



UvA-DARE (Digital Academic Repository)

Hierarchical resource management in grid computing

Korkhov, V.V.

Publication date

2009

Document Version

Final published version

[Link to publication](#)

Citation for published version (APA):

Korkhov, V. V. (2009). *Hierarchical resource management in grid computing*.

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

Publications

Journal publications

1. V.V. Korkhov, J.T. Moscicki, V.V. Krzhizhanovskaya. User-Level Scheduling of Divisible Load Parallel Applications with Resource Selection and Adaptive Workload Balancing on the Grid. *IEEE Systems Journal - Special Issue on Grid Resource Management*, Vol 3(1), 2009, pp. 121-130.
2. V.V. Korkhov, J.T. Moscicki, V.V. Krzhizhanovskaya. Dynamic Workload Balancing of Parallel Applications with User-Level Scheduling on the Grid. *Future Generation Computer Systems*, Vol 25(1) 2009, pp. 28-34.
3. V.V. Korkhov, V.V. Krzhizhanovskaya and P.M.A. Sloot. A Grid Based Virtual Reactor: Parallel Performance and Adaptive Load Balancing. *Journal of Parallel and Distributed Computing*, Vol 68(5), 2008, pp 596-608, Elsevier
4. V. Korkhov, D. Vasunin, A. Wibisono, A. Belloum, M. Inda, M. Roos, T. Breit, L.O. Hertzberger. VLAM-G: Interactive Dataflow Driven Engine for Grid-enabled Resources. *Journal of Scientific Programming* Vol 15(3), 2007, pp. 173-188
5. Z.W. Hendrikse, A. Belloum, P.M.R. Jonkergouw, G.B. Eijkel, R.M.A. Heeren, L.O. Hertzberger, V.Korkhov, C. de Laat, D. Vasunin. Evaluating the VLAM-G toolkit on the DAS-2. *Future Generation Computer Systems* Vol 19(6), 2003, pp. 815-824
6. A.S.Z Belloum, D.Groep, L.O. Hertzberger, V. Korkhov, C. de Laat, D. Vasunin. VLAM-G: a Grid-based Virtual Laboratory. *Future Generation Computer Systems*, Vol 19(2), 2003, pp. 209-217.
7. H. Afsarmanesh, R.G. Belleman, A.S.Z. Belloum, A. Benabdelkader, J.F.J. van den Brand, G.B. Eijkel, A. Frenkel, C. Garita, D.L. Groep, R.M.A. Heeren, Z.W. Hendrikse, L.O. Hertzberger, J.A. Kaandorp, E.C. Kaletas, V. Korkhov, C.T.A.M. de Laat, P.M.A. Sloot, D. Vasunin, A. Visser and H.H. Yakali. VLAM-G: A Grid-based Virtual Laboratory. *Scientific Programming*, (Special issue on Grid Computing) Vol 10(2), 2002, pp. 173-181. (R.H. Perrott and B.K. Szymanski, editors), IOS Press
8. A. Chevel, V. Korkhov. Experiments with Grid network fragments. *Open Systems*, No 05-06, 2001, Open Systems Publishing, Russia

Books

1. A. Bogdanov, V. Korkhov, V. Mareev, E. Stankova. Architectures and Topologies of Multiprocessor Computing Systems (book of lecture notes). Published by Internet University of Information Technologies (INTUIT), 2004, ISBN 5-9556-0018-3, 176 pages

Conference proceedings

IEEE, ACM and LNCS publications

1. V. Korkhov, D. Vasyunin, A. Wibisono, V. Guevara-Masis, A. Belloum, C. de Laat, P. Adriaans, L.O. Hertzberger. WS-VLAM: Towards a Scalable Workflow System on the Grid. 16th IEEE International Symposium on High Performance Distributed Computing, Proceedings of the 2nd workshop on Workflows in support of large-scale science (WORKS'07), pp 63-68, ISBN 978-1-59593-715-5, Monterey Bay, California, USA, June 25-29, 2007 Publisher: ACM New York, NY, USA
2. V.V. Krzhizhanovskaya and V.V. Korkhov. Dynamic Load Balancing of Black-Box Applications with a Resource Selection Mechanism on Heterogeneous Resources of the Grid. Proceedings of Conference on Parallel Computing Technologies (PaCT'07), Lecture Notes in Computer Science, Vol 4671, pp. 245-260 (2007), September 3-7, 2007, Pereslavl-Zalessky, Russia
3. A. Wibisono, D. Vasyunin, V. Korkhov, Z. Zhao, A. Belloum, C. de Laat, P. Adriaans, B. Hertzberger. WS-VLAM: a GT4 based workflow management system. Proceedings of International Conference on Computational Science (ICCS'07), Lecture Notes in Computer Science, Vol 4489, pp. 191-198 (2007), ISBN 978-3-540-72587-9
4. V.V. Krzhizhanovskaya, V.V. Korkhov, A. Tirado-Ramos, D.J. Groen, I.V. Shoshmina, I.A. Valuev, I.V. Morozov, N.V. Malyshkin, Y.E. Gorbachev, P.M.A. Sloot. Computational Engineering on the Grid: Crafting a Distributed Virtual Reactor. Second IEEE International Conference on e-Science and Grid Computing (e-Science'06), Amsterdam, the Netherlands, December 4-6, 2006, pp.101. IEEE CS Press.
5. V. Korkhov, V. Krzhizhanovskaya. Benchmarking and Adaptive Load Balancing of the Virtual Reactor Application on the Russian-Dutch Grid, Proceedings of the 6th International Conference on Computational Science (ICCS'06), Reading, UK, May 28-31, 2006, Part I, Lecture Notes in Computer Science, Vol 3991, pp. 530-538. Springer Berlin / Heidelberg 2006. ISBN: 3-540-34379-2. DOI: 10.1007/11758501

Other publications

1. V.V. Krzhizhanovskaya, V.V. Korkhov, M.A. Zatevakhin, Yu.E. Gorbachev Parallel Distributed Computing in Modeling of the Nanomaterials Production Technologies. Proceedings of Parallel Computing Technologies (PAVT'2008) international scientific conference (St.Petersburg, 28 Jan - 1 Feb 2008). ISBN 978-5-696-03720-2, pp. 585-590, YUSU, Chelyabinsk, Russia, 2008.
2. V.V. Krzhizhanovskaya and V.V. Korkhov. Problem-Solving Environments for Simulation and Optimization on Heterogeneous Distributed Computational Resources of the Grid. Proceedings of the Third International Conference on Parallel Computations and Control Problems (PACO 2006), Moscow, Russia, October 2-4, 2006. Publ: V.A. Trapeznikov Institute of Control Sciences RAS, ISBN 5-201-14990-1, pp. 917-932, Moscow, Russia, 2006.
3. V.V. Krzhizhanovskaya, V.V. Korkhov, P.M.A. Sloot. Virtual Reactor: a distributed computing environment for simulation of plasma chemical processes on heterogeneous resources of the Grid. All-Russian conference "Scientific services on the Internet: Parallel Programming Technologies". Novorossiysk, Russia, 18-23 September 2006.
4. V.V. Korkhov, V.V. Krzhizhanovskaya. Workload Balancing in Heterogeneous Grid Environment: A Virtual Reactor Case Study. Proceedings of the Second International Conference on Distributed Computing and Grid Technologies in Science and Education. JINR, D11-2006-167, ISBN 5-9530-0138-X, pp. 103-113, Dubna, Russia, 2006.
5. V.V. Korkhov, V.V. Krzhizhanovskaya. Workload Balancing in Heterogeneous Grid Environment: A Virtual Reactor Case Study. Book of abstracts of the Second International Conference on Distributed Computing and Grid Technologies in Science and Education. JINR, p. 93. ISBN 5-9530-0117-7. Dubna, Russia, 2006
6. I. Morozov, I. Shoshmina, A. Evlampiev, E.Stankova, A. Bogdanov, A. Luzan, D. Malashonok, I. Valuev, V. Korkhov. Experience in setting up an experimental Grid testbed for heavy scientific applications, All-Russian Scientific Conference on Scientific Service in Internet: distributed computing technologies, Abrau-Durso, Russia, September 19-24, 2005.
7. I. Shoshmina, V. Korkhov, D. Malashonok, A. Bogdanov, Evaluation of a Grid testbed between IHPC&IS and SPbSU PTC, Proceedings of XI All-Russian Guidance Conference "Telematics'2004", St.Petersburg, Russia, 2004
8. V. Korkhov, A. Bogdanov, L.O. Hertzberger. On Issues of Resource Management in Grid Environment, Proceedings of Intl Conference on Distributed Computing and Grid Technologies in science and education, Dubna, Russia, 2004

9. V. Korkhov, A.S.Z Belloum, and L.O. Hertzberger, VL-e: Approach to design a Grid-based Virtual Laboratory, Proceedings of 5th Workshop on Distributed and Parallel Systems, pp 21-28, ISBN 0-387-23094-7, Budapest, Hungary, September 19-22, 2004.
10. V. Korkhov, A.S.Z Belloum, and L.O. Hertzberger. Evaluating Meta-scheduling Algorithms in VLAM-G environment, Proceedings of ASCI'04 conference, Zeevolde, The Netherlands, pp. 87-94, 2004.
11. V. Korkhov, A. Bogdanov. Application of Grid technologies and Resource Management Issues, Proceedings of X All-Russian Guidance Conference "Telematics'2003", St.Petersburg, Russia, 2003.
12. A. Chevel, V. Korkhov. Deployment of Globus Tools at St.Petersburg (Russia), International Conference on Computing in High Energy and Nuclear Physics (CHEP'01), Beijing, China, September 3-7, 2001.