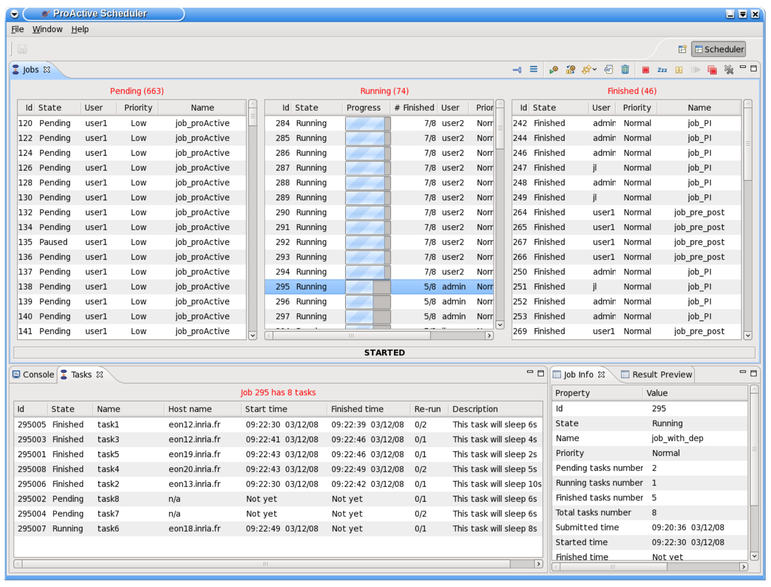
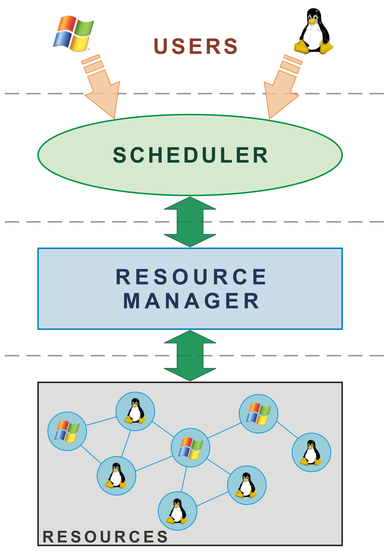
Integrating **SEGL**, **Calcium**, and **SAWE** with a ProActive based **Scheduler**

Java / ProActive based **Scheduler**

Graphical GUI / Monitoring

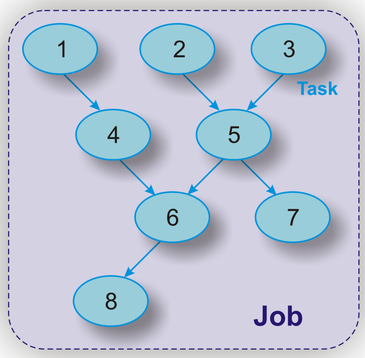
Resource Management





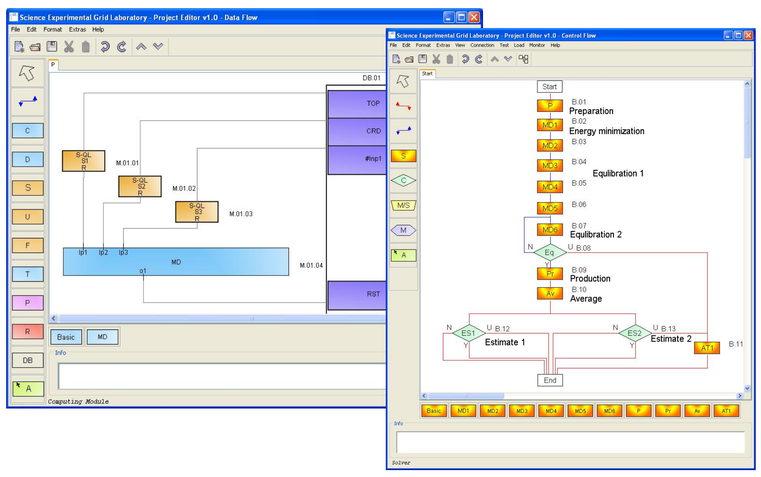
Schedules Jobs:

- Task Flows
- Parameter Sweeping
- ProActive Applications
- Native Tasks



SEGL

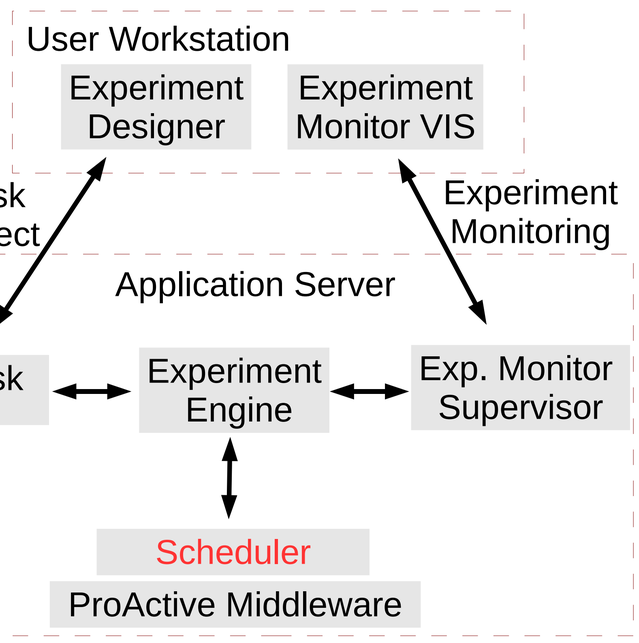
Science Experimental Grid Laboratory



GriCoL: a universal abstract language for the description of Grid experiments

SEGL: a problem solving environment capable of utilizing Grid resources to execute and manage **complex scientific applications**

Enable users, without knowledge on parallel programming, to **model** complex experiments and **execute** them efficiently on Grid resources



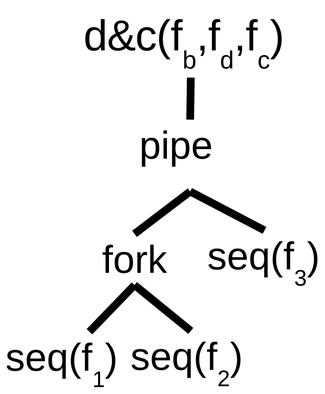
HLRS

http://www.hlrs.de/research/segl/

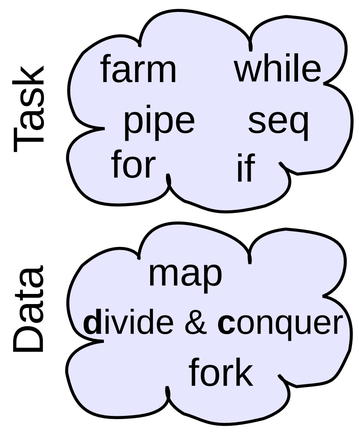
Calcium

Algorithmic Skeletons Framework

BLAST Example



Parallelism **Patterns**

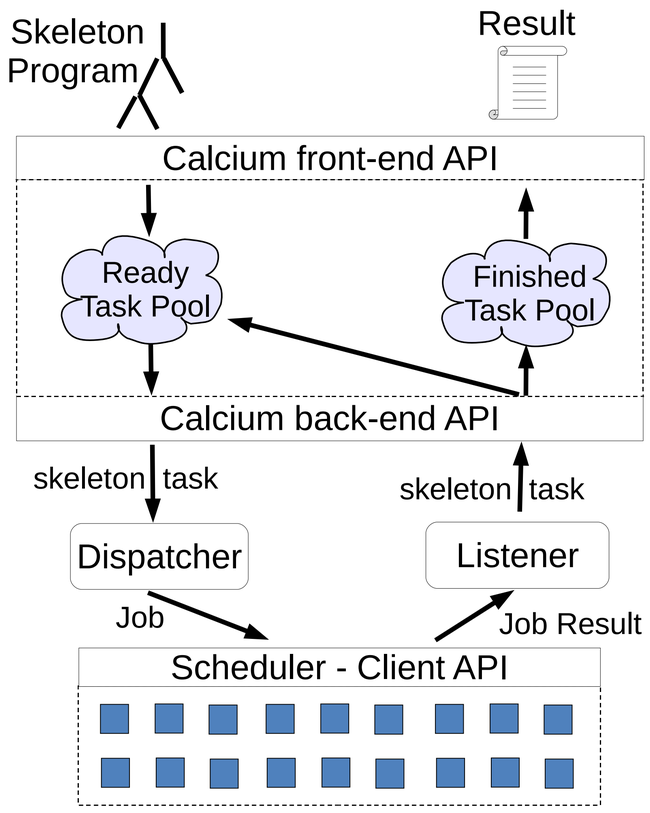


Execution Environments

- Java Threads
- ProActive distributed objects
- ProActive based Scheduler

Type Safe Composition

Transparent **File Transfer**

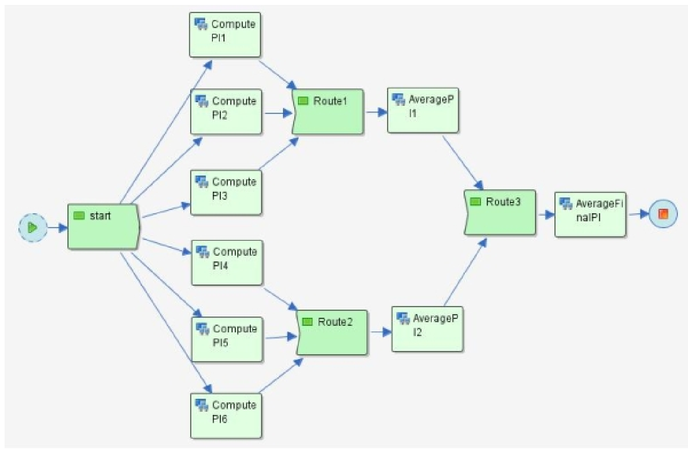


OASIS Team

http://proactive.inria.fr

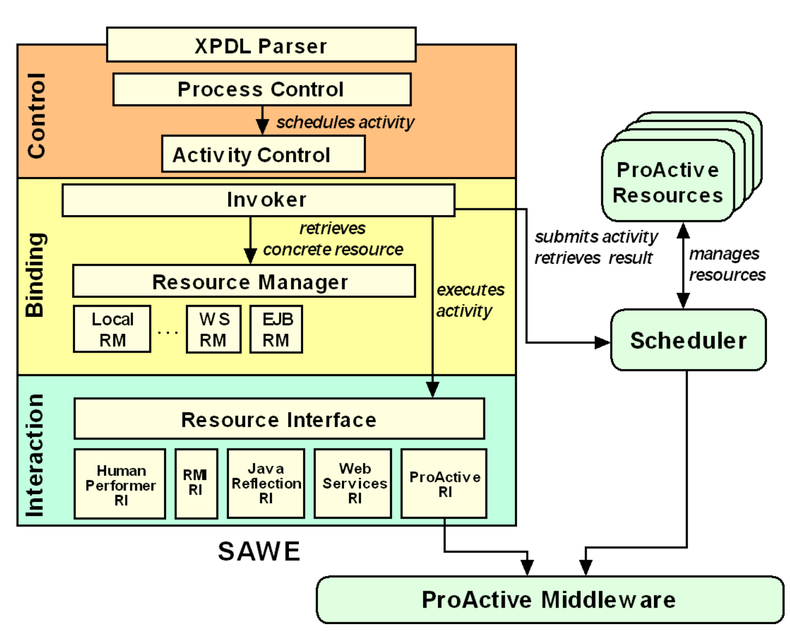
SAWE

Semantic and Autonomic Workflow Engine



Enactment of **workflows** in business and scientific domains:

- **XPDL**-based workflow description
- Heterogeneous resources interaction (POJO, RMI, Web Services, ProActive, etc)
- Semantic-based Dynamic Binding of Web Services
- **Dynamic Binding** of **ProActive Resources** using the ProActive based Scheduler



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http://rcost.unisannio.it