

OMERO at Warwick: The guide

- OMEERO is a single interface for all your imaging data, no matter where it is stored and which format it is in. You can do everything from storage to publishing inside OMEERO.
- The web interface is at `omero.warwick.ac.uk`
- Log in with your university credentials (also known as single sign-on).
- After you have logged in for the first time, contact us and we will add you to the correct group (please let us know who your PI is).
- Data can be imported into OMEERO using a desktop client, OMEERO.insight.
- The server address for importing is `camdu.warwick.ac.uk` Again, log in with your university credentials.
- You can also work with your data in FIJI/ImageJ using the OMEERO plugin.
- The primary contact in case of any problems, doubts or questions is Erick Martins Ratamero: `e.martins-ratamero.1@warwick.ac.uk`.
- If you are a PI interested in having an OMEERO group for your lab, please contact us and let us know the names and usernames of your lab members.
- Training sessions will be offered on 23 and 24/04, and in the future whenever there is enough demand for it.

Frequently asked questions

So what is OMERO?

OMERO is a software platform for visualizing, managing, and annotating scientific image data. OMERO lets you import and archive your images, annotate and tag them, record your experimental protocols, and export images in a number of formats. It also allows you to collaborate with colleagues anywhere in the world by creating user groups with different permission levels.

Why should I use it?

It's very convenient! After your data is imported, you never need to worry about network mounts and folder structures again. Your data is searchable, you can annotate it, visualise it, perform simple image analysis workflows, share it with collaborators and generate publication-level figures, all directly from your web browser.

How do I use it?

There are two main interfaces for OMERO: a desktop client (OMERO.insight) and a webpage (OMERO.web). They both have similar but not identical features - some specific tools are only present in one of them.

How do I get my data into OMERO? What happens to it?

Importing data into the OMERO server is done via the desktop client. A full guide on how to use OMERO.insight is available at:

<http://help.openmicroscopy.org/getting-started-5.html>

All downloads (OMERO client, Fiji plugin, etc) can be found at:

<https://www.openmicroscopy.org/omero/downloads/>

The address for the Warwick server is `camdu.warwick.ac.uk`. You should use your university credentials to log in. Before uploading data, please make sure you have been assigned to your lab group. If you are not sure, send me an email (e.martins-ratamero.1@warwick.ac.uk).

Data imported into OMERO is saved on our new petabyte storage server. It is regularly backed up and directly managed by IT services. It is in good hands and you don't need to worry about it!

The program asks me for a “project” and a “dataset”. How should I organise my data?

To leverage the way OMERO thinks about data, we recommend having **few projects** and **many datasets**. For a typical microscopy workflow, we envision

each individual user having a few (up to five) projects and a dataset per microscopy session.

I need to do complicated image analysis on my data. Is OMERO good for me?

Sure! It has a Fiji plugin that allows you to directly interface your Fiji workflows with OMERO and save results and images back to server easily: it's as simple as double-clicking your image of interest on the OMERO plugin for Fiji. If you prefer to code your own solutions, it also has interfaces with Python, Java, MATLAB, R, CellProfiler... By using OMERO, you never need to worry about manually downloading data before running your analysis algorithms.

Is my data private? Can I see other people's data?

The short answer is "it depends". Each group owner (i.e. PI) can choose the set of permissions for their group. These go from private (each user only sees their own data, PI can see the whole group's data) to read-write (everyone can do everything to each other's data inside the group, including deletion). We recommend private as the default setting.

I am still unsure about how to do things in OMERO. Can you help?

Of course! We will be running training sessions on the basics and the most popular features in the near future, and more advanced topics on demand. In the meantime, you are more than welcome to come talk to me (*in silico* area at the MCBB) or send me an email at e.martins-ratamero.1@warwick.ac.uk.

I still don't understand why I would ever use it. What should I do?

Can we suggest that you attend one of the training sessions? Most people who attend it are enthusiastic about the possibilities by the end of it. (OMERO.figure, the web-based 'Illustrator-lite' tool to generate publication figures, is particularly popular.)

I would like to try OMERO without the pressure of using my real data. Can I do that?

You definitely can. If you prefer, we also have a test server (web page: omero-test.warwick.ac.uk, server address: camdu-test.warwick.ac.uk) where you can try whatever you feel like doing without worrying about messing up your actual data.

I keep hearing about GDPR. Does that concern OMERO?

Yes. The OMERO server is classified as **Protected Data**, which means that it can only contain research data that is not classified as security-sensitive or intended for commercialisation. Other restrictions also apply - if in doubt, please contact us. By using the OMERO server, you agree that all data stored by you is classified as **Public** or **Protected** data.

Where can I find more help about OMERO?

The OMERO website (<http://help.openmicroscopy.org/>) has detailed instructions on how to perform simple workflows.