Alexandre di Costanzo
R. & D. Software Engineer

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29 years old

Distributed - Grid - Cloud Computing and Virtualization

Profile

Strong technical background in distributed computer systems, and in object oriented programming languages. Confirmed experience in grid/cloud systems and in concurrent and parallel programming. Experience in software conception and development.

Skills

Languages: Java (+ 5y), Python, C/C++, Pascal, Scheme, UNIX shells, XML, SQL

Development Tools (+ 5y): Eclipse, NetBeans, IDEA, CVS, Subversion, GForge, Wiki

Distributed and Grid Technologies: J2EE, RPC/RMI, Apache Hadoop (Map Reduce), Reservation and submission tools (OAR, PBS, LSF, Sun Grid Engine)

Virtualization and Cloud (+1y): Xen, KVM, Amazon EC2/S3, Open Nebula

Operating Systems: Advanced user of UNIX & Linux, Windows

Information dissemination: Redaction (and peer-reviewing) of scientific papers for international journals, conferences, and books; tutorials for ProActive Parallel Suite

Situation

Since May 2008   **Research Fellow at the University of Melbourne, Australia**

- Conception, development, and evaluation of the InterGrid middleware for interconnecting computing infrastructures (clusters, grids, and clouds)
- Amazon Web Services Research Grant of US$ 5,000 awarded, June 2009.

Experience

2007
2 months

Software Engineer
National Institute of Computer Science (INRIA), France
- Developer of a Java middleware: ProActive Parallel Suite

2004 - 07
3 years

PhD in Computer Sience:
      "Branch-and-Bound with P2P on Large-Scale Grids"
University of Nice Sophia-Antipolis / INRIA, France
- Computational infrastructure using a mix of clusters and desktop machines
- Realization of a framework for solving optimization problems
- Developer of ProActive. My activities were also support for users, maintenance, and demonstrations / presentations in international events
- International projects: CoreGrid, Grid'5000, Data Grid eXplorer, GridComp
- Dissemination of this thesis: Grant of 1M€ / 4 years to professionalize the computational infrastructure

2004	**Visiting Researcher**
3 months	*Indiana University, Bloomington, USA*
	• Extreme Computing group: "Asynchronous Peer-to-Peer Web Services and Firewalls"

Education

2004 – 07 Ph.D. in Computer Science:
              "Branch-and-Bound with P2P on Large-Scale Grids"
University of Nice Sophia-Antipolis / National Institute of Computer Science (INRIA)

2003 – 04 Master in Computer Science: Networks and Distributed Systems
University of Nice Sophia-Antipolis, passed with honors, ranked 1st

Internships

2004	**INRIA**, in Sophia-Antipolis, France
4 months	Master research internship in OASIS research group: "P2P Model and Infrastructure for Communicating Applications"
2003	**INRIA**, in Sophia Antipolis, France
4 months	Development of a generic test and benchmark API for ObjectWeb ProActive
2002	**Quadrimo**, in La Gaude, France
4 month	Created a cooperative application to manage property projects: building and apartments reservations
1999	**European Telecommunications Standards Institute (ETSI)**, in Sophia Antipolis
4 months	IT maintenance and preparation to the 2000 year bug
1998	**ETSI**, in Sophia Antipolis, France
4 months	Developed an intranet site for the IT department

Relevant Publications

Evaluating the Cost-Benefit of Using Cloud Computing to Extend the Capacity of Clusters, Marcos Dias de Assunção, Alexandre di Costanzo, Rajkumar Buyya, *IEEE International Symposium on High Performance Distributed Computing*, 2009

Peer-to-Peer for Computational Grids: Mixing Clusters and Desktop Machines, Denis Caromel, Alexandre di Costanzo, Clément Mathieu. *Parallel Computing Journal on Large Scale Grid*, 2007

Grid'BnB: A Parallel Branch & Bound Framework for Grids, Denis Caromel, Alexandre di Costanzo, Laurent Baudel, Satoshi Matsuoka, *International Conference on high Performance Computing*, 2007

Branch-and-Bound with Peer-to-Peer for Large-Scale Grids, Alexandre di Costanzo, Ph.D. thesis, University of Nice Sophia Antipolis, 2007

Spoken Languages

French	Mother tongue
English	Fluent