

## da|ra ClientAPI, version 1.1

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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 should validate them against the latest official release of the da|ra metadata scheme downloadable on the da|ra website. 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 [support@da-ra.de](mailto:support@da-ra.de).

## 1.7 API functionality

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

Figure 1. da|ra Client API GUI

### 1.7.1 Step One: Select the destination folder of your XML files.

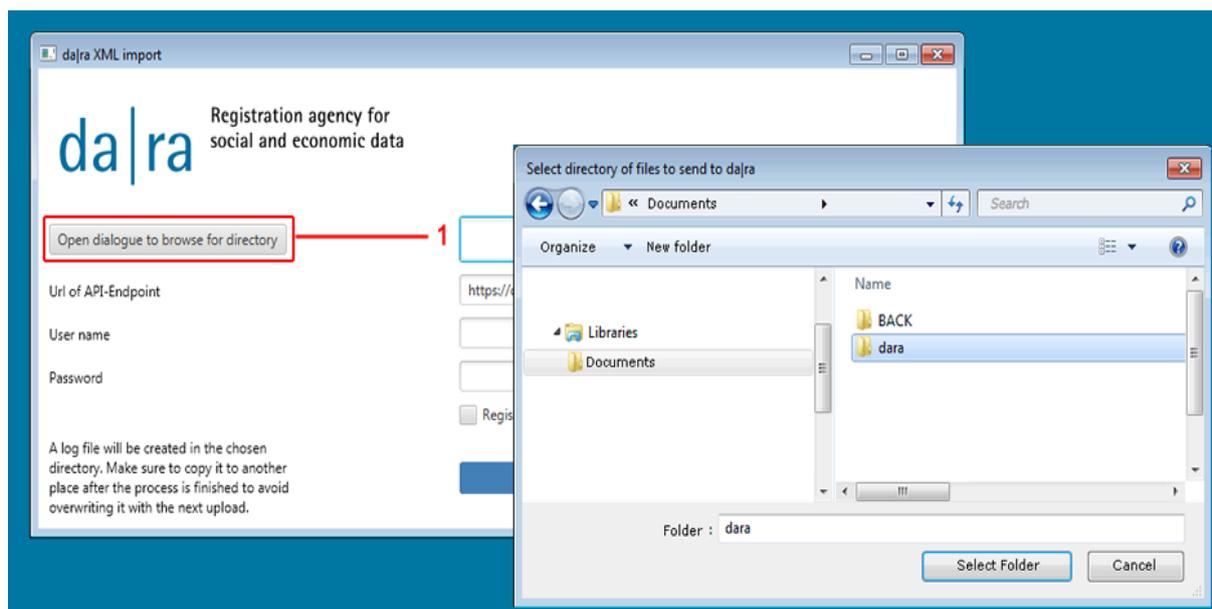


Figure 2. Select the folder of your XML files

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

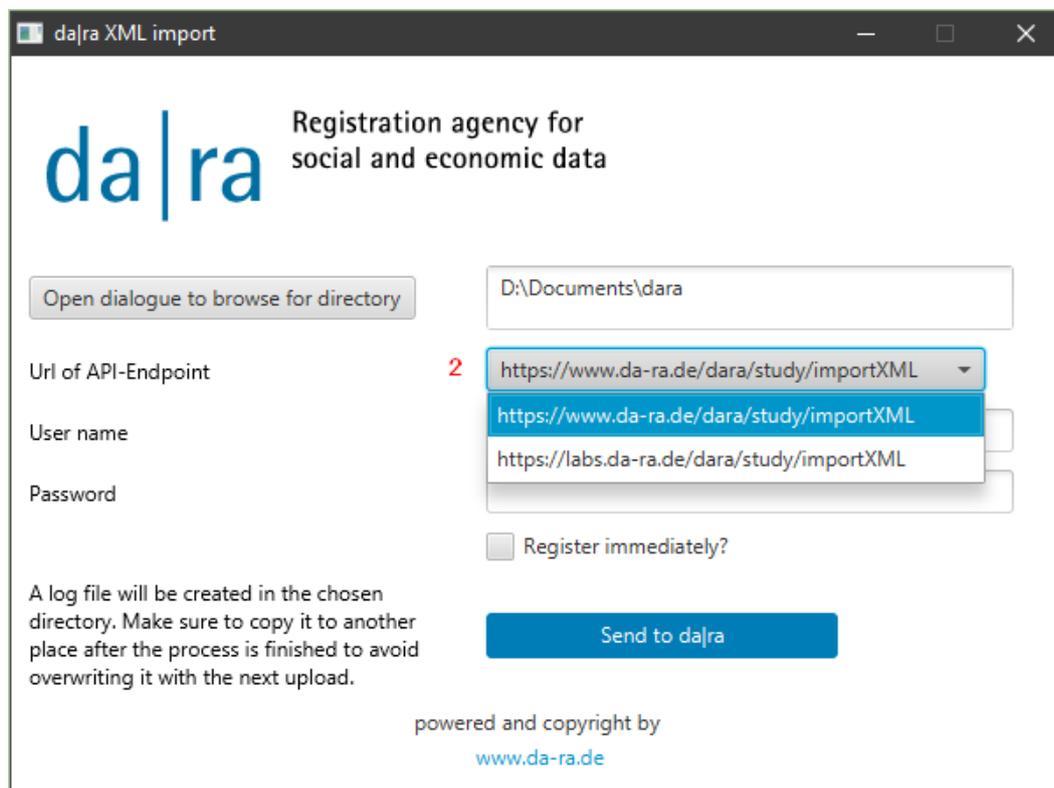


Figure 3. API-Endpoint URI

There are two options in the API Endpoint URL drop-down list: The first option is for real-time upload to the da|ra production server and the second is for uploading to our labs server for testing purposes only.

We strongly recommend that you start by testing and selecting the second URL in the list that uses the API endpoint for the labs environment (<https://labs.da-ra.de/dara/study/importXML>) so you can test the upload once and familiarize yourself with the result log.

Only if you really want to upload your files to the da|ra production server, choose the first URL in the list already selected as default (<https://www.da-ra.de/dara/study/importXML>).

### 1.7.3 Step Three: Account credentials

The screenshot shows a window titled "da|ra XML import" with the following elements:

- Logo and Title:** "da|ra" logo and "Registration agency for social and economic data".
- Directory Selection:** A button "Open dialogue to browse for directory" and a text input field containing "D:\Documents\dara".
- API Endpoint:** A dropdown menu labeled "Url of API-Endpoint" with the selected value "https://www.da-ra.de/dara/study/importXML".
- User Name:** A text input field labeled "User name" containing "your user name". A red number "3" is positioned to the left of this field.
- Password:** A password input field with masked characters "••••••••".
- Registration Option:** A checkbox labeled "Register immediately?" which is currently unchecked.
- Action Button:** A blue button labeled "Send to da|ra".
- Disclaimer:** Text stating "A log file will be created in the chosen directory. Make sure to copy it to another place after the process is finished to avoid overwriting it with the next upload."
- Footer:** "powered and copyright by [www.da-ra.de](http://www.da-ra.de)".

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 [support@da-ra.de](mailto:support@da-ra.de).

### 1.7.4 Step Four: Send to da|ra

Figure 5. Choose the right option before uploading XML

Please note that, when sending to our production server, by selecting the checkbox "Register immediately?" each item will receive a DOI immediately which cannot be changed or deleted anymore. Please also keep in mind that each DOI will be minted with the first dataURL entry you provide.

### 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.

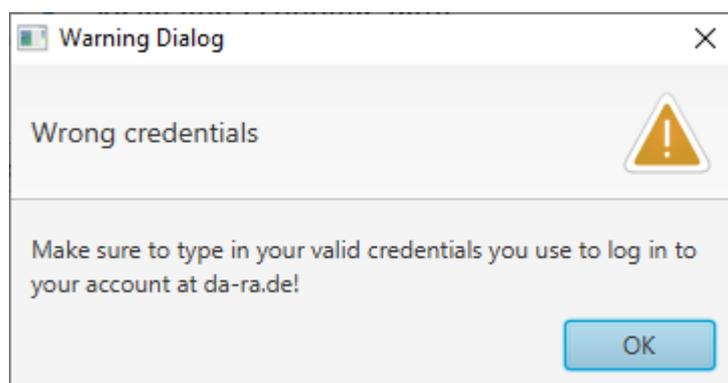


Figure 6. Warning Dialog

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

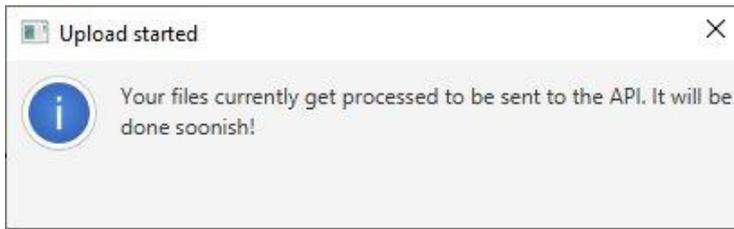


Figure 7. Upload started

Wait for the "Upload finished" message:

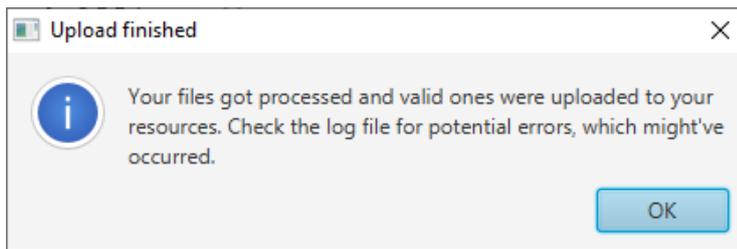


Figure 8. Upload finished

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 looks like this, depending on different use cases:

```

File name: [filename1].xml
Status: HTTP/1.1 201 Created
Response body: {
  "daraMessage": "Resource created and doi registered.",
  "doi": [your DOI Name],
  "studyIdentifier": [identifier name],
  "version": [Version]
}
...
-----
File name: [filename2].xml
Status: HTTP/1.1 201 Created
Response body: {
  "daraMessage": "Resource created. Registration failed!",
  "doi": [your DOI Name],
  "studyIdentifier": [identifier name],
  "version": [Version]
}
...
-----
File name: [filename3].xml
Status: HTTP/1.1 200 OK
Response body: {
  "daraMessage": "Resource updated.",
  "doi": [your DOI Name],
  "studyIdentifier": [identifier name],
  "version": [Version]
}
...
-----
File name: [filename4].xml
Status: HTTP/1.1 400 Bad Request
Response body: {
  "errors": {
    "status": 400,
    "detail": [the reason for the error]
  }
}
...
-----

```

For other possible responses depending on different use cases like update with or without immediately DOI registration see Table1 "response status".

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

status	response body	use case
201 Created	{ "daraMessage": "Resource created and doi registered.", "doi": [your DOI Name], "studyIdentifier": [identifier name], "version": [Version] }	metadata upload - new resources without a DOI and selected checkbox "Register immediately?"
201 Created	{ "daraMessage": " Resource created. Registration failed!", "doi": [your DOI Name], "dataCiteMessage": "DataCite Error", "studyIdentifier": [identifier name], "version": [Version] }	metadata upload (successful on da ra but failed on DataCite) - new resources without a DOI and selected checkbox "Register immediately?"
201 OK	{ "daraMessage": "Resource created.", "studyIdentifier": [identifier name], "version": [Version] }	metadata upload - new resources without a DOI and with checkbox "Register immediately?" not selected
200 OK	{ "daraMessage": "Resource updated.", "studyIdentifier": [identifier name], "version": [Version] }	metadata update - resources which already have a DOI - resources without a DOI and with checkbox "Register immediately?" not selected
200 OK	{ "daraMessage": "Resource's metadata updated. Registration/remint failed!", "dataCiteMessage": "DataCite Error", "studyIdentifier": [identifier name], "version": [Version] }	metadata update with registration respectively re-minting (successful on da ra but failed on DataCite) - remint of resources which already have a DOI - resources without a DOI and selected checkbox "Register immediately?"
400 Bad Request	"errors": { "status": 400, "detail": [the reason for the error] }	all use cases
401 Unauthorized	no or wrong login	all use cases
500 Internal Server Error	server internal error (try later and if problem persists please contact the da ra team)	all use cases

## 1.8 Contact/Support

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

If you have any questions in general please contact: [Brigitte.Hausstein@geis.org](mailto:Brigitte.Hausstein@geis.org). For technical issues please contact: [support@da-ra.de](mailto:support@da-ra.de).