

Montpellier Workshop

The presentation and a PDF version of the workshop are available at <https://downloads.openmicroscopy.org/presentations/2020/Montpellier>

Software versions used for this workshop:

- OMERO: 5.6.0
- OMERO.web: 5.6.1
- OMERO.insight: 5.5.9
- OMERO.insight-ij: 5.5.9
- OMERO.iviewer: 0.9.0
- OMERO.figure: 4.2.0
- OMERO.mapr 0.4
- OMERO.parade: 0.2.0
- OMERO.FPBioimage: 0.4.0
- OMERO training scripts: 0.7.0
- OMERO training notebooks: 0.7.1
- OMERO-downloader: 0.2.1
- omero-metadata: 0.5.0
- Bio-Formats: 6.3.1
- Fiji/ImageJ: 2.0.0-rc-69/1.52p

Content

Importing data into OMERO

Core concepts

Analysis

Data Mining using OMERO.parade

Publishing data using OMERO.figure

Import

In this section we will cover the various import options such as the import with or without data transfer and synchronous vs. asynchronous.

Desktop client install and import

For these 2 workflows shown in the workshop, see

<https://omero-guides.readthedocs.io/en/latest/upload/docs/import-desktop-client.html> and
<https://omero-guides.readthedocs.io/en/latest/upload/docs/import-desktop-client.html#import-for-another-user>

Command line import, bulk import, in-place import

These import sections not covered in the workshop can be found at

<https://omero-guides.readthedocs.io/en/latest/upload/docs/import.html>

OMERO core concepts

Data management and cooperation

See <https://omero-guides.readthedocs.io/en/latest/introduction/docs/data-management.html>

Viewing images (OMERO.iviewer)

<https://omero-guides.readthedocs.io/en/latest/iviewer/docs/iviewer.html>

Annotate data and filter using annotations

<https://omero-guides.readthedocs.io/en/latest/introduction/docs/annotate.html>

Search

<https://omero-guides.readthedocs.io/en/latest/introduction/docs/search-omero.html>

Viewing images (3D viewer: OMERO.FPBioimage)

<https://omero-guides.readthedocs.io/en/latest/fpbioimage/docs/fpbioimage.html>

Export

<https://omero-guides.readthedocs.io/en/latest/download/docs/index.html>

Analysis

This part constitutes the core of the training and we will explore the different means OME provides to interact with image and non-image data and how to best integrate these into your workflows.

Analysis with Fiji

- Analysis with Fiji: Java
 - Fiji client side: manual Analysis via UI
 - Fiji client side: scripting: Groovy and Macro
 - Fiji: Analysis in the cloud: Java and Macro

For setup of the Fiji plugin see

<https://omero-guides.readthedocs.io/en/latest/fiji/docs/installation.html>

For the walkthrough in this workshop, see the four Fiji chapters

<https://omero-guides.readthedocs.io/en/latest/fiji/docs/installation.html>

https://omero-guides.readthedocs.io/en/latest/fiji/docs/threshold_manual.html

https://omero-guides.readthedocs.io/en/latest/fiji/docs/threshold_scripting.html and

https://omero-guides.readthedocs.io/projects/fiji/en/latest/headless_notebook.html

Analysis with Ilastik

- Analysis with ilastik: Python
 - Manual Analysis via UI
 - Analysis in the cloud: Python

See for both setup and workflows

<https://omero-guides.readthedocs.io/en/latest/ilastik/docs/ilastik.html>

See for the

Analysis with CellProfiler

- Analysis with CellProfiler: Python
 - Analysis in the cloud: Python and using CellProfiler API

See for all CellProfiler workflows

<https://omero-guides.readthedocs.io/en/latest/cellprofiler/docs/index.html>

Note that <https://mybinder.org/> will be used for CellProfiler setup as described in

<https://github.com/ome/omero-guide-cellprofiler>

Analysis in Python/Java/R

- Analysis in Python/Java/R
 - Set up analysis environment

- Python script running locally
- Python script in the cloud

See for Python scripts

<https://omero-guides.readthedocs.io/en/latest/python/docs/simple-frap-example.html>

See for Java scripts

<https://omero-guides.readthedocs.io/en/latest/java/docs/index.html>

See for R analysis

<https://omero-guides.readthedocs.io/en/latest/r/docs/index.html>

Server side analysis

- Analysis server side
 - How to write a Python script
 - How to upload the script to the server

Server-side scripts (python)

https://omero-guides.readthedocs.io/en/latest/scripts/docs/execute_scripts.html

For further information about how to write and manage server-side scripts see

<https://omero-guides.readthedocs.io/en/latest/scripts/docs/index.html>

OMERO parade

Data mining using OMERO.parade on Projects and Plates

See https://omero-guides.readthedocs.io/en/latest/parade/docs/omero_parade.html

OMERO figure

Fast creation of publication figures using OMERO.figure

See https://omero-guides.readthedocs.io/en/latest/figure/docs/omero_figure.html