



## User job with the Web Portal

DIRAC Project



# Outline

---

- ▶ DIRAC user interfaces
- ▶ Web Portal
- ▶ General layout
- ▶ User tasks





# DIRAC: user interfaces

---

- ▶ **Unix command line interface**
  - ▶ Historically the first one
  - ▶ Suitable for unix addicts
    - ▶ Easy to use in shell scripts
  - ▶ Too many commands
    - ▶ Even more switches
  
- ▶ **Python API**
  - ▶ Originally for DIRAC developers
  - ▶ More users are starting to use it
  - ▶ The most versatile
    - ▶ Build your own DIRAC applications





# DIRAC: user interfaces

---

- ▶ Web interface – *<http://dirac.in2p3.fr>*
  - ▶ Relatively recent addition to DIRAC
- ▶ User friendliness is the goal
  - ▶ That's why we start with this one
- ▶ No security compromises
- ▶ Less flexibility than with other interfaces
- ▶ But still in rapid development
  - ▶ More exciting functionalities
  - ▶ More application specific extensions





# DIRAC: Secure Web Portal

---

- ▶ Web portal with intuitive desktop application like interface
  - ▶ Ajax, Pylons, ExtJS Javascript library
- ▶ Monitoring and control of all activities
  - ▶ User job monitoring and manipulation
  - ▶ Data production controls
  - ▶ DIRAC Systems configuration
- ▶ Secure access
  - ▶ Standard grid certificates
  - ▶ Fine grained authorization rules





# Web Portal: user tasks

---

- ▶ **Job submission**
  - ▶ Demonstrator
  
- ▶ **Job Monitoring**
  - ▶ Job status, access to the results
  
- ▶ **Data discovery**
  - ▶ E.g. LHCb Bookkeeping database interface
  - ▶ Generic Catalog Browser to come
  
- ▶ **Administrative tasks**
  - ▶ Configuration management
  - ▶ Users and groups, community policies
  - ▶ Accounting, services monitoring
  
- ▶ **Specific application Web Portals can be derived**
  - ▶ Community Application Servers
    - ▶ All the grid computational tasks steered on the web
    - ▶ E.g. LHCb Production Management System





# Web Portal: general layout

The screenshot displays the DIRAC Web Portal's Job Monitoring interface. The layout is organized into several key sections, each highlighted with a numbered callout:

- 1**: Navigation menu (Systems, Jobs, Production, Data, Tools, Web, Help).
- 2**: Selection controls (Select All, Select None).
- 3**: Filter sidebar (DIRAC Site, Status, Minor status, Owner, JobGroup, JobID, Time Span).
- 4**: Main job list table with columns: JobID, Status, MinorStatus, ApplicationStatus, Site, JobName, LastUpdate [UTC], LastSignOffLife [UTC], SubmissionTime [UTC], Owner.
- 5**: Action buttons (Reschedule, Kill, Delete) for the selected job.
- 6**: Submit and Reset buttons.
- 7**: Current Statistics section.
- 8**: Page navigation (Page 3 of 5).
- 9**: Items displaying per page (50).
- 10**: User information (hamar@eela\_user).
- 11**: User ID (O=GRID-FR/C=VE/O=UJA/O=CERN/OU=UJA/CN=Véronique Hamar).
- 12**: User email (v.hamar@cern.ch).
- 13**: User phone (+33 6 76 10 10 10).
- 14**: Job details (JobID: 131, Status: Done, MinorStatus: Execution Completed, ApplicationStatus: Unknown, Site: EELA.UFRJ.br, JobName: Unknown, LastUpdate [UTC]: 2009-11-06 17:06, LastSignOffLife [UTC]: 2009-11-06 17:06, SubmissionTime [UTC]: 2009-10-26 17:06, Owner: hamar).



# Web Portal: general layout

---

1. **Main Menu:** This menu offers options for systems, jobs, tools and help.
2. **Selections:** Shows a set of selectors than permits generate customs selections.
3. **Buttons to open/collapse panels:** Permit open or collapse left menu.
4. **Actions to perform for job(s):** These actions permits select all, select none, reset, kill or submit
5. **Menu to change DIRAC setup:** Users can change between different setups.
6. **Current location:** Indicates where the user is located inside the portal.
7. **Buttons to submit or reset the form:** After options are selected its possible to submit and execute the selection or reset the selectors.
8. **Pagination controls:** Permits navigate between the pages, and also show in which page the user is navigating.
9. **Refresh table:** Reload the page without loose the previous selection and show the new status.
10. **Items per page:** This option allow the users to specify how many items are going to be displayed by page.
11. **User DIRAC login:** Login assigned to the user connected to DIRAC web portal.
12. **DIRAC Group:** The user could belong to different groups and perform actions depending of the group previously selected.
13. **Certificate DN:** Web portal shows the distinguish name of user certificate what is being used to realize the connection.
14. **Index items displayed:** Display the range of items displayed in the page.







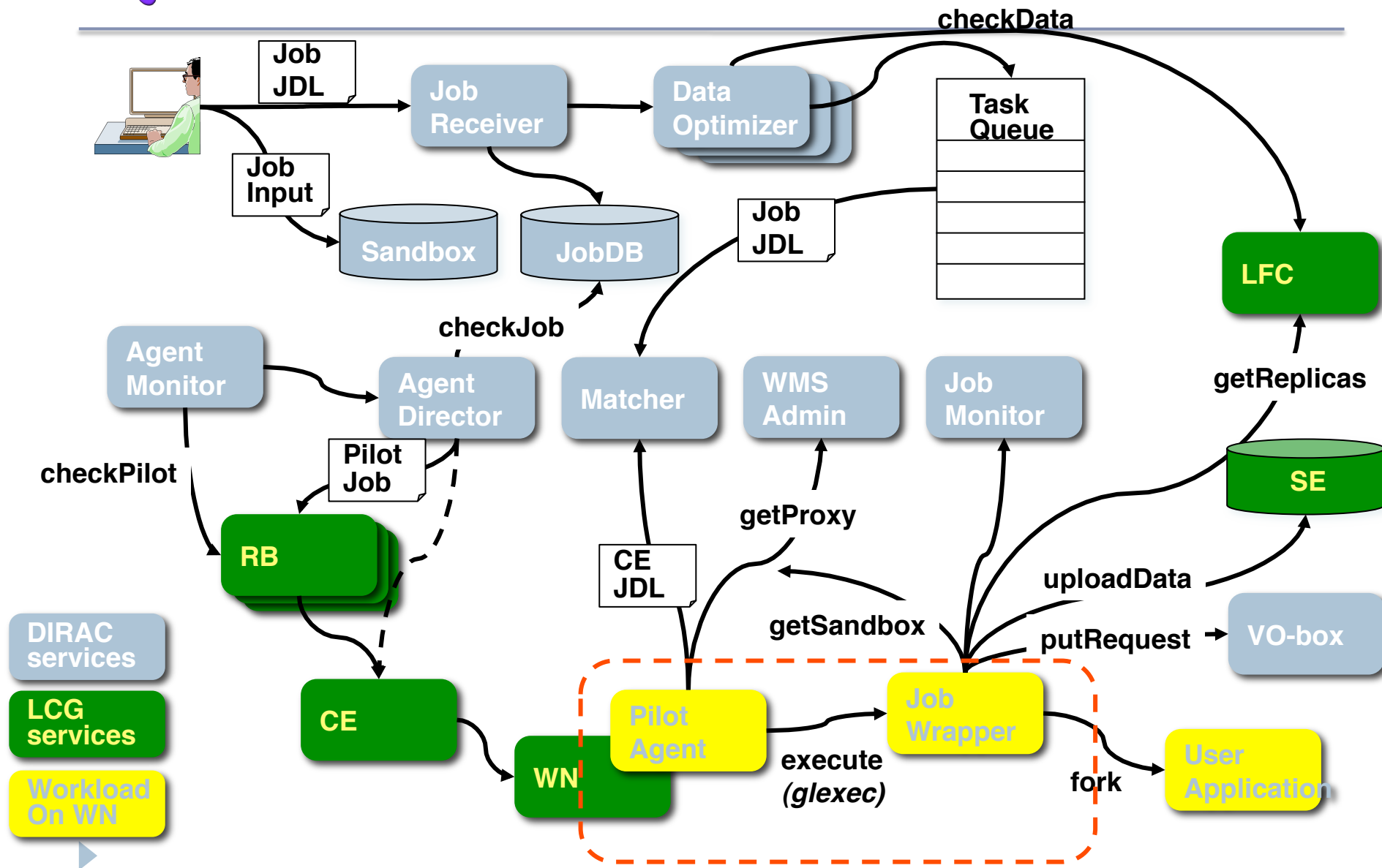
# Web Portal: job submission

- ▶ Launchpad applet
  - ▶ Jobs > JobMonitoring > Tools
- ▶ Job submission with the real owner credentials
- ▶ Job description
  - ▶ Executable, arguments
  - ▶ Sandboxes
  - ▶ Input/Output data
  - ▶ Extra parameters
- ▶ Input Sandbox
  - ▶ Upload local files
- ▶ Simple application
  - ▶ Mostly for demonstration purposes

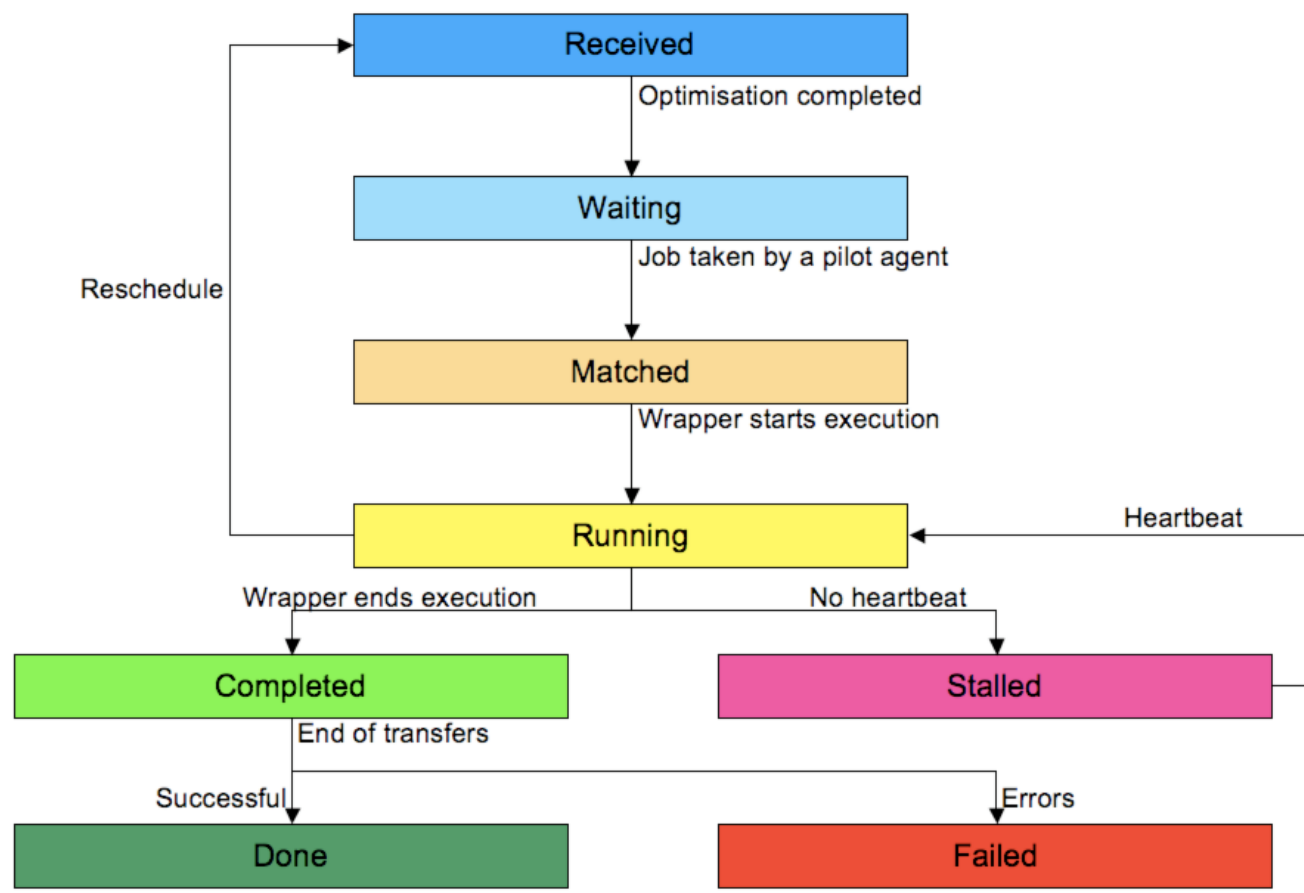
A screenshot of the 'Launchpad' web application. The window has a title bar with standard OS controls. Below the title bar, it says 'Proxy Status: Valid' in green, followed by '+ Add Parameters' and 'X Clear Sandbox'. The main content area is divided into two sections. The first section, titled 'JDL', contains four input fields: 'JobName:' with the value 'DIRAC\_atsareg\_411113', 'Executable:' with '/bin/lis', 'Arguments:' with '-ltrA', and 'OutputSandbox:' with 'std.out, std.err'. The second section, titled 'Input Sandbox', features a large blue progress bar and a 'Browse...' button with a folder icon. At the bottom of the window, there are three buttons: 'Submit' with a green checkmark, 'Reset' with a red X, and 'Close' with a red X. The background of the page shows a table with job scheduling information, including columns for job name, status, and dates.



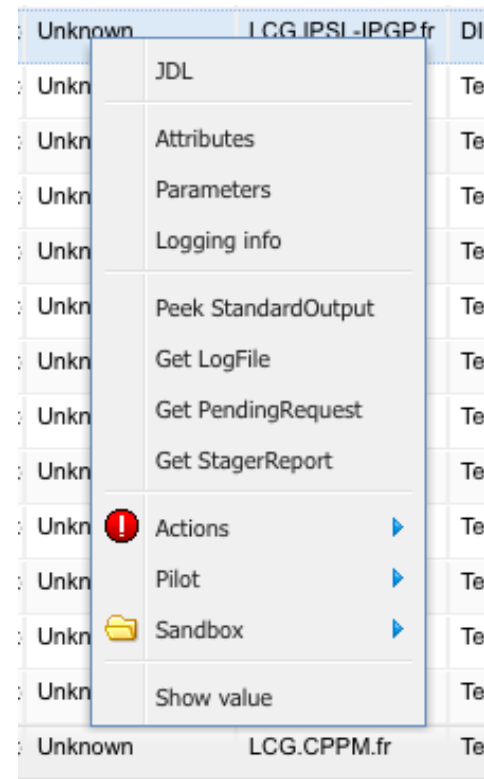
# DIRAC job life cycle



# Job state machine



- ▶ Job Monitoring page
  - ▶ Everything you need to know about your jobs
  - ▶ Use **Help** button for detailed explanations
- ▶ Job Menu
  - ▶ Job info
  - ▶ Actions
    - ▶ Reschedule, delete, kill
  - ▶ Pilot output access
    - ▶ Useful for debugging
  - ▶ Sandbox download
- ▶ Job selections





# Tutorial

---

- ▶ **Submit “Hello, world!” job with Web Launchpad**
  - ▶ Basic job description
  - ▶ Monitor it
  - ▶ Get results
  
- ▶ **Submit job with Input and Output Sandbox**
  - ▶ Simple processing
  - ▶ Getting results
  
- ▶ **Goals**
  - ▶ Understand job description
  - ▶ Understanding job Web monitoring and manipulation tools

