



Compute and Storage Hands-on

**Corso di formazione per utenti - INFN DataCloud
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Hands-on



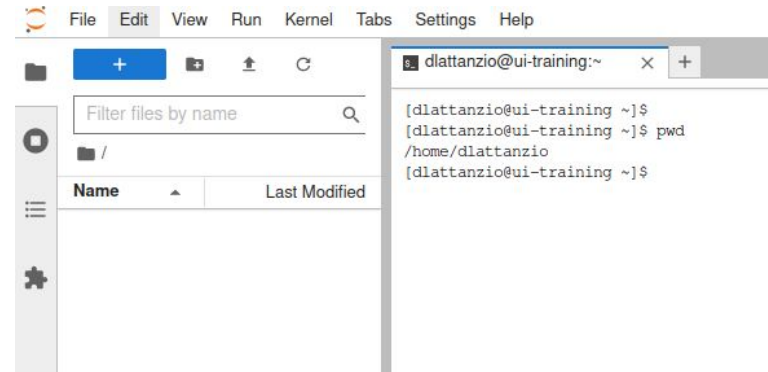
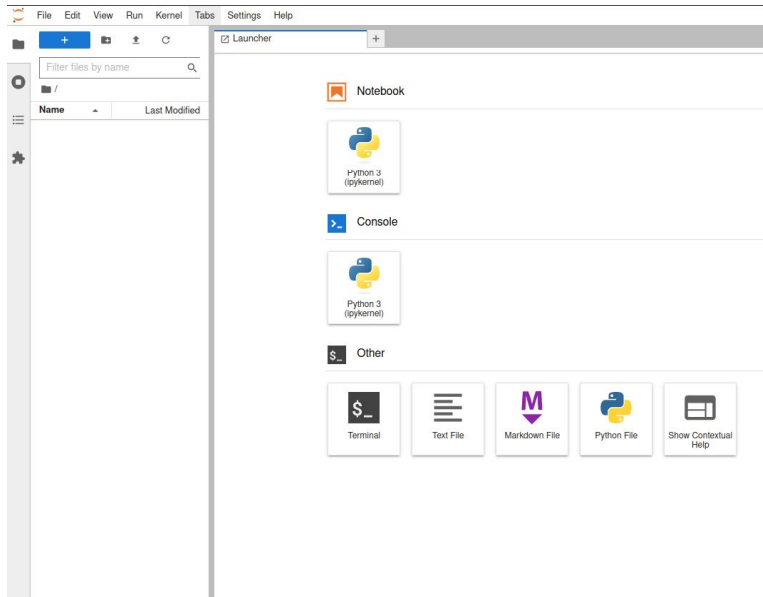
- Connect to the Jupyterhub:
<https://ui-training.cloud.infn.it/>
- You will be redirected to:
<https://iam.cloud.infn.it/login>
- Login via INFN-AAI and authorize the client
- In case you have not done it yet, please register to the **users/training** group from the IAM dashboard

A screenshot of an authorization page. At the top is the INFN CLOUD logo. Below it, the text 'Approval Required for training' is displayed. Underneath, there is a link for 'More information' and 'Administrative Contacts' with the email 'carmelo.pellegrino@cnaif.infn.it'. The main section is titled 'Access to :'. It lists permissions: 'log in using your identity', 'basic profile information', and 'email address'. Below these are the labels 'groups' and 'Remember this decision :'. There are three radio button options: 'remember this decision until I revoke it' (selected), 'remember this decision for one hour', and 'prompt me again next time'. At the bottom, it says 'Authorizing will redirect to https://ui-training.cloud.infn.it/hub/oauth_callback' and has two buttons: 'Authorize' (green) and 'Deny' (red). At the very bottom, it says 'Created a day ago'.

Hands-on



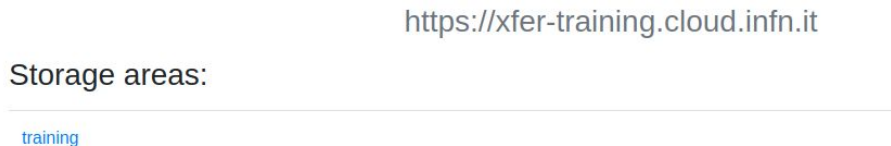
- Once logged in, open a terminal



Hands-on



- Navigate the training SA via browser:
- <https://xfer-training.cloud.infn.it:8443/>
- Do not select a certificate (if you will be asked to)
- From the page shown below, select the Storage area



https://xfer-training.cloud.infn.it

Please login with one of the configured providers:



[Go back to the storage area index page](#)

Hands-on



- Authenticate via IAM:
- Authorize the *training* client:
- Finally you can see the SA content



Welcome to **inf-n-cloud**

Sign in with



Local credentials

Not a member?

Apply for an account



Approval Required for *training*

[More information](#)

Access to :

log in using your identity

basic profile information

Remember this decision :

remember this decision until I revoke it

remember this decision for one hour

prompt me again next time

Authorizing will redirect to
<https://xfer-training.cloud.inf-n.it:8443/login/oauth2/code/iam-cloud>

Authorize

Deny

Created
3 days ago

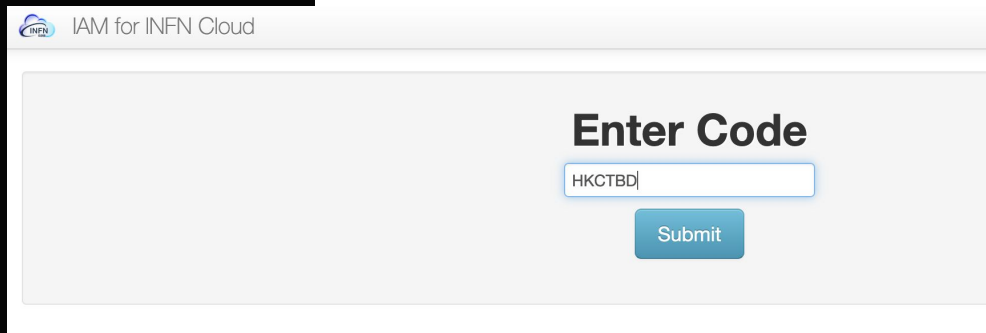
Hands-on

- Register a Client on IAM-Cloud with oidc-agent

```
apascalini@ul-training ~
$ eval `oidc-agent-service use`
26045
apascalini@ul-training ~
$ oidc-gen -w device iam-cloud-handson
[1] https://iam-t1-computing.cloud.cnaf.infn.it/
[2] https://iam.cloud.infn.it/
[3] https://bildungsproxy.aai.dfn.de
[4] https://cilogon.org
[5] https://iam.deep-hybrid-datacloud.eu/
[6] https://aai.egi.eu/auth/realms/egi
[7] https://aai-demo.egi.eu/auth/realms/egi
[8] https://aai-dev.egi.eu/auth/realms/egi
[9] https://login.elixir-czech.org/oidc/
[10] https://b2access.eudat.eu:8443/oauth2
[11] https://iam.extreme-datacloud.eu/
[12] https://fels.scc.kit.edu/oidc/realms/fels
[13] https://accounts.google.com
[14] https://login.helmholtz.de/oauth2
[15] https://login-dev.helmholtz.de/oauth2
[16] https://iam-demo.cloud.cnaf.infn.it/
[17] https://iam-test.indigo-datacloud.eu/
[18] https://oidc.scc.kit.edu/auth/realms/kit
[19] https://auth.didmos.nfdi-aai.de
[20] https://regapp.nfdi-aai.de/oidc/realms/nfdi_demo
[21] https://wlcg.cloud.cnaf.infn.it/
[22] https://alice-auth.web.cern.ch/
[23] https://atlas-auth.web.cern.ch/
[24] https://cms-auth.web.cern.ch/
[25] https://lhcb-auth.web.cern.ch/
Issuer [https://iam-t1-computing.cloud.cnaf.infn.it]: 2
The following scopes are supported: openid profile email address phone offline_access eduperson_scoped_affiliation eduperson_entitlement eduperson_assurance entitlements wlcg wlcg.groups compute.read compute.modify compute.create compute.cancel condor:read condor:write iam
Scopes or 'max' (space separated) [openid profile offline_access]: profile wlcg.groups wlcg compute.create compute.modify compute.read compute.cancel
Registering Client ...
Generating account configuration ...
accepted

Using a browser on any device, visit:
https://iam.cloud.infn.it/device

And enter the code: HKCTBD
Alternatively you can use the following QR code to visit the above listed URL.
```



Hands-on



Test HTC

- a disposizione repo pubblica da **baltig**
git clone <https://baltig.infn.it/apascalini/corso-htc.git>
- alcuni esempi di submit file e eseguibili messi a disposizione
- invito a produrre un submit file più articolato:
 - potete usare un eseguibile a vostro piacere (**da copiare prima sulla ui**)
 - integrare workflow più complessi anche partendo dagli esempi nella guida di HTCondor
<https://htcondor.readthedocs.io/en/latest/users-manual/submitting-a-job.html>

Hands-on



HTC cheat sheet

Useful Job Attributes	
<u>ClusterID</u>	ID of a Cluster of jobs
<u>JobID</u>	unique ID of a job [<u>ClusterID.Job_number</u>]
<u>Owner</u>	Local user executing the job
<u>AcctGroup</u>	Queue the owner/job belongs to
<u>JobStatus</u>	Number associated to the status of the job
<u>Odate</u>	Unix timestamp of submission
<u>JobstartDate</u>	Unix timestamp of job start
<u>CompletionDate</u>	Unix timestamp of job completion
<u>(Last)RemoteHost</u>	EP slot where the job was/is running
<u>HoldReason</u>	String indicating the reason the job was put in HOLD state
<u>RemoveReason</u>	String indicating the reason the job was REMOVED

JOB STATUS	
1	IDLE
2	RUNNING
3	REMOVED
4	COMPLETED
5	HELD

These Job Attributes may note be all defined at the same time!!

Hands-on



- Check the storage area permissions with *getfacl*:

```
[dlattanzio@ui-training ~]$ ll /storage/training/
total 0
drwxr-x---+ 2 storm storm 18 Jul 15 14:16 ciao
[dlattanzio@ui-training ~]$
[dlattanzio@ui-training ~]$
[dlattanzio@ui-training ~]$ getfacl /storage/training/ciao/test
getfacl: Removing leading '/' from absolute path names
# file: storage/training/ciao/test
# owner: storm
# group: storm
user::rw-
group::r-x          #effective:r--
group:griduser:r-x  #effective:r--
mask::r--
other::---
```

```
[dlattanzio@ui-training ~]$
[dlattanzio@ui-training ~]$ █
```

Hands-on



- **Listing directory:**

```
gfal-ls https://xfer-training.cloud.infn.it:8443/training
```

- **Upload:**

```
gfal-copy file_local.txt https://xfer-training.cloud.infn.it:8443/training/file.txt
```

- **Download:**

```
gfal-copy https://xfer-training.cloud.infn.it:8443/training/file.txt file_local.txt
```

- **Removing a file:**

```
gfal-rm https://xfer-training.cloud.infn.it:8443/training/file.txt
```