast-report

Email server settings

Server name   Port

New breadcrumbs

Breadcrumbs on file and folder pages have been replaced with a more compact version.

⌃ October

2023

Task reports

Templates   tasks in a month.frx
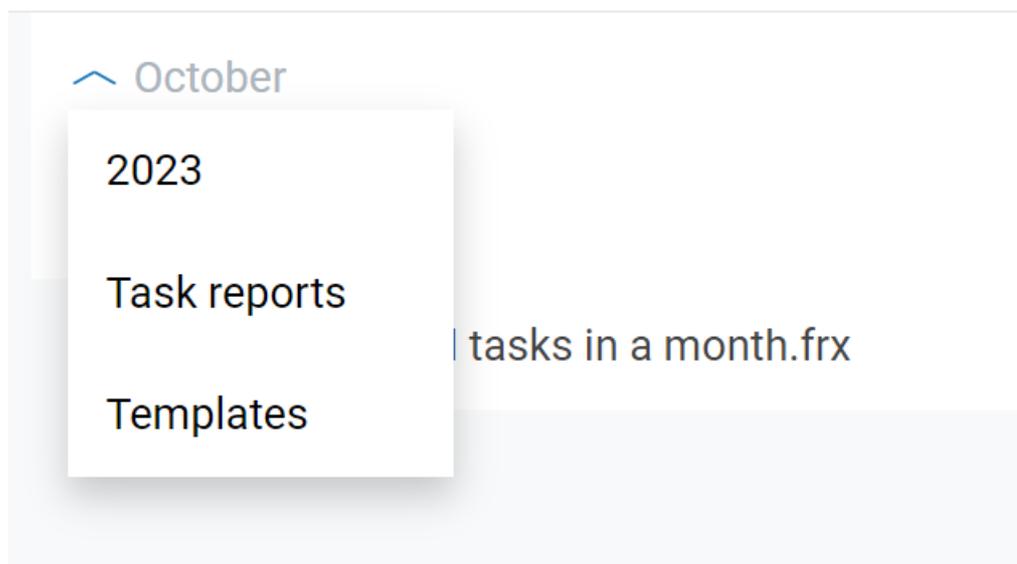
Downloading folders

We have added the ability to download groups of files and folders. To do this, select the "Download" item in the context menu. When you select folders or several files, a common archive will be created and download will start automatically.

> Task reports

	Name ☰

● ■ 2023

Open
Export to
Download
Copy to
Move to
Create Template
Create Folder
Rename
Delete
Properties
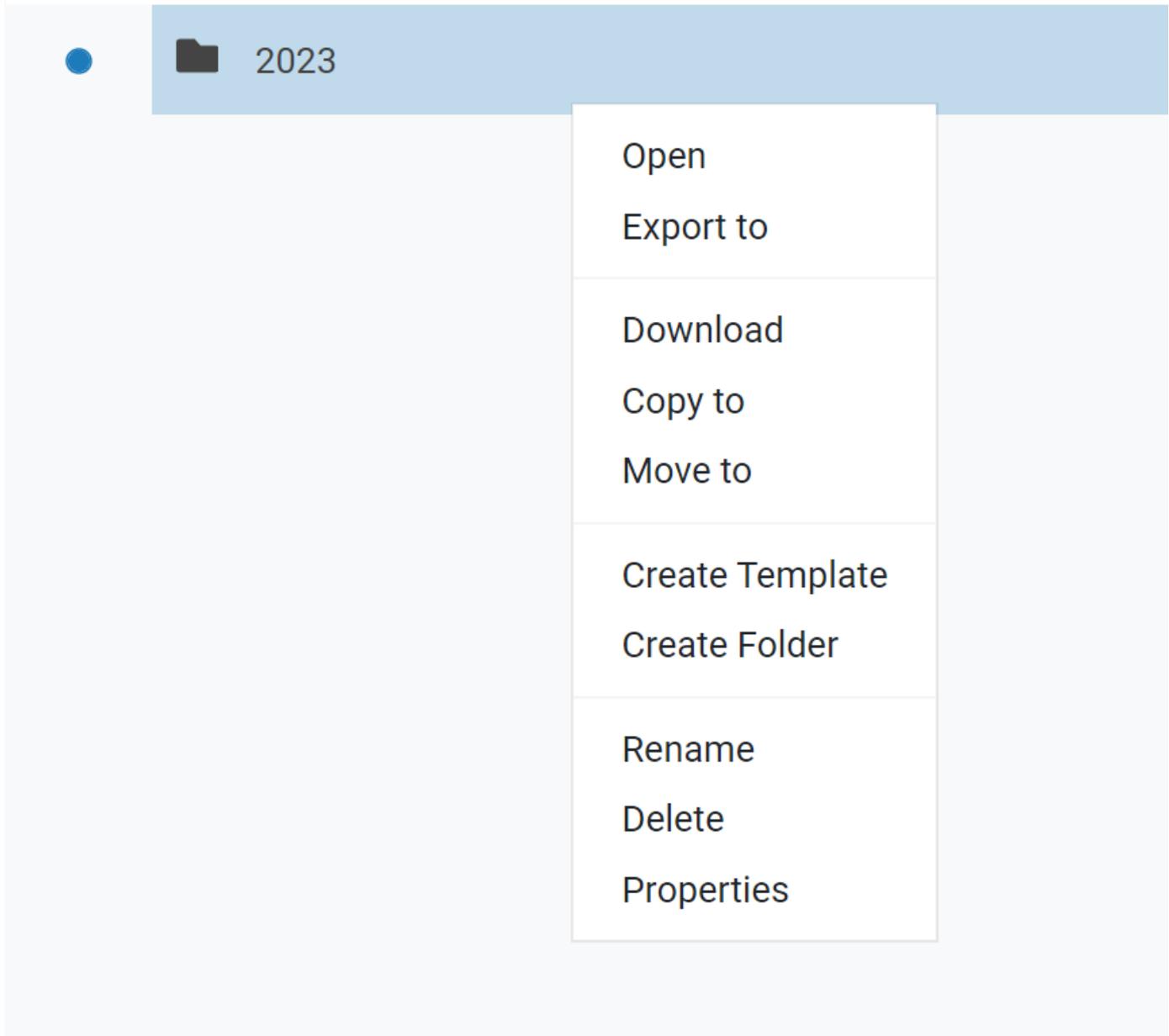
New online designer

The online report designer has been updated to the latest version. You can find more about the designer changes on the product page.

Storage of VCL templates

With the release of 2024.1, we added storage of VCL templates. Now you can save .fp3 and .fr3 files in the cloud, and then use them in future projects.

Full list of changes:

```
### [Backend]
+ added Tahoma font to worker;
```

+ added API, which will create a folder with the specified name if it does not exist when requested;
+ added serialization for the transport property of export tasks;
+ added a cache for previews;
+ added localization for checking scripts;
+ added a parser for ReportInfo VCL templates;
+ added a connection to the ClickHouse database;
+ added a validation method for transports and exports;
+ added a way to receive notifications from audit;
+ added bulk file deletion;
+ added an API for calculating how much space a folder takes up;
+ added checking and solving the problem when files did not have GridFS chunks;
+ added missing "Access Denied" logs for tasks;
* updated installation script;
* updated behavior when copies of files will no longer be created with the same rights as the original;
* localized FastReport .NET errors;
*updated the FastReport package to the version with SkiaSharp;
*refactored task updating;
*improved updating of transports for transfer tasks;
*improved task updating logic, now the process occurs in the View Model;
* renamed TaskUpdateType to EnumerablePatchType;
*merged some similar retrieval methods, removed unnecessary code, adjusted naming;
*improved GET request for one folder, now the calculated size of its contents will be returned;
* refactored View Models;
* converted subscription and entity identifiers in ObjectId audits;
*removed the Count field from audits due to performance problems;
*improved query for statistics on audits;
*added a new configuration file for the online designer;
* moved all View Models to another directory;
- adjusted records when creating audit;
- fixed rights check for groups with null rights;
- fixed error message display in online design;
- fixed connection checking when creating or editing a data source;
- fixed a bug with redundant auditing when exporting;
- fixed the creation of loggers with incorrect contexts;
- fixed a bug where an incorrect date value in creating or updating a subscription resulted in a 500 error;
- fixed a bug when the ".preview" folder was created for each preview;
- fixed numerous serialization problems;
- fixed a lack of traceId in the backend logs;
- fixed a naming error for SDK generation;
- fixed a bug when the report parameters broke the export;
- fixed duplication of file names during exports;
- fixed an error in the win1251 encoding in a FireBird connection;
- fixed UpdateTaskTest;
- fixed transports in transformer tasks;
- fixed serialization of tasks and audits;
- fixed a bug with report dialogs when building;
- fixed missing associated audits;
- fixed the type of the returned View Model in InternalDesignerController;
- fixed the preparation of the AMP tag for reading in XML;
- fixed the error displaying line breaks and spaces in the designer;
- fixed the returned View Model when exporting folders;
- fixed the error when the messageId of the export could be null;

[Frontend]
+ added icons for data sources;
+ added a preview button to the file properties page;
+ added support for mixins in the online designer;
+ added sorting by users page;
+ added creation time on the users page;
+ added a message showing that the folder was successfully exported;
+ added a workspace identifier to the file information pages in the admin panel;
+ added localization for the headers of the file and folder selection dialogs;
+ added the TemplateId field to the export page in the admin panel;
+ added a beta microservice for viewing reports in a browser using WASM technology;
+ added the Deleted field to file pages in the admin panel;
+ added redirection to the logout page from the authentication server after exiting the application;

+ added redirection to the logout page from the authentication server after exiting the application;
+ added a properties page for folders;
+ added a new switch for deleted files in the admin panel;
+ added the opportunity to go to the selected workspace from the user card;
+ added new icons in the online designer;
+ added search on the data sources page in the admin panel;
+ added the ability to use API Key in staticpreview;
+ added loading indicators for pages in the admin panel;
+ added sorting on the data sources page in the admin panel;
+ added blocking of the download button after clicking on it;
+ added an error message if updating the data source failed;
+ added behavior when the file pages of the admin panel the pressed ToBin button will change to Restore and vice versa;
+ added red coloring of the expiration date when the API key has already expired;
*localized the inscription "just now" and other text in pop-up messages;
*updated Blazor components, now they have unique html classes for future tests;
* the history of file properties is hidden if the history is empty or there are insufficient rights to view it;
* updated information about limits on the "about the workspace" page, implemented more accurate rounding of numbers;
* enabled cutting of WASM technology;
*updated Blazorise in the admin panel, fixed the page for creating a subscription plan;
*replaced custom checkboxes with a variation from Blazorise on the page for editing a subscription plan in the admin panel;
* changed the behavior for deleting on the file page;
*changed the design of the task page;
*changed the add parameter button in tasks;
*refactored the admin panel;
*breadcrumbs on the pages of files and folders were replaced with a more compact version;
* improved redirect to a special page when the subscription has expired;
- fixed text alignment on service pages;
- fixed a bug when the delete dialog was displayed without selected files;
- fixed a bug when you could not delete a file if a file with no rights to delete was deleted along with it;
- fixed a bug when several data sources were created while checking the status of the source;
- fixed a redirect when logging into the service;
- fixed non-aligned subscription cards in the admin panel;
- fixed a bug where it was impossible to move or copy a file to another subscription via the frontend;
- fixed a bug when searching in audits resulted in a 404 error;
- fixed a 404 error when switching workspace on file pages in the admin panel;
- fixed the window headers of the selection dialogs;
- fixed the dialog for selecting the export type in tasks;
- fixed the behavior of the middle mouse button, now clicking on the admin side panel opens new tabs;
- fixed the bug with displaying the template identifier on the export pages;
- fixed a bug in the new dotent SDK, fixed the layout of the export loading screen;
- fixed frontend errors when connecting to ClickHouse;
- fixed non-aligned data display on the pages of files and data sources;
- fixed invisible calendar in audits;
- fixed a bug when the value from the URL did not appear in the search bar on the workspaces page in the admin panel;
- fixed checkboxes on the plan update page in the admin panel;
- fixed the position of the control panel in the preview;
- fixed dashboard graphics (double graphs, missing colors, broken URL parameter);
- fixed initialization of dashboards;
- fixed a bug when long text broke the header of the selection dialogs;
[Demos]
- fixed a bug when editing group rights;
- fixed Java SDK and demo;
[Common]
+ added HomePageLink to the configuration file;
+ added automatic update of the online designer;
+ added Old and New Value fields to the "Audit Details" page;
+ added storage of VCL templates;
+ added a scanner for critical API changes at the build stage;
+ added generation of documentation in PDF format;
+ added a new documentation chapter;
+ added documentation "How to update transports in transformer tasks and email addresses in email tasks";
+ added storage of .fp3 files;
+ added preview service in JS;
+ added error messages for data sources;
+ added the link to renew subscription;
+ added downloading of folders;

+ added the current year in the license for the SDK;
+ added a button by which you can go to audits from the workspace;
+ added a test that checks the avoidance of folder name collisions;
+ added configs for data sources containing a timeout setting;
+ added cancellation tokens in the user panel for methods that access the API;
+ added cancellation tokens for methods that interact with the API;
+ added setting preview rights to the file properties page;
+ added links to objects in audits;
+ added a redirect to the home page when you click on the logo in the header;
+ added the ability to sort subscriptions by CreatedTime and SubscriptionPeriodVM.StartTime, SubscriptionPeriodVM.EndTime, Name, Locale, Plan in forward and reverse order;
+ added trimming of folder names;
*moved file uploading (documentation, installation files) to a new server;
*updated the project to .NET 6.0;
*updated the version of the Open API Tool;
*updated the search bar on the file pages in the admin panel;
*updated cake scripts to version .NET 6.0;
*removed the onclick event, which reloads the page
*updated version of FastReport .NET to 2023.2
- fixed display of TraceId in logs;
- fixed "Old" and "New value" fields in audits of file actions;
- fixed the assembly of the wasm-preview microservice;
- fixed a bug when the online designer could not load;
- fixed the version of the preview library in WASM;
- fixed errors in checking rights in data sources and Tasks;
- fixed an empty search field when there was an existing parameter in the URL for the user's section in the admin panel;
- fixed the error of the wrong report export root;
- fixed changing the standard subscription to the current one when changing workspaces;
- fixed redundant paginator pages provided that the search is used on the workspaces page of the admin panel;
- fixed image archiving when exporting a report to image format without the "create separate files for each page" setting enabled;
- fixed incorrect positioning of the context menu when trying to open it in a small window;
- fixed console errors when pressing buttons that have JSRuntime in their logic and errors about null references when pressing the "Properties" button of the context menu;
- fixed non-working breadcrumbs in audits.

Help and feedback

If you have any questions or suggestions, please write to us.

- Email: support@fast-report.com
- Website: https://fast-report.com