

RAiD



Funded by
the European Union

Clifford Tatum
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Agenda

- What is a RAiD?
- Current beta functionality
- RAiD demo (*simulated*)
- RAiD metadata schema
- RAiD API documentation

WHAT IS A RAID?

A RAiD is a persistent identifier for...

- Research projects and activities, linking organisations, people, inputs, and outputs to a project and providing key project information found nowhere else
- Governed by [ISO Standard 23527:2022](#)

A RAiD is not for...

- Grants
- Researchers
- Durable organisations or organisational units (teams, centres, groups, departments, etc.)
- Documents, papers, articles, books, recordings, or other digital objects
- Software or datasets
- Instruments
- Samples or specimens

HOW DOES RAID WORK?

A RAiD has two parts: The [RAiD identifier](#) and the [RAiD metadata record](#).

RAiD uses the [DOI system](#) to create [globally unique, persistent identifiers](#).

The metadata record includes other PIDs (where possible) for various project inputs and outputs like:

- Collaborators (people)
- Organisations (institutions)
- Grants, awards, and investments
- Infrastructure, tools, instruments, and services
- Data and software
- Publications, reports, and events

Where necessary, the metadata record captures project information found nowhere else, such as a project's title, description, and subject. Many RAiD elements can be time-bound.



What a RAiD metadata record looks like

<https://raid.org/10.25.10.1000/j6k28>



Title (primary) Lorem Ipsum Project

Title (acronym) LIP

Start date 2023-01-30

Description (short) Lorem ipsum dolor sit amet, consectetur adipiscing elit.



Principle investigator orcid.org/0000-0002-3843-0000 **Date:**

Role <https://credit.niso.org/contributor-roles/conceptualization/>

Co-investigator orcid.org/0000-0002-3639-2080 **Date:**

Role <https://credit.niso.org/contributor-roles/data-curation/>



Lead organisation ror.org/00r9422

Partner organisation ror.org/03b94tp07



Grant doi.org/10.8948/908234D93EAF

Dataset doi.org/10.1594/PANGAEA.726855

Article doi.org/10.1038/nphys1170

Instrument doi.org/10.1337/jdlc-tima

Sample XXAB000IH



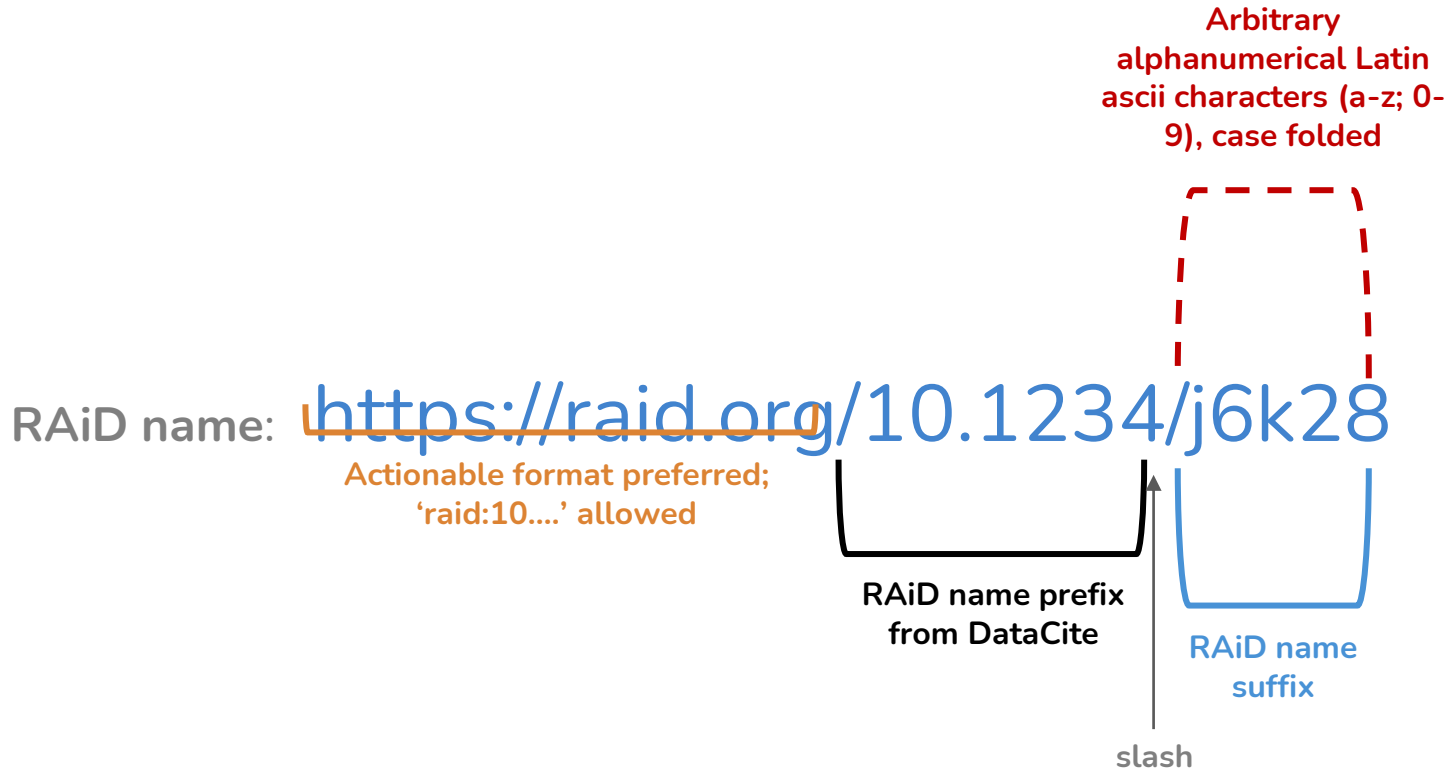
Local storage uq.edu.au/114/32

Cloud storage 79.152.127.243



Sub-project <https://raid.org/10.3010/401XQPOI>

RAiDs are now DOIs (via DataCite)



RAiD & PIDgraph

RAiD Core metadata is registered at DataCite, facilitating connections within the PID Graph

- **Near term solution:** PIDgraph will only include 'core' project metadata submitted to DataCite (including related PIDs)
- **Longer term:** project metadata is available via RAiD API and can be incorporated into the PID graph or can be retrieved via API for custom analysis / visualisation
- RAiD full metadata scheme: <https://metadata.raid.org/en/latest/> (will be updated shortly to reflect recent - minor - changes)

RAiD-Datacite core metadata mapping (draft)

RAiD Core Metadata	DataCite Metadata 4.4	DataCite Occurrence	Details
1 Identifier	1 Identifier	1-n	DOIs with prefix per RAiD structure 10.25.DD.DDDD/suffix
	2 Creator	1-n	identifier.owner.id and Organisation name (resolved from ROR)
2 Date	8 Date	0-n	date.startDate
3 Title	3 Title	1-n	title.text (Primary)
	4 Publisher	1-n	identifier.registrationAgency.id Organisation name (resolved from ROR)
	5 PublicationYear	1-n	date RAiD created
	6 ResourceType	1-n	type 'Other' and 'RAiD Project'
4 Description	17 Description	0-n	description.text (Primary)
5 Contributor	7 Contributor	0-n	contributor.id and Contributor name (resolved from ORCID)
6 Organisation	7 Contributor	0-n	organisation.id and Organisation name (resolved from ROR)
7 RelatedObject	12 RelatedIdentifier	0-n	relatedObject.id with type 'HasPart' if it is an 'output'.
8 AlternateIdentifier	11 AlternateIdentifier	0-n	alternateIdentifier.id
9 AlternateURL	12 RelatedIdentifier	0-n	alternateUri.uri with type 'IsSourceOf'
10 RelatedRAiD	12 RelatedIdentifier	0-n	relatedRaid.id with type 'HasPart'
11 Access	16 Rights	0-n	identifier.license and access.type.id and

RAiD beta developments and status

RAiD beta is available in the demo ([here](#)); this includes

- Implementation of **DOIs via DataCite** as the RAiD identifier
- Implementation of Keycloak for identity management (done except eduGAIN)
- Implementation of a stable and standardised **API**
- Improvements to **web application** providing a UI
- Publication of all [controlled vocabularies](https://vocabs.ardc.edu.au/viewById/682) (live soon, currently available via <https://vocabs.ardc.edu.au/viewById/682>).
- Finalisation and documentation of the v1.0 **metadata schema** (in progress),
- Draft **documentation** and a new **website** (in progress)
- Upgraded demo, with beta functionality (available now)
- SURF local RAiD deployment (imminent)

Identity management & log-in (<https://app.demo.raid.org.au>)

ARDC Research Activity Identifier (RAiD)

DEMO

This is the Oceania region implementation of the [RAiD](#) ISO standard.

Maintained by the [ARDC](#) .

[PRIVACY STATEMENT](#) [USAGE TERMS](#)


RAiD Sign-in



Please select your preferred sign-in method

 GOOGLE

 AAF

 EDUGAIN

 ORCID

Signed-in user

Identity	Client	Service point	Role
6fd3c4f8-1a73-4e55-9de8-96edf845168e	raid-api	45f64c39-b5ae-49a3-8841-cf8811eda2b7	group-admin

Recently minted RAiDs

COLUMNS FILTERS DENSITY EXPORT

Handle	Titles	Start Date	End Date	
10.82841/87af96a0	Athens demo	21-Apr-2024		
10.82841/919bb9ed	Updated	20-Apr-2024		
10.82841/fb5bec19	Example title... 10:28:28 am	20-Apr-2024		
10.82841/8c4de9e1	[G] testing	02-Apr-2024		
10.82841/64d551e1	RB Test 01	26-Dec-2023	30-Dec-2023	
10.82841/204db6de	RB Dev 03	14-Dec-2023	28-Dec-2023	
10.82841/f349cca2	RB Dev 02	01-Dec-2023	26-Dec-2023	
10.82841/a93327f8	RB Dev RDMP 1	01-Dec-2023	01-Dec-2023	
10.82841/5fe743f1	RB Dev RDMP 1	01-Dec-2023	01-Dec-2023	
10.82841/aa38ccdc	RB Dev RDMP 1	01-Dec-2023	01-Dec-2023	

Rows per page: 10 ▾ 1–10 of 70 < >



Demo environment

The screenshot shows a web application interface. At the top, there is a dark navigation bar with a search icon, a home icon, a red 'DEMO' button, a user profile icon, and a menu icon. Below the navigation bar is a breadcrumb trail with 'Home' and 'API Key'. The main content area features a heading 'Create API Key' and a sub-heading 'API keys are valid for 30 minutes'. A blue button with a key icon and the text 'CREATE API KEY' is positioned at the bottom of the content area.

Home > API Key

Create API Key

API keys are valid for 30 minutes

[CREATE API KEY](#)

RAiD demo (screen shots)

The screenshot shows the RAiD demo interface. At the top, there is a navigation bar with a home icon, a search icon, and a 'DEMO' button. Below the navigation bar is a breadcrumb trail: Home > RAiDs > RAID 10.82841/87af96a0. A grid of filter tabs is displayed, with blue circles indicating the number of items for each filter: Dates (1), Organisations (1), Related RAiDs (1), Titles (1), Related Objects (4), Access (1), Descriptions (2), Alternate Identifiers (1), Contributors (1), Alternate URLs (1), Subjects (1), and Spatial Coverage (1). The 'Dates' panel shows a table with columns 'Start Date' and 'End Date', containing one row with '21-Apr-2024'. The 'Titles' panel shows a table with columns 'Title', 'Type', 'Language', 'Start Date', and 'End Date', containing one row with 'Athens demo', 'Primary', 'English', and '21-Apr-2024'. An 'EDIT' button is visible in the bottom right corner of the 'Titles' panel.

Home > RAiDs > RAID 10.82841/87af96a0

Dates 1

Organisations 1

Related RAiDs 1

Titles 1

Related Objects 4

Access 1

Descriptions 2

Alternate Identifiers 1

Contributors 1

Alternate URLs 1

Subjects 1

Spatial Coverage 1

Dates

Start Date	End Date
21-Apr-2024	

Titles

Title	Athens demo	Language	English
Type	Primary	Start Date	21-Apr-2024
		End Date	

EDIT

RAiD demo (screen shots)

Descriptions

Description Text
EOSC RAiD open beta

Description Type
Primary

Language
English

Description Text
Legacy projects converted to RAiDs, where contributors are listed but do not have ORCIDs: list here available name, identity information. - - - -

Description Type
Other

Language
English

Contributors

ID
<https://orcid.org/0000-0002-2212-3197>

Leader

Contact

Positions

Position

Start Date

End Date

Consultant

21-Apr-2024

Roles

<https://credit.niso.org/contributor-roles/conceptualization/>

<https://credit.niso.org/contributor-roles/investigation/>

EDIT

RAiD demo (screen shots)

Organisations

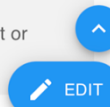
Name
<https://ror.org/038sjwq14>

Roles

Position	Start Date	End Date
Lead Research Organisation	23-Apr-2024	

Related Objects

ID HTTPS://DOI.ORG/10.5555.25/RAID.2023.00000001	Type Dataset	Category Input
ID HTTPS://DOI.ORG/10.5555.25/RAID.2023.00000001	Type Output Management Plan	Category Output
ID HTTPS://DOI.ORG/10.5555.25/RAID.2023.00000001	Type Standard	Category Internal process document or artefact



RAiD demo (screen shots)

Alternate Identifiers

No alternate identifiers defined

Alternate URLs

No alternate urls defined

Related RAiDs

No related RAiDs defined

Access

Access Statement

Access statement example text...

Language

eng

Access Type

Open Access

Subjects

No subjects defined



Subjects

Subject

Literature in Chinese (470515)

Keywords

你好, 怎么样

```
"subject": [  
  {  
    "id": "https://linked.data.gov.au/def/anzsrc-for/2020/470515",  
    "schemaUri": "https://linked.data.gov.au/def/anzsrc-for/2020/",  
    "keyword": [  
      {  
        "text": "你好, 怎么样",  
        "language": {  
          "id": "eng",  
          "schemaUri": "https://www.iso.org/standard/74575.html"        }  
      }  
    ]  
  }  
]
```

Research Activity Identifier (RAiD) Metadata Schema

The RAiD Metadata Schema is a way of organising data elements that are common to minted RAiD names. It is the overall structure by which each RAiD metadata component and its properties are ordered, defined and standardised across all RAiD names. The RAiD Metadata Schema specifies things like:

- the type and number of data elements recorded (e.g. dates, names and places)
- the designation of 'mandatory', 'recommended' and 'optional' fields
- encoding requirements
- use of that data content (e.g. controlled, uncontrolled, open or closed data lists)
- elements that are specific to a particular type of use (e.g. different types of schema)
- the vocabulary source for a particular property
- instructions on how to add another type of vocabulary.

The RAiD Metadata Schema underpins how RAiD names are identified, minted, resolved, updated and tracked via their metadata records. Any research project or activity with a RAiD name can be related to another RAiD or identified via the RAiD system, as well as cited in research documentation.

The RAiD system is developed by the Australian Research Data Commons (ARDC). In December 2022, the RAiD system was standardised for international use in *ISO 23527 Research Activity Identifier (RAiD)* <<https://www.iso.org/standard/75931.html>>.



/docs

Explore

Servers

/ - Default Server URL

Authorize



service-point the service-point API



GET /service-point/{id}



PUT /service-point/{id}



GET /service-point/



POST /service-point/



raid the raid API



GET /raid/{prefix}/{suffix} Read a raid



PUT /raid/{prefix}/{suffix} Update a raid



GET /raid/ List raids



POST /raid/ Mint a raid



GET /raid/{prefix}/{suffix}/history A list of base64 encoded changes to the raid in JSON Patch (RFC 6902) format.



RAiD development priorities 2024

Next phase: technical development (Q2-Q4 2024)

- EOSC integration via API, minting and editing RAiDs within the EOSC platform (on going)
- Search (component PIDs; other) and resolution across RAID RAs at raid.org (UI and API)
- Standardised landing pages at raid.org
- Expanded / refined access control, user roles, and user management (using web app)
- Identity management; single identity across ID providers and RAs
- Bulk export (customised / on demand by integrators and periodic full exports from us)
- Metadata available in multiple formats, conforming to DOI Content Negotiation approaches
- Management of metadata (customisation by RAs; versioning strategy)
- **Integration with other PID providers (informed by MoreBrains investigation)**
- Backup and redundancy
- Code standardisation and streamlining; improved redeployability (based on SURF experience)

Next phase: redeployment (Q2)

- Operating a separate instance of the RAiD service with SURF, our second RAiD Registration Agency (vision: single, shared codebase; multiple deployments; code contributions from RAs)

RAiD expansion 2024

RAiD Registration agencies

- The ARDC acts as the RAiD Registration Agency for Australasia
- SURF is the first overseas RA (for EOSC and Europe more broadly)
- RA EOIs:
 - JISC
 - San Diego Supercomputing Center
 - National Library of Technology, Czech Republic
- Potential EOIs
 - California Digital Library
 - Africa PID Alliance
 - Technical University of Vienna

Thanks!

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