

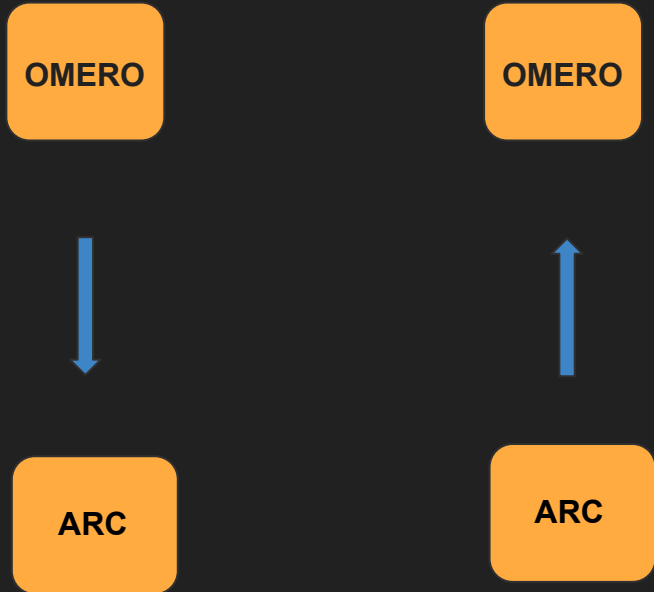
OMERO-ARC Integration

OMERO to ARC

Proposal de.nbi - Various Tasks

1. **Conceptual part :** ?
2. **Data curation :** ?
3. **Technical implementation :** ?

OMERO-ARC Flow Chart



Two Directions :

1. Omero to ARC
2. ARC to Omero

OMERO to ARC

OMERO



ARC

ARC like Structure in OMERO

The screenshot displays the OMERO web interface. The top navigation bar includes links for Data, History, Help, Figure, Tag Search, Data Protection, and Admin. A search bar is located on the right. The main content area is divided into three panels:

- Left Panel (Explore):** Shows a tree view of the project structure. The selected project is "Mitochondria in HeLa cells". It contains a sub-project "MDV formation in HeLa cells" with 11 sub-projects, each containing multiple image files (e.g., 10kX_HeLa 604 8894__0010.dm4). Below this is "My Study with Annotations 2" containing "My Assay with Annotations 5" and "My First Assay 3".
- Middle Panel:** Displays the "Project Dataset" view. It shows a list of image files with their names and sizes.
- Right Panel (Metadata):** Shows the "General" tab for the selected project. It includes fields for Project ID (1256), Owner (Karl Peter Dominikus Zentis), Project Details, Tags (0), and Key-Value Pairs (6). Below this is the "ARC-INVESTIGATION-ONTOLOGY SOURCE REFERENCE" section, which lists source information for two different assays: "SCoRO" and "EFO".

Peter Zentis

Conceptual + Data Curation

OMERO to ARC

Mapping

OMERO	ARC	ARC Metadata in OMERO
Project	Study	isa.investigation.xlsx isa.study.xlsx
Dataset	Assay	isa.assay.xlsx

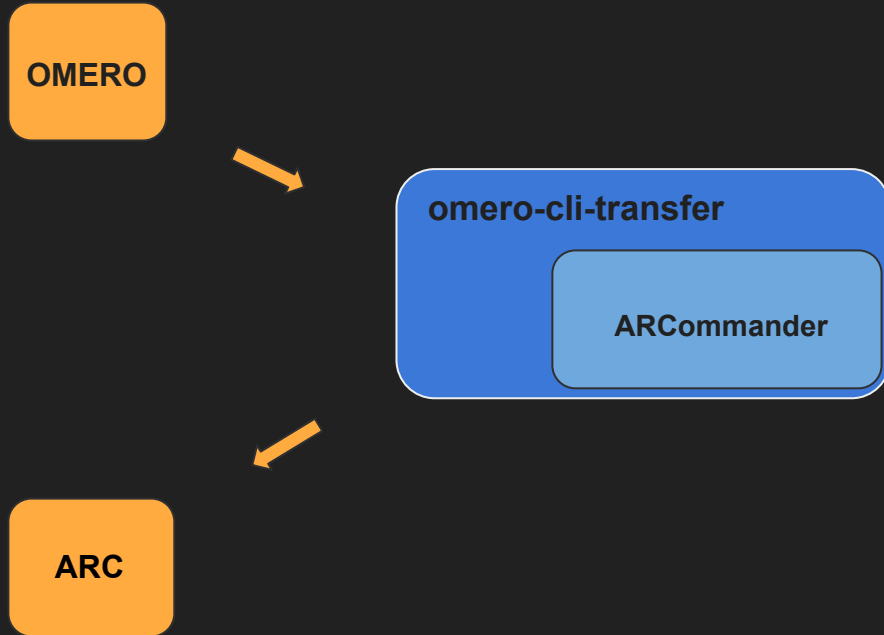
ARC like Structure in OMERO

The screenshot displays the OMERO web interface. On the left, a file tree under 'Mitochondria in HeLa cells' shows a series of microscopy images (10kX_HeLa 604 8894_0010.dm4 to 8000X_HeLa 604 8894_0002.dm4) and folders for 'My Study with Annotations 2' and 'My First Assay 3'. The main panel is divided into three sections: 'Project' (blue text), 'Dataset' (green text), and 'Metadata' (blue text). The 'Metadata' section shows details for a project named 'Mitochondria in HeLa cells', including project ID 1256, owner Karl Peter Dominikus Zentis, and a list of key-value pairs for 'ARC:INVESTIGATION:ONTOLOGY SOURCE REFERENCE'.

Peter Zentis

Discussion Conceptual Part

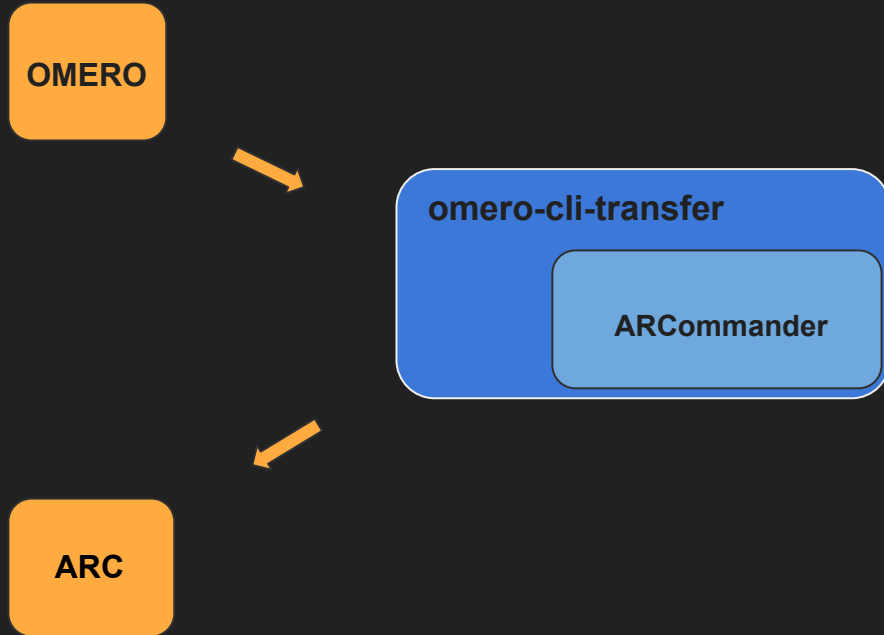
Flow Diagram for OMERO to ARC



Notes :

User does not use ARCommander.

Flow Diagram for OMERO to ARC

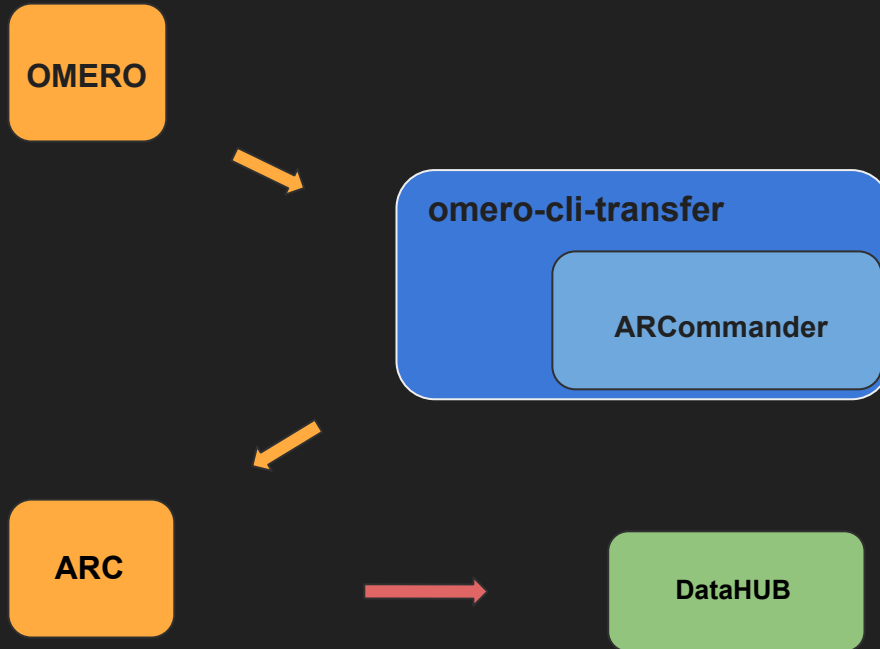


Notes :

User does not use ARCommander.
Final ARC in our local machine.

Technical Part

Flow Diagram for OMERO to ARC

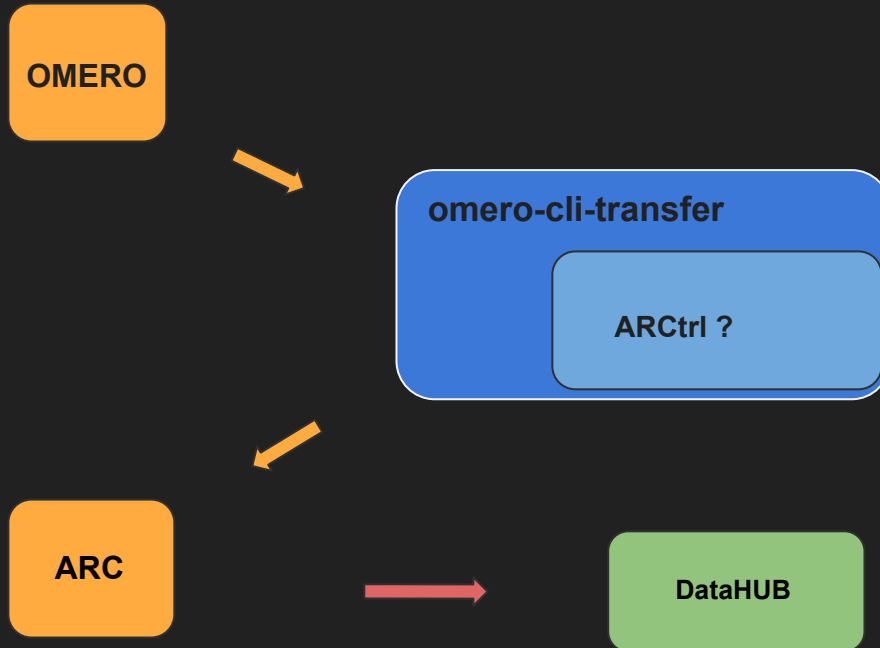


Notes :

User does not use ARCommander.
Final ARC in our local machine.
Push ARC to DataPlant DataHUB

Technical Part

Flow Diagram for OMERO to ARC

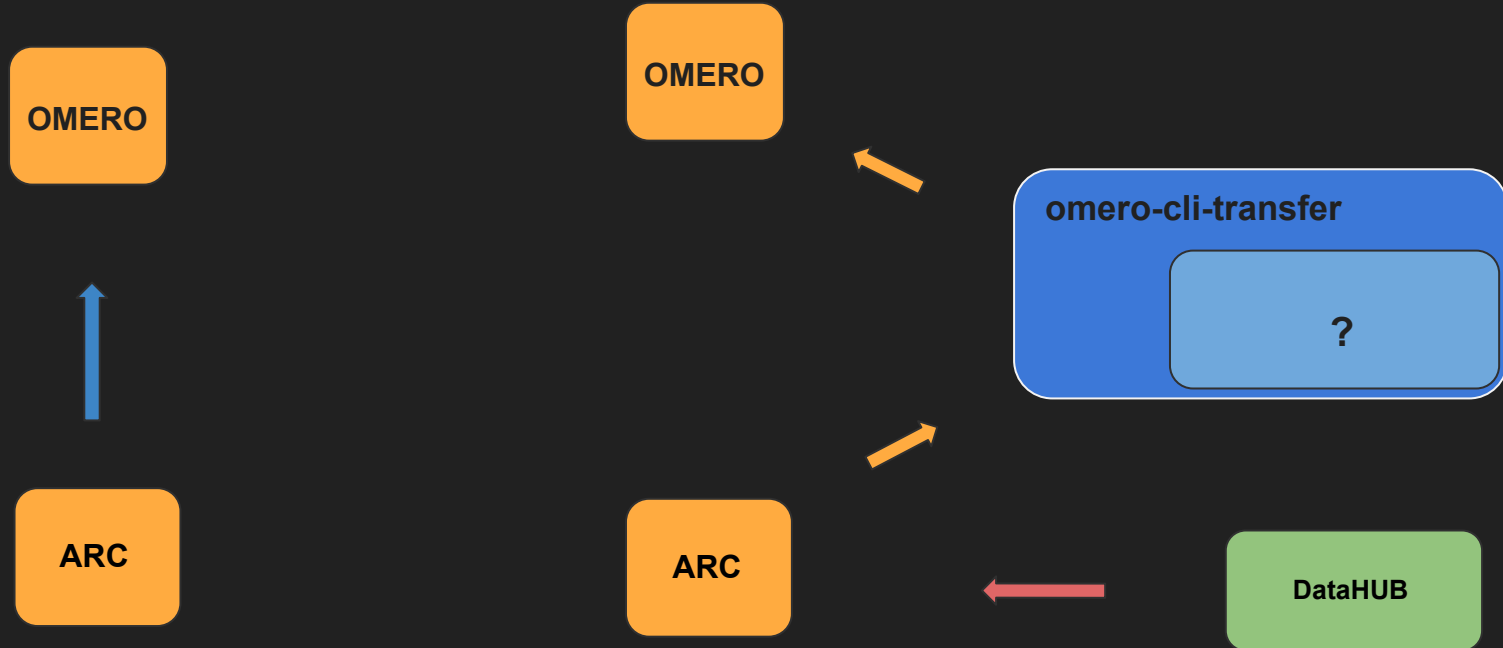


Notes :

User does not use ARCommander .
Final ARC in our local machine.
Push ARC to DataPlant DataHUB
Replacing ARCommander by ARCtrl (python)

Technical Part

Future work : ARC to OMERO



Future work : ARC to OMERO

Andrea Schrader

Michele Bortolomeazzi

OMERO



ARC

map-by-seq_CLSM-stacks
Project ID: 619

50 Commits 1 Branch 0 Tags 68.8 MB Project Storage

Topics: bio-imaging microscopy CLSM + 3 more

License: MIT Publish ARC Project badge

Merge branch 'arc_json' into 'main' ...
Andrea Schrader authored 1 week ago

main map-by-seq-clsm-stacks Find file Clone

README Creative Commons Attribution 4.0 International Auto DevOps enabled

Name	Last commit	Last update
arc	Initiated an ARC, added investigation met...	2 months ago
assays	Manually switched all Term Accession Na...	1 week ago
runs	Initiated an ARC, added investigation met...	2 months ago
studies	Manually switched all Term Accession Na...	1 week ago
workflows	Initiated an ARC, added investigation met...	2 months ago
.gitattributes	Added a study and assay(s) with measur...	2 months ago
.gitignore	Update .gitignore	2 months ago
LICENSE	Added a README template, license and ...	2 months ago
README.md	Update README.md	2 weeks ago
arc.json	Added a new arc-json.	1 week ago
isa.investigation.xlsx	Manually switched all Term Accession Na...	1 week ago

MBEN_Resolve
Project ID: 897

4 Commits 1 Branch 0 Tags 2.9 GB Project Storage

pipeline failed Publish ARC Project badge

Update
Michele Bortolomeazzi authored 5 days ago

main mben_resolve Find file Clone

README Auto DevOps enabled

Name	Last commit	Last update
arc	Update	5 days ago
assays	Update	5 days ago
runs	Update	5 days ago
studies	Update	5 days ago
workflows	Update	5 days ago
.gitattributes	Update	5 days ago
README.md	Update	5 days ago
isa.investigation.xlsx	Update	5 days ago

Sample ARCs : Imaging

Conceptual + Data Curation Part

Proposal de.nbi - Various Tasks

1. **Conceptual part** : Developing templates that can seamlessly integrate with various research areas and imaging modalities within OMERO and ARCs. This involves designing efficient methods for transferring metadata accompanying image data stored in both ARCs and OMERO.
[beneficial skills: OMERO, ARC]
2. **Data curation** : Existing ARCs containing microscopy data are transferred to OMERO and vice versa. Participants can work on their own datasets or use existing examples. This will validate the conceptual part and prepare the technical part.
[beneficial skills: OMERO or ARC, image data]
3. **Technical implementation** : Enable import/export of meta(data) from and to specialized and domain-specific data management solutions, such as OMERO.
[beneficial skills: Programming, e.g. Python, Java]