

From entering VSC to running a Jupyter notebook that accesses ManGO

In the interactive Shell that gives you access to the HPC, go to the Data directory. This is always recommended to start because it has more storage than the home directory.

```
cd $VSC_DATA
```

Install [Miniconda](#) and if it's successful (which can be checked with `which conda`) create an environment.

```
# installation
wget https://repo.continuum.io/miniconda/Miniconda3-latest-Linux-x86_64.sh
bash Miniconda3-latest-Linux-x86_64.sh -b -p $VSC_DATA/miniconda3
export PATH="${VSC_DATA}/miniconda3/bin:${PATH}"
```

To create an environment called “irods”, run the code below. (I add ‘numpy’ to make sure that it doesn’t use the default Python version, but it could be another package or a version specification.)

```
conda create -n irods numpy ipykernel
```

Enter the environment and install the Python client.

```
conda activate irods
pip install python-irodsclient
```

If everything has been successful, you can now write Python scripts that communicate with ManGO!

The final step is to add the kernel for the Jupyter Notebook to the right directory for the one in Open OnDemand to access it.

```
python -m ipykernel install --prefix=${VSC_HOME}/.local/ --name 'irods'
```

Finally, you can authenticate in ManGO by copying the corresponding snippet from “How to connect” in <mango.kuleuven.be>. It will look something like the following snippet (with your username and temporary passwords in “USERNAME” and “PASSWORD”).

```
mkdir -p ~/.irods
cat > ~/.irods/irods_environment.json <<'EOF'
{
  "irods_host": "ghum.irods.icts.kuleuven.be",
  "irods_port": 1247,
  "irods_zone_name": "ghum",
  "irods_authentication_scheme": "pam_password",
  "irods_encryption_algorithm": "AES-256-CBC",
  "irods_encryption_salt_size": 8,
  "irods_encryption_key_size": 32,
  "irods_encryption_num_hash_rounds": 8,
  "irods_user_name": "USERNAME",
  "irods_ssl_ca_certificate_file": "",
  "irods_ssl_verify_server": "cert",
  "irods_client_server_negotiation": "request_server_negotiation",
  "irods_client_server_policy": "CS_NEG_REQUIRE",
  "irods_default_resource": "default",
  "irods_cwd": "/ghum/home"
}
EOF
iinit -h | grep Version | grep -v -q 4.2. || sed -i 's/"irods_authentication_scheme":
"pam_password"/"irods_authentication_scheme": "PAM"/' ~/.irods/irods_environment.json
echo 'TOKEN' | iinit --ttl 168 >/dev/null && echo You are now authenticated
to irods. Your session is valid for 168 hours.
```