

# Research Object Crate (RO-Crate) Update

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Addressable  
resources



Local Data



<https://orcid.org/0000-0001-2345-6789>



ID? Title? Description?



Who created this data?



What parts does it have?



When?



What is it about?



How can it be reused?



As part of which project?



Who funded it?



How was it made?



[https://en.wikipedia.org/wiki/Scanning\\_electron\\_microscope](https://en.wikipedia.org/wiki/Scanning_electron_microscope)

**METADATA**





```
|-- Folder1/
|           |-- file1.this
|           |-- file2.that
|-- Folder2/
|           -- file1.this
|           |-- file2.that
| -2021-04-08 07.58.17.jpg
```



```
{
  "@id": "2021-04-08 07.58.17.jpg",
  "@type": "File",
  "contentSize": 3271409,
  "dateModified": "2021-04-08T07:58:17+10:00",
  "description": "",
  "encodingFormat": [
    {
      "@id":
        "https://www.nationalarchives.gov.uk/PRONOM/x-fmt/391"
    },
    "image/jpeg"
  ],
  "name": "Cute puppy"
},
```


```
|-- Folder1/
|           |-- file1.this
|           |-- file2.that
|-- Folder2/
|           |-- file1.this
|           |-- file2.that
|-2021-04-08 07.58.17.jpg
```



← → ↺ ⓘ File | /Users/pt/Do... ☆ ⚙️ 📄 🌐 (Update ⋮)

📄 📁 Download all the metadata for in JSON-LD format

📄 **Download:** Cute puppy



A close-up photograph of a black and white puppy looking upwards with its mouth slightly open. The background shows a misty, mountainous landscape with trees.

@id	2021-04-08 07.58.17.jpg
name [?]	Cute puppy
@type	File

📄 webinar-886835....ics ^ Show all ×



CreateAction

Date: 2021-04-01



Agent



instrument



Software / workflow

Name: My Workflow

URL: <https://example.com/workflow/1235>



result



Chart1



v1.1



[RO-Crate 1.1](#) [Background](#)[Community](#)[Examples](#)[Outreach and Publications](#)[Profiles](#)[RO-Crate In Use](#) [Specification](#)[Tools](#)

## Tools

While we're mostly focusing on the [RO-Crate specification](#) some tools already exist for working with RO-Crates:

- [Descrigo](#) interactive desktop application to create, update and export RO-Crates for different profiles. (~ *beta*)
- [CalcyteJS](#) is a command-line tool to help create RO-Crates and HTML-readable rendering (~ *beta*)
- [ro-crate](#) - JavaScript/NodeJS library for RO-Crate rendering as HTML. (~ *beta*)
- [ro-crate-js](#) - utility to render HTML from RO-Crate (~ *alpha*)
- [ro-crate-ruby](#) Ruby library to consume/produce RO-Crates (~ *alpha*)
- [ro-crate-py](#) Python library to consume/produce RO-Crates (~ *planning*)

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[RO-Crate 1.1](#) [Background](#)[Community](#)[Examples](#)[Outreach and Publications](#)[Profiles](#)[RO-Crate In Use](#) [Life Monitor](#)[Specification](#)[Tools](#)

## RO-Crate in use

These applications use or expose RO-Crates:

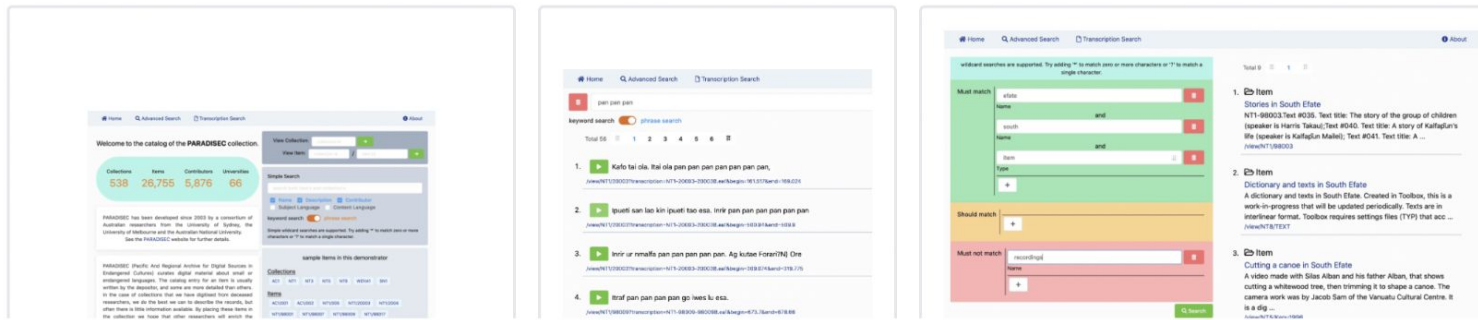
- [Workflow Hub](#) imports and exports [Workflow RO-Crates](#)
- [OCFL-indexer](#) NodeJS application that walks the [Oxford Common File Layout](#) on the file system, validate RO-Crate Metadata Files and parse into objects registered in Elasticsearch. (~ *alpha*)
- [ONI indexer](#)
- [ocfl-tools](#)
- [ocfl-viewer](#)
- [Research Object Composer](#) is a REST API for gradually building and depositing Research Objects according to a pre-defined profile. (RO-Crate support *alpha*)
- [Life Monitor](#) uses RO-Crate as an exchange format for workflow testing metadata
- ... (yours?)

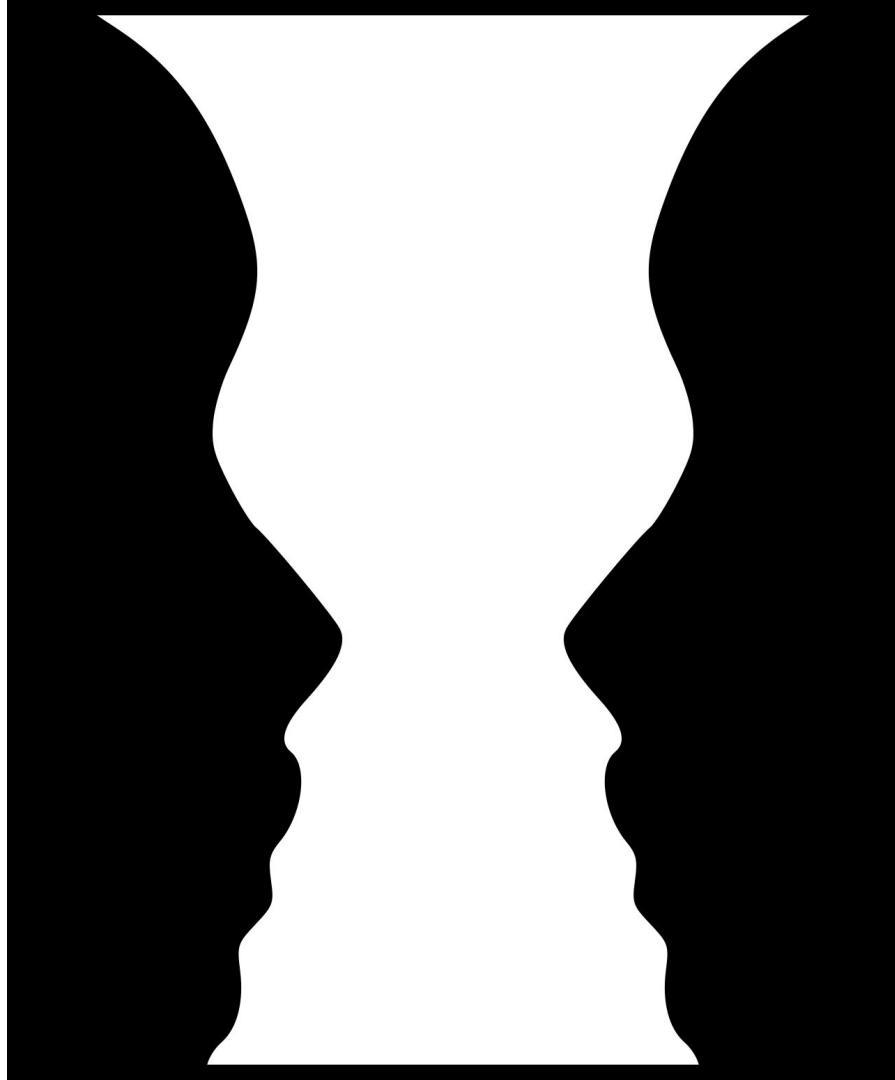
## Case Study: Modern PARADISEC

## Status: LIVE

PARADISEC - Pacific And Regional Archive for Digital Sources in Endangered Cultures has been operating for 18 years and currently holds material in 1,270 languages across Australia and the Pacific. The archive contains over 115TB of content including more than 14,000 hours of audio recordings, 1,600 hours of video and 8,000 transcriptions. It is a facility that acts as an archive of research recordings as well as forming an integral part of the research workflow in which primary data is made citable, is preserved, and is publicised (with licence agreements) for access.

The **Modern PARADISEC demonstrator**, developed with previous funding from the **ARDC**, demonstrates the use of RO-Crate to describe the collections and items and store those items within an OCFL system. The demonstrator includes an elastic search service and a webserver but the key feature is that it keeps working with only the filesystem and a webserver.



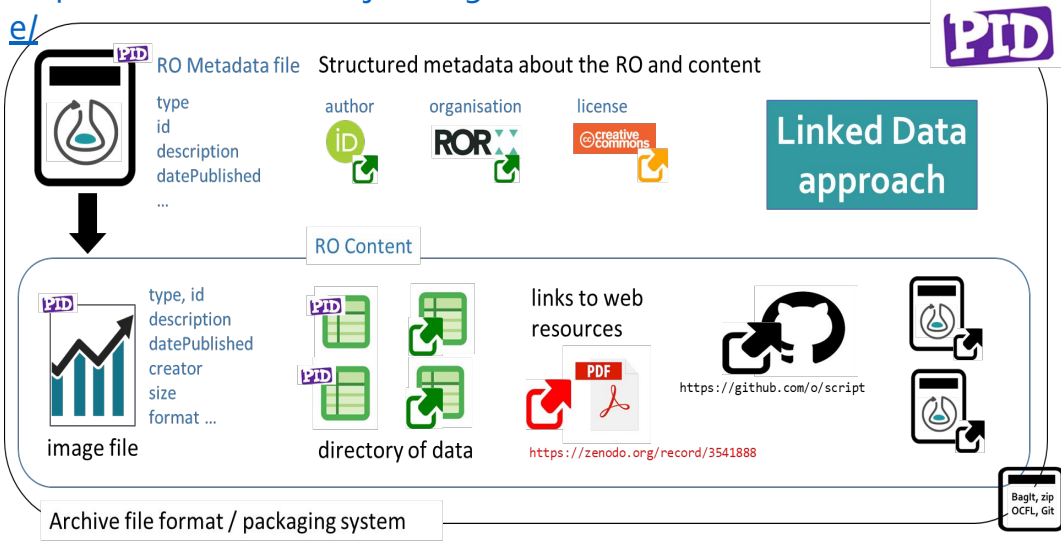




RO-Crate

<http://www.researchobject.org/ro-crate/>

# FAIR Object middleware



A valid RO-Crate JSON-LD graph MUST describe:

- 1.The [RO-Crate Metadata File Descriptor](#)
- 2.The [Root Data Entity](#)
- 3.Zero or more [Data Entities](#)
- 4.Zero or more [Contextual Entities](#)

Standard Web Native PIDs + JSON-LD + Schema.org, off the shelf archiving formats



*Machine and human readable, search engine friendly and developer familiar.*

Self-describing Typed by profiles + add more schema.org and domain ontologies



*Extensible, descriptive and content openedness, honouring legacy, diversity, and known and unknown unknowns - one size does not fit all.*

The **BETA** release of WorkflowHub  
Help is available on [about.workflowhub.eu](https://about.workflowhub.eu)

Report any issues or make suggestions on [GitHub](https://github.com).

**Want to join the WorkflowHub community?**

See our current activities and upcoming meetings [here](#).



Click here to see  
SARS-CoV-2/COVID-19 related workflows

Tags [\[show all\]](#)

Alignment Assembly Bioinformatics bpipe Climate  
**covid-19** [covid19.galaxyproject.org](https://covid19.galaxyproject.org) CWL Galaxy  
groovy INDELs Nextflow nf-core ONT Retrosynthesis  
rna rna-seq RNASEQ SNPs Workflows

This site is under active development. If you have suggestions, comments, or questions, please use the [feedback form](#).



Discover



Contribute



About

#### Latest additions

 **Compute daily and monthly mean from meteorological station measurements**

Workflow - added 14 days ago

 **SPARQL query (in a file) on graph database**

#### Latest downloads

 **Unicycler assembly and annotation**

Workflow - downloaded about 6 hours ago



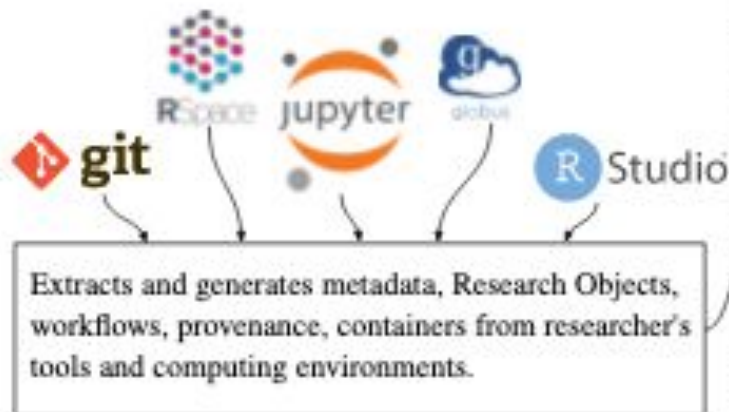
**ISMB 2020 - Workflow Hub**

Presentation - downloaded 2 days ago

## Active Data-Intensive Research

Research and  
data management  
tools

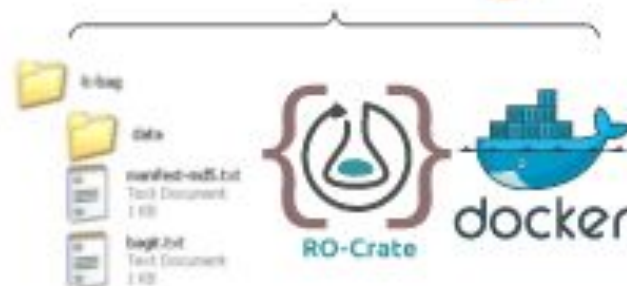
Interoperability  
Middleware



## Published Data and Research

API

**Dataverse**



**HARVARD** Data Commons  
UNIVERSITY



All versions

## Access Right

- ☐ Open (3109)
- ☐ Closed (77)
- ☐ Restricted (7)
- ☐ Embargoed (2)

## File Type

- ☐ Html (1507)
- ☐ Png (779)
- ☐ Pdf (585)
- ☐ Jpg (135)
- ☐ Zip (69)
- ☐ Csv (16)
- ☐ Docx (16)
- ☐ Txt (10)
- ☐ Xlsx (8)
- ☐ Xml (8)

Found 3195 results.

&lt; 1 2 3 4 5 6 7 8 9 &gt;

Sort by:

Best match ▼

asc. ▼

View

May 19, 2021 (v1) Other Open Access

## RO-Crate

84928;

PresQT Upload

Uploaded on May 19, 2021

April 20, 2021 (0.4.0) Software Open Access

View

## ResearchObject/ro-crate-py: ro-crate-py 0.4.0

Simone Leo; Stian Soiland-Reyes; Ignacio Eguinoa; Bert Droesbeke; albangaigard; Laura Rodríguez Navas;

Methods to add test-related entities "init" mode and first version of a CLI tool Support referring to test suites from the root dataset various fixes

Uploaded on April 21, 2021

7 more version(s) exist for this record

May 12, 2021 (v1) Presentation Open Access

View

## Describing and packaging workflows using RO-Crate and BioCompute Objects

 Stian Soiland-Reyes;

BioCompute Object (BCO) is a standard (IEEE 2791-2020) for describing computational workflows for regularity submission, e.g. a genomics workflow as part of personalized medicine. RO-Crate is a community-based specification for research data packaging of Research Objects with rich metadata, based on

Uploaded on March 25, 2021



## Other discussions / work going on

- Ecological data description (via University of Queensland)
- Machine-actionable Research Data Management Plans - eg [mapping to RO-Crate](#)
- BioExcel - discussions are taking place
- Via Australian Research Data Commons:
  - [Australian Text Analytics Platform](#) - data object description for Jupyter notebooks and other workspaces
  - [Language Data Commons](#) - potential building on techniques used in PARADISEC
- [BioCompute Objects](#) (BCO) community-led effort to standardise submissions of computational workflows to biomedical regulators.
- And IBISBA, ELIXIR, the EOSC-Life Cluster project, the DISSCo Synthesis+SDR pipelines and the EOSC Reliance project in geosciences
- A major Japanese institute (via Paul Walk)



Search or jump to...



Pull requests

Issues

Marketplace

Explore

ResearchObject / ro-crate

Unwatch

32

<> Code

Issues 54

Pull requests 2

Actions

Projects 2

Wiki

Security 1

Insights

Settings

## Join the team (post here to be added) #1

Edit

New issue

Open

stain opened this issue on 13 Feb 2019 · 60 comments



stain commented on 13 Feb 2019 · edited

Member



Add a comment to this issue to join the <https://github.com/ResearchObject/ro-crate> team.

There are no obligations in being a contributor except abiding by our [code of conduct](#).



ocorcho commented on 14 Feb 2019

Member



Happy to join



3



stain added a commit that referenced this issue on 15 Feb 2019



Added Oscar Corcho

Verified

✓ 29beb8f



dgarijo commented on 15 Feb 2019

Member



Me too!



2



rapw3k commented on 21 Mar 2019

Member



Count me in too!



1



stain added a commit that referenced this issue on 21 Mar 2019



Added Raul to team

Verified

✓ 2e387d2

Assignees



No one—assign yourself

Labels



None yet

Projects



None yet

Milestone



No milestone

Linked pull requests



Successfully merging a pull request may close this issue.

None yet

Notifications

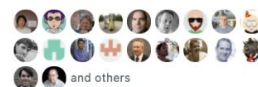
Customize



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You're receiving notifications because you're watching this repository.

46 participants



and others

Lock conversation

Unpin issue

Transfer issue