



SOP for connecting to AIR·MS from Minerva / HPC

Standard operating procedure (SOP) for all Mount Sinai
Researchers accessing AIR·MS from Minerva/HPC.

Contact:

For questions or in case of technical problems, please contact:

AIR·MS Support (airms-support@mssm.edu)

AIR·MS Info (airms-info@mssm.edu)



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Director of Operations Approval: _____ Signature _____ Date	Chair Approval: _____ Signature _____ Date

This document provides step-by-step instructions for all Mount Sinai Researchers on connecting to AIR·MS from Minerva / HPC.



Step 1: Request access to HPC

- If you do not possess an HPC account, kindly initiate a request to the [Scientific Computing and Data team](#). During this process, please ensure you select '[Mount Sinai User](#)' as demonstrated in the subsequent steps.
- For individuals who are already in possession of an HPC account, you may proceed directly to [Step 4](#).

[Scientific Computing and Data](#) / [High Performance Computing](#) / [Request an Account](#)

Request an Account

Please select the account type that best fits your access requirements:



- [Mount Sinai User](#)
Request a Minerva User Account. You'll need your Sinai Username, PI name, and Department.
- [External Collaborator](#)
PI's can request an account for non-Mount Sinai Users.
- [User Needing Project Allocation](#)
Request project allocation on Minerva for a new or existing project.
- [Group Collaborator](#)
Collaboration accounts for group-related activities require PI approval.

Read more about [connecting to Minerva](#), or [how to log in](#). Questions can be directed to hpchelp@hpc.mssm.edu

We partner with both internal and external scientists on innovative research to pursue new scientific opportunities, and actively strive for broader engagement and industrial partnerships with the local and state communities for education and workforce development.

Step 2: Completing the Minerva User Account Request Page

- Utilize your Mount Sinai credentials to fill out the request form.



Minerva User Account Request Page

Your Full Name:	
Your Email Address:	
External account?	☐
Non-Mount Sinai users must use an external account	
Non-Mount Sinai users must provide your own institution name:	
Physical two-factor token?	☐
Sinai Username:	
Your PI full name:	
Department:	



Step 3: Adding Your Account to a Minerva Project Folder

- **Establishment of a Project Folder [REQUIRED]:** Utilization of AIR·MS on the Minerva platform mandates the establishment of a dedicated project folder.
- **Post-Account Creation Action:** Upon the successful creation of your Minerva account, as indicated by a confirmation notice, you are required to initiate the process for accessing a Minerva Project Folder.
 - **For Existing Minerva Project Folders:** In instances where your Principal Investigator (PI) already possesses a Minerva Project Folder, the PI should request to have your userID added to the folder. This is achieved by sending an email to HPCHelp@mssm.edu, specifying the necessary user(s) addition.
 - **For New Minerva Project Folders:** Should your PI not have an existing Minerva Project Folder, a request for the creation of a new folder is necessary. This process is initiated by completing the requisite form, accessible [here](#).
 - Note: For HPI·MS Researchers, please send an email to Lewis Lo and Manbir Singh.

Step 4: Open an SSH Session

- To begin, we need to establish an SSH (Secure Shell) session to connect to HPC. SSH is a network protocol that provides a secure way to login remotely from one computer to another.
 - Mac users: Open your Terminal application to open a command prompt.
 - Windows users: Windows users will need to download and install [Putty](#), which provides an SSH client.

Step 5: Connect to HPC

- Using your terminal (or Putty for Windows users), establish an SSH session to `minerva.hpc.mssm.edu`. When connecting, you will need to provide your MSSM username and password. **Since HPC enforces 2-factor authentication, you will need to append your VIP token to the password.** (Password: `myH@rd2gu3$$p@$word123456` where `123456` would be the 6-digit credential from your VIP token.)

Mac users:

```
ssh -X userid@minerva.hpc.mssm.edu
```



Windows users:

1. Open Putty and configure a new session.
2. Specify **minerva.hpc.mssm.edu** as the hostname and SSH as the protocol. Save your session.
3. Enable X11 forwarding by navigating to Connection -> SSH -> X11 and selecting the Enable X11 forwarding checkbox. After making this setting, be sure to navigate to Session and save the connection you are configuring.
4. Click Open.

Step 6: Run the Minerva Jupyter Module wrapper

- Create your AIR·MS working directory:

```
mkdir /sc/arion/work/<user_id>/airms
```

Note: This may already exist, in which case you can ignore this step.

- Change to your Jupyter notebook working directory:

```
cd /sc/arion/work/<user_id>/airms
```

- Clone the repository containing AIR·MS tutorials

```
ml git
```

```
export GIT_SSL_NO_VERIFY=true
```

```
git clone https://github.mountsinai.org/AIRMS/airms-researcher-tutorials-minerva
```

- Run the the minerva-jupyter-module-web.sh to setup your Jupyter notebook environment:

```
minerva-jupyter-module-web.sh
```



- Note: The script will display a series of messages as it executes. At the very bottom of the output, you should see a **URL** for your Jupyter notebook.
- For more information, please visit the [HPC Documentation page](#).

Step 7: Access the Jupyter Notebook

- When running the login script during step 6, a URL was displayed at the bottom of the output. Copy and paste this URL into a browser on your local computer.

Step 8: Adapt notebook to user-specific environment

- You will be presented with the following notebook folder structure

