DOE Data ID Service
Frequently Asked Questions (FAQs)

1. **How can I get a DOI for my data from OSTI?**
    OSTI provides two options for obtaining a DOI for data funded by the Department of Energy.

    OSTI provides a [Web Submission Interface](#) through E-Link (a tool developed and maintained by OSTI for the submission of scientific and technical information products and metadata) for obtaining DOIs for data objects. As OSTI does not maintain a data repository, only the metadata describing your data will be submitted through the Web Submission Interface.

    OSTI also provides the [E-Link 241.6 Application Programming Interface (API)](#) as another option for obtaining DOIs for data objects. The API is HTTP-based and can be accessed using a wide variety of clients (Postman; HTTP Requestor; Restlet API, </>RESTED, etc); most examples are illustrated using the cURL command to demonstrate basic use cases.

2. **How is OSTI able to provide DOIs for DOE-funded data objects?**
    OSTI is a member of [DataCite](#), which gives us the ability to assign DOIs to data objects. DataCite employs a metadata schema that allows for the description of data objects. DOE OSTI collects relevant metadata required to obtain a DOI and passes that metadata on to DataCite allowing for a DOI to be minted by DataCite and registered globally through the [International DOI Foundation](#).

    DataCite is an international organization that supports data visibility, ease of data citation in scholarly publications, data preservation and future re-use, and data access and retrievability. DataCite members help achieve these goals by assigning persistent identifiers such as DOIs to data objects. Though there are costs associated with assigning DOIs through our DataCite membership, DOE OSTI provides DOI assignment services free to all DOE-funded data objects.

    DataCite is a registration agency of the International DOI Foundation, allowing DataCite DOIs to be registered internationally, giving them global recognition and persistence. The DOI system created by the

International DOI Foundation was adopted as International Standard ISO 26324.

3. What are the minimum steps to get a DOI?
If you are from a DOE laboratory or user facility:
- o Provide a new site code specific to the data center.

Work with OSTI Data Liaison to:
- • Determine if you need to acquire a unique DOI prefix for your DOIs
- • If you will use the API:
  - • obtain Test E-Link Account to test submissions
  - • obtain Prod E-Link Account
- • If you will use the Web Submission Interface:
  - • obtain Prod-E-Link account
    Submit minimal required fields to E-Link to obtain a DOI.

If you are using the grantee Web Submission Interface:
- • Go to https://www.osti.gov/elink/2416-submission.jsp
- • Fill out the required metadata fields
- • Submit the record

4. What metadata describing your data objects is required for obtaining a DOI?
DOE Minimum Required Fields:
- • Dataset Type: Type of the main content of the dataset. This is a dropdown with the following options: Animations/Simulations, Award, Figures/Plots, Genome/Genetics Data, Instrument, Interactive Data Map(s), Multimedia, Numeric Data, Specialized Mix, Still Images or Photos.
- • Title: Full title of the dataset, with version numbers and date ranges if applicable.
- • Author/Contributor: A listing of the authors/contributors to the dataset. Affiliations and ORCIDs can be added if known. If a contributor is listed, the contributor type must be specified.
- • Publication Date: The dataset publication date, in mm/dd/yyyy, yyyy, or yyyy Month format.
- • Site URL: Full URL to the landing page for this dataset.
- • DOE Contract Number(s): Primary DOE contract number(s), multiple values may be separated by a semicolon.

- Dataset Product Number(s): The most important identifying numbers given to the dataset by the host or originating organization.
- Originating Research Organization: The organization name primarily responsible for conducting the research.
- Sponsoring Organization: The organization name that sponsored/ funded the research.
- Contact Information: Name, phone number, and email address of a contact person for this dataset. This is for internal use only and will not be displayed publicly.

Many optional fields are available to increase the findability of dataset metadata records. Please refer to the Appendix of the manual for the details of the optional fields.

5. **After submission, how long does it take to receive a DOI?**
Once a successful metadata record is submitted, a DOI will be assigned and registered within 24 hours.

6. **How do you designate time stamping or versioning of data objects?**
When a major version change or update occurs to a data object, OSTI recommends a new DOI be registered. It is helpful to include a version number or time stamp as a part of the data object's title. This will allow data users and third party indexers (i.e. Google Dataset Search) to correctly index and cite the data object.

We recommend using the Related Identifier metadata field to reference previous versions, as well as express other relationships to a related source (including journal articles associated with the data object, data sets, figures, software, etc).

7. **Do I have to make my data public to get a DOI?**
No, the data does not need to be accessible to the public. But, a publicly available landing page providing metadata about the data objects and describing the data availability is required.

8. **Is there a limit on number of DOIs that can be requested?**
As part of the free service DOE OSTI provides to DOE-funded data objects, an unlimited amount of DOIs can be obtained.

9. **Can the DOI link directly to the data?**
   No, DOIs should link to a landing page, which is a webpage that provides additional information describing the data, includinga full bibliographic citation metadata, the DOI, title, abstract, submission/creation date, keywords, authors, and funding information. On the landing page, a link to the data should be provided.

   If the data becomes deprecated, a landing page is important because a tombstone landing page can state why the data is no longer available.

10. **Can a data object with an assigned DOI or metadata describing the data object be updated?**
    Yes, a DOI is persistent, but the data object itself and the metadata describing the data object may be updated at any time. The only metadata field that cannot be updated is the infix, which is a part of the DOI. Once assigned, the DOI number itself cannot be updated.

11. **Can a DOI be deleted (error, duplicate)?**
    A DOI is persistent. Once registered and made public with DataCite, it cannot be deleted. If no other alternatives are viable, OSTI can "hide" a DOI so it will not appear in OSTI search tools and DataCite's search. Although this is an option, it is seldom necessary. However, if you or someone else knows the exact DOI, it will resolve to the landing page.

12. **If a data object is no longer available, what should I do?**
    When a data object is no longer available for whatever reason, a "tombstone" page needs to be created with information on why the dataset is no longer available. This provides the required persistence of a DOI.

13. **How do I use the related identifier metadata field?**
    Related identifiers are a way to connect data objects with other research objects (journal articles, technical reports, datasets, instruments, experiments, awards, etc). OSTI currently has 31 different Relation Types (Describes/IsDescribedBy, HasVersion/IsVersionOf, etc.).

    Related Identifier Fields:

Field Name	Description
relidentifier_detail	Tag encapsulating a single related identifier value.

related_identifier	The DOI of the related resource.
relation_type	A code specifying the type of relation between this identifier and the parent dataset.
related_identifier_type	The type of identifier, usually "DOI".

Example:
```
<relidentifiersblock>
<relidentifier_detail>
<related_identifier>10.5072/238923</related_identifier>
<relation_type>Cites</relation_type>
  <related_identifier_type>DOI</related_identifier_type>
</relidentifier_detail>
<relidentifier_detail relationType="References"
relatedIdentifierType="DOI">
<related_identifier>10.5072/science/2019/18-
200</related_identifier>
</relidentifier_detail>
</relidentifiersblock>
```

Please refer to the DOE Data ID Services Manual for more information.

14. Does OSTI provide a data repository to store my data indefinitely?
No, OSTI does not currently provide data repository services. OSTI hosts the metadata record for data objects that obtain a DOI, but OSTI does not provide a repository to store the actual data.

Typically, DOE Data ID Service data objects are hosted by the associated lab repository or the university's institutional repository.

15. Why would I want to reserve a DOI?
Reserved DOIs give the researcher the ability to obtain a DOI before a dataset is final or before publication. Reserved DOIs are placeholders within the OSTI E-Link ingest system but are not yet registered at DataCite.

Once a dataset is finalized/published, use your DOI or OSTI ID to update the metadata appropriately without the reserved XML tag. This will trigger the DOI to be released to DataCite for registration.

16.   How can I reserve a DOI?
A DOI can be reserved through the Web Submission Interface and the API.

Web Submission Interface: Enter information for all required metadata fields (use placeholder information for what is not yet known), and then click the Save button. This will generate an OSTI ID, which can be used to predict what the DOI will be. For example, if my site's prefix is 10.0001, and my OSTI ID is 111111, then my DOI can be predicted to be: 10.0001/111111.

Once you are ready to submit your record and obtain your DOI, find the OSTI ID for the Saved record, click the Edit button, and then finish the record with the correct metadata and click Submit to OSTI.

API: Post all required metadata fields (use placeholder information for what is not yet known) and add the metadata field </set_reserved> to the API submission.

Once you are ready to submit your finalized record and make your DOI public, use the OSTI ID and resubmit the API request with the correct metadata and removing the set_reserved field from the submission.

17.   Can I reserve a DOI if I do not yet have/know all of the required metadata?
Yes, you can enter "placeholder" information until accurate information is available.

18.   What best practices exist (if any) in terms of the format, structure, and/or style to use for dataset citations?
DataCite provides a recommended data citation format for authors to use:
Creator (PublicationYear). Title. Publisher. Identifier
It may also be desirable to include information about two optional properties, Version and ResourceType (as appropriate). If so, the recommended form is as follows:
Creator (PublicationYear). Title. Version. Publisher. ResourceType. Identifier

For citation formatting based on a specific journal or publisher, see the [DOI Citation Formatter](#). Select a professional society, a scientific journal publisher, etc. and see exactly how that group formats a citation and what to include in it.

FORCE11 has a [Joint Declaration of Data Citation Principles](#) that provide data citation best practices.

19.   Where are my data objects discoverable?
OSTI provides discovery tools where data objects that have obtained DOIs can be discovered. [OSTI.GOV](#) is the primary search tool for DOE-funded research results including data. [DOE Data Explorer (DDE)](#) is the search tool for finding DOE-funded scientific data objects. OSTI also works closely with common search engines such as Google, Bing, Google Scholar, and Google Dataset Search to make sure our content is well indexed and discoverable.

20.   How would I get a DOI for other STI, such as software or technical reports?
DOE OSTI offers a separate service for submitting software and obtaining DOIs through our software services platform and search tool, [DOE CODE](#). More information about how to submit software and obtain a DOI can be found [here](#).

All technical reports submitted to OSTI automatically receive a DOI upon successful submission. The DOI links directly to the technical report on OSTI.GOV.

21. What if I have additional questions?
Please contact OSTI's Data Team at [DOEDataID@osti.gov](#).