



# SWAN instructions

Spring 2021

- **Cern SWAN service**
  - **Set-up**
  - **sharing**





# SWAN set-up

[SWAN](#): Interactive Data Analysis, in the Cloud

- Allows (shared) analysis via jupyter notebooks
- Linked to Cernbox so can share data and results
  - `$CERNBOX_HOME`  $\equiv$  `/eos/user/N/NAME/`



Each SWAN session gives configuration options (unless default is set)

- Software stack: *python version*
- Platform: *Centos version*
- Environment script: *.sh file* from Cernbox (if required)
- Number of cores: *2/4*
- Memory: *8/10/16 GB*
- Spark cluster: *cloud detail (?)*

If no *.sh* supplied, standard package set and versions used

If custom packages/versions required use configuration file

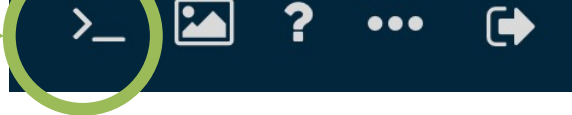
Setting custom packages details next slide...



# SWAN local packages

Locally installed packages are saved to eos space (/eos/user/N/NAME/)

Install packages via terminal in session (**NB** –user flag)

- Open a terminal in SWAN session (top LHS) 
- (can check eos space: echo \$CERNBOX\_HOME)
- Install (upgrade) package
  - E.g.: python3 –m pip install MYPACKAGE (--upgrade) –user
- If package not defined by default then can now be accessed
  - If package is alternative to default version then append PYTHONPATH:  
export PYTHONPATH=\$CERNBOX\_HOME/.local/lib/python3.8/site-packages:\$PYTHONPATH

To avoid repeating this procedure for each SWAN session...

- Add line to config file:  
export PYTHONPATH=\$CERNBOX\_HOME/.local/lib/python3.8/site-packages:\$PYTHONPATH
- This will allow use of locally installed packages (saved to eos space)

Change python version as appropriate

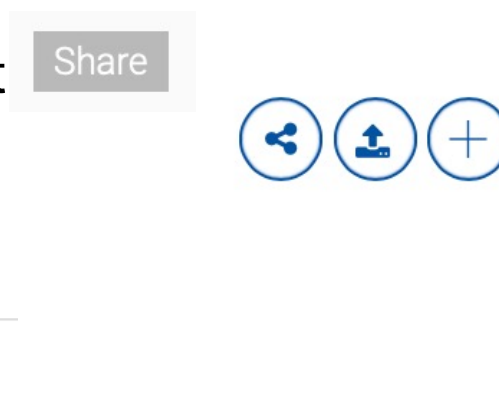
# SWAN sharing

Projects are saved to eos space:  $\$CERNBOX\_HOME \equiv /eos/user/N/NAME/$

- Can be shared analogously to Cernbox

To share a project (directory)

- Navigate to the project and either...
  - Select the share button when hovering over project
  - Select the share icon inside the project (top LHS)
  - (Additional people can be added later)
- Choose names from phonebook
- Project status should change



To see shared projects go to shared tab (top bar)

- What is shared *by* you
  - See details (people/groups), edit share
- What is shared *with* you
  - View shared notebooks
  - Clone shared notebooks
    - Make edits and share on as required

