

### Publications

#### Minting DOI's through DataCite (previously EZID)

DOI (digital object identifier) service is available on the HUBzero platform through integration with DataCite, an international member organization that provides persistent identifiers for data and other scholarly resources. For Purdue, this service is managed locally by the Purdue Libraries. To inquire, contact them at [datacite@purdue.edu](mailto:datacite@purdue.edu).

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### Curation Workflow

#### Turning on Curation:

1. From the backend, navigate to **Components -> Publications**
2. Click the **Options** button
3. Click the **Curation** tab
4. Select **ON** in the **Curation** field
5. In the **Name of Group of curators** field, type in the CN of the group you want to give curation rights to
6. Optionally, select 1 month in the **Grace period for changes** box if needing to give users the ability to change the publication after it has been published
  1. **Note:** mkAPI will not run until the one month grace period is set.
7. Click **Save & Close** to ensure the changes are submitted

### Auto-Approve Publications

If you would like certain users to have their new Publications by pass the Curation steps, you can add them to a list where their Publications are auto-approved. To add users to this list, follow these steps:

1. Navigate to the backend of the HUB and click on **Publications** underneath the **Components** drop-down
2. Inside of **Publications**, click on the **Options** button
3. Click on the **Curation** tab and then insert the usernames of the users who's Publications are to be auto-approved
4. Click **Save & Close** to save the changes

### Enabling Databases

To enable databases within Publications:

1. Log onto the administrative backend
2. Go to **Components**
3. Go to **Publications**
4. Go to **Master Types** submenu item
5. Select the checkbox next to the **Database** table row
6. Click the **Edit** Button
7. Find the **Content** block for the **Databases Type**
8. Click the **[Edit]** button next to **Block Elements**
9. Locate the **Type** drop-down, change **file** to **data**
10. Change the **Maximum count** to **1**
11. **Save** the Block Element

### Creating a Publication License

1. Navigate to the backend of the Hub and click on **Components** and from the drop-down click on **Publications**
2. Open up the **Licenses** tab and then click the **New** button in the upper right hand corner

of the page

3. Start filling out the **License Information**:
  - a. **Title**: The title of the license
  - b. **Name**: The name of the license, full name if the license is an acronym
  - c. **URL**: The webpage that all the legal license information
  - d. **About**: The background information about this license
  - e. **Content**: The parameters of the license such as what content this license supports
  - f. **Icon**: Path to icon image that lives in the Media Manger on the HUB
4. Once you have filled out the **License Information**, begin filling out the **License Configuration**:
  - a. **Active**: If this license should be automatically published and available on the frontend for users to use after saving
  - b. **Customizable**: Should the license text be customizable for publication authors to edit
  - c. **Agreement required**: Forces publication authors to
5. Once you have finished filling out the information for the license, click **Save & Close**

## Selecting a Default Publication License

1. Navigate to the backend of the Hub and click on **Components** and from the drop-down click on **Publications**
2. Open up the **Licenses** tab and locate the **Default** column
3. Locate the license that should become the new default and select the box beside the license title
4. Click the **Make Default** button (star icon) and the license will be made the new default

## Publishing/Unpublishing a Publication License

1. Navigate to the backend of the Hub and click on **Components** and from the drop-down click on **Publications**
2. Open up the **Licenses** tab and locate the license you want to publish or unpublish
3. In the **Status** column you can click on the **check-mark** or **cancel sign** to change the status of the license
4. After clicking on the status icon the new status will be automatically saved

## Reordering Publication Licenses

1. Navigate to the backend of the Hub and click on **Components** and from the drop-down click on **Publications**
2. Open up the **Licenses** tab and locate the **Order** column
3. Rearrange the licenses by clicking the arrows facing up and down
4. The final ordering you leave the licenses in will appear the same inside of **Publications** on the frontend of the Hub inside the **License** drop-down when creating a new publication

### Creating Publication Categories

1. Navigate to the backend of the Hub and click on **Components** and from the drop-down click on **Publications**
2. Open up the **Categories** tab and then click the **New** button
3. Begin filling out the **Category Information**:
  - a. **Name**: The name of the new category
  - b. **Alias**: The shortname of the new category
  - c. **URL Alias**: The URL name for the category
  - d. **dc:type**: The Dublin Core Meta Data type
  - e. **About**: A short introduction describing what type of publication files and content are stored in this category
4. Determine what **plugins** you want to connect to the this new Publication Category
5. Fill out the **Item Configuration**:
  - a. **Status**: Determine if the category is active (publish) or inactive (unpublished)
  - b. **Contributable**: Determine if the category can be contributed to
6. Determine the **Custom Fields** by creating new fields or managing the preexisting files. The fields determine the layout of the Publication overview page:
  - a. **Reorder**: Drag and drop the different field rows to change the order
  - b. **Field name**: Change the name of the field title
  - c. **Input Type**: Determine the amount of text that can be inputted in this field from the drop-down
  - d. **Required**: Check the box to make the field required for the publication author to fill out before publishing the publication
7. Review the information and then click **Save & Close**

### Publishing/Unpublishing a Publication Category

1. Navigate to the backend of the Hub and click on **Components** and from the drop-down click on **Publications**
2. Open up the **Categories** tab and locate the license you want to publish or unpublish

3. In the **Status** column you can click on the **check-mark** or **cancel sign** to change the status of the license
4. After clicking on the status icon the new status will be automatically saved

## Handling Publication Options

1. Navigate to the backend of the Hub and click on **Components** and from the drop-down click on **Publications**
2. Open up the **Publications** tab and then click the **Options** button in the upper right hand corner of the page
3. Inside the Publication Options, the different areas of Publications can be managed and adjusted as needed:
4. **Defaults:**
  1. **Component ON/OFF:** Turning on or off Publications
  2. **User Contributions Outside of Projects:** Allow users to contribute to Publications outside of Projects
  3. **Email Notifications:** Allow component to send out emails
  4. **Default Category:** Newly created Publications will automatically be defaulted to this category if not selected by the publication author
  5. **Default Publication Thumbnail:** Path to default publication, used as a placeholder
  6. **Default Video Thumbnail:** Path to default video, used as a placeholder
  7. **Default Image Thumbnail:** Path to default image, used as a placeholder
  8. **Default Master Image:** Default image for Publication page cover, used as a placeholder
  9. **Publication Files:** Master path for restoring published data
  10. **URL to Documentation:** URL to page with Publication information
  11. **URL to Terms of Deposit:** URL of Terms of Deposit page on the HUB
5. **Curation:**
  1. **Name of Curators:**(Hub) group members authorized to perform pre-publication curation (all publication types) and manage curation assignment
  2. **Grace Period for Changes:**Allow authors to make changes to a published resource within the grace period after approval
  3. **Auto-approve:**Automatically approve new submissions
  4. **Auto-approved Users:**A comma-separated list of usernames to be auto-approved
3. **DOI Configuration:**
  1. **About DOI Link:** a link to an explanation of what Digital Object Identifiers (DOI) are [optional]
  2. **DOI Namespace Start:** First part of DOI namespace (what goes right after DOI: and before /,e.g. 10.5072)
  3. **DOI Namespace End:** Hub-specific DOI namespace end (usually 2-3 characters going after /, e.g. F2K)
  4. **DOI Service URL:** DOI service address
  5. **DOI Service User/Password:** DOI Service/Password
  6. **DOI Publisher:** Publisher name (may use full HUB name) for DOI service
  7. **DOI Resolve URL:** URL for resolving DOI's
  8. **DOI Verification URL:** URL for verifying DOI's
  9. **Issue master DOI for Publication?:** Master DOI links to /main page listing all previously

- published versions
4. **Sections:**
    1. **Contributors:** Show/Hide the list of authors on publication page
    2. **Format Author Display:** Format list of authors on publication page
    3. **Ranking:** Show/Hide the ranking
    4. **Rating:** Show/Hide the rating
    5. **Date:** Show/Hide the date on the publication page
    6. **Linked Data:** Show/Hide a link to an OAI-ORE compliant linked data representation in the HTML source for each publications
    7. **Citation:** Show example/instructions for citing this publications.
    8. **Suggest License:** Allow users to suggest licenses
    9. **Citation Format:** Choose format for citations
    10. **Supported Tag:** A tag to display to indicate Org supported tools
    11. **Supported Link:** A link display to describe Org supported tools
    12. **Audience Link:** URL to a page describing audience levels.
  5. **AIP:**
    1. **Trusted Digital Repository:** Trusted Digital Repository
    2. **AIP Path:** AIP path (for trusted digital repos)
    3. **MkAIP Admin Group:** Group of administrators to get notification about archived dataset

## Master Types: Editing Block Information

1. Navigate to the backend of the **HUB** and click on the tab **Components**
2. From the drop-down click on **Publications**
3. Inside of **Publications**, click on the tab **Master Types**
4. Click on the name of the Master Type that you want to edit block information in
5. Locate the **Block** you wish to edit
  1. A Block is a section of the Publication that holds information about the materials being published (i.e. description, abstract, etc.)
6. Find the **Block Elements** section and click the **Edit** in brackets
7. Change the block information as fit, for example below is a use case of a small issue that occurs in some Master Types with the abstract switching with the description:
  1. In this case the abstract and description mappings are incorrect. There is a section that tells the block which field the Publication versions table what to map from the content block. Here, one would switch the description alias and name from **abstract** to **description** and vise versa.
8. Click **Save & Close** to save these changes

## Setting Up Group Association with a Publication

Groups can be associated with a Publication that was not published from a Project owned by any groups. Only one group can be given association rights. Usually a group is associated with

a Publication if the group contributed materials or resources that helped with the Publication's development or if the group helped fund this Publication. To set up the ability for users to associate groups with their Publications, follow these steps:

1. Navigate to the backend of the Hub
2. Hover over **Components** and click **Publications** from the drop-down
3. Inside of **Publications** click the **Master Types** tab
4. Click the title of the **Master Type** that you want this feature to be enabled on
5. Under the section called **Blocks and Configuration** locate the **Authors** block
6. Locate the *Show group ownership and allow to be assign group ownership* and change the drop-down to be **Yes**
7. Click **Save & Close** and this feature will be enabled on this **Master Type**
8. Enable this on each Master Type that you wish for this feature to be enabled

### Can attaching a license to a Publication be made optional?

Yes, it can be set up in specific Master Types:

1. Navigate to the backend of the Hub
2. Hover over **Components** and select **Publications** from the drop-down
3. Select **Master Types** tab
4. Select the Master Type you would like to manage this setting
5. Inside the Master Type locate the **License** block and change "Input required" to **No**
6. Click **Save & Close**

### Setting up minting DOIs as optional for a Publication

It can be set up in specific Master Types:

1. Navigate to the backend of the Hub
2. Hover over **Components** and select **Publications** from the drop-down
3. Select **Master Types** tab
4. Select the Master Type you would like to manage this setting
5. Inside the Master Type locate the **Curation Configuration** block and change "Require DOI" to **Offer choice to publish with DOI or post without DOI**
6. Click **Save & Close**

### Batch Create

1. Navigate to **administrator** on the Hub
  2. Hover over **Components** and select **Publications** from the drop-down
  3. Select **Batch Create** tab
  4. Select a project you would like to create publications in
  5. Underneath **Data**, click **Choose File** and upload a .xml file with the publications.
  6. Make sure the .xml file follows the schema provided by the link on your hub
- 
7. Click **Process data** and review the record to add to the database as there may be errors.
  8. After verifying the data is correct, click the **Create record(s)** button



# DataCite

## DataCite MDS API Application

The DataCite Metadata Store (MDS) API[1] is going to be used for Hub dataset Digital Identifier Object (DOI) and corresponding metadata creation and update.

### 1. Introduction

The DataCite Metadata Store (MDS) API is the default API for registering DataCite DOIs and associated metadata. Below shows the requirements for using the MDS API.

- (1) The API requires authentication. If your hub or university is member of DataCite and has DataCite credentials then you can configure DataCite to mint DOIs for your hub's publications and tools. DataCite also has a [testing guide](#) to help with troubleshooting.
- (2) DataCite assigns the DOI prefix.
- (3) DOI request needs to transfer through HTTPS.
- (4) HTTP basic authentication is performed in the DataCite Metadata Store API usage.

### 2. DOI register

The DOI registration takes two steps, first is to register DOI metadata, and second is to register the DOI name and dataset URL.

#### 2.1 Registering DOI metadata

The DOI metadata for dataset includes title, author, dates, description, and so on. All the metadata that a hub collects for a dataset shows in table 1. Metadata element

Identifiers  
Creators/creator/creatorName  
nameIdentifier

titles/title

Explanation

Identifier type is doi, and the value of identifier is the doi.

Author(s) of the dataset  
nameIdentifierScheme is ORCID? and value is the ORCID.

Name of the dataset.

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publisher	Holder of the dataset
publicationYear	The year when the dataset is published
Contributors/contributor/contributorName	Project leader's name
dates	There are two metadata elements, one is when dataType is Valid, the value is the date when the dataset is submitted on the hub; Another is when the datatype is Accepted, the value is the date when the dataset is approved for publish on the hub.
language	It is set to en by default
resourceType	resourceTypeGeneral is set to the resourceType designated by the hub. The value is the resourceTypeTitle.
RelatedIdentifiers/relatedIdentifier	relatedIdentifierType is DOI, relationType is IsNewVersionOf, and the value is the relatedDoi, which is DOI of the resource that reference this dataset.
version	Publication version
rights	The license that user selects in the dataset submission workflow on the hub
Descriptions/description	DescriptionType is Abstract, and the value is the abstract of the dataset

The metadata elements in table 1 are saved in xml format as showing below.

```
<resource xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://datacite.org/schema/kernel-4"
xsi:schemaLocation="http://datacite.org/schema/kernel-4
http://schema.datacite.org/meta/kernel-4.1/metadata.xsd">
```

```
<identifier identifierType="DOI">doi</identifier>
```

```
<creators>
```

```
<creator>
```

```
<creatorName>name 1</creatorName>
```

```
</creator>
```

```
<creator>
```

```
<creatorName>name 2</creatorName>
```

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</creator>

<creator>

<creatorName>name 3</creatorName>

</creator>

<creator>

<creatorName>name 4</creatorName>

<nameIdentifier nameIdentifierScheme="ORCID">orcid goes here</nameIdentifier>

</creator>

</creators>

<titles>

<title>title</title>

</titles>

<publisher>YOUR HUB's NAME</publisher>

<publicationYear>year</publicationYear>

<contributors>

<contributor contributorType="ProjectLeader">

<contributorName>name</contributorName>

</contributor>

</contributors>

<dates>

<date dateType="Valid">date</date>

<date dateType="Accepted">date</date>

</dates>

```
<language>en</language>

<resourceType resourceTypeGeneral="Dataset">Datasets</resourceType>

<version>1.0</version>

<rights>Attribution 3.0 Unported</rights>

<descriptions>

<description descriptionType="Abstract">

Description goes here

</description>

</descriptions>

</resource>
```

All the metadata elements conform to the DataCite metadata schema [2] standards.

The MDS API can generate random DOI name when prefix is included in the metadata registration. The identifier in the metadata xml can be left empty in this case.

The curl package can be used to submit the metadata to MDS service, see example below. Note that the **[PREFIX]** would need to be replaced with your hub's DataCite prefix.

```
curl -H "Content-Type:application/xml;charset=UTF-8" -X PUT -i --user username:password -d
@[PREFIX].xml https://mds.test.datacite.org/metadata/10.5072
```

The response to the call above is OK (**[PREFIX]**/XXXX-XXXX). We need take the DOI out from there and use for further process.

The identifier value in the metadata xml on DataCite will be replaced by the DOI name that is created in this step.

The DOI is set to Draft state [3] after the metadata are registered.

### 1.2.2 Registering the URL

The second step is to register the DOI name and the URL that refers to the dataset. Below is an example of the curl command. Note that DOI name and URL to the dataset is included.

```
curl -H "Content-Type:text/plain;charset=UTF-8" -X PUT --user username:password -d  
$'doi=[PREFIX]/0000-03VC' -d 'url=http://example.org/publications/1'  
https://mds.test.datacite.org/doi/10.5072/0000-03VC
```

The DOI transits from Draft state to Findable state after the DOI name and URL is registered.

Below table includes the endpoint and other useful information that need to use in the DOI registration in production. The endpoint, prefix, username and password need to be configured on the admin interface for any development and production environments.

DOI prefix	[PREFIX]
MDS production endpoint	https://mds.datacite.org

## 2. Update DOI Metadata Records

Update the DOI metadata is the same as storing a new version of the DOI metadata. According to the MDS API document, we need to issue a post of the metadata xml to DataCite. Below is an example on what the curl command should look like for such operation.

```
$ curl -H "Content-Type: application/xml;charset=UTF-8" -X POST -i --user username:password  
-d @'[PREFIX]/JQX3-61AT.xml' https://mds.test.datacite.org/metadata
```

## Reference list

1. <https://support.datacite.org/docs/mds-api-guide>
2. <http://schema.datacite.org/>
3. <https://support.datacite.org/docs/doi-states>
4. <https://support.datacite.org/docs/testing-guide>

1. Navigate to **/administrator** and login to the backend of the Hub
2. Click on **Components** and then select **Publications**
3. Click on **Options** and then click on **DOI Configuration**
  1. Note: You will only be able to access the Options button if you are a super user.
4. Locate *Enable DataCite or EZID DOI Service* and select from the drop-down the appropriate option
  1. Note: When the "DataCite" is selected, the DataCite DOI service is activated and only DataCite related options on the configuration form are going to show up. When "EZID" is selected, EZID DOI service is activated and only EZID related options on the configuration form are going to show up. When "None" is selected, all options related to DOI service will be hidden. When users publish a dataset in this case, a message saying that "No DOI service is selected and please contact site administrator" is popping up.
5. Click **Save & Close**