



REST API documentation Interface Connection firstbase

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Revocation (disclaimer)

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1 Introduction

Have you decided on firstbase and would like to deliver and maintain your item master data using an API interface connection?

Or would you like to retrieve and receive item master data from firstbase via an API interface?

This document describes the most important queries to the firstbase API interface.

1.1 Target audience

This document is aimed at people who implement interfaces and want to obtain data from firstbase via an API interface.

1.2 Scope and Boundary

This document describes the most important queries to the firstbase API interface.



Note:

The current version of this documentation contains the interface functions for data recipients.

A next version with the interface functions for data suppliers is in progress and will be available shortly.

1.3 Format descriptions and data model

You will find comprehensive documentation on the data models of the respective platform on the firstbase website: <https://www.firstbase.ch/en/services/documents-links>

2 Authorization and Base URL

To get a connection to the data exchange platform, you need a username and a password as login data. The interface uses Basic-Auth as the authorization method. You need to pass the credentials in the authorization header of each request.

You will receive the login data for each base URL when registering for firstbase.

2.1 Base URLs:

firstbase healthcare: <https://healthcare.firstbase.ch/api>

firstbase healthcare (test): <https://healthcare-test.firstbase.ch/api>

firstbase consumer goods: <https://consumergoods.firstbase.ch/api>

firstbase consumer goods (test): <https://consumergoods-test.firstbase.ch/api>

trustbox: <https://trustbox.firstbase.ch/api>

trustbox (test): <https://trustbox-test.byrd.io/api>

2.2 Test access

If you prefer not to test the API connection on the productive environment, you can use the test environment.

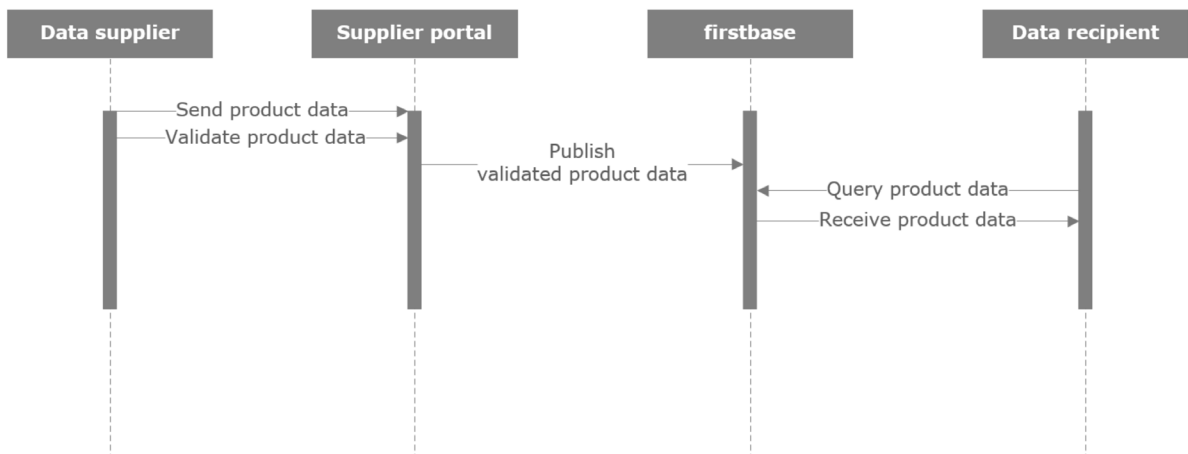
Please note that you need separate credentials for each environment.

For test access please contact distribution@gs1.ch

3 General process of data delivery and data reception

Data suppliers deliver and maintain their item data in their own data supplier account. If it is published from there, item data will be pushed to general catalogue of the respective environment.

Data recipients query item data from the general catalogue and receive item data from the general catalogue.



4 Data Receiver: Retrieve and receive data

4.1 Search and browse function via the web GUI

The graphical user interface (Web GUI) of the complete catalogue is available with the same login data as for the API interface. There you can filter for new items and suppliers, display the item data, compare items and download selected items as Excel, XML or JSON files.

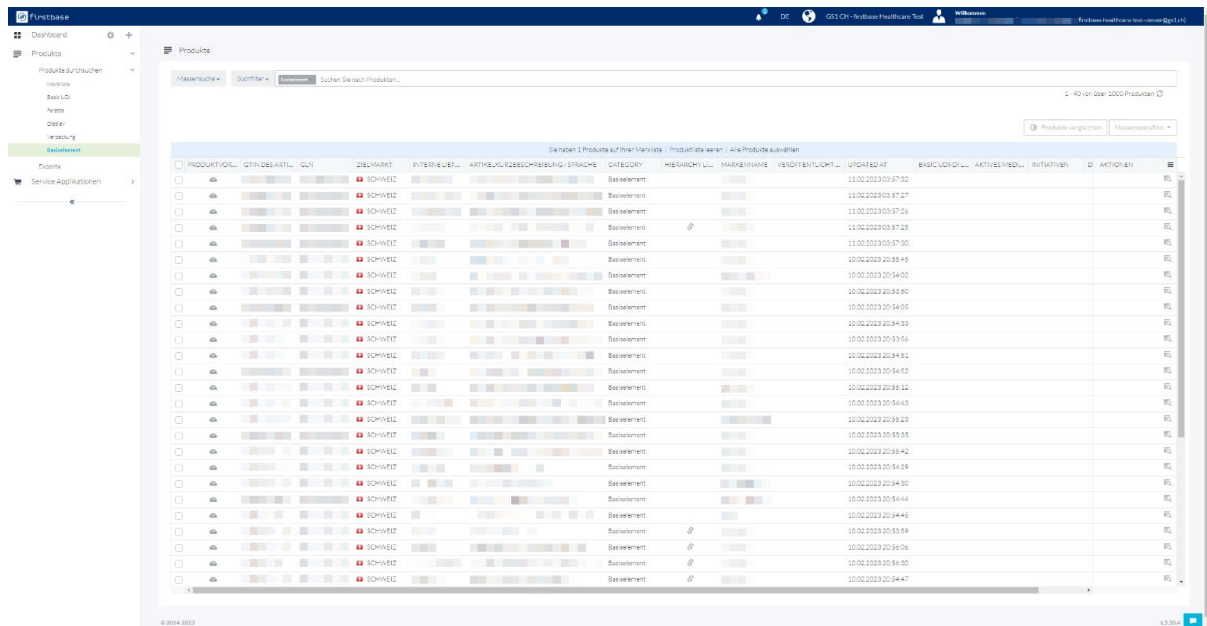


Figure 1: General catalogue view

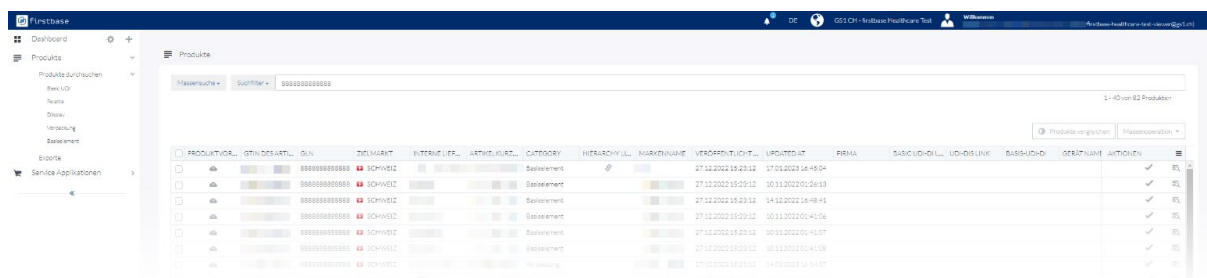


Figure 2: General catalogue view with search results



Figure 3: Advanced filter options

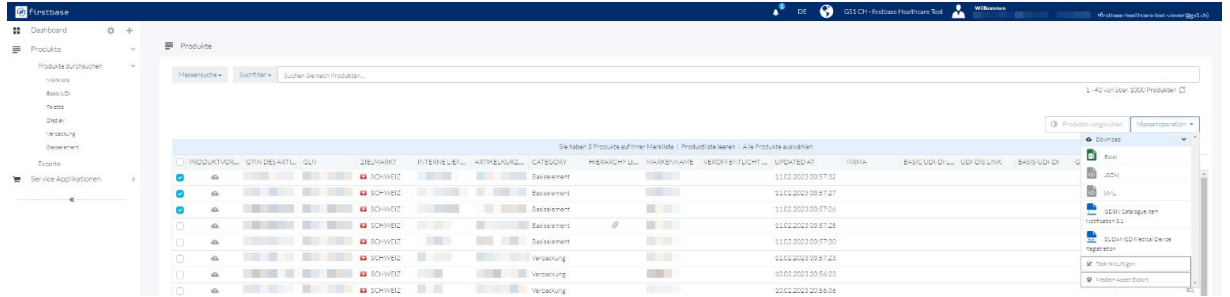


Figure 4: Export options. Applies to selected items.

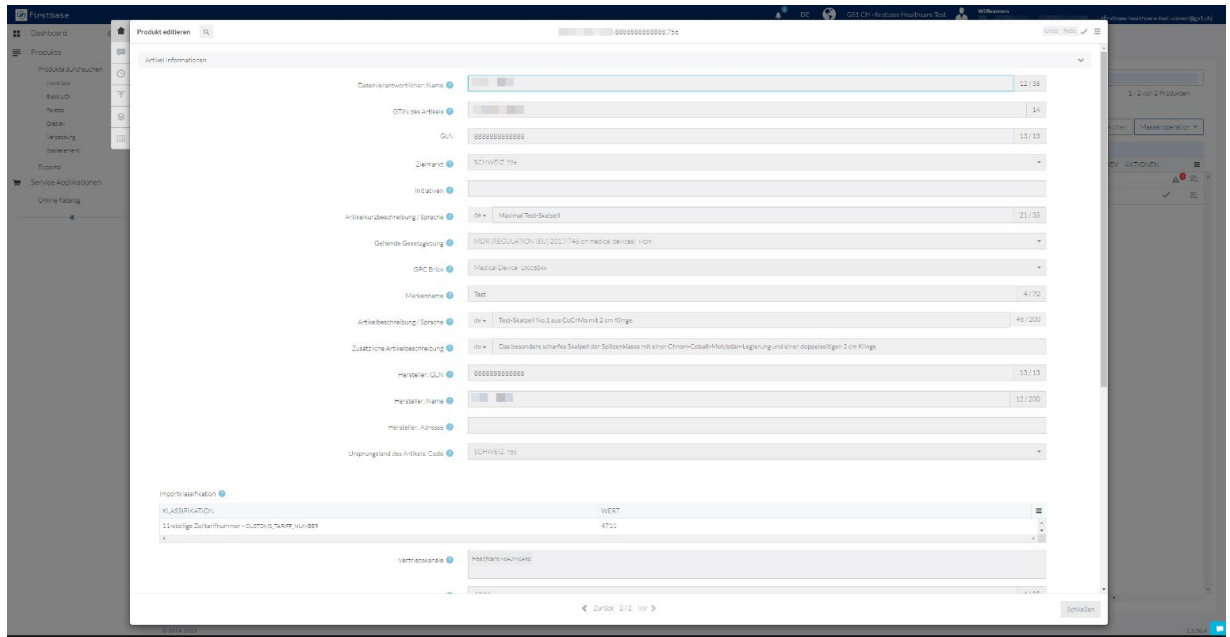


Figure 5: Product detail view

4.2 Interface functions for data recipients

4.2.1 Retrieving a single item

path	v1/items/<pk>	
method	GET	
parameter	<pk>	Primary key of the item to be retrieved. A primary key consists of a combination of GTIN, GLN and target market country code and is separated by a colon

Expected query:

The method expects the primary key of the item being searched for as the last path parameter. Either the item you are looking for is returned as a JSON object or the message "Object not found" (Code 404) if no matching data was found.

Expected return value:

Code: 200

Data: JSON object containing information about the requested item

Example query:

<https://healthcare-test/v1/items/022222222222:888888888888:756>

4.2.2 Retrieving items with Query

path	v1/items?keyword=<expr>	
method	GET	
parameter	<expr>	Valid query expression to restrict the return

Expected query:

The method expects an expression that serves as a filter for the call. Only items matching the filter will be returned.

Expected return value:

Code: 200

Data: An array of JSON objects that match the expression

Filter on specific attribute:

Structure: `attribute_name:search_value`

Example: The attribute 'brandName' shall have the value 'TESTMARKE' → `brandName:TESTMARKE`

Example: The attribute 'gpc' shall have the value '10005844' → `gpc:10005844`

Example: The attribute 'gln' shall have the value '8888888888888' → `gln:8888888888888`

Filter for a specific attribute with a different comparison operator

Allowed operators: `<`, `<=`, `>`, `>=`

Structure: `attribute_name operator search_value`

Example: The attribute 'updatedAt__' shall be newer than 01/01/2023 → `updatedAt__>2023-01-01`



Coding of comparison operators

Important: Since these are path parameters, the operators must be coded accordingly. The above example then becomes: `updatedAt__%3E2023-01-01`

<code><</code>	<code>%3C</code>	comparison sign "less than"
<code>=</code>	<code>%3D</code>	Equals sign, equals sign
<code>></code>	<code>%3E</code>	comparison sign "greater than"

Use of logic operators

The search expressions can be combined with one another using brackets and logic operators.

Structure: `<expr> AND|OR <expr>`

Example: The attribute 'gln' shall have the value '8888888888888' and the attribute 'updatedAt__' shall be newer than 01/01/2023 → `(gln:8888888888888)AND(simple_date%3E2023-01-01)`

Example query:

[https://healthcare-test/v1/items?keyword=\(gln:8888888888888\)AND\(simple_date%3E2023-01-01\)](https://healthcare-test/v1/items?keyword=(gln:8888888888888)AND(simple_date%3E2023-01-01))

4.2.3 Retrieving items in chunks

The REST interface uses chunks to break up responses into smaller pieces. The default chunk size is 20 items (hits).

path	v1/items/?count=<x>	
method	GET	
parameter	<x>	Number of desired items per query (optional).
headers	x-item-cursor	In the header you get the x-item-cursor with which the next items (hits) can be queried.

Expected return value:

Code: 200

Data: An array of JSON objects

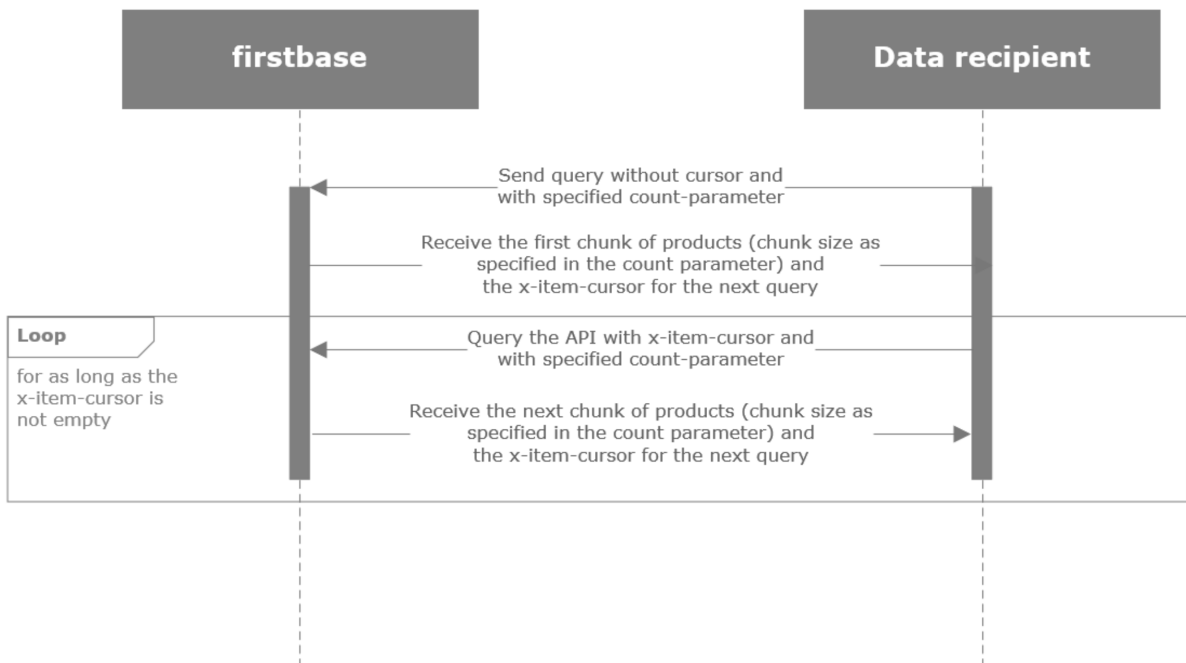
Header: x-item-cursor: the cursor to use for the next call

Request flow 'Get items in chunks'

When retrieving chunks, two elements are important.

- 1) The 'count' parameter determines how many records are returned per request.
- 2) The 'x-item-cursor' is used to identify a search query across requests.

Procedure:



Send the first request without 'x-item-cursor'. The response will contain the new 'x-item-cursor'.

Send further requests with 'x-item-cursor'. Check the existence of the received 'x-item-cursor' after each response. If the cursor exists, it replaces the previous one in the next request.

If a response does not contain a cursor, the query is complete, and no more records are returned.

4.2.4 Query embedding of an item in its hierarchy

path	v1/items/<pk>/hierarchies	
method	GET	
parameter	<pk>	<p>Primary key of the item to be retrieved.</p> <p>A primary key consists of a combination of GTIN, GLN and target market country code and is separated by a colon</p>

Expected return value:

Code: 200

Data: An array of JSON objects

Validity:

This method is currently only available for queries from the firstbase healthcare catalogue.

Example query:

<https://healthcare-test.firstbase.ch/api/v1/items/02222222222222:88888888888888:756/hierarchies>

4.2.5 Concrete examples of queries

Query of all published items of a supplier (GLN) with example GLN in standard XML:

<https://healthcare-test.firstbase.ch/api/v1/items?format=xml&keyword=gln:88888888888888>

Same query with the result in standard JSON:

<https://healthcare-test.firstbase.ch/api/v1/items?format=json&keyword=gln:88888888888888>

Query of all items from a supplier (GLN) that have changed since April 03, 2018 (delta query):

[https://healthcare-test.firstbase.ch/api/v1/items?count=200&compliant=true&keyword=gln:88888888888888+AND+\(updatedAt %3E=2018-04-03\)](https://healthcare-test.firstbase.ch/api/v1/items?count=200&compliant=true&keyword=gln:88888888888888+AND+(updatedAt %3E=2018-04-03))

5 Data recipient: Retrieve and receive data from the trustbox

The same functions as before are available for trustbox customers.

The legacy format can be queried with the path suffix `&format=application/xml;schema=trustbox_xml`. Without this addition, you get the platform's own JSON format. Without the schema parameter, you get the platform's native XML format.

5.1 Search and browse

The search and browse functions (see p. 6) are also available to trustbox data recipients.

5.2 getChangedArticles function

This query returns all items that have changed since the date in the query.

path	v1/items?keyword=(updatedAt__%3E<YYYY-MM-DD>)&format=application/xml;schema=trustbox_xml	
method	GET	
parameter	<YYYY-MM-DD>	The requested deadline date

Example query:

[https://trustbox-test.firstbase.ch/api/v1/items?keyword=\(updatedAt__%3E=2023-01-03\)&format=application/xml;schema=trustbox_xml](https://trustbox-test.firstbase.ch/api/v1/items?keyword=(updatedAt__%3E=2023-01-03)&format=application/xml;schema=trustbox_xml)

5.3 Function getTrustedDataByGTIN

This query returns all item information for a specific GTIN.

path	v1/items?keyword=gtin:<gtin>&format=application/xml;schema=trustbox_xml	
method	GET	
parameter	<gtin>	The GTIN to be queried

Example query:

https://trustbox-test.firstbase.ch/api/v1/items?keyword=gtin:07640148735209&format=application/xml;schema=trustbox_xml

5.4 Function getGLNs

This query returns all GLNs from all items in trustbox.

path	v1/items?category=Gdsn3BaseModel::GDSNBaseUnit&format=application/xml&fields=gln
method	GET
parameter	-

Example query1:

<https://trustbox-test.firstbase.ch/api/v1/items?category=Gdsn3BaseModel::GDSNBaseUnit&fields=gln&format=application/xml>

Example query 2, combination with query of all changed data per key date:

[https://trustbox-test.firstbase.ch/api/v1/items?keyword=\(updatedAt %3E2023-01-03&category=Gdsn3BaseModel::GDSNBaseUnit&format=application/xml&fields=gln](https://trustbox-test.firstbase.ch/api/v1/items?keyword=(updatedAt %3E2023-01-03&category=Gdsn3BaseModel::GDSNBaseUnit&format=application/xml&fields=gln)

Example return:

```
<?xml version="1.0" encoding="UTF-8"?>
<pim>
  <item>
    <gln>7612345000008</gln>
  </item>
  <item>
    <gln>7649997749016</gln>
  </item>
  <item>
    <gln>7649997749047</gln>
  </item>
</pim>
```

5.5 Function getTrustedData

This query returns all item data from a specific supplier (a GLN).

path	v1/items?keyword=gln:<gln>&format=application/xml;schema=trustbox_xml
method	GET
parameter	<gln> The GLN for which item data shall be queried

Example query:

https://trustbox-test.firstbase.ch/api/v1/items?keyword=gln:07612345000176&format=application/xml;schema=trustbox_xml