Code and Documentation
http://oar.imag.fr/

Supported systems
Linux, Solaris, Mac OS X

GPL License

Related publications

A batch scheduler with high level components
Nicolas Capit, Georges Da Costa, Yiannis Georgiou, Guillaume Huard, Cyrille Martin, Grégory Mounié, Pierre Neyron, Olivier Richard.
Cluster computing and Grid'2005 (CCGrid05), 2005.

Grid'5000, a large scale, reconfigurable, controlable and monitorable grid platform
Franck Cappello, Frédéric Desprez, Michel Dayde, Emmanuel Jeannot, Yvon Jégou, Stéphane Lanteri, Nouredine Melab, Raymond Namyst, Pascale Primet, Olivier Richard, Eddy Caron, Julien Leduc, Guillaume Mornet.
Grid'2005 6th IEEE/ACM International Workshop on Grid Computing, 2005.

CIMENT GRID, a GRID facility for large scale parametric computing
Nicolas Capit, Laurent Desbat, Lionel Eyraud, Olivier Richard.
Workshop PMAA, October 2004.

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CIMENT

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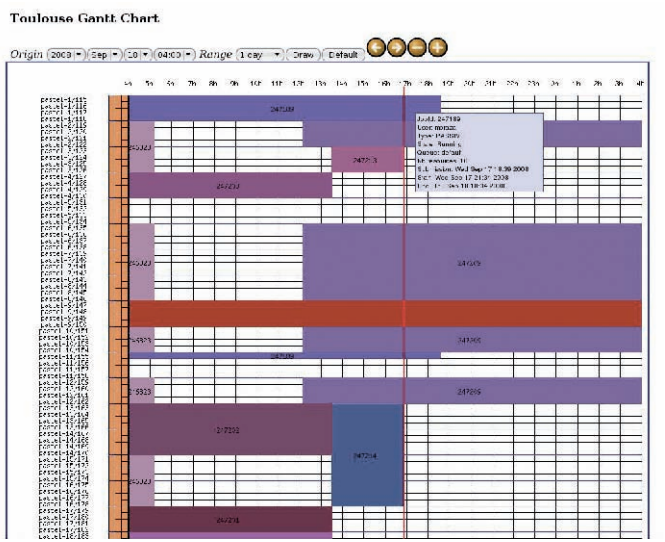
INRIA

OAR
Resource management system for large computing

On a cluster, resources (like processors) have to be assigned to user requests.
OAR is made to respond to this problem in a flexible and efficient manner.

Main features

- Batch and Interactive jobs
- Admission rules
- Walltime
- Multi-schedulers support
- Multi-queues with priority
- Backfilling
- First-Fit Scheduler
- Advanced reservations
- Support of moldable tasks
- Check compute nodes
- Epilogue/Prologue scripts
- Support of dynamic nodes
- Logging/Accounting
- Suspend/resume jobs
- Array Jobs



OAR advantages

- No specific daemon on nodes
- Upgrades are made on the servers, nothing to do on computing nodes
- CPUSET (2.6 linux kernel) integration which restricts the jobs on assigned resources(also useful to clean completely a job, even parallel job)
- Taktuk command support: enhance the scalability and the speed of the administration tasks performed on a large amount of nodes (http://taktuk.gforge.inria.fr/)
- Hierarchical resource requests (handle heterogeneous clusters)
- Gantt chart (allows to visualize the internal scheduler decisions)
- Full or partial time-sharing
- Checkpoint/resubmit
- Licences servers management support
- Environment deployment support: Kadeploy (http://gforge.inria.fr/projects/kadeploy/)
- Best effort jobs: if another job wants the same resources then it is deleted automatically (useful to execute programs like SETI@home)
- Green computing: automatically sets idle nodes on energy-saving modes