Client installation

DIRAC Tutorial

DIRAC Client Software

- Many operations can be performed through the Web interface
  - Even more to come
- However, certain things should be done using the DIRAC client software
  - Obtaining proxies
  - Intensive work with jobs, data – scripting tools
    - E,g, using Ganga
- Client software available for MacOS and various Linux flavors
  - Windows client was demonstrated but not maintained

Client installation

Installing DIRAC client:

Getting DIRAC installer dirac-install script from the web

http://dirac.france-grilles.fr/demo/dirac-install

Run it with France Grilles default

```
dirac-install –V gridfr
```

Detailed instructions at:

https://github.com/DIRACGrid/DIRAC/wiki/ClientInstallation

Installing user certificate

Obtaining user grid certificate is specific for each Certification Authority

- Out of scope of this tutorial, you are supposed to have your personal certificate or a temporary training certificate
  - In p12 form

DIRAC is providing a dirac-cert-convert.sh tool to convert the certificate in p12 form into the form suitable for the Grid use

```
dirac-cert-convert.sh <cert_file.p12>
```

User cert and key files in PEM format are in ~/.globus

Installing user certificates

- If the user certificate is not yet set up, do that now. Its needed to finish the DIRAC client configuration

https://github.com/DIRACGrid/DIRAC/wiki/AuthentificationAuthorization

User proxy

Users must generate and upload long proxies to the ProxyManager before using DIRAC

- Single command, use it for any proxy generation
  - Analogous to ***voms-proxy-init***
  - Gets also VOMS extensions if possible
  - Checks the long proxy status and uploads as necessary
  - Creates short working proxy

dirac-proxy-init

Client Configuration

To configure DIRAC client only one command is needed:

```
dirac-configure defaults-gridfr.cfg
```

More information at:

https://github.com/DIRACGrid/DIRAC/wiki/ClientConfiguration

Dirac Configuration Files

- Preference order:
  1. Configuration file specified in the command line (argument ending by .cfg)
  2. Configuration file pointed to by the DIRACSYSCONFIG environment variable
  3. $HOME/.dirac.cfg
  4. <Client_installation_directory>/etc/dirac.cfg

1. Note: if a configuration file exist before configuration command is executed the file is not going to be replaced. To configure Dirac from scratch the file must be removed before configure.

COMDIRAC Configuration

- To configure COMDIRAC extension the command below must be executed

```
$ dconfig –minimal
```

- Configuration file will be located in ~/.dirac/dcommands.conf and will look like:

```
[global]
default_profile = dirac_user
[dirac_user]
group_name = dirac_user
home_dir = /vo.formation.idgrilles.fr/user/u/usera
default_se = DIRAC-USER
```

More information in the wiki page:

- https://github.com/DIRACGrid/COMDIRAC/wiki/Client-Installation-and-Configuration

Tutorial

Tutorial page :

Client Installation

https://github.com/DIRACGrid/DIRAC/wiki/ClientInstallation

Managing certificates and proxies

https://github.com/DIRACGrid/DIRAC/wiki/AuthentificationAuthorization

Client Configuration

https://github.com/DIRACGrid/DIRAC/wiki/ClientConfiguration

COMDIRAC Configuration

https://github.com/DIRACGrid/COMDIRAC/wiki/Client-Installation-and-Configuration

The goal is to get a fully functional DIRAC user environment ready for subsequent exercises

Just in case

- Use virtual box:

https://www.virtualbox.org/wiki/Downloads

  - A Scientific Linux 6 image is available at:

http://ccdiracli05.in2p3.fr/defaults/ScientificLinux.ova

- Or you can use an interactive machine, available during tutorial. To connect use:

  - ssh –l userX ccosvm0901

- X is the value associated to your certificate

- Ask tutors for your password!!!

DIRAC and Docker

- To run a container

```
docker run -it -v /home/userX/.globus:/root/.globus -v /home/userX:/home/userX diracgrid/client:gridfr /bin/bash
```