

Cloud Server for DarkSide



Emmanuel Le Guirriec

Réunion Plateforme de Calcul

24 September 2020

Openstack (Thx Carlos)

- Create a server
 - Image: CentOS-7-x86_64
 - Flavor: large
 - Contextualization
 - Low amount of packages (wget)
 - Mount darkside shared volume (20T) for user
 - A “data” directory not provided yet
 - Temporary use of the shared volume

Anaconda environment

- Create a “soft” directory on shared volume
 - Install Anaconda3
 - Create “analysis” environment as centos user
 - Git
 - gcc, cython
 - ROOT, uproot
 - Pandas, scipy, matplotlib
 - And others ...
 - Side effect: OS contextualization is slim

ssh connection in analysis environment

- `.ssh/config`
 - Host “`ds_cloud`” entry created to connect cloud server
- `ssh -t ds_cloud`
"/home/centos/darkside/soft/anaconda3/bin/conda init
bash > /dev/null; bash --init-file <(echo \"
\"/home/centos/.bashrc\";conda activate analysis\"))"
 - Initialize anaconda and activate “`analyses`” environment
 - Could be done with LocalCommand ssh config
 - not available

Initial tests

- Pyproto (DS-20k soft) on gitlab server
 - Public key register on gitlab server
 - Copy of the private key on ds_cloud
 - Git clone → ok
- Calibration example python code
 - Compile Python code
 - Run example → ok
- Analysis python code
 - Replicate 14 G of data from CC on shared volume
 - Replicate a database from CC on shared volume
 - Run code → ok

Backup

GPU test on margpu1

- Use TensorFlow Deep Learning API: Keras
 - Done with anaconda to activate tensorflow-2.2-gpu
- Run 1D - Convolutional Neuron Network model
 - Test ok
 - Can't use helpful tool : TensorBoard callback
 - It profiles the execution of your TensorFlow code
 - Issue solved at CC
 - Not urgent (in touch with Julien)