

# History and documents

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- ❑ The SDJ WG has been active from October 2005 to March 2006.
- ❑ The activity report is available at <http://egee-intranet.web.cern.ch/egee-intranet/NA1/TCG/wgs/SDJ-WG-TEC-v1.1.pdf>
- ❑ Posed a requirement towards JRA1 statisfied February 2008  
[https://savannah.cern.ch/bugs/?func=detailitem&item\\_id=31278](https://savannah.cern.ch/bugs/?func=detailitem&item_id=31278)
- ❑ Not related to the short time implementation of the priority WG.

# Summary

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- SDJ= Short Deadline Jobs
  - Jobs executed without queuing or rejected
- Sites are expected to configure the batch system
- Sites might have to install rpm in the next future
- Contact: Frédéric Schaer, (Michel Jouvin ?)
- VO: biomed + notify direct user support

# Motivation & use cases

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- ❑ Avoid unreasonable latencies for the very many jobs which feature an execution time of a few minutes
- ❑ Biomed VO use cases:
  - SDJs have been introduced in the area of medical imaging and is a very important feature for some life sciences applications. It already proved to play an important role through the 3 sites currently supporting it.
  - GPSA portal: 500 seconds is typical
- ❑ Non area-specific use cases
  - demonstrations & training: SDJ are critical to run live demo without uncontrollable delays introduced by the grid dynamic workload. All medical imaging demonstrations have used SDJs since they are available
  - Future matlab extensions
- ❑ SDJ provide a unified method and interface. Designed to be independent of VOs.

# Components

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- A new boolean attribute in the JDL  
ShortDeadlineJob
  - Not yet documented in the glite3.1 manual, to avoid saturation
- Proper matchmaking scheme
- Specific queues and scheduler configuration
  - Useful (and already used) without the other components: the user manually adds the requirements
  - Extensive testing has been done, the problem is the deployment

# Torque configuration

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- ❑ Create a dedicated queue with the sdj suffix
  - Example parameters
    - ❑ max\_running = 4
    - ❑ resources\_max.cput = 00:10:00
    - ❑ resources\_max.walltime = 00:30:00
    - ❑ queue\_type = Execution
- ❑ Force jobs submitted to the sdj queue to run immediately or fail
  - example procedure to add

```
#PBS -W x="FLAGS:NOQUEUE"
```

to the user's script available

# MAUI configuration

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- ❑ Create additional slots : in `/var/spool/pbs/server_priv/nodes`, set the “`np=X`” parameter to the number of physical CPUs plus the number of permitted SDJ jobs
- ❑ Reserve the additional slots for the SDJ jobs
  - in `/var/spool/maui/maui.cfg`, add reservations on the slots for each client machine
    - ❑ `# Short-deadline job reservation for grid26.lal.in2p3.fr`
    - ❑ `SRCFG[11] HOSTLIST=grid26.lal.in2p3.fr`
    - ❑ `SRCFG[11] PERIOD=INFINITY`
    - ❑ `SRCFG[11] ACCESS=DEDICATED`
    - ❑ `SRCFG[11] TASKCOUNT=1`
    - ❑ `SRCFG[11] RESOURCES=PROCS:2`
    - ❑ `SRCFG[11] CLASSLIST=sdj`

# Status on configuration

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- Present deployment
  - grive11.ibcp.fr: 2119/jobmanager-pbs-sdj
  - node07.datagrid.cea.fr: 2119/jobmanager-lcgpbs-sdj
  - grid10.lal.in2p3.fr: 2119/jobmanager-pbs-sdj
  - Production at GRIF/LAL since 2007
- Quattor configuration available
- No yaim implementation available

# Status on the WMS

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- ❑ Required behaviour
  - For jobs with ShortDeadlineJob=true, add the SDJRequirements clause (RegExp(".\*sdj\$", other.GlueCEUniqueID)) to the job requirements.
  - For jobs without ShortDeadlineJob attributes or ShortDeadlineJob=false, add the (!SDJRequirements) to the job requirements.
  - SDJRequirements is a configuration parameter in the WMPProxy section of the WMS configuration file glite\_wms.conf
- ❑ Baseline release: gLite 3.1.0
- ❑ 2008-02-12: Bug fixed and ready to be tagged. Fix will be included in next release. Affected components/files
  - org.glite.wms.configuration/config/glite\_wms.conf
  - org.glite.wms.wmproxy/src/server/wmpcoreoperations.cpp