Getting started

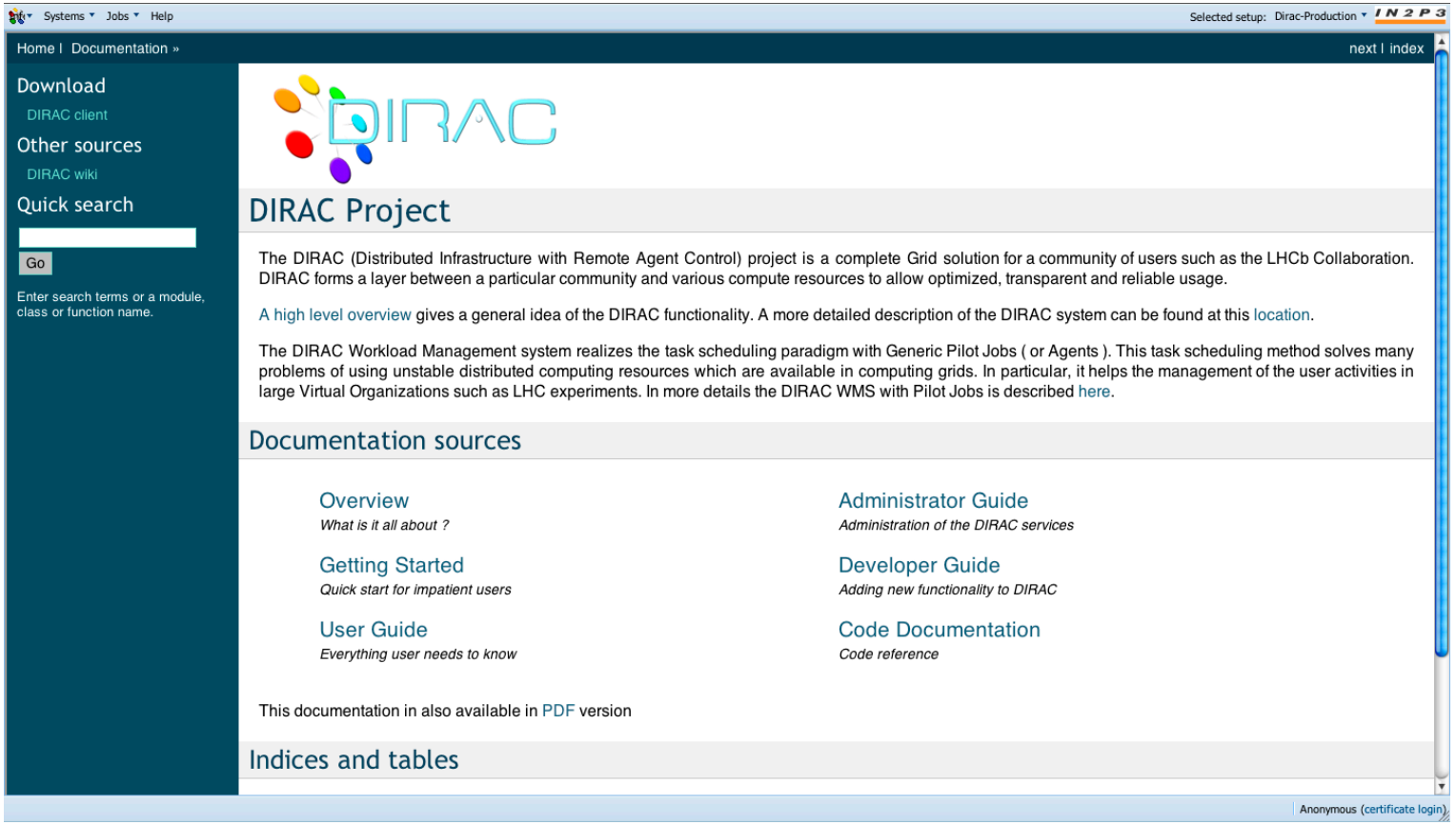
DIRAC Project

Outline

- DIRAC information system
  - Documentation sources
  - Configuration Service
- DIRAC users and groups
  - Registration with DIRAC
- Getting the DIRAC software
  - Installation
  - Configuration
- Getting DIRAC credentials
  - Getting the certificates right
  - Registering user proxies

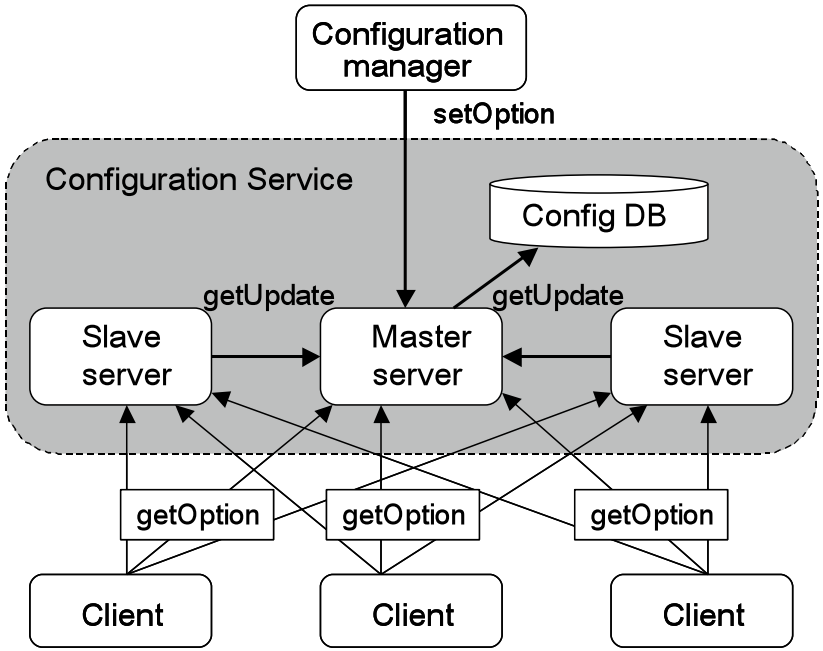
http://dirac.in2p3.fr

- Web Portal front page contains entry points to various docs
  - This is being rapidly developed now, more info to come



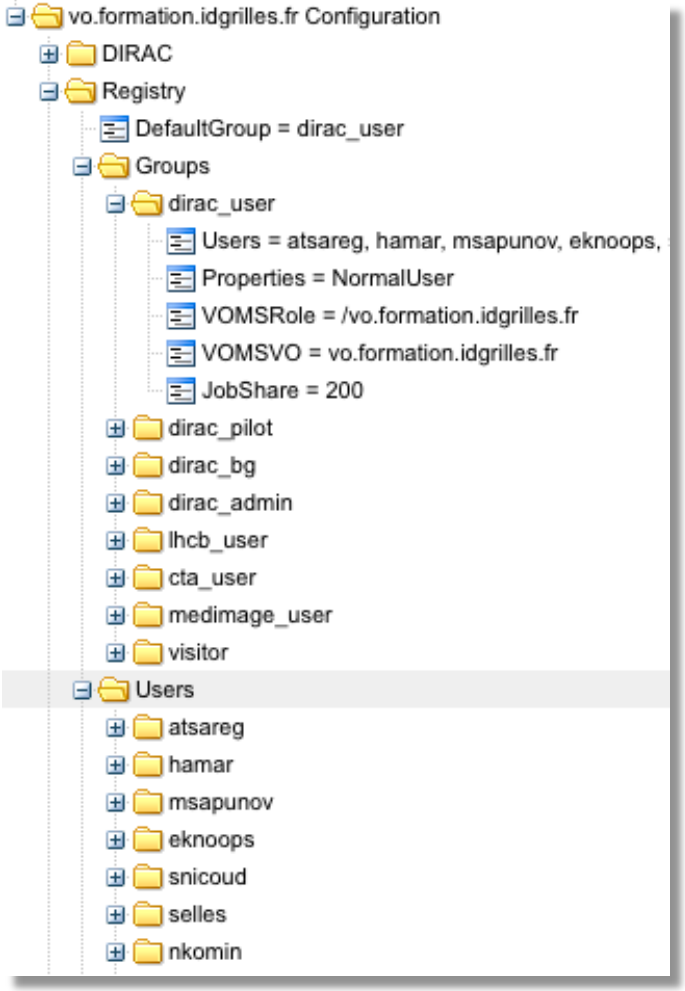
Configuration Service

- This is the back bone of the whole system
  - Provides service discovery and setup parameters for all the DIRAC components
- Multiply redundant for high availability
- Contains only static information
- Browsable and editable through the Web interface
  - **`Systems > Configuration  > Manage remote configuration`**



DIRAC users and groups

- In order to work with DIRAC users should be registered
  - In one or several groups
  - For traceability, accounting, etc
- User's rights are determined by the ***Properties*** of the group
  - E.g. ***NormalUser*** can submit jobs but can not change the DIRAC Configuration data
- Each group has its share of jobs that it can run
  - Determines the group priority
- Groups are mapped onto VOMS VO groups/ roles



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 flavours of Linux
  - Windows client was demonstrated

Client installation

- Getting the DIRAC installer from the Web
  - Python script *dirac-install*
- Running installer with your VO specific defaults
  - Installs the software for the current platform
  - Creates :
    - *vo.formation.idgrilles.fr_defaults.cfg* file with default config
    - *bashrc* environment setting script
- Configuring local installation
  - *dirac-configure vo.formation.idgrilles.fr_defaults.cfg*
- You are ready to use DIRAC !
  - More detailed installation and configuration options are available for advanced users

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

User proxy

- DIRAC has a full featured Proxy Management system
  - Secure Proxy repository – ProxyManager service
    - Can be configured to use MyProxy server
  - Supply user proxies to various components
    - Automatic proxy renewal if necessary

- 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
  - `proxy-init -g dirac_user`

Tutorial

http://mareela.in2p3.fr:9200/dirac/wiki/Tutorials

1. Client installation
   - Local DIRAC client installation for users of Linux or Mac OS
   - Users of Windows can use the installation on marui.in2p3.fr:

```
source /opt/dirac/bashrc
```

2. Managing certificates and proxies

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