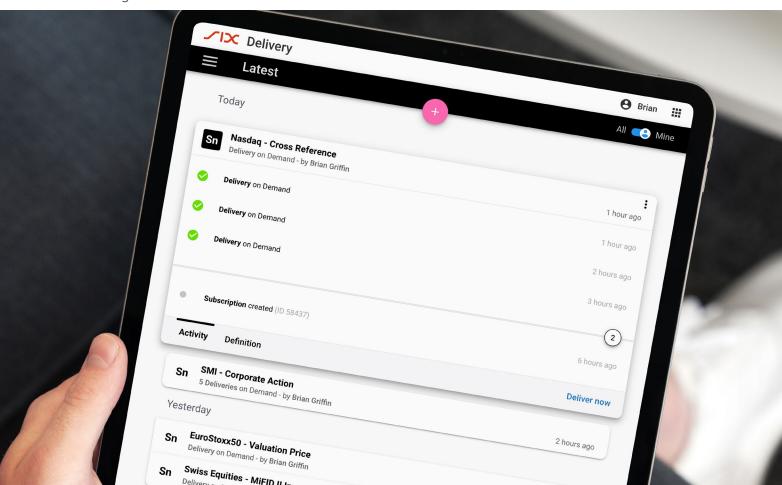


SIX Flex® – Delivery **User Guide**

SIX Flex delivers reference, market, regulation and tax data in easy-to-consume data files. Files are delivered on-demand or at your chosen interval.

This guide will show you the ins and outs of SIX Flex, from the first login to the day-to-day use of the application.

August 2021

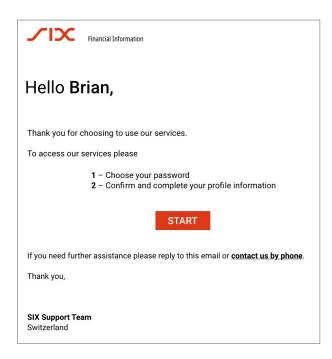


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First time login

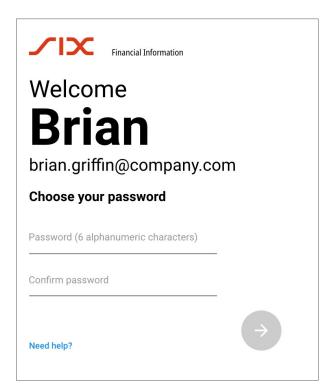
As soon as your SIX Flex user account is created you will receive a **Welcome email**, which will guide you through the first login process.



Welcome email

Click **Start** to begin.

In the browser window choose your password.



Choose your password

Enter and confirm your password.

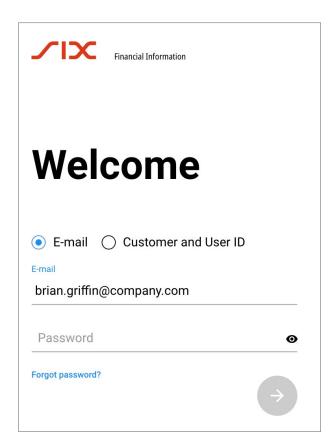
6 or more alphanumeric characters

Note:

Your welcome email is only valid 7 days.

If you are unable to register yourself before the 7 days elapsed, you will have to request a new welcome email by contacting SIX support:

 $\underline{clientsupport.fts@six-financial-information.com}$



Login page

In order to login you will need your

- Your corporate email
- · Your SIX password

Notes:

Customer and User ID is only relevant when logging in as a Technical User.

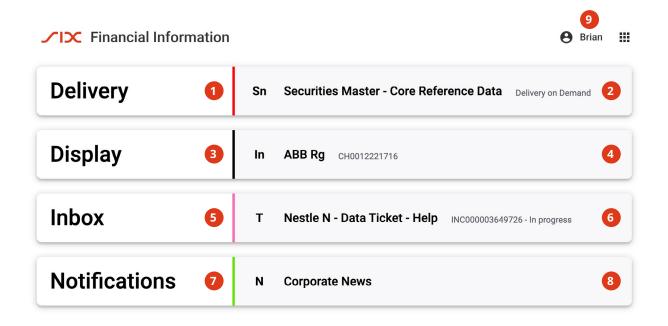
"You are already logged in" message may appear when you are connected on another machine or browser. Click on the arrow button to connect on this machine and terminate the session on the other machine or browser.



Tip: To easily access SIX Flex® we recommend that you bookmark the Login Page: client-portal.six-financial-information.com

SIX Home

After login, the SIX Home page presents all applications you have access to.



- **Delivery** is the entry point to SIX Flex® Delivery.
- 2 Last content delivered by SIX Flex.
- **Display** is the entry point to SIX Flex[®] Display.
- 4 Latest instrument, company or market you viewed.
- **Inbox** is the place where you can raise questions, report data issues, or request instrument opening.
- 6 Latest update in your Inbox.
- **Notifications:** SIX messages about product changes, data changes, product releases and relevant client information.
- 8 Latest notification sent to you.
- Menu to update your profile or logout.
- Tip: Select Notifications to customize what product, data or news updates you would like to receive. Use the Subscriptions link on the notifications page to edit this.

 Note: you can change your password by using the link at the bottom of your profile page.

SIX Flex

Click on Delivery on the home page to access the SIX Flex Delivery user interface.

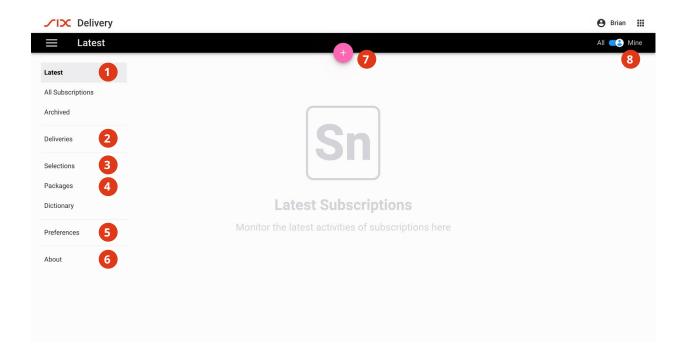
Here is a breakdown of the vocabulary needed to navigate SIX Flex.

- Sn To retrieve data, you have to create a subscription.
 - A **Subscription** to retrieve data. It is defined by a **Selection**, a **Package**, a **Schedule** and the format settings.

The **format settings** define the number and date format in the file.

- Se A **selection** is a list of listings, instruments or companies you are interested in.
- A **package** is a list of fields that meet key business activities (Cross Reference, Valuation Price, Corporate Action, MiFID II...).
- A **field** is a unique data element. You can find the field description in the **dictionary** or in the **Package** views.
- Finally, a **Delivery** is all the delivered files for a **Subscription** at a scheduled time or for an "on demand" request.

Delivery interface overview

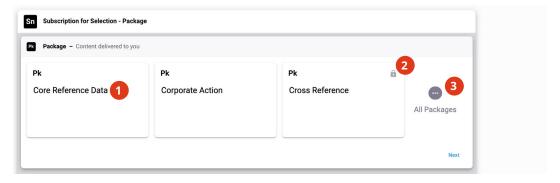


- Subscription:
 - **Latest:** list of subscription sorted by latest event. An event is either a subscription configuration change or a delivery notification
 - All subscriptions: list of subscriptions sorted in alphabetical order
 - Archived: a list of archived subscriptions
- Deliveries: list of delivery files (from latest to oldest).
- **Selections:** list of the selections you defined.
- Packages and Dictionary provide detailed descriptions on packages and fields.
- Preferences contains product configuration settings.
- **6 About** contains product information and links to support documentation.
- Click on the + button to create a new subscription.
- **All/Mine filter:** displays only the subscriptions you created (Mine) or all subscriptions defined within your organization (All). The filter also applies to the **Deliveries view**.

Create a subscription

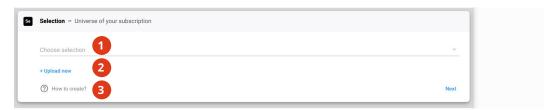


1 Start by clicking on the + button to create a subscription



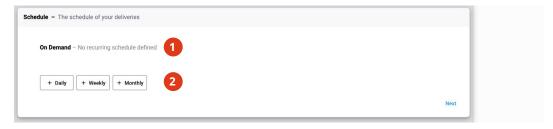
- 1 Package name.
- 2 The lock icon indicates the package cannot be subscribed. Your SIX Flex Administrator can activate it.
- Display all packages.

Once the package is selected, click on the section below to expand the selection configuration.



- 1 Select an already uploaded selection.
- 2 Upload a new selection.
- 3 The quick guide helps you to define a selection.

Once your selection is defined, move on to the schedule section.



- By default, the subscription is on demand, meaning there is no recurrent delivery.
- 2 Click on the buttons to schedule a daily, weekly or monthly delivery. If you would like more scheduled delivery configurations, you can easily add some by clicking again on the daily, weekly or monthly buttons.

In the example below, two daily deliveries are configured.

The first delivery will be at 09:00 and the second at 18:00.



- 1 Configure a delivery on all days (from Monday to Sunday) or weekdays (Monday to Friday).
- Define when the subscription processing starts.
- 3 Define the time zone of your schedule time.

Below are two examples of weekly and monthly schedule.

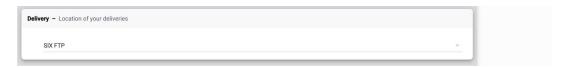


In the next section, define the CSV (Character Separated Values) output file format.



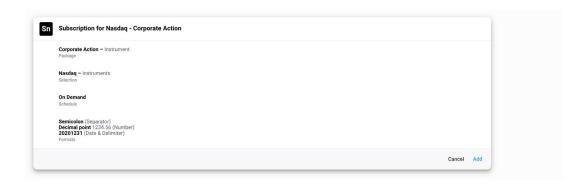
- 1 The CSV separator.
- 2 The date format and the separator for the dates.
- 3 How the decimal part of numbers shall be separated.

Configure the location where the delivery files will be produced. The default is the SIX FTP and you can select any Cloud configuration setup for your account.

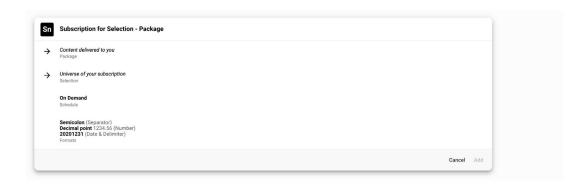


Note: The Delivery section is only visible when a cloud configuration is setup. The paragraph <u>Setup a Cloud configuration</u> describes the procedure.

Finalize the subscription creation by clicking on **add** or **subscribe** at the bottom right.

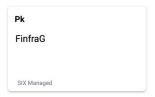


The arrows indicate the actions that are required to complete the subscription

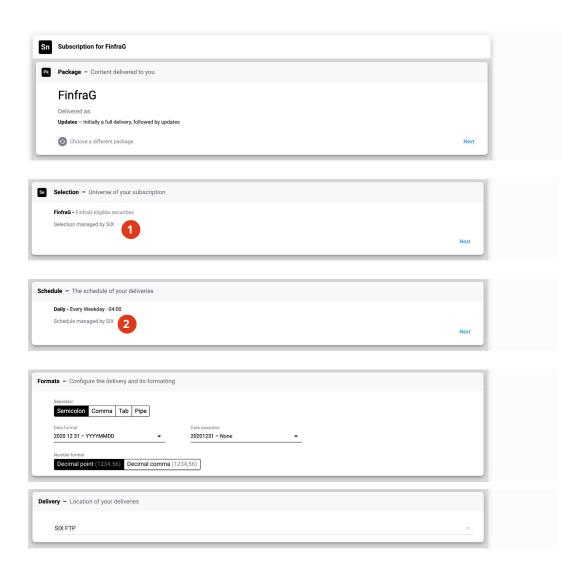


Subscribe to a SIX Managed Package

A SIX Managed Package comes with a predefined instrument universe dynamically managed by SIX. The schedule time is configured by SIX for an optimal delivery. You can identify the SIX Managed Packages with the label at the bottom of the card.



When you subscribe to a SIX Managed Package the selection and the schedule of your subscription are managed by SIX and you can not edit these sections. You can still configure the format and the location of your delivery.

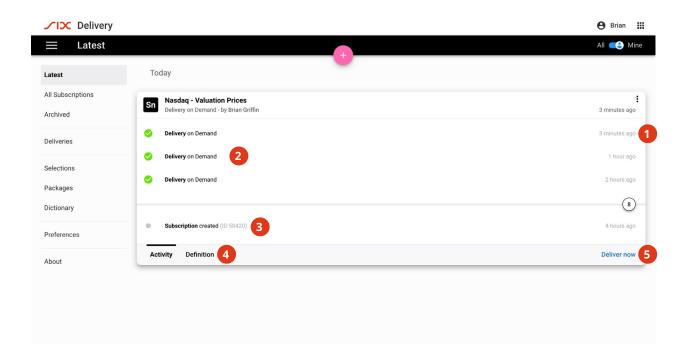


- Selection managed by SIX
- 2 Schedule managed by SIX

Note: The Delivery section is only visible when a cloud configuration is setup. The paragraph <u>Setup a Cloud configuration</u> describes the procedure.

Deliver now

Once the subscription is created click on **Deliver now** 5 to get an immediate delivery.



- 1 A delivery happened 3 minutes ago. Expand this line to discover the delivered files.
- **Activity** displays the history of all the events for a given subscription. It allows you to track all the definition changes and deliveries.
- The first event the subscription creation with the subscription Id in parenthesis.
- **Definition** gives you access to the editor you discovered during creation. You can change the selection, the schedules and the delivery format.
- **Deliver Now**. Click here to request an immediate delivery of the subscription.

Note: Deliver now button is hidden when a scheduling is defined and the delivery mode is Updates. This is to prevent accidental deliveries of full deliveries

Rename a subscription

The name of a subscription is initially composed by using the selection file name and the package used in the subscription. Once the subscription is created, it can be renamed.



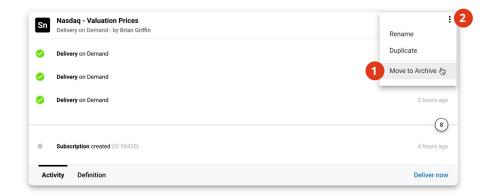
To name a subscription select the option **Rename** 1 from the card menu 2

Note: changing a subscription name affects the name of the subscription in the user interface as well as the <u>Delivery File Names</u>.

Archive a subscription

Archiving a subscription is the first step before deleting it.

When a subscription is archived, it will move into the archived view and its scheduled deliveries are halted.

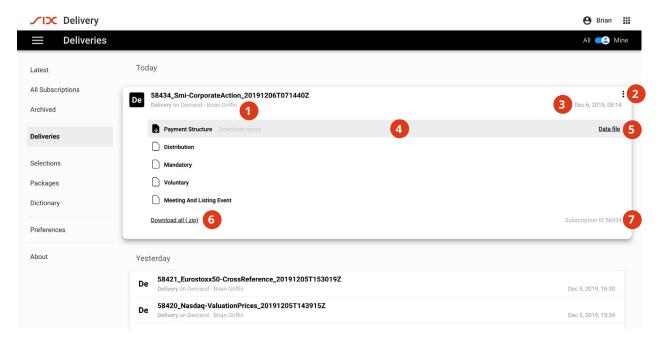


To archive a subscription select the option **Move to Archive** 1 from the card menu

Once archived, the same menu on the archived subscription allows you to Delete a subscription or Unarchive a subscription. Unarchiving a subscription automatically re-activates previously scheduled deliveries.

Deliveries

The **Deliveries view** lists all deliveries in descending / reverse chronological order.



- Activity that triggered the delivery. The message either shows the schedule that triggered the delivery or "on demand" followed by the user name who requested an immediate delivery via the Deliver now button.
- Menu to navigate to the related subscription.
- 3 Date and time of the scheduling in your machine time zone.
- 4 Link to download the report file that in addition to the data file contains all error messages and statistics for the delivery.
- 5 Link to download the data file. The data file aims to be consumed by a machine.
- 6 Link to download all the delivered files archived in one ZIP archive.
- 7 The subscription identifier. The identifier is used in the delivery filenames to link a delivery file to a subscription.

When a delivery fails an error delivery card is displayed in the list as illustrated below.

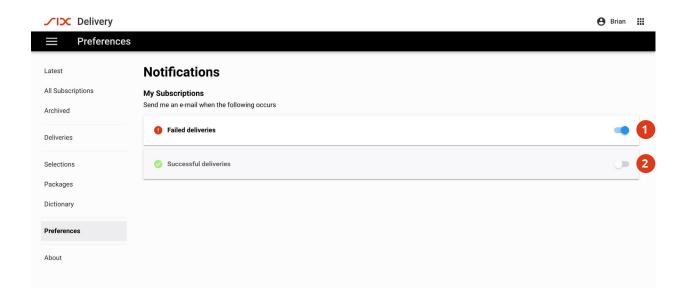


Should this happen, you can directly open the **inbox** by clicking on the **Support** button.

In Inbox create a support ticket and mention the Error ID. SIX Support will get in touch with you to assist you.

Preferences

Preferences contains all your preference settings.



- 1 Failed deliveries send emails when the scheduled deliveries of your subscriptions are failing.
- 2 Successful deliveries send emails when the scheduled deliveries of your subscriptions are successful.

Note: emails will not be sent when clicking on the Deliver now button.

Package options



You can choose among the available delivery options:

Updates sends a full delivery, followed updated data only deliveries, at the defined interval.

A full delivery consists in all the data available for the selected package and selection.

For the Corporate Action package, the full delivery includes all future events and events with a significant date of up to one year in the past.

Scheduled subscriptions (daily, weekly, monthly) only deliver a full delivery on the first delivery, afterwards they deliver updates. In addition, when you add new instruments, the update will include the equivalent information of a full delivery for the added instruments.

The full delivery and update format are identical, in order to ease data integration.

On-demand subscriptions always deliver a full delivery, you can request it by clicking the Deliver now button. Setting a scheduled subscription for a package with Updates option hides the Deliver now button.

Snapshots always send full delivery. Whether subscriptions are scheduled or not, this mode always deliver a full delivery.

Range sends all corporate action events that occur within a date range.

This option only applies to the Corporate Action package. You can define the date range by choosing the number of days before and after. Every time the subscription is delivered, days before and days after are applied and events with a significant date in the defined range appear in the result.

The **significant date** is a SIX calculated date.

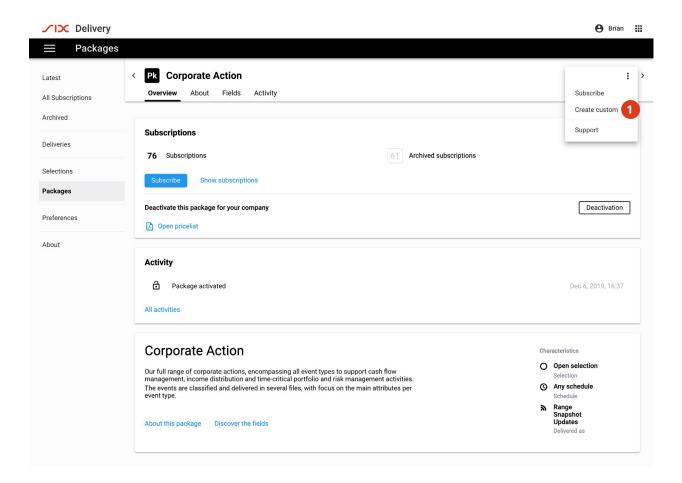
We create the significant date in order to have one reference date across all event types. The logic takes all available dates for a given event type and chooses the most significant one.

The focus of the logic is to promote business relevant dates as, for example, payment dates, effective dates.

Custom Package

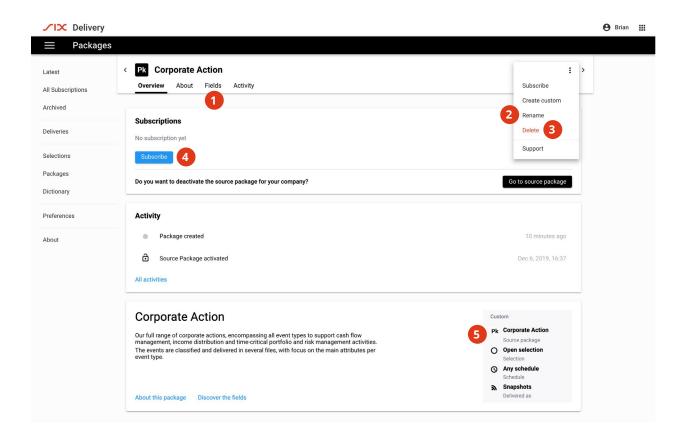
Package customization enables you to define a tailor-made package. You can thereby remove, re-order and rename the column headers of the delivery files.

To create a custom package, you have to navigate to a package and click on **Create custom** 1



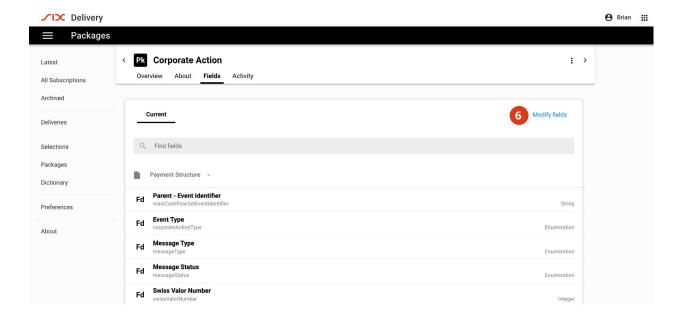
Clicking on **Create custom** will create and navigate you to a custom package with the same name as the original package (Corporate Action in the example above).

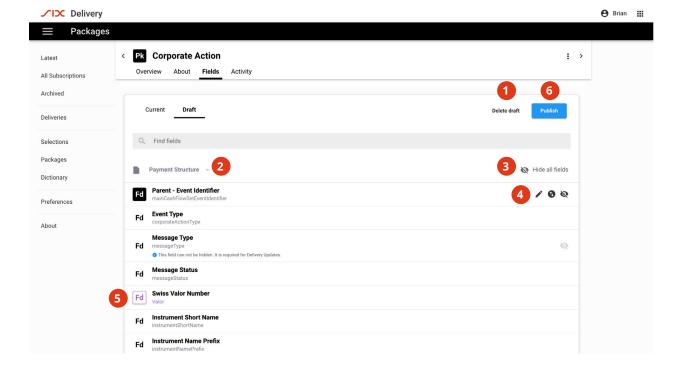
Modify a custom package



- Display and modify the fields of the custom package.
- 2 Rename the custom package.
- 3 Delete the custom package.
 Before deleting a Custom Package, <u>archive</u> and delete all the depending subscriptions.
- 4 Shortcut to immediately use the Custom Package in a new subscription.
- 5 The SIX package used as a source to create the Custom Package.

To initiate the customization, click on **Modify Fields** in the fields tab





- 1 Delete the draft, if you want to cancel your changes.
- 2 Select the package file to customize.
- Hide all the package fields. When all fields are hidden, the file is not delivered.
- These 3 icons are displayed when you are moving the mouse over. They, in order, rename the CSV Header of the field, move the field to another position in the file, and hide the field. A hidden field is not distributed in the delivery files of the custom package.
- 5 The purple Fd icon highlights modified fields of the draft package.
- 6 Publish draft changes onto production version of the custom package.

Custom packages have two states: draft and production (current tab in the above screenshot). The **Fields** view lists all the fields currently in production for the package. This means a subscription based on the custom package delivers files in the format specified in the **Fields** view of the package.

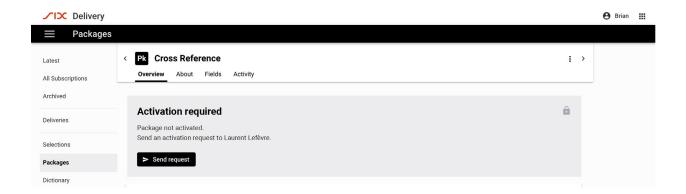
The **Draft** view is the place where you can specify the changes you want to apply to the custom package. This changes will affect the subscriptions based on the custom package only when you publish the changes. At that time, the **Draft** disappears and all changes are reflected in the **Fields** view. The next delivery of a subscription based on the custom package will integrate all the published changes.

Deactivated packages

Some packages may not be available for subscription. These packages are deactivated and appear with a locker icon, as illustrated below.



Your SIX Flex administrator(s) can activate or deactivate a package. An embedded "Request" functions sends an email to your administrator(s) if you need a given package activated.



The Send request button in the above image sends an email to the SIX Flex administrator(s) in your organization.

SIX Flex Administrator role

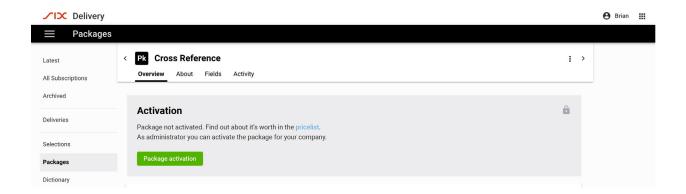
The following functions are privileged and reserved to the Administrator role. There must be at least one SIX Flex administrator per client account.

Package activation

New packages are regularly published on SIX Flex. To avoid accidental consumption of these packages and associated fees, new packages are deactivated by default. Only the SIX Flex Administrator can activate the packages for your organization.

When a package is deactivated, a locker icon is displayed, and users cannot use it for subscriptions. Still they can visualize its contents.

The package activation takes place in the package view. Below a screenshot of a deactivated package.



To activate the package, click **Package activation**; within the next 2 minutes, the package will be activated to all the users of your organization.

Once a package is activated, you can still decide to deactivate it. The workflow of activation and deactivation are similar.

When you deactivate a package, you may have subscriptions on this package. In such case, the subscriptions will not deliver any data and report an error stating the package is deactivated.



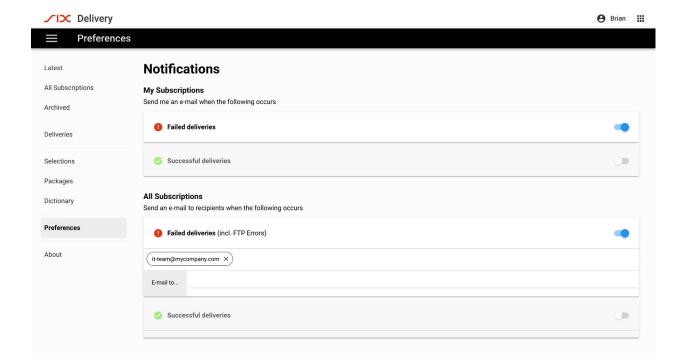
Note: Custom packages cannot be activated directly. A custom package is activated when the source package is activated.

Global notification

As a user, you can receive email notifications on successful and failed deliveries on the subscriptions you created. This is convenient for a single user, but what if you want your IT team to monitor the activity of the deliveries or even, to automate the file retrieval on an email message.

With administrative rights you can configure notifications for **All subscriptions** and send them to your chosen group email address.

Navigate from the left menu to the **Preferences** view. An administrator can configure its own notification as normal users with the section on top called **My Subscriptions**. In addition, he can configure notification for **All Subscriptions** in the eponym section.

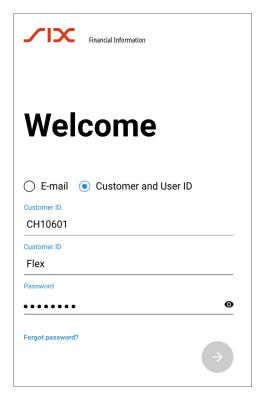


Technical information

FTP Access

The FTP access allows you to download delivered files and upload selection files, as well as fully automate the processing of data delivered by SIX Flex. The access to FTP is restricted to the technical user. Here are the steps to configure the technical user account:

1. Configure the FTP password



Connect to

https://client-portal.six-financial-information.com

Login as the technical user using the Customer Id authentication and the information delivered to you via email.

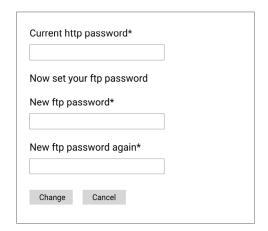
Note: you must change your password before you logging on the first time.



Click on the **Technical User** in the top right corner, and select profile



Select **change** the FTP password at the bottom of the page



Enter the technical administrator password and chose your new FTP password.

Click **Change**.

2. Configure the FTP connection

The FTP host is: ftp.tkfweb.com

The username is the Customer ID and the user ID separated by the character "-".

Example: CH12345-flex

Where CH12345 is the Customer ID and flex is the technical user name

SIX recommends to use secured FTP connection. Here are the connection settings:

SFTP host: sftp.tkfweb.com

SFTP port: 2222

· Fingerprint:

SHA-256: 3rG7Bqw0fFrpqHep2KNyhceEeZkQMyzexO62cYmYH1Y=

MD5: 2f:4d:2b:b8:32:c9:ce:9e:5f:3c:f1:ec:41:db:db:5f

Once connected to the FTP, 2 folders are available:

- flex-selections a read/write folder to upload or download the selection files. This folder contains the selection files uploaded via FTP as well as the ones uploaded via the user interface. Important: a selection file must have the ".csv" extension.
- flex-deliveries a read only folder containing the files delivered by SIX Flex. Delivered files are automatically deleted after 30 days

Setup a Cloud configuration

The file produced by SIX Flex can be delivered to a Google Cloud Platform in addition to the SIX FTP server and the user interface. Here are the steps to configure a Google Cloud Platform account:

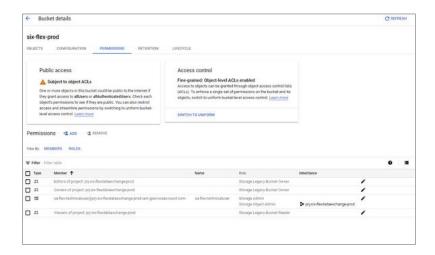
1. Create a bucket in Google Cloud Platform

SIX recommends creating a bucket in Google Cloud Platform dedicated to SIX Flex.

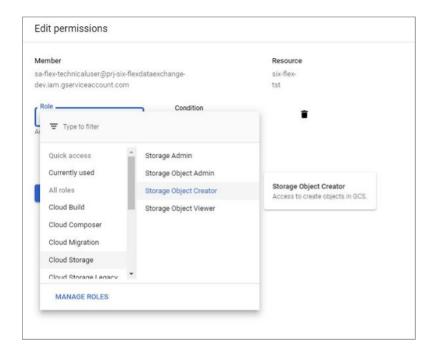
Note, SIX Flex does not delete files on the bucket, therefore it is recommended to delete the delivery files on regular basis.

2. Setup a Google Cloud account for SIX Flex

In the Google Cloud Platform administration interface, create a new account named: sa-flex-technicaluser@prj-flexdataexch1-euw6-prod.iam.gserviceaccount.com



3. Grant the role storage object creator to the SIX Flex user on the newly created bucket.



4. Contact the SIX Support

<u>Contact the SIX Support</u> and request the activation of the Google Cloud Platform for SIX Flex. The only information required to activate the service is the bucket name defined in step 1.

Here is a message template.

Dear SIX Support,

Please activate the Google Cloud Platform service in SIX Flex.

The bucket name for SIX Flex is: XXX

Best regards,

XYZ

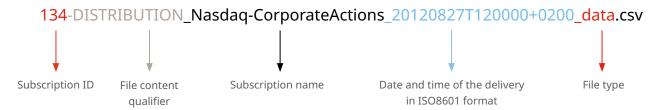
Delivery File Names

The file name format is designed to be user friendly and to ease automated processing.

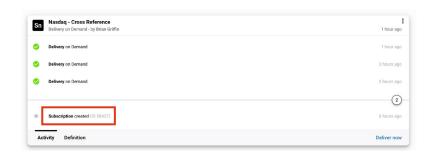
A delivery consists of a minimum of three files:

- A data file, it only contains data. This file is designed for programmatic purposes
- A report file, a human readable file that contains data and related statuses
- A **ZIP file**, a zip compressed file that contains all the delivered files (data and reporting files).

The example below illustrates the distribution file delivery of the Corporate Action package.



The **subscription ID** can be found in the user interface once the subscription is created.



The **subscription name** is defined by default by the application and can be renamed by the user (chapter Rename a subscription).

The **date** in the ISO8601 format. Note: the "+0200" refers to a time offset of 2 hours from the UTC time.

The **file content qualifier** uniquely identifies a delivery file among all packages.

The **data and time** of the delivery refers to the scheduled time of the delivery and time zone configured in the user interface.

File Type distinguishes the data "_data" from the report file "_report".

File content qualifier and File type are not present in the zip filename.

 $134_Nasdaq\text{-}CorporateActions_20120827T120000+0200.zip$

For automated processing, SIX recommends to wildcard the file name and the UTC offset to identify a file. Below some examples of wildcard strings to identify respectively, the data, report and zip files of valuation price package. The delivery is scheduled for the 12 August 2020 at 14h00m00s:

- 123- VALUATIONPRICE _*_20200812T140000*_data.csv
- 123-VALUATIONPRICE_*_20200812T140000*_report.csv
- 123 _*_20200812T140000*.zip

Selection File Format

The selection file format is a CSV (Character Separated Values) with a header row in the first line and UTF-8 as character encoding format. SIX Flex supports the following separators: comma (","), semicolon (";"), tabulation and the pipe character ("|").

The first line must contains the following headers (separated by a semicolon character in the example below):

identifierScheme;identifier

The following lines must contain values that match the header for that column. The first value must specify the type of code you want to use (ISIN, SEDOL, ... find the full list in the <u>appendix</u>), the second value is the code identifier.

In addition, to indentifierScheme and identifier headers, there are 2 optional headers that can be added: BC and clientReference.

BC column header is optional and is the SIX Market Code Numerical BC. When the SIX Market Code Numerical BC is not provided but required, SIX Flex returns data on all markets relevant for the identifier. The SIX Market Code Numerical BC is mandatory for ticker and listing codes (TKH and TKL identifier schemes).

The clientReference column is a 64 characters free text content where you can store an information of your choice (e.g. a table index in your database). With the client reference, you tag the selection files entries and in the delivery file you will find your tag back for all rows that are delivered for the tagged entries.

Here are some example of Selection files:

identifierScheme;identifier identifierScheme;identifier;clientReference

 DE;A1EWWW
 DE;A1EWWW;C1

 GB;BD6V6X2
 GB;BD6V6X2;C2

ISIN;CH0003846729 ISIN;CH0003846729;C3

CH;4910811 CH;4910811;C4

With the BC column With BC and client reference columns

identifierScheme;identifier;BC identifierScheme;identifier;BC;clientReference

DE;A1EWWW;4 DE;A1EWWW;4 ;C1 GB;BD6V6X2;6 GB;BD6V6X2;6;C2

ISIN;CH0003846729;201 ISIN;CH0003846729;201;C3

CH;4910811;254 CH;4910811;254;C4

Data File Format

Data file format is CSV (Character Separated Values) with a header row on the first line.

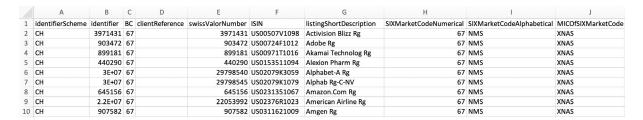
The first headers refers to the selection file entries and are named:

- identifierScheme
- identifier
- BC
- clientReference

These headers contains the resolved selection: for instance, when the BC is not specified in the selection file and the package is valuation price, SIX Flex converts the instruments into listings and therefore the BC number is populated in the resolved selection.

The following headers are named with the CSV header names of the package. When reading a data file you must mandatorily use the CSV headers as opposed to relative positions, as the column order may change and columns can be added to the package.

Screenshot of a data file displayed in Microsoft Excel.



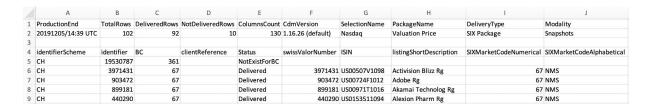
Report file format

The Report File Format is CSV (Character Separated Values) format. It delivers the content of the data file and provides metadata describing the delivery and explanations when some content is not delivered.

Important: The report file contains explanations on the delivered content. It must not be used for data ingestion, as its format may change without advance warning.

The first two lines of the report files contains general metadata on the delivery such as:

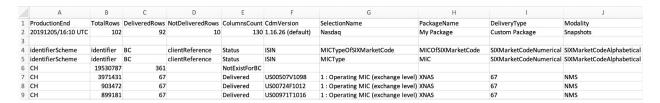
- ProductionEnd: date and time of the delivery.
- **TotalRows**: contains the total number of rows in the report file. This is the sum of DeliveredRows and NotDeliveredRows.
- DeliveredRows: number of rows with the status Delivered. This correspond to the number
 of rows in the data file.
- **NotDeliveredRows**: number of rows where no content is delivered. This could be because of invalid entries, no entitlement or no data available.
- ColumnCount: correspond to the number of fields in the package
- **CdmVersion**: is the version of the Client Data Model. The Client Data Model includes the field dictionary and the packages.
- **SelectionName**: name of the selection used to generate the delivery.
- PackageName: name of the package used to generate the delivery.
- **DeliveryType**: Specifies whether a regular SIX package or a custom package is delivered.
- There could be some additional columns that report specific parameters of the package such as Modality.



Line three is empty.

From line four onwards you will get the same structure as in the data file with additional information. The report file contains all identifiers specified in your selections and adds a status column. The status column indicates the state of the delivery for each instrument. The exhaustive list of statuses is available in the appendix. The column headers row is duplicated for custom packages. The first row contains the official names while the second one contains the renamed headers.

In the report, the value of a field is blank when there is no data, **NotAuthorized** when you are not entitled, otherwise the value.



Above and example of a Custom Package report. The CSV headers row is duplicated. The first row contains the official SIX names while the second one reports the renamed names (e.g. MIC and MICType) as they appear in the data file.

Appendix

Report file - statuses

Status	Description
Delivered	Data has been delivered.
Duplicate	This status indicates that the exact same identifier is present multiple times in the selection file. The first occurrence has a standard status and the subsequent ones have the Duplicate status.
MissingBC	No value was provided in the BC column. The BC is mandatory when using TKH and TKL codes.
NoData	Rare status. It happens when the requested instrument is known but there is no data available.
NoEvent	When an initial load is delivered, NoEvent specifies there is no corporate action event. In the Event Source Information file, the NoEvent status appears when no source information is delivered.
NoPriceForBC	Prices are not delivered for the requested source (BC). The source is either inactive or is not delivering prices (e.g. ratings agencies sources).
NoQuotesOnBC	There is no price available for the selected source (BC)
NotAuthorized	You are not authorized for this content.
NotAuthorizedIdentifierScheme	You are not authorized to use this identifierScheme in this context (e.g. SEDOL or CUSIP based ISIN)
NotExistForBC	The identifier does not exist for the specified market.
NotRelevant	Indicates that the listing or instrument is not relevant for the package, hence no data are delivered.
NoUpdate	There has been no update (applies to delta delivery only)
UnknownBC	The market identifier in column BC does not exist in SIX database.
UnknownIdentifier	The identifier in column Identifier does not exist in SIX database.
UnknownIdentifierScheme	The identifier code scheme in column IdentifierScheme is not recognized by SIX Flex.

List of identifier code schemes

Identifier code scheme	Description
ISIN	International Securities Identification Number
СН	Swiss Valor Number
AT	Austrian Number
B2	FIGI Global Share Class ID
BE	Belgium Number
CA	Canadian CUSIP
DE	German WPK
DK	Danish Number
GB	UK Sedol
Н	Hong Kong Issue Number
IT	Italian Number
J	Japanese Number TSE Code
JP	Japanese Number SICC
NL	Dutch Number
NO	Norwegian Number
TKH	Trading Symbol
TKL	Listing Symbol
U	CUSIP International number
US	US CUSIP