Human Brain Project

EBRAINS

EBRAINS Collaboratory

Brief introduction and demo

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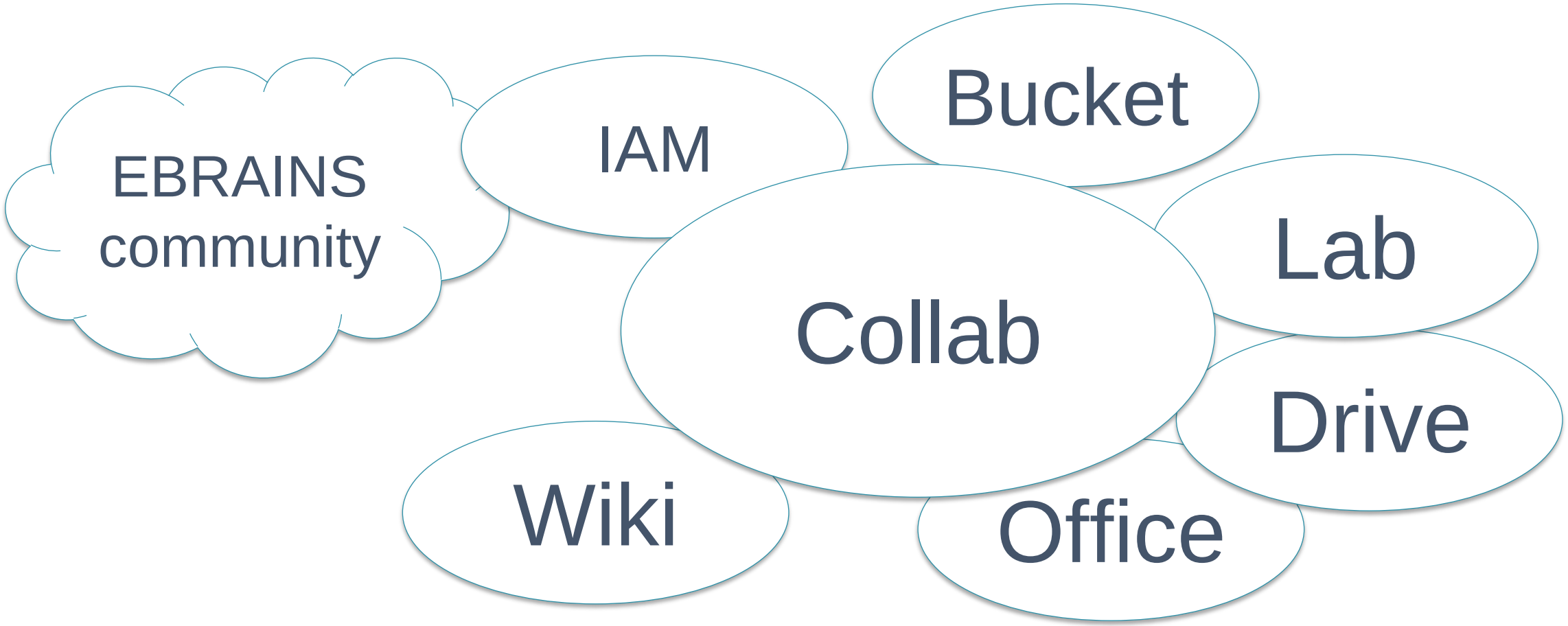
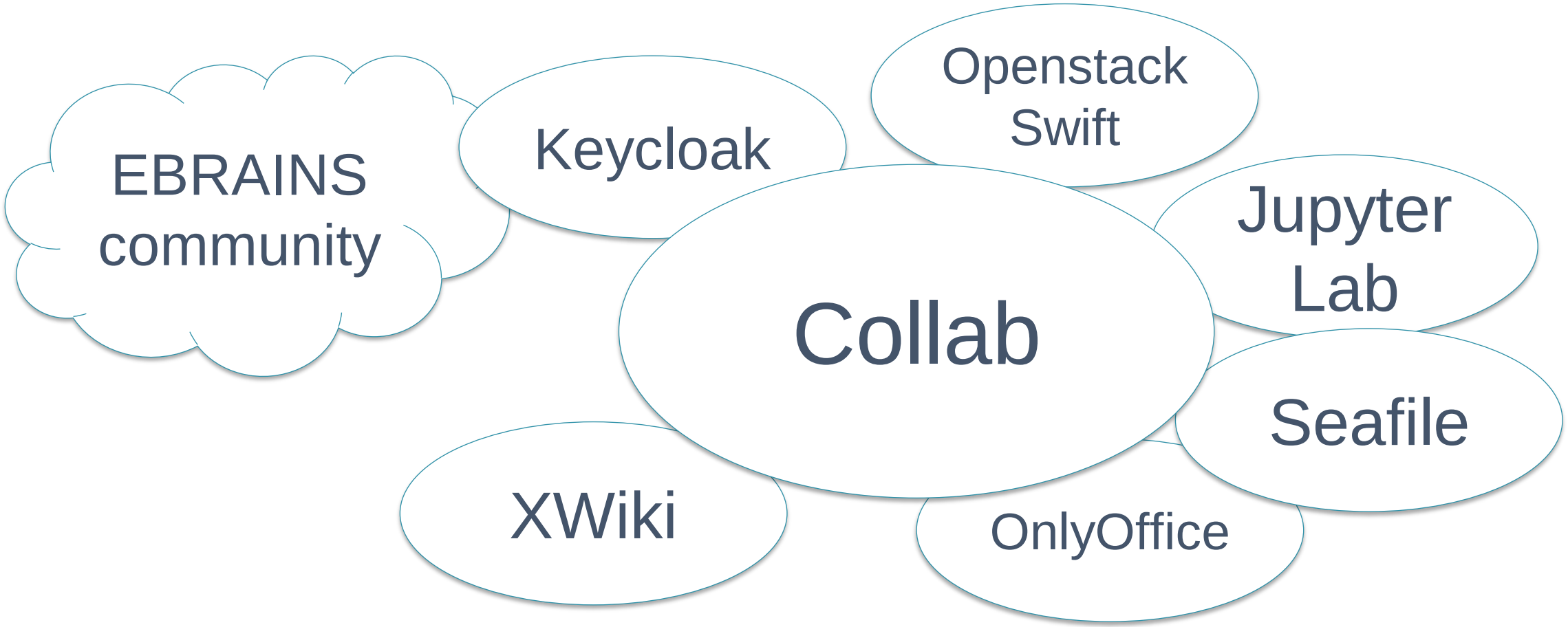
The Collaboratory is made up of…

- IAM: authentication & authorization
- Wiki: collaborative edition of web pages
- Drive: file storage
- Bucket: object storage for large files
- Office: collaborative edition of Office documents
- Lab: interactive programming

Collaboratory and “collab” workspaces




EBRAINS community
Keycloak
Openstack Swift
Collab
Jupyter Lab
Seafile
XWiki
OnlyOffice

- Allows you to create collabs, a central repository of information that provides easy integration to all other Collaboratory services
  - Allows either public or private collabs
- Create wiki paegs, an easy and convenient way to publish content to the web
  - Highly customizable, from simple text pages to highly interactive pages incorporating various 'macros'
  - Embed videos or even other web pages/applications into your wiki
  - Track all changes made to a wiki page throughout its life, as well as who made those changes
- Easily provide access to various people/groups using the "teams" functionality
- Search all public public collabs and private collabs you have access to, easily.
  - Also use a convenient "favourite" feature that allows you to keep track of important collabs

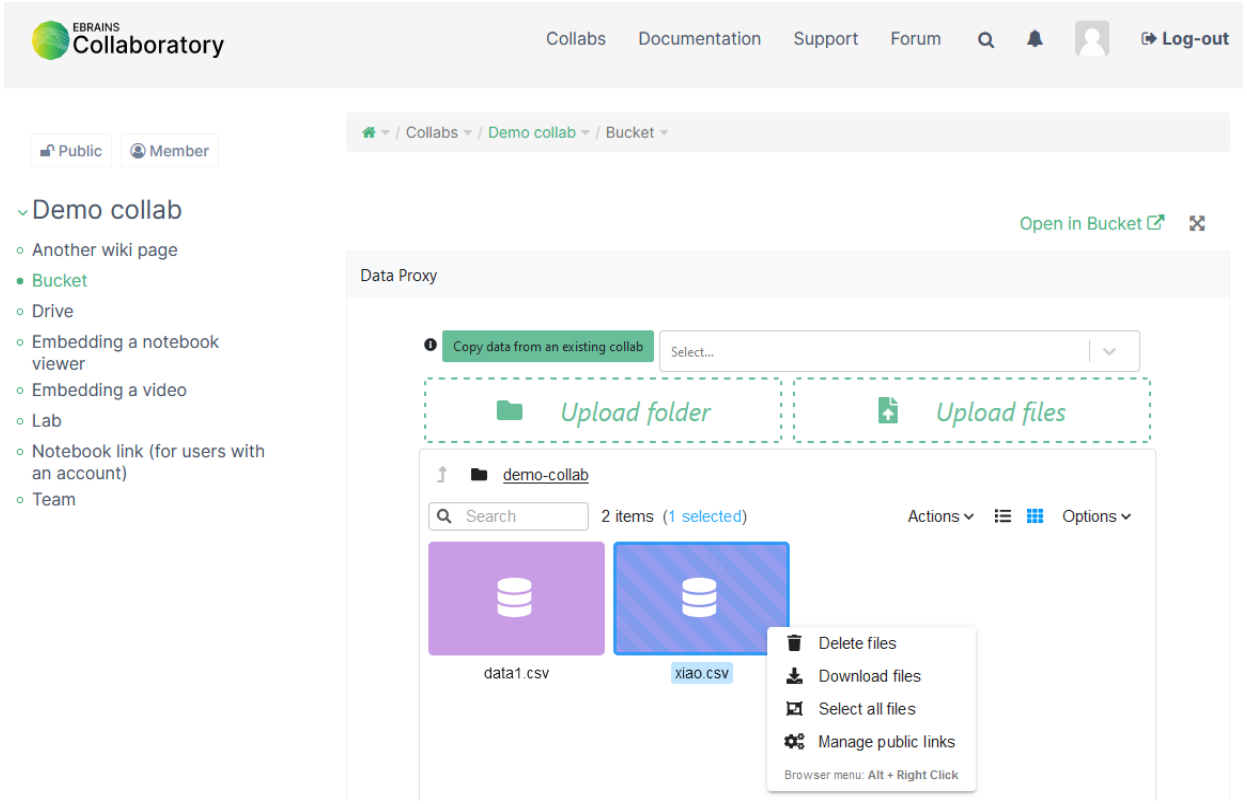
- IAM = Identity and Access Management
- Central user authentication and authorization service for EBRAINS
- Example client apps:
  - Inside Collaboratory: Wiki, Drive, Bucket, Lab
  - Other EBRAINS services: Knowledge Graph, Nuerorobotics
- We use the 3rd party software Keycloak by RedHat
- Users can manage collab permissions via Teams
  - Users have viewer, editor or admin permissions in a collab
  - Same permissions apply to the whole collab
  - Easily add or remove permissions to single users or Groups/Units
- EBRAINS service developers can create and manage OIDC clients

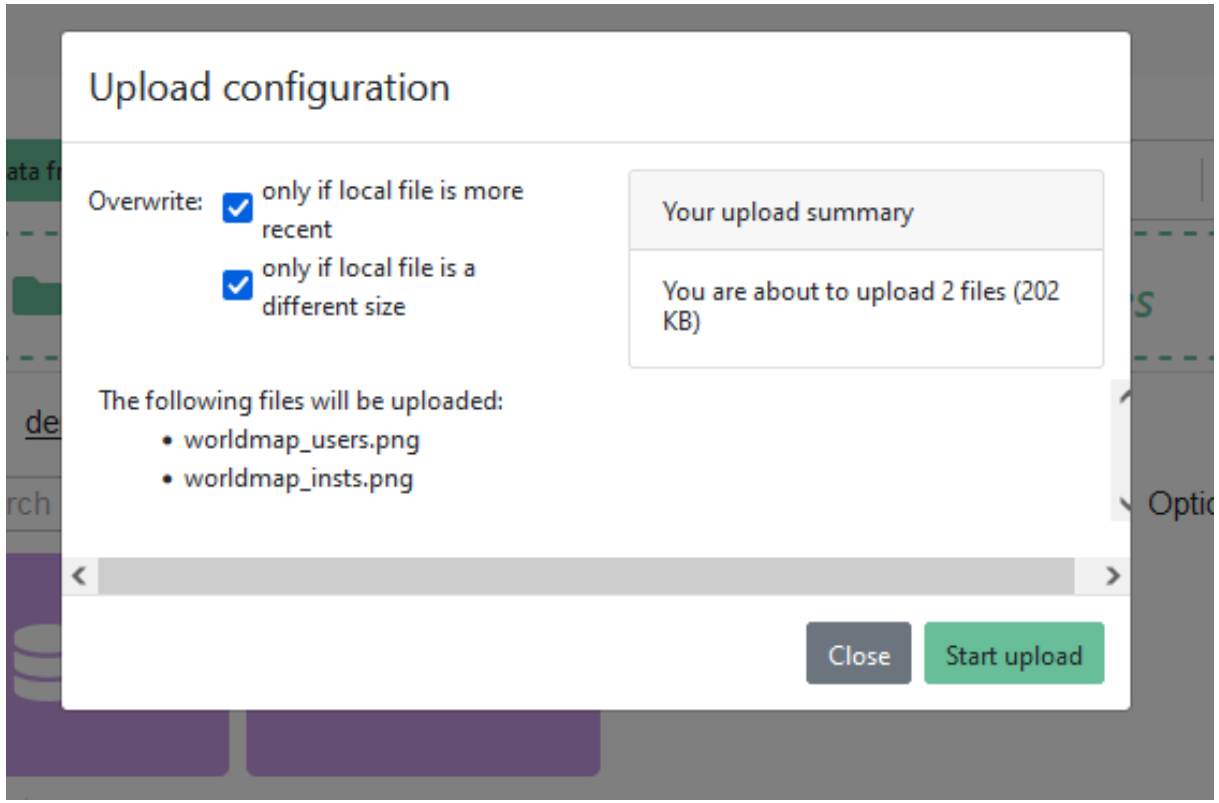
- Reachable from your user profile icon in the Wiki
- Search EBRAINS users
  - https://wiki.ebrains.eu/bin/view/Identity/#/users
- Browse Units (see button in your user profile)
  - https://wiki.ebrains.eu/bin/view/Identity/#/units/all
- Search for Groups(see button in your user profile)
  - https://wiki.ebrains.eu/bin/view/Identity/#/groups

- Upload files to a collab's “Drive” storage
  - Perfect for files and documents that need to be worked on collaboratively
  - Uses the collab's permissions to manage access
  - Maximum limit of 1 GB per file (For now)
- All files are version controlled
  - Track all changes made to a file and who made those changes
  - Possibility of reverting to an older version of a file by an editor of the collab
- Ensure only the appropriate people can see a file with “Smart link (Internal link)” or make it available to the public with “Share links”
- Possibility of creating a public upload link
  - good way of collecting information from users with and without an EBRAINS account

- Easily edit collaborative files together
  - Tightly coupled with the Drive, files on the Drive can access Office directly
  - Supports Word, PowerPoint and Excel formats.
  - All files are version controlled
  - Track all changes made to a file and who made those changes (Although if groups are editing at the same time, only 1 name will show up on the track list)

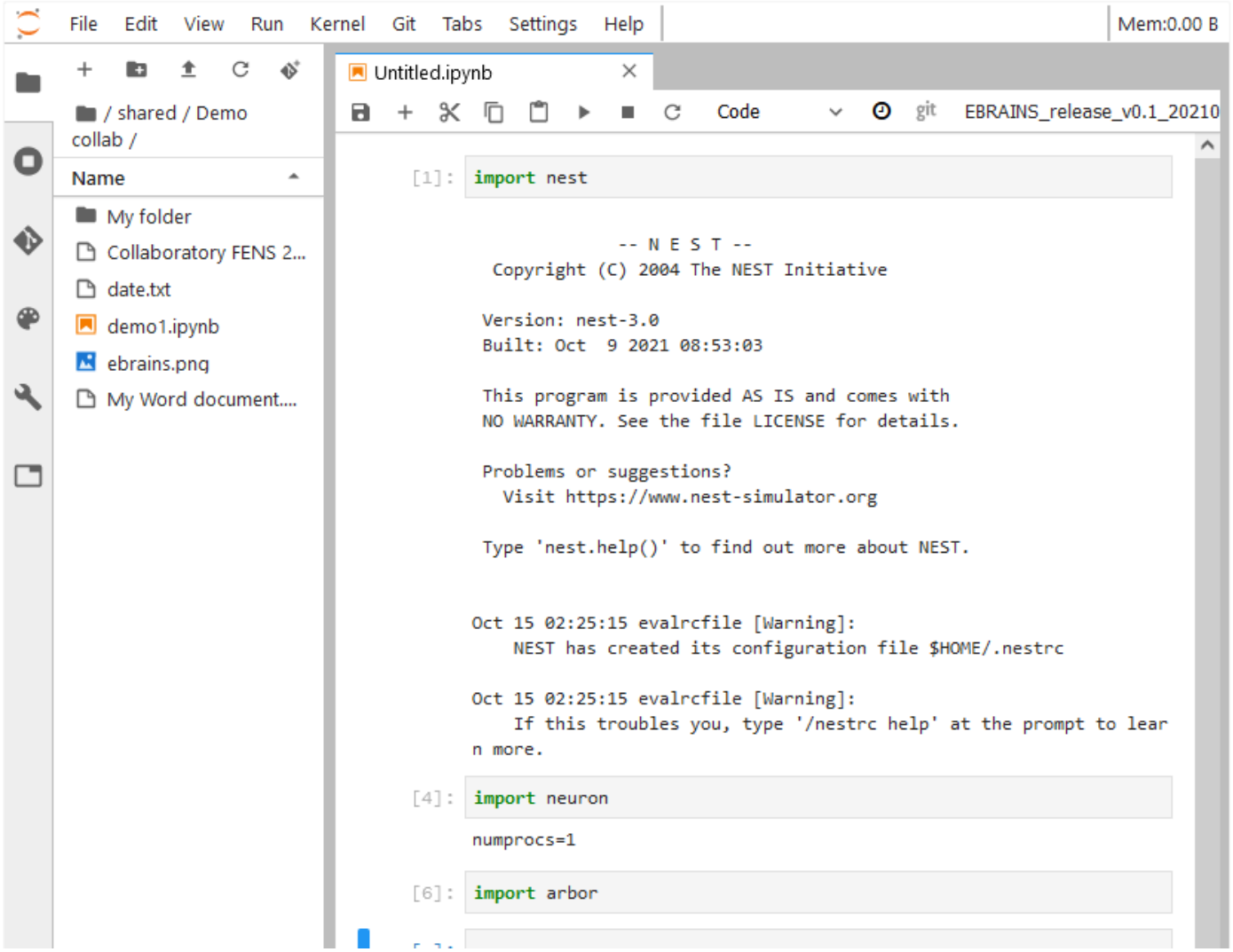
- Upload large files to a collabs “Bucket” storage
  - Perfect for large files such as datasets or videos
  - Uses the collabs permissions to manage access





- A place to run Jupyter Notebooks
  - EBRAINS official kernel contains many EBRAINS and EBRAINS integrated tools by default
  - Jupyter Notebooks mainly run on Python although we have an R kernel also
  - Runs on multiple FENIX sites
- Can be useful for many different functions, such as processing large Excel files from the Drive or many other processes.
  - Support can always help with this

Collaboratory Lab – Tools available



> 300 packages built

NEST
Neuron
Arbor
TVB
BrainScaleS

Try the Collaboratory today

- Visit the demo collab
- Read our documentation
- Create your own collab and experiment with the tools available

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EBRAINS

Thank you

www.humanbrainproject.eu

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