da|ra ClientAPI, version 1.0

This document is proposed for technical audience and users of the API.

1.1 About
The registration agency da|ra provides a graphical user interface to support publication agents to upload metadata and to register DOI names. Several XML files may be uploaded at once.

1.2 License / Legal Information
To be announced.

1.3 System Requirements
The software requires an installed version of Java 8. Make sure to install it beforehand.
You can find the required version at https://java.com/en/download/.

1.4 Security
All requests to the API go via HTTPS and require a basic access authentication header. So please, have your username and password at hand (the credentials you received by da|ra).

1.5 Installation
There is no installation needed. Decompress the file and you get two self-executable files. According to your OS you can use either the exe or the jar file. Both are doing the same. After successful import a property file will be created in the directory of the self-executable files. This file provides information about last accessed directory. Please do not delete it.

1.6 Prerequisites to use the API
Besides of the system requirements the compliance of the following prerequisites is recommended to use the API successfully.

Before you send your XML files to da|ra you can validate them against the latest official release of the da|ra metadata scheme. You can find the current xsd on the da|ra website at https://www.da-ra.de/en/technical-information/doi-registration. Examples for XML files are also provided there.

We strongly recommend not leaving the field resourceIdentifier with the subfields identifier and currentVersion blank when using the API. Otherwise they will be generated automatically by the da|ra system, since both identifier and version are primary keys. Please be aware of this fact and provide the information to avoid collision and loss of control whenever updating metadata.

Example:
<resourceIdentifier>
  <identifier>Own ID</identifier>
  <currentVersion>Own version</currentVersion>
</resourceIdentifier>
Some constraints listed below are associated with each account users get from da|ra:

- For the metadata field doiProposal only DOIs with a prefix assigned to your account are allowed. We recommend that only the following characters are used within a DOI name:
  - 0-9
  - a-z
  - A-Z
  - - (dash)
  - . (dot)
  - _ (underscore)
  - + (plus)
  - : (colon)
  - / (slash)

- With regards to the metadata field dataURL for the landing page of your resource it should be noted that only URLs are allowed which refer to specific domains assigned to your account (e.g. based on the specifications in the Service Level Agreement). If any changes are necessary, please inform the da|ra technical support team at tech@da-ra.de.

1.7 API functionality

After starting the program you are only 4 steps away to register DOIs or update your metadata.

![da|ra Client API GUI](image)

**Figure 1. da|ra Client API GUI**
1.7.1 Step One: Select the destination folder of your XML files.

There is a limitation of a maximum of 100 files per upload. Make sure to only select a directory with less or equal to 100 files. Otherwise you will be prompted to adjust the amount of files in the directory and there will be no progress in terms of uploading. The folder should not contain XML files that you want to exclude. An important prerequisite is to provide a valid document.

1.7.2 Step Two: Check the URI of the API-Endpoint

The input field for the endpoint URI is already filled out by default with the API endpoint of the test environment, where you can test the upload and view the results. If you wish to upload files to your da\ra resources of the production environment, adjust the endpoint accordingly.

The endpoint URI to the production environment at the time of this release (version 1.0) can be found here: https://www.da-ra.de/dara/study/importXML

da\ra ClientAPI, version 1.0 – released August 1st, 2017
1.7.3 Step Three: Account credentials

![Image](image1.png)

*Figure 4. Account credentials*

Please enter your credentials (username and password), you have received by da|ra (see figure 4). If the username and/or password are not available, please contact the da|ra team at tech@da-ra.de.

1.7.4 Step Four: Send to da|ra

![Image](image2.png)

*Figure 5. Choose the right option before uploading XML*

Two options of registration are available: the DOIs may be registered immediately when the XML is being uploaded or the metadata may be uploaded and updated later with a DOI registration. If the checkbox ‘Register immediately?’ is checked, registration is performed when clicking the submit button. Please consider that each DOI will be minted with the first dataURL entry you provided in the dataURLs element of the respective XML file.
1.7.5 The upload and registration process

If your credentials are incorrect you get a warning dialog and the process will be stopped and discontinued. None of the metadata will be uploaded and no DOI will be registered.

![Warning Dialog](image)

Figure 6. Warning Dialog

If the account credentials are valid the upload process continues. Dialog boxes will pop up and inform you about the status of the process.

![Upload started](image)

Figure 7. Upload started

Wait for the "Upload finished" message:

![Upload finished](image)

Figure 8. Upload finished

Whenever the upload is finished, the process of upload and register is logged. The log file is saved in the destination folder of your XML files you have selected in step one. If you use this folder again, please make sure the log file is renamed or moved; otherwise the file will be overwritten.

1.7.6 The log file

To each XML file there is an entry in the log file. The structure of the important part of information will be as follows:

```
File name: [filename1].xml
Status: HTTP/1.1 201 Created
Response body: ...
```

```
File name: [filename2].xml
Status: HTTP/1.1 200 OK
Response body: [your DOI Name]
```

```
File name: [filename3].xml
Status: HTTP/1.1 400 Bad Request
Response body: [the reason for the error]
```

da|ra ClientAPI, version 1.0 - released August 1st, 2017
You get a quick overview of the successful upload at the end of the log file e.g.

40 file(s) were processed
35 file(s) successfully uploaded/updated through the API
5 file(s) failed to be uploaded through the API

Table 1: response status

<table>
<thead>
<tr>
<th>status</th>
<th>response body (explained)</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 OK</td>
<td>DOI name (the DOI name which was successful registered)</td>
</tr>
<tr>
<td>201 Created</td>
<td>(operation successful, returned if a new meta data set created)</td>
</tr>
<tr>
<td>400 Bad Request</td>
<td>(upload / register failed, reason for the error)</td>
</tr>
<tr>
<td>401 Unauthorized</td>
<td>no or wrong login</td>
</tr>
<tr>
<td>500 Internal Server Error</td>
<td>server internal error (try later and if problem persists please contact the da</td>
</tr>
</tbody>
</table>

1.8 Contact/Support

For more information, see the da|ra website at https://www.da-ra.de/en.

If you have any questions in general please contact: Brigitte.Hausstein@gesis.org. For technical issues please contact: tech@da-ra.de.