Weichao Guo

Ph.D. Candidate, Department of Computer Science and Technology, Tsinghua University
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Education

Ph.D. student in Computer Science, Tsinghua University   Sep. 2011 – Present

Advisors: Prof. Weimin Zheng and Prof. Yongwei Wu

B.E. in Software Engineering, Harbin Institute of Technology   Sep. 2007 – July 2011

Publications

Yongwei Wu, **Weichao Guo**, Jinglei Ren, Xun Zhao, and Weiming Zheng, "NO2: Speeding Up Parallel Processing of Massive Compute-Intensive Tasks" IEEE Transactions on Computers (TC), Vol. 63, No. 10, pp. 2487 - 2499, Oct. 2014.

Jinglei Ren, Bo Wang, **Weichao Guo**, Yongwei Wu, and Weimin Zheng. Rebasable File Systems for Enhanced Management of Virtual Machines. Presented in the Poster Section of OSDI 12.

Research Experience

Mobile System   2014

Designed and implemented MARS, which improves the performance of swap-in reads by reorganizing page slots and reducing concurrent/extra internal writes addressing the characteristic of flash storage on smartphones. MARS is used for fast mobile application relaunching.

Economic and Reliable Cloud Computing   2014

Formalized failure model of spot instances in Amazon EC2 and proposed a bidding framework which reduces cost while still keeping the availability level the same as the on-demand instances.

Parallel Processing Scheduling   2012 - 2013

Designed and implemented NO2, a framework for speeding up parallel processing of massive compute-intensive tasks on ProActive platform. NO2 employs program instrumenting to estimate the execution progress of tasks, then identifies straggler tasks and performs speculative execution.

File System   2011

Participated the design and implementation of a file system with rebase feature like version control systems for enhancing the management of virtual machines.

Programming Tool   2010

Developed an Eclipse plugin which could detect code clones using a suffix tree based pattern matching algorithm.

Industry Experience

Research & Develop Intern, Tencent, Map R&D center, Beijing   Summer 2011

Designed and implemented a prototype to remind users arrivals of a bus or subway.

Software Engineering Intern, Tencent, Mobile Browser Group, Shenzhen   Summer 2010

Ported Flirt, an open source flash runtime to Windows Mobile Platform.