

PROACTIVE PARALLEL SUITE

HPC for JAVA & J2EE !

Key Words:

- Parallelism
- Virtualization
- Distribution
- Multi-Core



Project Name

ProActive

Category

Grid Middleware

License

GPL3

Professional Support

ActiveEon

Some References

- Amadeus
- Pricing Partners
- Mikros Image
- SCP
- University of Westminster
- Universita' di Pisa
- CRdC-ICT
- GMO Boston
- IBM Zurich
- ATOS Spain
- Repast project

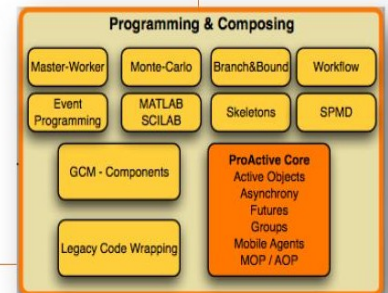
ProActive is an Open Source middleware for parallel, distributed, multi-core computing. ProActive tools simplify the programming and execution of parallel applications on: Multi-core processors, Distributed Local Area Network (LAN), Clusters and Data Center Servers, GRIDS, and on OS such as Linux, Windows, Mac..

PROGRAMMING

Java Parallel Frameworks

for HPC, Multi-Cores, Distribution, Enterprise Grids and Clouds.

Featuring: Async. comms, Master-Worker, Monte-Carlo, SPMD, components and legacy code wrapping.

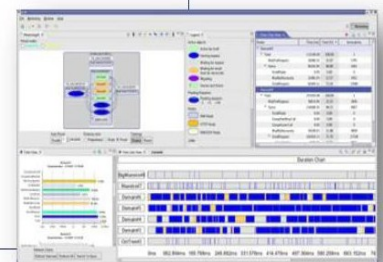


OPTIMIZING

Eclipse GUI (IC2D)

for Developing, Debugging, Optimizing your parallel applications.

Featuring: graphical monitoring and benchmarking with report generation.

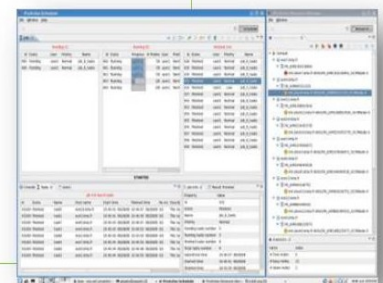


SCHEDULING

Multi-Language Scheduler

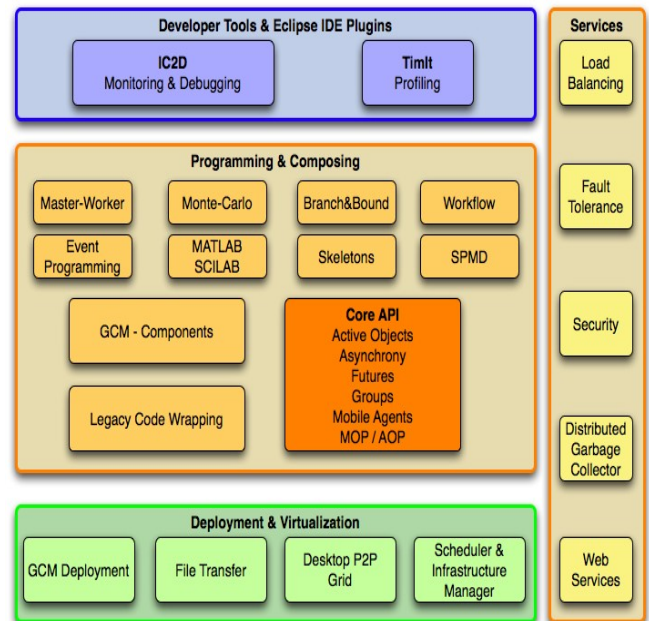
for workflows made of C, C++, Java, Scripts, Matlab, Scilab tasks.

Featuring: graphical user interface, resource acquisition and virtualization.



The ProActive Middleware Architecture

- ❑ **ProActive Core:** Write easily complex parallel applications using the ProActive Active Object (Actors) model.
- ❑ **Deployment Framework:** ProActive deployment framework allows a powerful description and abstraction of any infrastructure thanks to the use of XML files and connections to many existing standards (SSH, LSF, OAR, gLite, etc...)
- ❑ **Master-Worker:** API for solving embarassingly parallel problems
- ❑ **Matlab-Scilab:** Integration with Matlab and Scilab for running scripts in a parallel environment
- ❑ **Skeletons:** Write, combine and run algorithms like divide-and-conquer, farm, pipe, etc..
- ❑ **Legacy Code Wrapping:** Wrap your C/MPI code and integrate it within ProActive
- ❑ **Components:** A powerful component framework for parallel applications based on the Fractal model
- ❑ **Optimizing:** IC2D is a set of tools based on the SWT (Eclipse) technology which allows to monitor and benchmark ProActive applications.
- ❑ **Resource Manager:** The ProActive Resource Manager allows to manage in real-time resources on the grid, users can monitor their activity, add or remove resources, etc...
- ❑ **Scheduler:** The ProActive scheduler, allows a multi-user sharing of resources to run workflows, ProActive applications, native or Java code on the grid
- ❑ **Timit profiling:** Timit plug-in provides a complete solution to benchmarks applications' performance. It is able to produce a large variety of statistics, advanced timers with hierarchical capabilities.



Key Features

- ❑ Active Objects
- ❑ Asynchrony and Futures
- ❑ Typed group communication
- ❑ Mobile Agents
- ❑ GCM Deployment
- ❑ Scheduling
- ❑ GCM Components
- ❑ Legacy code wrapping
- ❑ Matlab/Scilab integration
- ❑ Load balancing
- ❑ Fault tolerance

Professional Support



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ActiveEon is a Professional Open Source company, co-developing and providing support for the ProActive Parallel Suite®.

For Multi-threaded, Distributed and Enterprise Grids, our technology provides a uniform parallel computing interface for Multi-Cores, Servers, and Clusters.

Open and non intrusive, ActiveEon is parallel computing made easy, for your applications, within your IT culture, making the most of your own infrastructure.

OW2

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About OW2

Founded in January 2007 as a result of the merger of ObjectWeb and OrientWare communities, OW2 is an independent industry consortium dedicated to developing open source code middleware and to fostering a vibrant community and business ecosystem. Building on the legacy of ObjectWeb and OrientWare, OW2 federates more than one hundred organizations and 6000 developers in Europe, Asia and the Americas. OW2 hosts over one hundred technology Projects, including Lomboz, Sync4j, eXo Platform, XWiki, SpagoBI and JOnAS. Several of the OW2 projects are combined into market-driven Initiatives, such as the ESB/SOA Initiative and the Business Intelligence Initiative, which facilitate their implementation by systems integrators, OEMs and end-users. A typical global open-source organization, OW2 aims to bring together grassroots communities across all continents through Local Chapters.

More information about OW2 is available at <http://www.ow2.org>.