

Accessing OMERO at UArizona

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OMERO is “an enterprise image data management platform that enables access, processing, sharing, analysis and where appropriate publication of scientific image data and metadata.” <https://www.openmicroscopy.org/about/> For more information about OMERO for scientists, see <https://www.openmicroscopy.org/omero/scientists/>

OMERO at the UArizona (<https://datascience.arizona.edu/analytics-powerhouse/omero>) is part of the larger **Soteria** project (<https://soteria.arizona.edu/>) which is funded by the University of Arizona Health Sciences strategic initiative 5.3.

Questions? – contact us at RII-omero@arizona.edu

Server access

To obtain permission to use the OMERO server at UArizona a faculty member must first request access for themselves, as well as the members of their lab. Currently we are asking faculty members to provide us with a short project plan so that we can work with them as they integrate OMERO into their lab’s workflow.

Virtual Private Network

The authentication process for the UArizona VPN was updated Feb 16, 2024. See the last bullet point in this section for more detail.

Access to the UArizona OMERO server requires the use of the campus VPN (Cisco AnyConnect software), even if you are already physically on the campus network (wired or Wi-Fi). The only persons who can use the VPN are those who already have a UA NetID, such as faculty, staff, students, or designated campus colleagues (DCC).

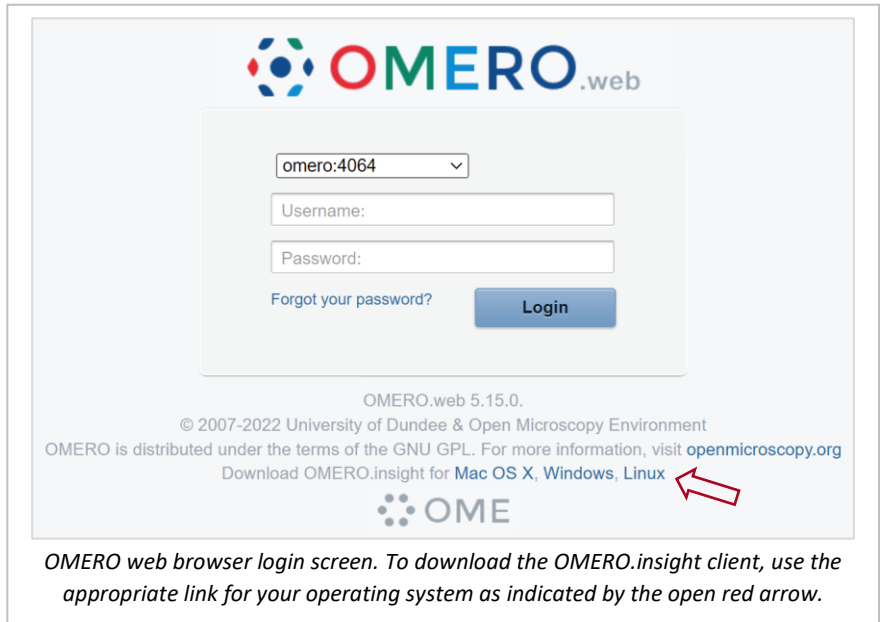
- Information about the UArizona VPN is here: https://uarizona.service-now.com/sp?id=sc_cat_item&sys_id=8ab35af01bb830507947edf1604bcb90
- To download and install the Cisco AnyConnect client software (Windows, Mac, Linux), see: https://uarizona.service-now.com/sp?sys_kb_id=f9cbea218777f150731954273cbb35e1&id=kb_article_view&sysparm_rank=1&sysparm_tsqueryId=49af9a2087dcce90731954273cbb3539
- Instructions for connecting to and using the VPN client are here: https://uarizona.service-now.com/sp?id=kb_article_view&sys_kb_id=ee7aba4c87c48a10731954273cbb357c
- Logging in with a UA NetID requires two-factor authentication. The UArizona uses a phone app called DUO, see: https://uarizona.service-now.com/sp?sys_kb_id=aed38231874cc650731954273cbb3599&id=kb_article_view&sysparm_rank=1&sysparm_tsqueryId=8e8062a487dcce90731954273cbb3582
- If you would prefer to use an alternative two-factor authentication method, see this article for options: https://uarizona.service-now.com/sp?sys_kb_id=50649ae097ce7510b41055b00153af4e&id=kb_article_view&sysparm_rank=3&sysparm_tsqueryId=8e8062a487dcce90731954273cbb3582
- If you need technical support setting up the VPN client, contact the UArizona 24/7 or your local IT support group: <https://it.arizona.edu/get-support>
- If you are already familiar with the VPN, the Feb 2024 update changed the appearance of some of the prompts. See this article for more information: https://uarizona.service-now.com/sp?id=kb_article_view&sysparm_article=KB0010283

We recommend that you use the “full” UA virtual private network (*paste <https://vpn.arizona.edu/full> into the window of CISCO Anyconnect*), for some reason this works more reliably than the standard UA campus VPN. You are not likely to “see” the OMERO server using a college or center/institute specific VPN.

OMERO.insight client

Once you are connected to the campus VPN, the UArizona OMERO server can be accessed in a web browser at <https://omero.arizona.edu/>. You will need to use the login credentials (username, password) that you were provided when you registered.

At this time OMERO does not have the capability to use the UA NetID login process. Your OMERO username will be the same as your UA NetID (an intentional choice on our part). Our team hopes to be able to integrate UA NetID logins at some future date.



You can perform many OMERO functions from within the web browser interface, but to upload image data to the server you will need to have the desktop OMERO.insight client. You can download the appropriate client for your operating system (Windows/Mac/Linux) from the web login screen or go to: <https://www.openmicroscopy.org/omero/downloads/>

For installation tips for OMERO.insight see: <https://omero-guides.readthedocs.io/en/latest/upload/docs/import-desktop-client.html>

Once you have the OMERO.insight client installed (may require assistance from your college/dept IT team), open the software. Please note, you must be on the UA virtual private network to use OMERO.insight with the UArizona OMERO server.

From the login screen click on the wrench icon to open the SERVER dialog box. In the server dialog box, find the blue + icon to add the UArizona OMERO server **omero.arizona.edu**, then click OK to add the server to the list. Select the omero.arizona.edu server from the list and then click Apply.

OMERO.insight login screen

- Clicking on the wrench icon will open the server dialog box. See open red arrow.
- The UArizona server name is omero.arizona.edu
- You will have been given a username and password when you registered.
- You must be on the UArizona VPN.

If you are just learning how to use OMERO, you may also be given permission to access our training/practice server which is located at **omero-training.arizona.edu**. To use the training server, this address would need to be added to OMERO.insight as well. **Please note, the training server is just for practice purposes. Do not store important data there.**

NOTE: we have video recordings from our August 2023 two-day training workshop with the OME trainers available on the campus learning site, <https://d2l.arizona.edu/>. To see these videos, please email us (UArizona emails only) and we can give you access to the OMERO training course.

Logging in using OMERO.insight or OMERO.web

At the OMERO login screen put your login name (should be the same as your UA NetID login name) and the password that you were given when you registered for OMERO. You can have both open at the same time if needed. The web browser version has more useful features for viewing the data than the desktop client.

Command Line Interface (OMERO.cli)

There is a Python library (OMERO.py) that allows you to connect to the UArizona OMERO server from a command line. For most users this will likely require the installation of Conda (or miniconda, or Anaconda, see: <https://omero-guides.readthedocs.io/en/latest/python/docs/setup.html>). You should use the login credentials provided and will still need your computer to be on the UArizona VPN to connect to the server.

Please note: there are a number of Python experts on campus, but the current UArizona OMERO team does not have expertise with this particular language.

If you want to change your OMERO login password

To accomplish this, you must log into OMERO using a web browser. Log into OMERO with your current credentials and look in the upper right hand corner of the interface. You should see your name (or login name) up in the corner and a downward facing triangle ▼. Click on your name and choose **user settings** from the menu. In the user settings is the option to change your password.

Please note: OMERO does not have an administrative function to enforce rules related to password length or complexity, so this means that users are on the honor system. If your data is valuable to you and your colleagues, please create an appropriately secure password.

Strong password tips: <https://support.microsoft.com/en-us/windows/create-and-use-strong-passwords-c5cebb49-8c53-4f5e-2bc4-fe357ca048eb>