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DocHub REST API Documentation for Distributors

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1.1	Final	Manuel Niederberger	05.09.2022	<p>The PDF document in the response body of the following requests is delivered as binary string:</p> <ul style="list-style-type: none"> • Latest Documents: Content-Request • Archived Documents: Content-Request • Instruments: PIB Content-Requests
2.0	Final	Manuel Niederberger	14.10.2022	<p>The DocHub release 2.8 introduces the following updates:</p> <ul style="list-style-type: none"> • New Fields for Consolidated Metadata File • New and updated REST endpoints: <ul style="list-style-type: none"> - Latest Documents: Search-Requests - Archived Documents: Search-Requests - Health Check: Ping • Change from Instrument to General Identifier • New links to Swagger documentation • Introduction of optional header to provide custom data string • New chapter on Certificate Validity Period
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Table of contents

1. Overview	7
1.1. Introduction SIX Regulatory Document Service DocHub	7
1.2. Collateral documents	7
2. Usage of DocHub API services	8
2.1. Document universe – public and private	8
2.2. Consolidated Metadata Files	8
2.3. REST API Interface	8
2.4. Environments	9
3. DocHub Consolidated Metadata File API	9
3.1. Metadata attributes	9
3.2. Optional settings for the delivery of metadata	11
3.3. CSV format: Consolidated metadata file	11
3.4. Interface behavior and description	15
3.4.1. Consolidated metadata file types	15
3.4.2. Filter capabilities	15
3.4.3. Delivery technology	15
3.4.4. File access from SIX SFTP server	15
3.4.5. Sample metadata file deliveries	17
3.4.6. Filename convention	19
4. DocHub REST API	20
4.1. General details	20
4.1.1. Certificate Validity Period	20
4.1.2. Environments	20
4.1.3. Authorization	20
4.2. Methods	22
4.2.1. Overview of all methods	22
4.2.2. Overview of all “request parameters” of the methods	22
4.2.3. Overview of all “response parameters” of the methods	25
4.2.4. Errors delivered when a request fails	27
4.2.5. User Authentication V1	28
4.2.6. Latest Documents: Content-Request V1	28
4.2.7. DEPRECATED - Latest Documents: Search-Requests V1	31
4.2.8. Latest Documents: Search-Requests V2	34
4.2.9. Archived Documents: Content-Request V1	37
4.2.10. DEPRECATED - Archived Documents: Search-Requests V1	38
4.2.11. Archived Documents: Search-Requests V2	40
4.2.12. Instruments: SIX-Status-Information V1	42
4.2.13. Instruments: PIB Content-Requests V1	43
4.2.14. Health Check: Ping V1	44
5. General API information	44
5.1. General type definitions	44
5.1.1. Identifier Scheme Type	44
5.1.2. Contract Side Type	44
5.1.3. Document Type	44
5.1.4. MIME Type	44
5.1.5. Generation Method Type	44
5.1.6. Issuer Identifier Type	44
5.1.7. Publication Classification Type	44
5.1.8. Sourcing Strategy Type	44
5.2. Web service: error_code	44
5.3. Definition of the attribute type dateTime	46
5.4. Definition of the attribute format fileCreationTime	46

6. Implementation Support	47
6.1. Demo java application	47
6.2. Screenshot from SwaggerUI	47

Table of Figures

Figure 1: SIX Regulatory Document Service: Flow diagram.....	7
Figure 2: Example of a full metadata file.....	14
Figure 3: Example of an empty metadata file with Instrument Identifiers	15
Figure 4: Example of an empty metadata file with General Identifiers.....	15
Figure 5: Example of a metadata file	16
Figure 6: Delivery 1, Full metadata file for day 1.....	17
Figure 7: Delivery 2, Delta metadata file 01 for day 1	17
Figure 8: Delivery 3, Delta metadata file 02 for day 1	17
Figure 9: Delivery 4, Delta metadata file 03 for day 1	18
Figure 10: Delivery 5, Delta metadata file 04 for day 1	18
Figure 11: Delivery 6, Full metadata file day 2.....	18
Figure 12: REST V1: Example of the request User Authentication	28
Figure 13: REST V1: Example of the Response Body for User Authentication.....	28
Figure 14: REST V1: Example of the request body of the Latest Documents: Content-Request	30
Figure 15: REST V1: Example of the Latest Documents: Search-Requests Request	32
Figure 16: REST V1: Example of the Response Body for Latest Documents: Search-Requests	33
Figure 17: REST V2: Example of the Latest Documents: Search-Requests Request	35
Figure 18: REST V2: Example of the Response Body for Latest Documents: Search-Requests	36
Figure 19: REST V1: Example of the request Archived Documents: Content-Request	37
Figure 20: REST V1: Example of the Request Body for Archived Documents: Search-Requests.....	39
Figure 21: REST V1: Example of the Response Body for Archived Documents: Search-Requests.....	39
Figure 22: REST V2: Example of the Request Body for Archived Documents: Search-Requests.....	41
Figure 23: REST V2: Example of the Response Body for Archived Documents: Search-Requests.....	41
Figure 24: REST V1: Example of the request for Instruments: six-status-information requests	42
Figure 25: REST V1: Example of the response body for Instrument: six-status-information requests.....	42
Figure 26: REST V1: Example of the request Instruments: PIB Content-Requests	43
Figure 27: REST V1: Example of the request Health Check: Ping	44
Figure 28: REST V1: Example of the Response Body for Health Check: Ping	44
Figure 29: SwaggerUI for the DocHub REST API.....	47
Figure 30: SwaggerUI Available Authorizations	48

Table of Tables

Table 1: Metadata attributes.....	11
Table 2: Metadata file attributes in CSV format	13
Table 3: Further information on the CSV file	13
Table 4: Structure of the filename	19
Table 5: Individual file name configuration.....	19
Table 6: Overview of the API Document retrieval (production environment)	20
Table 7: Overview of the API Document retrieval (customer test environment, member test)	20
Table 8: Overview of the SIX DocHub REST API methods	22
Table 9: Overview of all request parameters	24
Table 10: Overview of all response parameters.....	27
Table 11: Request parameters getAuthorizationToken	28
Table 12: Response parameters getAuthorizationToken.....	28
Table 13: Request parameters.....	30
Table 14: Response parameters.....	30
Table 15: Request parameters Search-Requests.....	31
Table 16: Response parameters Search-Requests	31
Table 17: Request parameters Search-Requests.....	34
Table 18: Response parameters Search-Requests	34
Table 19: Request parameters Content-Request	37
Table 20: Response parameters Content-Request.....	37
Table 21: Request Parameters Search Request	38
Table 22: Response Parameters Search Request.....	38
Table 23: Request Parameters Search Request	40
Table 24: Response Parameters Search Request.....	40
Table 25: Request parameters six-status-information	42
Table 26: Response parameters six-status-information.....	42

Table 27: Request parameters PIB Content-Requests.....	43
Table 28: Response parameters PIB Content-Requests.....	43
Table 29: error_code List	45
Table 30: Format of the attribute type dateTime	46
Table 31: Format of the attribute type dateTime	46

1. Overview

Distributors of financial products (typically wealth management firms and insurers) need various documents from the relevant issuers/manufacturers (“Document Suppliers”) to distribute their financial products whilst complying with applicable laws and regulations. Document Suppliers can distribute their documents through DocHub or via third parties.

The document download platform “DocHub” provides distributors with a single interface through which various types of regulatory and marketing documents can be accessed, thereby reducing integration costs. All document downloads are logged for subsequent auditability requirements and the downloaded documents can optionally be archived.

1.1. Introduction SIX Regulatory Document Service DocHub

The following picture shows an overview of the dataflow and interfaces in the SIX Regulatory Document Service.

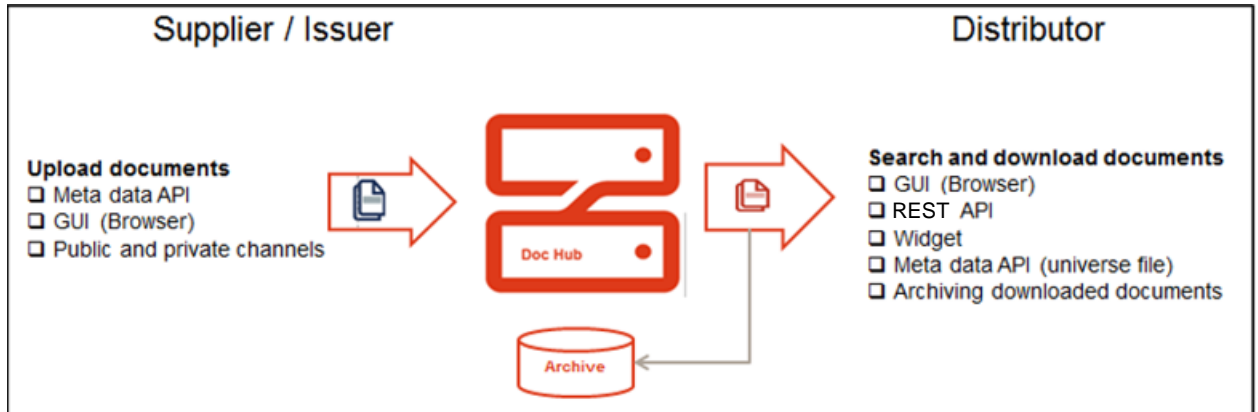


Figure 1: SIX Regulatory Document Service: Flow diagram

This document describes the API between the SIX DocHub and the distributors. This API covers two different types of Interfaces:

- “**Consolidated metadata**” which delivers the metadata (e.g. instrument identifiers, document type, language) of all available documents.
- “**Document retrieval**” to request and search documents.

1.2. Collateral documents

Additional information or other interfaces are described in following documents, which are available in DocHub Member Area and Documentation Center.

- DocHub Attribute Tables
- DocHub Environments and Testing
- DocHub User Manual
- DocHub Search Widget Documentation
- Service Description DocHub
- RegHub Inbox Notification Quick Guide

2. Usage of DocHub API services

SIX DocHub API service is split in two parts which complement each other. One part is the delivery of Consolidated Metadata Files, the other the REST API interface.

For the access to a document the documentID is needed. The documentID can be retrieved from the data delivered in the Consolidated Metadata File or by submitting a search request via REST API. It is assumed that the access to a local database on distributors side is faster than the search access via REST API to DocHub. To support the setup of a local database, consolidated document metadata files are available.

DocHub is an open platform where different suppliers deliver data from issuers. It is possible that multiple entries are delivered for the same document metadata. To enable a smart selection of the best supplier the attribute Sourcing Strategy Type can be used. This identifier indicates the role of the supplier in respect of document distribution.

2.1. Document universe – public and private

DocHub offers public and private documents for distributors. The classification of a document is decided by the supplier. When offered private the supplier decides which distributors have access to the document.

The distributor can decide which suppliers should be included in his universe. Configuration is done by the connection management (see DocHub User Manual). There is no data available for a distributor when no connection is available. In case no data is available, please check your connections first.

This universe definition applies to GUI and API Users.

2.2. Consolidated Metadata Files

These files contain metadata for documents. They are supposed to be used by distributors to get a fast access to the documentID which is needed to retrieve document to check if documents within a big distributor portofolio are available on DocHub. If a distributor needs only dedicated languages, jurisdictions and/or document types, it is possible to restrict the delivery to Document Metadata which is his focus. There are two different filetypes available. **Full files** with the full universe available for the distributor and **Delta files** containing changes during the last delivery period.

It is recommended to get a full file each day to build up the database on distributors side and use then the delta files to update this universe. The delta files deliver always the changed data against the last delivery of the delta file or full file. In case there is a queue of files to be processed on distributor side and one of the files is a full file, the distributor should skip all delta files up to the full file and start processing this file. It is useless to process the previous deltafiles, since processing of the full file replaces the existing universe. Processing of a full file and the subsequent delta files keeps the universe in in sync with the DocHub database.

The frequency of the delta files can be configured according to the needs of a customer.

2.3. REST API Interface

With the REST API interface all document metadata in the distributors universe can be accessed. Filters defined for metadata files do not apply for the REST API. Using the document ID the documents can be accessed and delivered. The distributor can decide, if the downloaded documents should be stored in DocHub archive.

For REST API access to archive there are also search and access methods available.

It is assumed that checks of big portofolios are done against the local database build up from metadata files in first place to speed up the access to documents.

Important:

A technical user is required to use REST API. GUI users are rejected.

Bulk requests to check an instrument universe should be avoided during main business hours executed with a max. frequency of 5 requests per second, per instance (2 instances are in place for PROD and TEST MT1), per method (searchLatestDocuments, getDocument, searchArchive) that means in total 10 requests per second per method. On throttling method returns fault with status 1006: Too many requests

For bulk request we recommend using the Consolidated Metadata File.

2.4. Environments

Beside production (PROD) system a test system (TEST) is available. To avoid mistakes different user-accounts are usually set up for the access to each environment.
See DocHub Environments and Testing guide.

3. DocHub Consolidated Metadata File API

The target of this API is to publish a list of available documents for each distributor. With this metadata, we enable the distributor to retrieve a document directly using the REST API, which is described later in this document.

Content and format of metadata files is the same SOAP, REST and widget API.

3.1. Metadata attributes

Below all the metadata attributes are described. The explicit representation in the file format is shown in a later chapter ([CSV format: Consolidated metadata file](#)).

No	Name	Type	Condition	Description and Rule
1	Modifier	String	Mandatory	<p>Describes the modification type of a metadata record:</p> <p>Full files contain following modifier: S = Static: In the full file delivery, all records are marked as static. The full delivery provides a daily overview of all reachable documents from the SIX DocHub.</p> <p>Delta files contain following modifiers: N = New: New document with metadata is available. M = Modify: Changes in the metadata.</p>
2	Document ID	String	Mandatory	<p>Delivers the unique document id (SIX DocHub wide) which is needed for downloading the document. Within a metadata file are no duplicates of a document id.</p>
3a	Instrument Identifiers	String (Sorted List, 1-n)	Conditional	<p>A sorted list of "Identifier Scheme Type" and "Instrument Identifiers".</p> <p>The format of the list is described as below.</p> <ul style="list-style-type: none"> List element: Identifier Scheme Type + "=" + Instrument Identifier List separator: " " <p>A list example:</p> <ul style="list-style-type: none"> 1=CH0012345678 2=12345678 <p>Special case example: In the case the "Error! Reference source not found." is filled with "302", the "Instrument Identifier" is enriched with the attribute separator "-" and the attribute "Contract Side Type".</p>

				<ul style="list-style-type: none"> • Example 1 (Swiss Valorennummer and contract side long): Value: 302=94647315-1 • Example 2 (Swiss Valorennummer and contract side short): Value: 302=94647315-2 <p>You can either set-up the consolidated metadata file with the field 3a “Instrument Identifiers” or 3b “General Identifiers”. With “General Identifiers” the file also contains company specific identifiers. Default is “Instrument Identifiers”.</p>
3b	General Identifiers	String (Sorted List, 1-n)	Conditional	<p>A sorted list of “<u>Identifier Scheme Type</u>” and “General Identifiers”.</p> <p>The format of the list is described as below.</p> <ul style="list-style-type: none"> • List element: <u>Identifier Scheme Type</u> + “=” + General Identifier • List separator: “ ” <p>A list example:</p> <ul style="list-style-type: none"> • 801=KY37LUS27QX7BB93L28 802=213695 <p>You can either set-up the consolidated metadata file with the field 3a “Instrument Identifiers” or 3b “General Identifiers”. With “General Identifiers” the file also contains company specific identifiers. Default is “Instrument Identifiers”.</p>
4	Document Type	Integer	Mandatory	Describes the business type of document.
5	Language	String	Mandatory	Describes the language of the document. The values have to be according to ISO 639-1 (two letter code) . In lower case letters and the value “ u0 ” for unknown.
6	Jurisdictions	String (Sorted List, 1-n)	Mandatory	<p>A sorted list of countries in which the document is valid. The values have to be according to ISO 3166-1 (two letter code) in capital letters and the value “U0” for not applicable or unknown.</p> <p>The format of the list is described as below.</p> <ul style="list-style-type: none"> • List element: Jurisdiction • List separator: “ ”
7	<u>MIME Type</u>	Integer	Mandatory	Describes the type of the document. In the first stage, only PDF (application/pdf) documents are supported.
8	<u>Generation Method Type</u>	Integer	Mandatory	Describes the method of the document generation (on the fly or produced in advance).
9	Document Supplier	String	Optional	This information indicates from which source a document Metadata Entry is supplied.
10	Issuer Identifiers	String (Sorted List, 1-n)	Optional	A sorted list of “ <u>Issuer Identifier Type</u> ” and “Institution Identifiers”.
11	Availability	Boolean	Mandatory	Describe if a document is available at the current time:

				<ul style="list-style-type: none"> • 0 = not available • 1 = available <p>Not available means that the document was recalled/ deleted and can no longer be requested. Archived copies of earlier requested documents can still be loaded from the archive.</p>
12	<u>Publication Classification Type</u>	Integer	Mandatory	Describes the intended accessibility of a document on the distributor side (DocHub clients). The Supplier informs the distributor, if he is allowed to publish the document (e.g. on his website in a public area where no password is needed).
13	<u>Sourcing Strategy Type</u>	Integer	Optional	Describes the the role of the supplier in respect of document distribution. Indicates the best source, when there are multiple matches for a document search.
14	Last Update Timestamp	DateTime	Optional	This field provides the information when the metadata record was inserted or modified by the Supplier of the document (yyyy-mm-ddThh:mm:ss.s+zzzzz).
15	Last Generation Timestamp	DateTime	Optional	This field provides the last generation timestamp of the pre-generated document (yyyy-mm-ddThh:mm:ss.s+zzzzz).
16	Valid From Date	Date	Optional	Valid from date in format yyyy-mm-dd Start date when the document is valid
17	Valid To Date	Date	Optional	Valid to date in format yyyy-mm-dd End date when the document is valid
18	Record Date	Date	Optional	Record date in format yyyy-mm-dd

Table 1: Metadata attributes

3.2. Optional settings for the delivery of metadata

Over time the content of the metadata file has been enhanced. To avoid software changes on distributor side the enhancement have been introduced as optional.

Following enhancements are possible:

- Delivery of Source strategy type
- Delivery of timestamps: Last Update and Last Generation Timestamp
The timestamps might produce additional lines in the delta files, when there was only a change of timestamps
- **Delivery of unknown values for language (u0) and jurisdiction (U0)**
The consequence is that the delivery also consists of documents where the language or jurisdiction could not be assigned
- **Enhancement and Name change of Identifier: General Identifier**
The client has the possibility to either get a consolidated metadata file which contains all instrument specific identifiers for a document (=3a Instrument Identifier) or a file which consists of all instrument and company specific identifiers for a document (=3b General Identifier). The default is "Instrument Identifiers"
- Delivery of Dates: Valid From, Valid To and Record Date

3.3. CSV format: Consolidated metadata file

The consolidated metadata file consists of three elements.

Header: Each file starts with a header that contains the following elements (elements are separated with “;”):

- The text “**start**”.
- The creation timestamp in the format 5.4 Definition of the attribute format fileCreationTime.
- The **SIX customer id** of the distributor.
- The **SIX customer name** of the distributor.
- The API version, for example version 2.6.1 = “**version=2.6.1**”.

Body: The body of the file starts with the metadata attributes header and a list of metadata. The field separator is “;”. In case a field contains a sorted list the elements are separated by | (Pipe character).

Footer: Each file ends with a footer that contains the following elements (the elements are separated with “;”):

- The text “**end**” indicates when a file is finished.
- The count of the records in the body “**records=12**”.

Sample Body content:

No	Name	CSV-Name	Type (length)	Example
1	Modifier	Mod	String (1)	N
2	Document ID	DocumentID	String (64)	abcdefghijklmnopqrstuvwxy
3a	General Identifiers	GeneralIdentifiers	String (800) (Sorted List, 1-n)	Concatenation: “ <u>Identifier Scheme Type</u> ”+ “=”+“ Instrument ID ” Two examples: • 2=12345678 • 1=CH0012345678 2=12345678
3b	General Identifiers	GeneralIdentifiers	String (800) (Sorted List, 1-n)	Concatenation: “ <u>Identifier Scheme Type</u> ”+ “=”+“ General ID ” Two examples: • 802=213695 • 802=213695 801=KY37LUS27QQX7 BB93L28
4	Document Type	DocumentType	Integer	1
5	Language	Language	String (2)	de
6	Jurisdictions	Jurisdictions	String (200) (Sorted List, 1-n)	AT CH DE
7	MIME Type	MIMETYPE	Integer	1
8	Generation Method Type	GenerationMethodType	Integer	1
9	Document Supplier	DocumentSupplier	String (128)	Bank Sun
10	Issuer Identifiers	IssuerIdentifiers	String (800) (Sorted List, 1-n)	Concatenation: “ <u>Issuer Scheme Type</u> ”+ “=”+“ Institution ID ”

				1=876543210 2=888800ABCDEFGHJKL00
11	Availability	IsAvailable	Boolean	1
12	Publication Classification Type	PublicationClassType	Integer	0
13	Sourcing Strategy Type	SourcingStrategyType	Integer	99
14	Last Update Timestamp	LastUpdateTimestamp	Datetime	2021-01-12T11:00:00+01:00 See 5.3 Definition of the attribute type dateTime
15	Last Generation Timestamp	LastGenerationTimestamp	Datetime	2021-01-11T11:00:00+01:00 See 5.3 Definition of the attribute type dateTime
16	Valid From Date	ValidFromDate	Date	2021-01-11
17	Valid To Date	ValidToDate	Date	2021-01-11
18	Record Date	RecordDate	Date	2021-01-11

Table 2: Metadata file attributes in CSV format

Further information on the CSV file:

Topic	Description
Encoding	The encoding is UTF-8.
Escape character	<p>If a value contains line breaks (CRLF) or the column separator (e.g. comma (,) or semicolon (;)), the complete value should be enclosed in double-quotes. If in an enclosure case, the value contains double-quotes (“) each double-quote has to be prefix with a double-quote. (RFC 4180). For example:</p> <ul style="list-style-type: none"> No enclosure: aaa;bbb;ccc (orig. value: aaa/ bbb/ ccc) No enclosure: a”aa;bbb;ccc (orig. value: aaa/ bbb/ ccc) Enclosure the column separator: aaa;”b;bb”;ccc (orig. value: aaa/ b;bb/ ccc) <p>Enclosure the column separator and double-quotes: aaa;bbb;”c””c;””c” (orig. value: aaa/ bbb/ c”c;”c)</p>

Table 3: Further information on the CSV file

The following is an example of the consolidated metadata file with 20 rows:

```
start;20160614_041501_+0200;CH-10597;SIX FI Ltd test users; version=3.1
Mod;DocumentID;GeneralIdentifiers;DocumentType;Language;Jurisdictions;MIMEType;GenerationMethodType;DocumentSupplier;IssuerIdentifiers;IsAvailable;PublicationClassType;SourcingStrategyType;
LastUpdateTimestamp;LastGenerationTimestamp;ValidFromDate;ValidToDate;RecordDate
S;1234567890abcdef1234567890ghijkl;1=XD0029955925|2=29955925;1;en;GB;1;1;SIX;;1;0;1;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;1234567890abcdef1234567891ghijkl;1=XD0029955925|2=29955925;1;de;CH|DE;1;1;SIX;;1;0;1;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;1234567890abcdef1234567892ghijkl;1=XD0029955925|2=29955925;1;fr;FR;1;1;SIX;;1;0;1;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;1234567890abcdef1234567893ghijkl;1=XD0029955925|2=29955925;1;it;IT;1;1;SIX;;1;0;1;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;0987654321zyxwvu0987654321tsrqpo;1=XD0029955933|2=29955933;2;en;GB;1;1;Seven;;1;1;2;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
```

```
S;0987654321zyxwvu0987654322tsrqpo;1=XD0029955933|2=29955933;2;de;AT|CH|DE;1;1;Seven;;1;1;2;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;0987654321zyxwvu0987654323tsrqpo;1=XD0029955933|2=29955933;2;fr;FR;1;1;Seven;;1;1;2;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;0987654321zyxwvu0987654324tsrqpo;1=XD0029955933|2=29955933;2;it;IT;1;1;Seven;;1;1;2;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;24687asdfghjkl13576;301=DE2468013579-1;1;en;GB;1;2;Eurex;1=11223344;1;0;99;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;24687asdfghjkl13577;301=DE2468013579-1;1;de;AT|CH|DE;1;2;Eurex;1=11223344;1;0;99;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;24687asdfghjkl13578;301=DE2468013579-2;1;en;GB;1;2;Eurex;1=11223344;1;0;99;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;24687asdfghjkl13579;301=DE2468013579-2;1;de;AT|CH|DE;1;2;Eurex;1=11223344;1;0;99;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;123451234512345asdfasdl;1=ES1231231231;1;es;ES;1;1;ONE;;1;0;99;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;567895678956789fsafdsaf;2=78865544;1;de;CH;1;1;ONE;;1;0;99;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;765476547654hgfhgfhgfhgf;3= 514019;1;de;AT|CH|DE;1;1;ONE;;1;0;99;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;8888777766665555qwert01;302=88776655-1;1;fr;FR|CH;1;2;NewEurex;;1;0;99;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;8888777766665555qwert02;302=88776655-2;1;fr;FR|CH;1;2;NewEurex;;1;0;99;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;YXABABCDEF GHIOP20180128531111;303="YXAB;ABCDEF GHI;O;P;2018-01-28;5.31-1";1;de;AT|CH|DE;1;2;AnotherExchange;;1;0;1;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;YXABABCDEF GHIOC2018012811281111;303="YXAB;ABCDEF GHI;O;C;2018-01-28;11.28-1";1;de;AT|CH|DE;1;2;AnotherExchange;;1;0;1;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;XEURFGBLFF2019031501111;303="XEUR;FGBL;F;F;2019-03-15;0-1";1;de;AT|CH|DE;1;2;AnotherExchange;;1;0;1;2021-01-12T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
end;records=20
```

Figure 2: Example of a full metadata file

3.4. Interface behavior and description

3.4.1. Consolidated metadata file types

The consolidated metadata interface supports two different file delivery modes:

- **“Full” metadata file:** On a daily basis, the SIX DocHub generates a single file with the full metadata of all available documents for the distributor. In this file, the attribute Modifier will always be set to “S” (static). The window of the full file delivery is recommended between 21:00 and 05:00 UTC. The time when the process is scheduled in the SIX DocHub, will be defined during the onboarding process.
- **“Delta” metadata file:** During the day, the SIX DocHub can generate delta file deliveries for the distributors to update the information. The “Delta” delivery is optional but recommended. In the “Delta” metadata records can be changed (Modifier = “M”), new documents introduced (Modifier = “N”) or deleted documents removed from the active list (Modifier = “M” and Availability = 0). The delta files contain only the records modified since the last sent file. The standard interval of starting the process of a delta file delivery is defined to every 30 minutes. The exact time will be defined during the onboarding process (steps in 15 minutes).
In case no metadata has changed during the interval, an empty file is generated.

```
start;20160613_100501_+0200;CH-10597;SIX FI Ltd test users;version=3.1  
Mod;DocumentID;GeneralIdentifiers;DocumentType;Language;Jurisdictions;MIMEType;GenerationMethodType;DocumentSupplier;IssuerIdentifiers;IsAvailable;PublicationClassType;SourcingStrategyType;  
LastUpdateTimestamp;LastGenerationTimestamp;ValidFromDate;ValidToDate;RecordDate  
end;records=0
```

Figure 3: Example of an empty metadata file with Instrument Identifiers

```
start;20160613_100501_+0200;CH-10597;SIX FI Ltd test users;version=3.1  
Mod;DocumentID;GeneralIdentifiers;DocumentType;Language;Jurisdictions;MIMEType;GenerationMethodType;DocumentSupplier;IssuerIdentifiers;IsAvailable;PublicationClassType;SourcingStrategyType;  
LastUpdateTimestamp;LastGenerationTimestamp;ValidFromDate;ValidToDate;RecordDate  
end;records=0
```

Figure 4: Example of an empty metadata file with General Identifiers

3.4.2. Filter capabilities

In case a distributor needs only metadata in dedicated languages, jurisdiction and document types DocHub can filter the content of metadata files. Only matching entries are delivered which have passed the defined filters based on Jurisdictions, Document Types and Languages. The setup of filters has to be requested towards SIX customer support. Per default no filter is in place.

3.4.3. Delivery technology

Distributors can retrieve consolidated metadata files from SFTP server. Beside production also a test environment is available. Access is done with different users, which are communicated during onboarding. In case of special requirements regarding the access to the metadata file please contact SIX onboarding manager or SIX customer support.

3.4.4. File access from SIX SFTP server

Metadata files are available on SIX SFTP server to be retrieved by the distributors. See DocHub_Environments_Testing manual for more details.

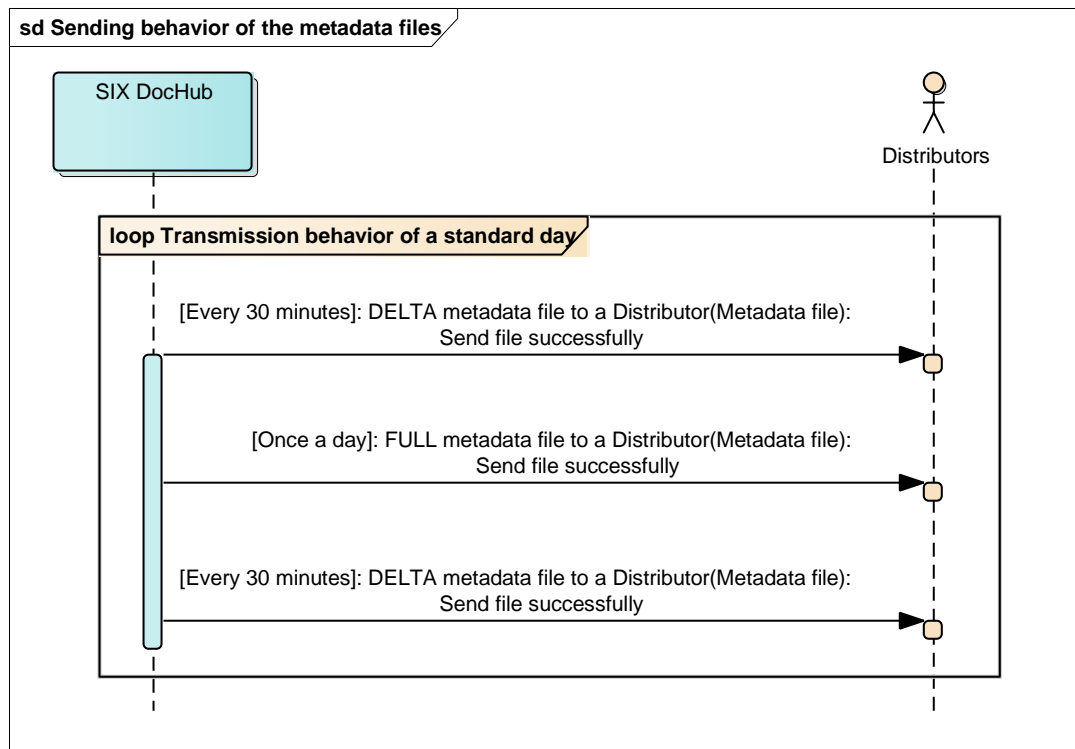


Figure 5: Example of a metadata file

3.4.5. Sample metadata file deliveries

Subsequent five examples files are intended to describe a possible course of the day (without empty files). For easier understanding of the examples the document ID is started with subsequent codes. In real live these IDs are random unique strings.

3.4.5.1. A full metadata file with six records for the first day.

```
start;20160613_041501_+0200;CH-10597;SIX FI Ltd test users;version=3.1
Mod;DocumentID;GeneralIdentifiers;DocumentType;Language;Jurisdictions;MIMEType;GenerationMethodType;DocumentSupplier;IssuerIdentifiers;IsAvailable;PublicationClassType;SourcingStrategyType;LastUpdateTimestamp;LastGenerationTimestamp;ValidFromDate;ValidToDate;RecordDate
S;a01234567890abcdef12345678ghijkl;1=XD0029955925|2=29955925;1;en;GB;1;1;SIX;;1;0;1;2021-01-11T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;a11234567890abcdef12345678ghijkl;1=XD0029955925|2=29955925;1;de;CH|DE;1;1;SIX;;1;0;1;2021-01-11T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;a21234567890abcdef12345678ghijkl;1=XD0029955925|2=29955925;1;fr;FR;1;1;SIX;;1;0;1;2021-01-11T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;b10987654321zyxwvu09876543tsrqpo;1=XD0029955933|2=29955933;2;en;GB;1;1;Seven;;1;1;2;2021-01-11T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;b20987654321zyxwvu09876543tsrqpo;1=XD0029955933|2=29955933;2;de;DE;1;1;Seven;;1;1;2;2021-01-11T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;b30987654321zyxwvu09876543tsrqpo;1=XD0029955933|2=29955933;2;fr;FR;1;1;Seven;;1;1;2;2021-01-11T11:00:00+01:00;2021-01-11T11:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
end;records=6
```

Figure 6: Delivery 1, Full metadata file for day 1

3.4.5.2. The first delta metadata file

It contains two new documents (ids starting with a3,a4) for the ISIN XD0029955925.

```
start;20160613_121501_+0200;CH-10597;SIX FI Ltd test users;version=3.1
Mod;DocumentID;GeneralIdentifiers;DocumentType;Language;Jurisdictions;MIMEType;GenerationMethodType;DocumentSupplier;IssuerIdentifiers;IsAvailable;PublicationClassType;SourcingStrategyType;LastUpdateTimestamp;LastGenerationTimestamp;ValidFromDate;ValidToDate;RecordDate
N;a31234567890abcdef12345678ghijkl;1=XD0029955925|2=29955925;1;it;IT;1;1;Two;;1;1;1;2021-01-11T12:00:00+01:00;2021-01-11T12:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
N;a41234567890abcdef12345678ghijkl;1=XD0029955925|2=29955925;1;de;AT|CH;1;1;Two;;1;1;1;2021-01-11T12:00:00+01:00;2021-01-11T12:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
end;records=2
```

Figure 7: Delivery 2, Delta metadata file 01 for day 1

3.4.5.3. The second delta metadata file

It contains two updates for documents ids starting with a3,a4 related to ISIN XD0029955925 (a3 change Jurisdiction from IT to CH|IT, a4 change Jurisdiction from AT|CH to AT)) and two new documents (ids starting with b4 and b5) for ISIN XD0029955933.

```
start;20160613_144501_+0200;CH-10597;SIX FI Ltd test users;version=3.1
Mod;DocumentID;GeneralIdentifiers;DocumentType;Language;Jurisdictions;MIMEType;GenerationMethodType;DocumentSupplier;IssuerIdentifiers;IsAvailable;PublicationClassType;SourcingStrategyType;LastUpdateTimestamp;LastGenerationTimestamp;ValidFromDate;ValidToDate;RecordDate
M;a31234567890abcdef12345678ghijkl;1=XD0029955925|2=29955925;1;it;CH|IT;1;1;Two;;1;0;1;2021-01-11T12:00:00+01:00;2021-01-11T12:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
M;a41234567890abcdef12345678ghijkl;1=XD0029955925|2=29955925;1;de;AT;1;1;Two;;1;0;1;2021-01-11T12:00:00+01:00;2021-01-11T12:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
N;b40987654321zyxwvu09876543tsrqpo;1=XD0029955933|2=29955933;2;it;IT;1;1;Seven;;1;1;2;2021-01-11T12:00:00+01:00;2021-01-11T12:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
N;b50987654321zyxwvu09876543tsrqpo;1=XD0029955933|2=29955933;2;de;AT|CH;1;1;Seven;;1;1;2;2021-01-11T12:00:00+01:00;2021-01-11T12:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
end;records=4
```

Figure 8: Delivery 3, Delta metadata file 02 for day 1

3.4.5.4. The third delta metadata file

It contains one update for document id starting with a4 related to ISIN XD0029955925 (change IsAvailable from 1 to 0). This means that the document can no longer be requested.

```
start;20160613_181501_+0200;CH-10597;SIX FI Ltd test users;version=3.1
Mod;DocumentID;GeneralIdentifiers;DocumentType;Language;Jurisdictions;MIMEType;GenerationMethodType;DocumentSupplier;IssuerIdentifiers;IsAvailable;PublicationClassType;SourcingStrategyType;LastUpdateTimestamp;LastGenerationTimestamp;ValidFromDate;ValidToDate;RecordDate
M;a41234567890abcdef12345678ghijkl;1=XD0029955925|2=29955925;1;de;AT;1;1;Two;;0;0;1;2021-01-11T13:00:00+01:00;2021-01-11T12:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
end;records=1
```

Figure 9: Delivery 4, Delta metadata file 03 for day 1

3.4.5.5. The fourth delta metadata file

It contains an update for document id starting with b5 related to ISIN XD0029955933 (Add the jurisdiction DE to the existing two jurisdictions AT|CH).

```
start;20160613_181501_+0200;CH-10597;SIX FI Ltd test users;version=3.1
Mod;DocumentID;GeneralIdentifiers;DocumentType;Language;Jurisdictions;MIMEType;GenerationMethodType;DocumentSupplier;IssuerIdentifiers;IsAvailable;PublicationClassType;SourcingStrategyType;LastUpdateTimestamp;LastGenerationTimestamp;ValidFromDate;ValidToDate;RecordDate
M;b50987654321zyxwvu09876543tsrqpo;1=XD0029955933|2=29955933;2;de;AT|CH|DE;1;1;Seven;;1;1;2;2021-01-11T14:00:00+01:00;2021-01-11T12:00:00+01:00
end;records=1
```

Figure 10: Delivery 5, Delta metadata file 04 for day 1

3.4.5.6. A full metadata file with eight records for the second day.

```
start;20160614_041501_+0200;CH-10597;SIX FI Ltd test users;version=3.1
Mod;DocumentID;GeneralIdentifiers;DocumentType;Language;Jurisdictions;MIMEType;GenerationMethodType;DocumentSupplier;IssuerIdentifiers;IsAvailable;PublicationClassType;SourcingStrategyType;LastUpdateTimestamp;LastGenerationTimestamp;ValidFromDate;ValidToDate;RecordDate
S;a01234567890abcdef12345678ghijkl;1=XD0029955925|2=29955925;1;en;GB;1;1;SIX;;1;0;1;2021-01-11T12:00:00+01:00;2021-01-11T12:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;a11234567890abcdef12345678ghijkl;1=XD0029955925|2=29955925;1;de;CH|DE;1;1;SIX;;1;0;1;2021-01-11T12:00:00+01:00;2021-01-11T12:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;a21234567890abcdef12345678ghijkl;1=XD0029955925|2=29955925;1;fr;FR;1;1;SIX;;1;0;1;2021-01-11T12:00:00+01:00;2021-01-11T12:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;a31234567890abcdef12345678ghijkl;1=XD0029955925|2=29955925;1;it;CH|IT;1;1;Two;;1;0;1;2021-01-11T12:00:00+01:00;2021-01-11T12:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;b10987654321zyxwvu09876543tsrqpo;1=XD0029955933|2=29955933;2;en;GB;1;1;Seven;;1;1;2;2021-01-11T12:00:00+01:00;2021-01-11T12:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;b20987654321zyxwvu09876543tsrqpo;1=XD0029955933|2=29955933;2;de;AT|CH|DE;1;1;Seven;;1;1;2;2021-01-11T12:00:00+01:00;2021-01-11T12:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;b30987654321zyxwvu09876543tsrqpo;1=XD0029955933|2=29955933;2;fr;FR;1;1;Seven;;1;1;2;2021-01-11T12:00:00+01:00;2021-01-11T12:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;b40987654321zyxwvu09876543tsrqpo;1=XD0029955933|2=29955933;2;it;IT;1;1;Seven;;1;1;2;2021-01-11T12:00:00+01:00;2021-01-11T12:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
S;b50987654321zyxwvu09876543tsrqpo;1=XD0029955933|2=29955933;2;de;AT|CH|DE;1;1;Seven;;1;1;2;2021-01-11T12:00:00+01:00;2021-01-11T12:00:00+01:00;2021-01-01;2021-12-31;2021-01-01
end;records=8
```

Figure 11: Delivery 6, Full metadata file day 2

3.4.6. Filename convention

For unique identification, a special naming convention of the files is established. The underline sign separates the elements. The filename is not case sensitive.

3.4.6.1. Default structure

yyyyMMdd_HHmms_DataType_Delivery_SequenceNumber.File

Example: 20160427_140522_M_F_00001.csv.gz

Element	Example	Description
yyyyMMdd	20160427	The date of the creation of the file: <ul style="list-style-type: none"> • yyyy = year • MM = month • dd = day
HHmms	140522	The time of the creation of the file: <ul style="list-style-type: none"> • HH = hour • mm = minute • ss = second
DataType	M	The data type field shows if in the file are metadata or content data. <ul style="list-style-type: none"> • M = Metadata.
Delivery	F	The delivery field offers the possibility to send periodically delta data. <ul style="list-style-type: none"> • F = Full delivery of all reachable documents. • D = Delta delivery science the last delivery.
SequenceNumber	00001	The sequence number is an ascending number that is assigned by the SIX DocHub. <ul style="list-style-type: none"> • 5 -digit number: The number will be reset every day and starts again with 00000.
File	.csv.gz	The file extension according to the used file format: <ul style="list-style-type: none"> • .csv.gz (csv file compressed in gzip file format)

Table 4: Structure of the filename

3.4.6.2. Other file name structure

In case there is an urgent need by the customer, the file name can be configured individually in the onboarding process. Each file name consists of a prefix, a center part and a postfix which are separated with the character "." Within each part the elements can be separated by the character "_".

Example: F1.20160427_140657_M_F.FULL.00001

(default file name: 20160427_140522_M_F_00001.csv.gz)

Parts	SIX default structure	Other structure (Example)
Prefix. (0-3)		- (String("F1"))
Center part	(yyyyMMdd) (HHmms) (DataType) (Delivery) (SequenceNumber)	(yyyyMMdd) (HHmms) (DataType) (Delivery)
.Postfix (0-3)	- (File)	- (if (Delivery.equals("F")) then String("FULL")) (if (Delivery.equals("D")) then String("DELTA")) - (SequenceNumber)

Table 5: Individual file name configuration

4. DocHub REST API

This section describes the REST API and the requests to search and retrieve documents from SIX DocHub.

4.1. General details

4.1.1. Certificate Validity Period

The DocHub certificate on all environments is valid for a one year period cycle ends every year on August, 12th. The SwissSign RSA TLS OV ICA certificate is issued by SwissSign. SIX recommends to not pin the certificate on client side since the certificate will change frequently. Moreover, The biggest problem with pinning is that you lose the ability to respond to certificate issues on a short schedule.

4.1.2. Environments

4.1.2.1. Production PROD

No	Topic	Short Description
1	Base URL	The base URL using for GUI access: https://www.six-dochub.com
2	API Documentation	Swagger JSON: https://www.six-dochub.com/api/rest/documentation Swagger YAML: https://www.six-dochub.com/api/rest/documentation.yaml Swagger UI: https://www.six-dochub.com/api/rest/documentation/ui
3	Username and password for using REST API	The username and the password will be provided during the onboarding process for the test system.

Table 6: Overview of the API Document retrieval (production environment)

4.1.2.2. Test TEST

No	Topic	Short Description
1	Base URL	The base URL using for GUI access: https://test.six-dochub.com
2	API Documentation	Swagger JSON: https://test.six-dochub.com/api/rest/documentation Swagger YAML: https://test.six-dochub.com/api/rest/documentation.yaml Swagger UI: https://test.six-dochub.com/api/rest/documentation/ui
3	Username and password for using REST API	The username and the password will be provided during the onboarding process for the test system.

Table 7: Overview of the API Document retrieval (customer test environment, member test)

4.1.3. Authorization

In order to authorize at the API, the user needs to request a token using HTTP POST method to create a token with the following URL: `/api/rest/v1/authentication/authorization-tokens`

All other methods need to contain the authorization HTTP request header with authentication scheme "Bearer" (according to RFC 6750) and a valid token as credentials.

Example: Authorization for token eyJhbGciOiJIUzI1NiJ9.eyJyY

Authorization: Bearer eyJhbGciOiJIUzI1NiJ9.eyJyY

The POST request delivers a new token, when no user session is active. A user session is the time during this token is valid. A request session is the time between arrival and completion of a request. An application with parallel processing might share the token. In case a requests fails due to wrong authorization, a new POST request with valid credentials delivers a new token which is valid.

In case of requesting a new request session and the maximum number is reached a fault will be returned. Then the application needs to wait until a request session completes.

SIX DocHub is designed to offer a consistently stable environment and response times. This capability includes intelligent traffic management, allowing DocHub to carefully handle high loads and gracefully handle requests to ensure an optimal experience for all users.

Bulk requests to check an instrument universe should be avoided during main business hours executed with a max. frequency of 5 requests per second, per instance (2 instances are in place for PROD and TEST MT1), per method (searchLatestDocuments, getDocument, searchArchive) that means in total 10 requests per second per method. On throttling method returns fault with status 1006: Too many requests

For bulk request we recommend using the Consolidated Metadata File.

A token expires under following conditions:

- Idle condition
When no request has been received after a predefined time (typically 15 minutes)
- Maximum time exceeded
A token has a predefined maximum lifetime (typically one day). In case a user session is active and the maximum time is reached the user session is closed

4.2. Methods

4.2.1. Overview of all methods

For all REST requests:

- Host: <https://www.six-dochub.com/>

No	Method	URL	Short Description	Notes
1	POST	api/rest/v1/authentication/authorization-tokens	Get an authorization token from the system via login.	User Authentication
2	POST	api/rest/v1/documents/latest/{identifier}/content-requests	Get a document.	Latest
3a	POST	api/rest/v1/documents/latest/search-requests	Search for a document using different parameters.	Latest V1 is deprecated
3b	POST	api/rest/v2/documents/latest/search-requests	Search for a document using different parameters.	Latest
4	POST	api/rest/v1/documents/archived/{archiveId}/content-requests	Get a document out of the archive.	Archive Documents
5a	POST	api/rest/v1/documents/archived/search-requests	Search for a document out of the archive using different parameters.	Archive Documents V1 is deprecated
5b	POST	api/rest/v2/documents/archived/search-requests	Search for a document out of the archive using different parameters.	Archive Documents
6	POST	api/rest/v1/instruments/isin/{isinValue}/pib/content-requests	Create a PIB document on the fly	Instruments
7	GET	Valor: api/rest/v1/instruments/valor/{identifier}/six-status-information ISIN: api/rest/v1/instruments/isin/{identifier}/six-status-information	Get SIX status information of an instrument.	Instruments
8	GET	api/rest/v1/healthcheck/ping	Using the ping endpoint ensures that routing and other network-level components work together to deliver a request to the API process	Health Check

Table 8: Overview of the SIX DocHub REST API methods

The syntax of the request methods, parameters and the response messages are described in the following chapters.

4.2.2. Overview of all “request parameters” of the methods

Request parameter	Type	Method	Description and Rule
archive	Boolean	2, 6	Defines whether the request document is to be archived: <ul style="list-style-type: none"> • false = Do not archive • true = Archive (default)
archiveID	String (64)	4	The archiveID is an alphanumeric String with a maximum of 64 characters. The attribute archiveID is provided every time a

			document is called using the method " getDocument " with the request parameter " archive " set to " true ".
customData1	String (16)	2, 4	This field gives the distributor the opportunity to provide some calling parameters for reporting purposes.
customData2	String (16)	2, 4	This field gives the distributor the opportunity to provide some calling parameters for reporting purposes.
customData3	String (16)	2, 4	This field gives the distributor the opportunity to provide some calling parameters for reporting purposes.
customData4	String (64)	2, 4	This field gives the distributor the opportunity to provide some calling parameters for reporting purposes.
customData5	String (64)	2, 4	This field gives the distributor the opportunity to provide some calling parameters for reporting purposes.
x-custom-data	String (128)	2, 4	This is an optional header parameter that gives the distributor the opportunity to provide some calling parameters for reporting purposes. The string provided in the header will be stored in customData4 and customData 5 fields.
Identifier	String (64)	7	The instrument id in format of the Swiss Valor Number or ISIN.
documentID	String (64)	2	The documentID is an alphanumeric String with a maximum of 64 characters. The attribute documentID is provided by the metadata file or by the request method " searchDocument ".
documentSupplier	String (128)	3, 5	This information indicates from which source a document is sourced.
documentTypes	Integer (List, 1-n)	3	Document types of the requested document.
documentType	Integer	3, 5	Document Type describes the business type of document.
issuerIdentifier	composition	3, 5	A pair of an institution scheme type and an institution id (see next parameter).
issuerIdentifierValue	String (64)	3, 5	Issuer id in format of the issuer scheme type, see next parameter.
issuerIdentifierType	Integer	3, 5	<u>Issuer Identifier Type</u> of the issuer id.
generalIdentifier	composition	3a, 5a	A pair of an <u>Identifier Scheme</u> and Value (see next parameter).
generalIdentifierValue	String (64)	3a, 5a	Instrument Identifier Value in format of the <u>Identifier Scheme</u> , see next parameter.
generalIdentifierType	Integer	3a, 5a	<u>Scheme</u> of the Instrument Identifier.
generalIdentifier	composition	3b, 5b	A pair of an <u>Identifier Scheme</u> and Value (see next parameter).
value	String (64)	3b, 5b	General Identifier Value in format of the <u>Identifier Scheme</u> , see next parameter.
type	Integer	3b, 5b	<u>Scheme</u> of the General Identifier.
isinValue	String (64)	6	Instrument id in format of the ISIN
jurisdictionCodes	String (2) (List, 1-n)	3	The countries in which the document is valid. The values have to be according to ISO 3166-1 (uppercase two letter code) or "U0" for unknown.
jurisdiction	String (2)	3, 5	The country in which the document is valid. The values have to be according to ISO 3166-1 (two letter code).
languageCodes	String (2) (List, 1-n)	3	Languages of the requested documents. The values have to be according to ISO 639-1 (lowercase two letter code) or "u0" for unknown.
language	String (2)	3, 5	Language of the requested document. The values have to be according to ISO 639-1 (two letter code).
listLimit	Integer	3, 5	The number of delivered results (default: 100/ maximum: 100).
listPage	Integer	3, 5	The result page in combination with the attribute listLimit.

Example: listLimit = 10, listPage = 2:

			The result will be the search entries from 11 to 20.
mimeType	Integer	3, 5	<u>MIME Type</u> of the document.
password	String (64)	1	The password for the technical user account of the distributor. The password is stored in the database as a hash value.
storedCustomData1	String (16)	5	This attribute allows the distributor to search in the archive for its own customData1 attribute.
storedCustomData2	String (16)	5	This attribute allows the distributor to search in the archive for its own customData2 attribute.
storedCustomData3	String (16)	5	This attribute allows the distributor to search in the archive for its own customData3 attribute.
storedCustomData4	String (64)	5	This attribute allows the distributor to search in the archive for its own customData4 attribute.
storedCustomData5	String (64)	5	This attribute allows the distributor to search in the archive for its own customData5 attribute.
username	String (64)	1	The username of a technical user account of the distributor.

Table 9: Overview of all request parameters

4.2.3. Overview of all “response parameters” of the methods

Response parameter	Type	Method	Description and Rule
archivelD	String (64)	2, 5	The archivelD is an alphanumeric String with a maximum of 64 characters.
authorizationToken	String (1024)	1	The user's authorization token. A token for a technical user account is typically valid for 15 minutes.
delDate	String	7	Date when instrument becomes inactive.
document	Binary String	2, 4, 6	The document itself. Sent as a binary string.
documentID	String (64)	3, 5	The documentID is an alphanumeric String with a maximum of 64 characters.
documentSupplier	String (128)	3, 5	The name of the document supplier (for more details see Document Supplier).
documentType	Integer	3, 5	Document Type describes the business type of document.
error_code	Integer	1-7	Error code delivered when a requests fails
fidlegScopeIndicator	Integer	7	The FIDLEG scope indicator of an instrument indicates whether the instrument needs a KID or not. 1 Liable/applicable 2 Potentially liable/applicable 12 Liable/applicable - confirmed 3 Exempt/not liable/applicable 11 Potentially not liable/applicable 13 not liable/applicable - confirmed
fidlegProspectusRelevancy	Boolean	7	<u>Currently not provided via API</u> : Prospectus needed in Switzerland
fidlegProspectusApprovalDate	String	7	<u>Currently not provided via API</u> : Date when Prospectus has been approved by the authorities in Switzerland
generationMethodType	Integer	3, 5	<u>Generation Method Type</u> describes the method of the document generation (on the fly or produced in advance).
generalIdentifierValue	Integer	3a, 5a	Instrument Identifier Value in format of the Identifier Scheme, see next parameter.
generalIdentifierType	Integer	3a, 5a	Scheme of the Instrument Identifier.
generalIdentifier	composition	3b, 5b	A pair of an <u>Identifier Scheme</u> and Value (see next parameter).
value	String (64)	3b, 5b	General Identifier Value in format of the <u>Identifier Scheme</u> , see next parameter.
type	Integer	3b, 5b	<u>Scheme</u> of the General Identifier.
instrumentStatus	Integer	7	Indicates the status of the instrument. 1 Not yet issued 4 Inactive 7 In liquidation/dissolution The instrument will be taken back following the sale of the company's or fund's assets and subsequent dissolution/liquidation. 8 Active 9 In default Debt instruments where the interest or redemption payments were not made as originally provided for in the prospectus or where payments discontinued.
issuerIdentifierValue	String (64)	3, 5	Issuer id in format of the issuer scheme type, see next parameter.
issuerIdentifierType	Integer	3, 5	<u>Issuer Identifier Type</u> of the issuer id.
jurisdictionsCodes	String (2) (List, 1-n)	3, 5	The country in which the document is valid. The values have to be according to ISO 3166-1 (two letter code) or “U0” for unknown.
validFromDate	String	3,5	Date
validToDate	String	3,5	Date
recordDate	String	3,5	Date
languageCodes	String (2) (List, 1-n)	3, 5	Language of the requested document. The values have to be according to ISO 639-1 (two letter code) or “u0” for unknown.

message	String (64)	1-7	Textual error description and additional information when applicable.
contentType	Integer	3, 5	<u>MIME Type</u> of the document.
priipScopeIndicator	Integer	7	The PRIIP scope indicator of an instrument indicates whether the instrument needs a KID or not 1 Liable/applicable 2 Potentially liable/applicable 12 Liable/applicable - confirmed 3 Exempt/not liable/applicable 11 Potentially not liable/applicable 13 not liable/applicable - confirmed
sixSecurityType	String (1)	7	The SIX Security Type indicates the type of an instrument Symbol Description A Rights/Subs. Rights/Claims/Fraction acc. B National currencies C Trust certificate unit/fund, investment foundation units D Part in cooperative society E Deposit and Saving books F REPO/Securities Lending and Borrowing H Synthetic instrument I Forward transactions J Combined transactions K Technical instrument L FRN/Variables/Grad., index-link interest M Leveraged products N REPO-Basket O ETD Contract specification P Futures Q Money market instr. (CD/CP) R Commodities S Other instruments with cash-flow V Convertibles X Technical currencies Y Indices Z Options (call/put) 0 Bond, compound instr. cons.of several bonds 1 Shares/Units with shares/Particip. Cert. 2 DE saving bonds/Collect.sec.No BK accept. 3 Coupon/Talon (inactive) 4 Other instruments without cash-flow (inactive) 5 Insurance policies 6 Structured instruments 7 Trust-Shares 8 Interest Rate 9 Rest-Quota attestation
sourcingStrategyType	Integer	3	Describes the role of the supplier in respect of document distribution. Indicates the best source, when there are multiple matches for a document search. Possible values are described in the attribute table document.
storedCustomData1	String (16)	5	This attribute includes the value of the customData1 attribute, exactly as the distributor gave it when the " getDocument " function was called.
storedCustomData2	String (16)	5	This attribute includes the value of the customData2 attribute, exactly as the distributor gave it when the " getDocument " function was called.
storedCustomData3	String (16)	5	This attribute includes the value of the customData3 attribute, exactly as the distributor gave it when the " getDocument " function was called.
storedCustomData4	String (64)	5	This attribute includes the value of the customData4 attribute, exactly as the distributor gave it when the " getDocument " function was called.
storedCustomData5	String (64)	5	This attribute includes the value of the customData5 attribute, exactly as the distributor gave it when the " getDocument " function was called.

timestamp	composition	5	Unix Timestamp (Unix time is a way of representing a timestamp by representing the time as the number of seconds since January 1st, 1970 at 00:00:00 UTC).
publicationClassificationType	Integer	3	Describes the intended accessibility of a document on the distributor side (DocHub clients). The Supplier informs the distributor, if he is allowed to publish the document (e.g. on his website in a public area where no password is needed).
issuerName	String (128)	3	The name of the issuer of the instrument.
lastUpdateTimestamp	Integer	3, 5	Last update timestamp as delivered by the supplier as a Unix Timestamp (Unix time is a way of representing a timestamp by representing the time as the number of seconds since January 1st, 1970 at 00:00:00 UTC).
lastGenerationTimestamp	Integer	3, 5	Last generation timestamp as delivered by the supplier as a Unix Timestamp (Unix time is a way of representing a timestamp by representing the time as the number of seconds since January 1st, 1970 at 00:00:00 UTC).
totalHits	Long	3, 5	The total number of results
isFiltered	Boolean	3, 5	When the attribute value is "true" it means that some results are not being delivered in the output since entitlement for SEDOL and/or CUSIP is missing.
page	Integer	3, 5	The page number
pageSizeLimit	Integer	3, 5	The limit of records being shown on a page.

Table 10: Overview of all response parameters

4.2.4. Errors delivered when a request fails

When DocHub is not able to fulfil a request an application error can be delivered. Errors are delivered as Content-Type: application/json and deliver an error code and message. Below is the error format:

```
{
  "message": string,
  "error_code": integer($int32)
}
```

For example a document that could not be retrieved from a website an error message like the following is delivered:

```
{
  "message": "DocumentID not available (likely permanent): ErrorRef: a48e0857-3576-4614-aadf-af68aeb4ca33",
  "error_code": 320
}
```

In chapter [5.2 Web service: error_code](#) you can find an overview of the error codes delivered.

4.2.5. User Authentication V1

The request enables access to DocHub, when a valid username and password has been supplied. A technical user is required to login. Is this the case, a token is returned. This token must be used for subsequent data requests. If the login credentials are invalid a HTTP status code for errors will be returned. See also chapter 4.1.3 Authorization for more details.

Request parameter	Mandatory
username	Yes
password	Yes

Table 11: Request parameters getAuthorizationToken

Response parameter	Mandatory
Token	Yes

Table 12: Response parameters getAuthorizationToken

Example REST Version V1:

Request:

```
'POST' \
  'https://www.six-dochub.com/api/rest/v1/authentication/authorization-tokens' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
    "username": "username_123",
    "password": "password_123"
  }'
```

Figure 12: REST V1: Example of the request User Authentication

Content-Type: application/json

Response Body:

```
{
  "token": "eyJhbGciOiJIUzUxMiJ9.eyJyY2x1cyI6WyJURUNIRElTVkVjZjBjG1lbnQlOnsibmFtZSI6IHRvY0h1Ykdsb2JhbFVuaXZlcnNlIi..."}'
```

Figure 13: REST V1: Example of the Response Body for User Authentication

4.2.6. Latest Documents: Content-Request V1

The content-request retrieves the document with the specified “documentID”. If the document is found, the document will be returned. If an error occurs, an error_code (see: 5.2 Web service: error_code) is returned.

In case that a document is delivered and the request argument “archive” is set the document is stored in the archive.

The document is delivered in the response as binary string with content-type: application/pdf which can be stored as a PDF file.

The related **archive ID** is delivered in the response Header of the message.

The attributes “customData1-5” give the user the possibility to store additional information together with the archived document, e.g. a transaction number to identify the request or client. The data is also available in the audit trail. As an alternative the API user could provide the custom data string in an optional header “x-custom-data” instead of in the request body. The string is then copied on the “customData4” and “customData5” fields on DocHub side. Be aware that the information provided in the optional header would overwrite the information provided in the “customData4” and “customData5” field via request body. Therefore, please only use either the “customData4” and “customData5” fields in the request body or the header “x-custom-data”. For clients using the SIX DocHub service via bLink OpenAPI platform, the optional header and the fields “customData4” and “customData5” are not available.

When a document for an instrument has been updated since the last full or delta consolidated metadata file delivery it might happen, that the document ID is not valid anymore. When requesting an invalid

documentID an `error_code 320` is returned. In this case please search for the document and retry the access with the new document ID delivered as search result.

Be aware that most of the documents are retrieved from an external server. This is done to ensure delivery of actual documents. Some documents are even created when a document request is received. Since DocHub depends on external servers, we cannot guarantee that a document can be delivered. Furthermore we cannot ensure that a document can be delivered within a predefined time. Especially for big documents with more than 5 MB it might take some time for retrieval.

4.2.6.1. Additional information regarding errors when documents are retrieved.

When an error code is delivered, the message can contain an additional reference `ErrorRef`: with details of the error. With this code and the environment (PROD, TEST) our DocHub operation team can get more detailed information about the root cause of the problem.

See chapter 4.2.4 above Errors delivered when a request fails for a sample reply. In respect of external deliveries following error codes are of special interest.

- **305** = An error occurred while reading the document
This error is delivered under following sample conditions.
 - It is not possible to connect to the server (might be caused by a temporary outage, or an invalid certificate)
 - The delivered data is not a PDF document
The server delivered different information than the document
- **320** = The requested documentID is not available
This error is returned, when the documentID is not available anymore. In this case, it doesn't make sense to retry the delivery. It might happen, that documentIDs have changed after the delivery of the most recent metadata file. You can do a search for the document and get the actual document ID
- **330** = Failed to retrieve document
This error code is delivered when the web server is responding the request with an error or a reply without a valid PDF document.

4.2.6.2. Content-Requests sequence and example

Request parameter	Mandatory
documentID	Yes
Archive (default: true = Do archive)	No
customData1	No
customData2	No
customData3	No
customData4	No
customData5	No
x-custom-data (request header)	No

Table 13: Request parameters

Response parameter	Mandatory
Document (as binary string)	Yes
archive-id (response header)	No

Table 14: Response parameters

Example REST Version V1:

Request:

```
'POST' \
  'https://www.six-dochub.com/api/rest/v1/documents/latest/anmadufmagg6xx6srpymw.../content-requests?archive=true' \
  -H 'accept: application/pdf' \
  -H 'Authorization: Bearer eyJhbGciOiJIUzUxMiJ9...' \
  -H 'Content-Type: application/json' \
  -H 'x-custom-data: "string" \
  -d '{
    "customData": {
      "1": "string",
      "2": "string",
      "3": "string",
      "4": "string",
      "5": "string"
    }
  }'
```

Figure 14: REST V1: Example of the request body of the Latest Documents: Content-Request

Response Body: PDF document as binary string

Response header:

x-archive-id: 0a870580ade0cca747f3dd129a4a008b-18779-1651650627
content-type: application/pdf

4.2.7. DEPRECATED - Latest Documents: Search-Requests V1

The Search-Requests retrieve documents matching the specified criteria. Matches are returned as a list of elements representing a document. The response contains the documents "documentID", its identifier and other metadata. The document files are not part of the response. They need to be requested individually with the [Content-Request](#).

If no match is found, an empty list will be returned. To limit the amount of results, the limit parameter can be used (default limit is 100 entries). To request the next part of the results, the page parameter can be set (ex. result has 100 entries, but only show entries 11 to 20 one would set the page parameter to 2 and the limit parameter to 10). This endpoint is deprecated as [V2](#) has been introduced.

Request parameter	Mandatory
generalIdentifierType	No (1)
generalIdentifierValue	No (1, 2)
documentTypes	No (1, 3)
languageCodes	No (1, 3)
jurisdictionCodes	No (1, 3)
contentType	No (1)
documentSupplier	No (1, 2)
issuerIdentifierType	No (1)
issuerIdentifierValue	No (1, 2)
listPage	No
listLimit	No

Table 15: Request parameters Search-Requests

Response parameter	Mandatory
--------------------	-----------

- Searches can be performed only by the parameters that are marked with the **number 1**.
- The flagged parameters with the **number 2** are string fields. This kind of field gives the opportunity to search substrings. In the example below is a search for instruments with substring "DE000GL"
- The parameters with the **number 3** are being delivered as an array. The parameter can be used to search multiple values with one search.
- In the example below is a search for de and en language

a list of hits	Yes
• documentID	• Yes
• generalIdentifierType	• Yes
• generalIdentifierValue	• Yes
• documentType	• Yes
• languageCode	• Yes
• jurisdictionCodes	• No
• mimeType	• Yes
• generationMethodType	• No
• documentSupplier	• No
• issuerIdentifierType	• No
• issuerIdentifierValue	• No
• issuerName	• No
• sourcingStrategyType	• Yes
• publicationClassificationType	• No
• lastUpdateTimestamp	• No
• lastGenerationTimestamp	• No
• validFromDate	• No
• validToDate	• No
• recordDate	• No
totalHits	Yes
page	Yes
pageSizeLimit	Yes
isFiltered	Yes

Table 16: Response parameters Search-Requests

Example REST Version V1:

Request:

```
curl -X 'POST' \  
  'https://www.six-dochub.com/api/rest/v1/documents/latest/search-requests' \  
  -H 'accept: */*' \  
  -H 'Authorization: Bearer eyJhbGciOiJIUzUxMiJ9.eyJpZCI6MTg...\  
  -H 'Content-Type: application/json' \  
  -d '{  
    "generalIdentifier": {  
      "generalIdentifierType": "1",  
      "generalIdentifierValue": "DE000GL"  
    },  
    "documentTypes": [  
      1  
    ],  
    "languageCodes": [  
      "de",  
      "en"  
    ],  
    "jurisdictionCodes": [  
      "DE"  
    ],  
    "listLimit": 50,  
    "listPage": 1  
  }'
```

Figure 15: REST V1: Example of the Latest Documents: Search-Requests Request

Response Body:

```
{
  "page": 1,
  "pageSizeLimit": 50,
  "hits": [
    {
      "GeneralIdentifiers": [
        {
          "instrumentIdentifierType": 1,
          "instrumentIdentifierValue": "DE000GL19VP3"
        }
      ],
      "documentType": 1,
      "languageCode": "en",
      "jurisdictionCodes": [
        "DE"
      ],
      "mimeType": 1,
      "generationMethodType": 2,
      "documentSupplier": "Wallstreet DOCS",
      "issuerIdentifiers": [
        {
          "issuerIdentifierType": 2,
          "issuerIdentifierValue": "W22LROWP2IHZNBB6K528"
        }
      ],
      "lastUpdateTimestamp": 1559238223,
      "lastGenerationTimestamp": 1558428074,
      "sourcingStrategyType": 3,
      "publicationClassificationType": 0,
      "issuerName": "Goldman, Sachs & Co. Wertpapier GmbH",
      "documentID": "adda8tr5h8dnm6ntjad9ysmbssgssak5"
    },
    {
      "GeneralIdentifiers": [
        {
          "instrumentIdentifierType": 1,
          "instrumentIdentifierValue": "DE000GL19VP3"
        }
      ],
      "documentType": 1,
      "languageCode": "de",
      "jurisdictionCodes": [
        "DE"
      ],
      "mimeType": 1,
      "generationMethodType": 2,
      "documentSupplier": "Wallstreet DOCS",
      "issuerIdentifiers": [
        {
          "issuerIdentifierType": 2,
          "issuerIdentifierValue": "W22LROWP2IHZNBB6K528"
        }
      ],
      "lastUpdateTimestamp": 1559238223,
      "lastGenerationTimestamp": 1558428074,
      "sourcingStrategyType": 3,
      "publicationClassificationType": 0,
      "issuerName": "Goldman, Sachs & Co. Wertpapier GmbH",
      "documentID": "addar4un6tcv4gpsdyesnmy8m7cuwbxw"
    }
  ],
  "totalHits": 22,
  "isFiltered": false
}
```

Figure 16: REST V1: Example of the Response Body for Latest Documents: Search-Requests

4.2.8. Latest Documents: Search-Requests V2

The Search-Requests retrieve documents matching the specified criteria. Matches are returned as a list of elements representing a document. The response contains the documents "documentID", its identifier and other metadata. The document files are not part of the response. They need to be requested individually with the [Content-Request](#).

If no match is found, an empty list will be returned. To limit the amount of results, the limit parameter can be used (default limit is 100 entries). To request the next part of the results, the page parameter can be set (ex. result has 100 entries, but only show entries 11 to 20 one would set the page parameter to 2 and the limit parameter to 10).

Request parameter	Mandatory
generalIdentifier.type	No (1)
generalIdentifier.value	No (1, 2)
documentTypes	No (1, 3)
languageCodes	No (1, 3)
jurisdictionCodes	No (1, 3)
mimeType	No (1)
documentSupplier	No (1, 2)
issuerIdentifierType	No (1)
issuerIdentifierValue	No (1, 2)
listPage	No
listLimit	No

Table 17: Request parameters Search-Requests

Response parameter	Mandatory
--------------------	-----------

- Searches can be performed only by the parameters that are marked with the **number 1**.
- The flagged parameters with the **number 2** are string fields. This kind of field gives the opportunity to search substrings. In the example below is a search for instruments with substring ""DE000GL"
- The parameters with the **number 3** are being delivered as an array. The parameter can be used to search multiple values with one search.
- In the example below is a search for de and en language

a list of hits	Yes
• documentID	• Yes
• generalIdentifiers.type	• Yes
• generalIdentifiers.value	• Yes
• documentType	• Yes
• languageCode	• Yes
• jurisdictionCodes	• No
• mimeType	• Yes
• generationMethodType	• No
• documentSupplier	• No
• issuerIdentifiers.type	• No
• issuerIdentifiers.value	• No
• issuerName	• No
• sourcingStrategyType	• Yes
• publicationClassificationType	• No
• lastUpdateTimestamp	• No
• lastGenerationTimestamp	• No
• validFromDate	• No
• validToDate	• No
• recordDate	• No
totalHits	Yes
page	Yes
pageSizeLimit	Yes
isFiltered	Yes

Table 18: Response parameters Search-Requests

Example REST Version V2:

Request:

```
curl -X 'POST' \  
  'https://www.six-dochub.com/api/rest/v2/documents/latest/search-requests' \  
  -H 'accept: */*' \  
  -H 'Authorization: Bearer eyJhbGciOiJIUzUxMiJ9.eyJpZCI6MTg...\  
  -H 'Content-Type: application/json' \  
  -d '{  
    "generalIdentifier": {  
      "type": "1",  
      "value": "DE000GL"  
    },  
    "documentTypes": [  
      1  
    ],  
    "languageCodes": [  
      "de",  
      "en"  
    ],  
    "jurisdictionCodes": [  
      "DE"  
    ],  
    "listLimit": 50,  
    "listPage": 1  
  }'
```

Figure 17: REST V2: Example of the Latest Documents: Search-Requests Request

Response Body:

```
{
  "page": 1,
  "pageSizeLimit": 50,
  "hits": [
    {
      "generalIdentifiers": [
        {
          "type": 1,
          "value": "DE000GL19VP3"
        }
      ],
      "documentType": 1,
      "languageCode": "en",
      "jurisdictionCodes": [
        "DE"
      ],
      "mimeType": 1,
      "generationMethodType": 2,
      "documentSupplier": "Wallstreet DOCS",
      "issuerIdentifiers": [
        {
          "issuerIdentifierType": 2,
          "issuerIdentifierValue": "W22LROWP2IHZNBB6K528"
        }
      ],
      "lastUpdateTimestamp": 1559238223,
      "lastGenerationTimestamp": 1558428074,
      "sourcingStrategyType": 3,
      "publicationClassificationType": 0,
      "issuerName": "Goldman, Sachs & Co. Wertpapier GmbH",
      "documentID": "adda8tr5h8dnm6ntjad9ysmbssgssak5"
    },
    {
      "GeneralIdentifiers": [
        {
          "instrumentIdentifierType": 1,
          "instrumentIdentifierValue": "DE000GL19VP3"
        }
      ],
      "documentType": 1,
      "languageCode": "de",
      "jurisdictionCodes": [
        "DE"
      ],
      "mimeType": 1,
      "generationMethodType": 2,
      "documentSupplier": "Wallstreet DOCS",
      "issuerIdentifiers": [
        {
          "issuerIdentifierType": 2,
          "issuerIdentifierValue": "W22LROWP2IHZNBB6K528"
        }
      ],
      "lastUpdateTimestamp": 1559238223,
      "lastGenerationTimestamp": 1558428074,
      "sourcingStrategyType": 3,
      "publicationClassificationType": 0,
      "issuerName": "Goldman, Sachs & Co. Wertpapier GmbH",
      "documentID": "addar4un6tcv4gpsdyesnmy8m7cuwbxw"
    }
  ],
  "totalHits": 22,
  "isFiltered": false
}
```

Figure 18: REST V2: Example of the Response Body for Latest Documents: Search-Requests

4.2.10. DEPRECATED - Archived Documents: Search-Requests V1

The request searches for documents in the archive matching the specified input criteria. Matching records are returned as a list of elements representing a document. The archiveID, documentID and other metadata for a document is returned when performing a successful search request. The document files are not part of the response. They need to be requested individually with the API Archived Documents: Content-Request.

If there is no matching record, an empty list is returned. To limit the amount of results, the limit parameter can be used (default limit is 100 entries). To request the next part of the results, the page parameter can be set (ex. result has 100 entries, but only show entries 11 to 20 one would set the page parameter to 2 and the limit parameter to 10). This endpoint is deprecated as V2 has been introduced.

Request parameter	Mandatory
documentID	No (1)
generalIdentifier	No (1, 2)
documentType	No (1)
languageCode	No (1)
jurisdictionCode	No (1)
mimeType	No (1)
documentSupplier	No (1, 2)
issuerIdentifier	No (1, 2)
storedCustomData1 - 5	No (1)
listPage/ listLimit	No/ No

Table 21: Request Parameters Search Request

Response parameter	Mandatory
"hits" List of:	
• archiveID	• Yes
• documentID	• Yes
• timestamp	• Yes
• generalIdentifiers	• Yes
• documentType	• Yes
• languageCode	• Yes
• jurisdictionCodes	• No
• mimeType	• Yes
• generationMethodType	• No
• documentSupplier	• No
• issuerIdentifiers	• No
• storedCustomData1 - 5	• No
totalHits	Yes
page	Yes
pageSizeLimit	Yes
isFiltered	Yes

Table 22: Response Parameters Search Request

- Searches can be performed only by the parameters that are marked with the **number 1**.
- The flagged parameters with the **number 2** are string fields. This kind of field gives the opportunity to search substrings.

Example REST Version V1:

Request:

```
curl -X 'POST' \  
  'https://test.six-dochub.com/api/rest/v1/documents/archived/search-requests' \  
  -H 'accept: */*' \  
  -H 'Authorization: Bearer eyJhbGciOiJIUzUxMiJ9...' \  
  -H 'Content-Type: application/json' \  
  -d '{  
    "generalIdentifier": {  
      "generalIdentifierType": "1",  
      "generalIdentifierValue": "LU0828906700"  
    },  
    "languageCode": "en",  
    "jurisdictionCode": "CH"  
  }'
```

Figure 20: REST V1: Example of the Request Body for Archived Documents: Search-Requests

Response Body:

```
{  
  "page": 0,  
  "pageSizeLimit": 100,  
  "hits": [  
    {  
      "timestamp": 1646992509,  
      "GeneralIdentifiers": [  
        {  
          "generalIdentifierType": 1,  
          "generalIdentifierValue": "LU0828906700"  
        }  
      ],  
      "documentType": 101,  
      "languageCode": "en",  
      "jurisdictionCodes": [  
        "CH"  
      ],  
      "mimeType": 1,  
      "generationMethodType": 3,  
      "documentSupplier": "Fundinfo",  
      "issuerIdentifiers": [],  
      "storedCustomData1": "321654",  
      "storedCustomData2": null,  
      "storedCustomData3": null,  
      "storedCustomData4": null,  
      "storedCustomData5": null,  
      "archiveID": "7b643c31e6bd8116a95ed53ef2762833-4481-1646992509",  
      "documentID": "agta6wcxw52tqq118duyke6rfnxdhbyg"  
    },  
  ],  
  "totalHits": 2,  
  "isFiltered": false  
}
```

Figure 21: REST V1: Example of the Response Body for Archived Documents: Search-Requests

4.2.11. Archived Documents: Search-Requests V2

The request searches for documents in the archive matching the specified input criteria. Matching records are returned as a list of elements representing a document. The archiveID, documentID and other metadata for a document is returned when performing a successful search request. The document files are not part of the response. They need to be requested individually with the API Archived Documents: Content-Request.

“storedCustomData1-5” is the “customData1-5” which had been supplied with the request “Latest Documents: Content-Request” at an earlier point in time when the document was downloaded and the archiving of the document had been initiated.

If there is no matching record, an empty list is returned. To limit the amount of results, the limit parameter can be used (default limit is 100 entries). To request the next part of the results, the page parameter can be set (ex. result has 100 entries, but only show entries 11 to 20 one would set the page parameter to 2 and the limit parameter to 10).

Request parameter	Mandatory
documentID	No (1)
generalIdentifier.type	No (1)
generalIdentifier.value	No (1, 2)
documentType	No (1)
languageCode	No (1)
jurisdictionCode	No (1)
contentType	No (1)
documentSupplier	No (1, 2)
issuerIdentifierType	No (1)
issuerIdentifierValue	No (1, 2)
storedCustomData1 - 5	No (1)
listPage/ listLimit	No/ No

Table 23: Request Parameters Search Request

Response parameter	Mandatory
“hits” List of:	
• archiveID	• Yes
• documentID	• Yes
• timestamp	• Yes
• generalIdentifiers.type	• Yes
• generalIdentifiers.value	• Yes
• documentType	• Yes
• languageCode	• Yes
• jurisdictionCodes	• No
• mimeType	• Yes
• generationMethodType	• No
• documentSupplier	• No
• issuerIdentifierType	• No
• issuerIdentifierValue	• No
• storedCustomData1 - 5	• No
totalHits	Yes
page	Yes
pageSizeLimit	Yes
isFiltered	Yes

Table 24: Response Parameters Search Request

- Searches can be performed only by the parameters that are marked with the **number 1**.
- The flagged parameters with the **number 2** are string fields. This kind of field gives the opportunity to search substrings.

Example REST Version V2:

Request:

```
curl -X 'POST' \
  'https://test.six-dochub.com/api/rest/v2/documents/archived/search-requests' \
  -H 'accept: */*' \
  -H 'Authorization: Bearer eyJhbGciOiJIUzUxMiJ9...' \
  -H 'Content-Type: application/json' \
  -d '{
    "generalIdentifier": {
      "type": "1",
      "value": "LU0828906700"
    },
    "languageCode": "en",
    "jurisdictionCode": "CH"
  }'
```

Figure 22: REST V2: Example of the Request Body for Archived Documents: Search-Requests

Response Body:

```
{
  "page": 0,
  "pageSizeLimit": 100,
  "hits": [
    {
      "timestamp": 1646992509,
      "generalIdentifiers": [
        {
          "type": 1,
          "value": "LU0828906700"
        }
      ],
      "documentType": 101,
      "languageCode": "en",
      "jurisdictionCodes": [
        "CH"
      ],
      "mimeType": 1,
      "generationMethodType": 3,
      "documentSupplier": "Fundinfo",
      "issuerIdentifiers": [
        {
          "issuerIdentifierType": 1,
          "issuerIdentifierValue": "string"
        }
      ],
      "storedCustomData1": "321654",
      "storedCustomData2": null,
      "storedCustomData3": null,
      "storedCustomData4": null,
      "storedCustomData5": null,
      "archiveID": "7b643c31e6bd8116a95ed53ef2762833-4481-1646992509",
      "documentID": "agta6wcxw52tqq118duyke6r-fnxdhbyg"
    }
  ],
  "totalHits": 2,
  "isFiltered": false
}
```

Figure 23: REST V2: Example of the Response Body for Archived Documents: Search-Requests

4.2.12. Instruments: SIX-Status-Information V1

This endpoint can be used to retrieve status information about an instrument.

Be aware that only ISIN or valor number is supported as scheme type. Both instrument scheme types have their own REST endpoints. In the current API the attributes “fidlegProspectusRelevancy” and “fidlegProspectusApprovalDate” will be null for all instruments status requests.

Request parameter	Mandatory
identifier	Yes

Table 25: Request parameters six-status-information

Response parameter	Mandatory
instrumentStatus	Yes
delDate	No
priipScopeIndicator	Yes
fidlegScopeIndicator	Yes
sixSecurityType	Yes
fidlegProspectusRelevancy	No
fidlegProspectusApprovalDate	No

Table 26: Response parameters six-status-information

Example REST Version V1:

Request:

```
(ISIN):
GET ' \
  'https://test.six-dochub.com/api/rest/v1/instruments/isin/LU0828906700/six-status-
information' \
  -H 'accept: */*' \
  -H 'Authorization: Bearer
eyJhbGciOiJIUzUxMiJ9.eyJpZCI6NjkyNCwicm9sZXMiOiIsIiVEVDSERJU1QiXSwic2Vzc2lvd19pZCI6IjFhNmY1OWMwL
WE4NDMtNGUwNi1iYWNjLWVjMGJkYzY0MmRjMiIsImNsawVudCI6eyJlbnRpdGxlbWVudHMiOiJldlJlYyY1IjojRG9jSHV
iR2xvYmFsVW5pdmVyc2UiLCJpZCI6MTgxLCJma2l2X2N1c3RvbWVyX2lkIjojQ0g5OTk5OSJ9LCJleHAiOiJlE2NDk4OTYxN
zIsIm5hbWUiOiJDSdk50Tk5X2RvY1RFU1Rz...'

(Valor):
GET ' \
  'https://test.six-dochub.com/api/rest/v1/instruments/valor/19443037/six-status-information'
\
  -H 'accept: */*' \
  -H 'Authorization: Bearer
eyJhbGciOiJIUzUxMiJ9.eyJpZCI6NjkyNCwicm9sZXMiOiIsIiVEVDSERJU1QiXSwic2Vzc2lvd19pZCI6IjFhNmY1OWMwL
WE4NDMtNGUwNi1iYWNjLWVjMGJkYzY0MmRjMiIsImNsawVudCI6eyJlbnRpdGxlbWVudHMiOiJldlJlYyY1IjojRG9jSHV
iR2xvYmFsVW5pdmVyc2UiLCJpZCI6MTgxLCJma2l2X2N1c3RvbWVyX2lkIjojQ0g5OTk5OSJ9LCJleHAiOiJlE2NDk4OTYxN
zIsIm5hbWUiOiJDSdk50Tk5X2RvY1RFU1Rz...'

```

Figure 24: REST V1: Example of the request for Instruments: six-status-information requests

Response Body:

```
{
  "instrumentStatus": 8,
  "delDate": null,
  "priipScopeIndicator": 3,
  "fidlegScopeIndicator": 1,
  "sixSecurityType": "C",
  "fidlegProspectusRelevancy": null,
  "fidlegProspectusApprovalDate": null
}
```

Figure 25: REST V1: Example of the response body for Instrument: six-status-information requests

4.2.13. Instruments: PIB Content-Requests V1

This endpoint generates and retrieves a PIB document for a specified “ISIN” and requires special entitlement as it is a joint solution between SIX DocHub and ARIVA EasyLink.

As PIB is a German regulation the attribute “**language**” is always set to “**de**” and the “**jurisdiction**” to “**DE**”. The requestor does not have to provide these attributes.

The related **archive ID** is delivered in the response Header of the message.

If the document has been successfully created, the document will be returned.

Request parameter	Mandatory
isinValue	Yes
archive (default: true = Do archive)	No
customData1	No
customData2	No
customData3	No
customData4	No
customData5	No

Table 27: Request parameters PIB Content-Requests

Response parameter	Mandatory
Document (as binary string)	Yes
Archive-id (response header)	No

Table 28: Response parameters PIB Content-Requests

Example REST Version V1:

Request:

```
curl -X 'POST' \
  'https://test.six-dochub.com/api/rest/v1/instruments/isin/DE000BAY0017/pib/content-requests?archive=true' \
  -H 'accept: application/pdf' \
  -H 'Authorization: Bearer eyJhbGciOiJIUzUxMiJ9...' \
  -H 'Content-Type: application/json' \
  -d '{
    "customData": {
      "1": "string",
      "2": "string",
      "3": "string",
      "4": "string",
      "5": "string"
    }
  }'
```

Figure 26: REST V1: Example of the request Instruments: PIB Content-Requests

Response Body: PDF document as binary string

Response header:

x-archive-id: 0a870580ade0cca747f3dd129a4a008b-18779-1651650627
 content-type: application/pdf

4.2.14. Health Check: Ping V1

Using the health check ping endpoint ensures that routing and other network-level components work together to deliver a request to the API process. If the request is successful “pong” will be returned in the response body.

The endpoint can be requested without the user being logged-in and authenticated.

Example REST Version V1:

Request:

```
curl -X 'GET' \  
'https://test-internal.six-dochub.com/api/rest/v1/healthcheck/ping' \  
-H 'accept: application/json'
```

Figure 27: REST V1: Example of the request Health Check: Ping

Response body:

```
{  
  "message": "pong"  
}
```

Figure 28: REST V1: Example of the Response Body for Health Check: Ping

Response header:

content-type: application/json

5. General API information

5.1. General type definitions

The definitions in this chapter have been moved to document DocHub Attribute Tables.pdf It is available at DocHub Member area and Documentation Center.

5.1.1. Identifier Scheme Type

5.1.2. Contract Side Type

5.1.3. Document Type

5.1.4. MIME Type

5.1.5. Generation Method Type

5.1.6. Issuer Identifier Type

5.1.7. Publication Classification Type

5.1.8. Sourcing Strategy Type

5.2. Web service: error_code

REST returns technical faults back as an error_code.

Name	Description
error_code	100 = General error, see error message for details

200	=	Parameter is missing, see error message for details
201	=	Parameter value is invalid, see error message for details
204	=	Data type of parameter is wrong, see error message for details
205	=	Identifier Scheme is unknown
230	=	No active connections available
301	=	Identifier is unknown
302	=	Document is not available
305	=	An error occurred while reading the document
320	=	The requested documentID is not available
330	=	Failed to retrieve document
400	=	Missing permission for request
601	=	Document generator failed to generate document, see error message for details
602	=	Parameter is missing for generating a document, see error message for details
603	=	Parameter value is invalid for generating a document, see error message for details
604	=	The document is not available on the document generator, see error message for details
(Note: The 6xx error codes are only thrown by methods 7 and 8.)		
1001	=	Login failed, username or password is wrong
1002	=	Session ID is invalid
1004	=	The maximum number of connections is reached
1005	=	Invalid authorization token
1006	=	Too many requests

Table 29: error_code List

5.3. Definition of the attribute type dateTime

The attribute type dateTime is structured as follows:

Format of timestamp	Description
yyyy-mm-ddThh:mm:sszzzzzz	yyyy = year - = separator between parts of the date portion mm = month - = separator between parts of the date portion dd = day T = Separator indicating that time-of-day follows hh = hours - = separator between parts of the time-of-day portion mm = minutes - = separator between parts of the time-of-day portion ss = seconds zzzzzz = time zone regions with standard offset from UTC Examples: 2016-06-01T12:15:14.000+02:00 = 2016-06-01 12:15:14 +02:00 2016-06-15T16:45:01.000-08:00 = 2016-06-15 16:45:01 -08:00 More details can be found at: http://www.w3.org/TR/xmlschema-2/#dateTime .

Table 30: Format of the attribute type dateTime

5.4. Definition of the attribute format fileCreationTime

Format of timestamp	Description
yyyymmddThh:mm:ss_zzzzz	yyyy = year mm = month dd = day T = Separator indicating that time-of-day follows hh = hours mm = minutes ss = seconds _ = “_” Underscore as separator zzzzz = time zone regions with standard offset from UTC Example: 20220502_071504_+0200 = 2022-05-02 07:15:04 +02:00 2 nd May 2022 7:15:04

Table 31: Format of the attribute type dateTime

6. Implementation Support

6.1. Demo java application

A demo java application is available in the documentation center (Java 11 is required). The following functions are implemented:

- User Authentication
Please provide userid and password from your **technical** user. The user provided for GUI access is not entitled to use the API.
- Latest Documents: Search-Requests
Search for documents using the token from login.
- Latest Documents: Content-Request
Access DocHub and download a document using the token from login.
- Archive Documents: Search-Requests
Search for documents in the archive using the token from login.
- Archive Documents: Content-Request
Access DocHub and download a document from the archive using the token from login.

6.2. Screenshot from SwaggerUI

The SwaggerUI allows the user to visualize and interact with the API's resources without having any of the implementation logic in place: <https://test.six-dochub.com/api/rest/documentation>

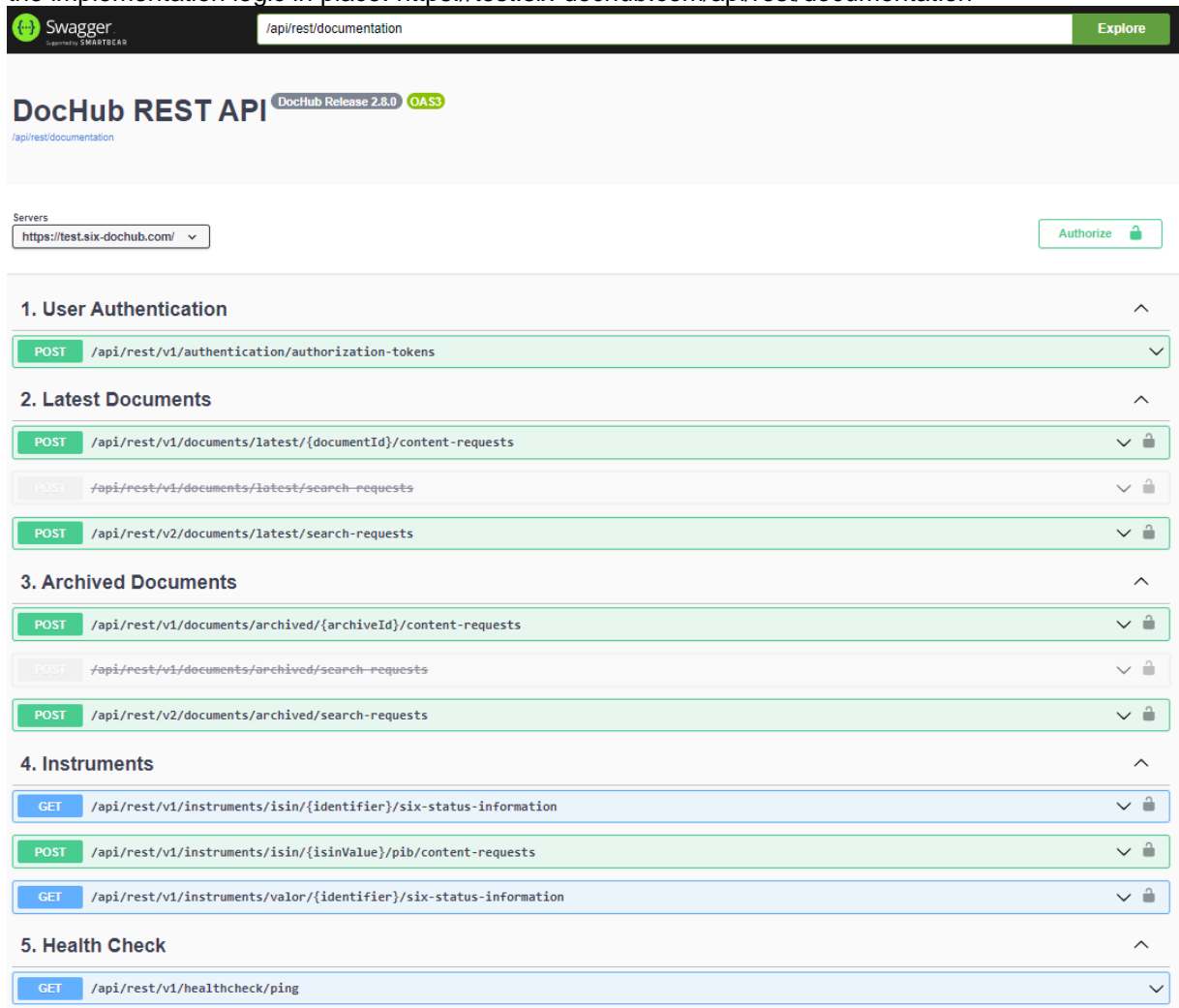


Figure 29: SwaggerUI for the DocHub REST API

When you intend to use this functions, the first step is a login with a technical user. After a successful ul login you get a token back. Please copy this token without the surrounding “ characters and activate



This token needs to be copied in the Value field of the screen below and then confirmed by Authorize. This token is then used in the authorization Header entry of the requests.

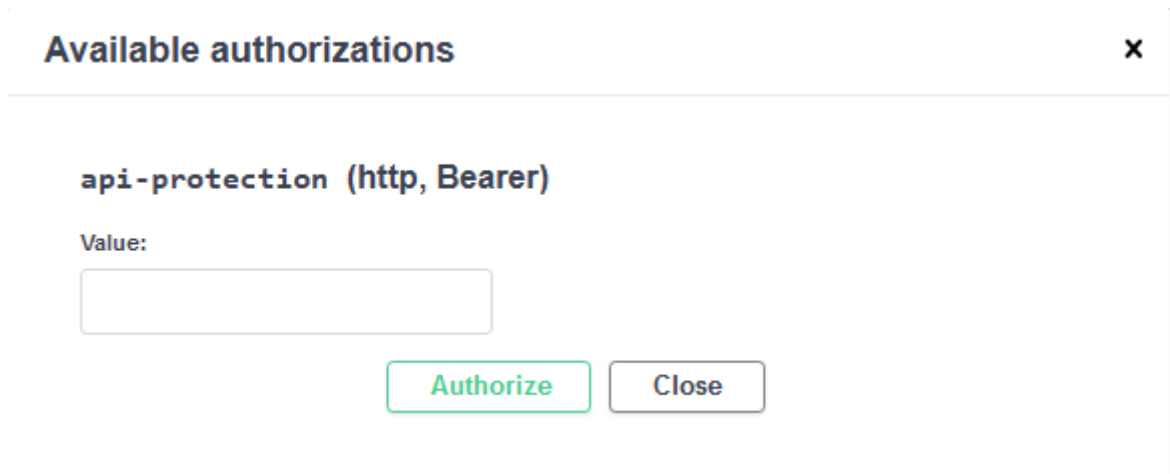


Figure 30: SwaggerUI Available Authorizations