

Measurement & Profiling Readings

Measurement & Profiling with Mostly System Support

[Read for Lecture 4] Yaoping Ruan and Vivek Pai. “Making the ‘Box’ Transparent: System Call Performance as a First-Class Result.” To appear in *Proc. USENIX 2004*. <http://www.cs.ucla.edu/~kohler/class/o4s-readable/debox.pdf> – please do not redistribute this pre-publication version.

Andrea C. Arpaci-Dusseau and Remzi H. Arpaci-Dusseau. “Information and Control in Gray-Box Systems.” In *Proc. 18th SOSP*, 2001. <http://www.cs.wisc.edu/wind/Publications/gray-box.ps>

Jennifer M. Anderson, Lance M. Berc, Jeffrey Dean, Sanjay Ghemawat, Monika R. Henzinger, Shun-Tak A. Leung, Richard L. Sites, Mark T. Vandevoorde, Carl A. Waldspurger, and William E. Weihl. “Continuous Profiling: Where Have All the Cycles Gone?” In *Proc. 16th SOSP*, 1997; revised version in *ACM Transactions on Computer Systems* **15**(4), November 1997. <http://portal.acm.org/citation.cfm?id=265925&dl=portal&dl=ACM> – or <http://pag.lcs.mit.edu/6.893/readings/anderson-tocs97.pdf>

Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau, Nathan C. Burnett, Timothy E. Denehy, Thomas J. Engle, Haryadi S. Gunawi, James A. Nugent, and Florentina I. Popvici. “Transforming Policies into Mechanisms with Infokernel.” In *Proc. 19th SOSP*, 2003. <http://www.cs.rochester.edu/sosp2003/papers/p162-arpacidusseau.pdf>

Marcos K. Aguilera, Jeffrey C. Mogul, Janet L. Wiener, Patrick Reynolds, and Athicha Muthitacharoen. “Performance Debugging for Distributed Systems of Black Boxes.” In *Proc. 19th SOSP*, 2003. <http://www.cs.rochester.edu/sosp2003/papers/p146-mogul.pdf>

Ariel Tamches and Barton P. Miller. “Fine-Grained Dynamic Instrumentation of Commodity Operating System Kernels.” In *Proc. OSDI 1999*. <http://www.cs.wisc.edu/paradyn/papers/kerninst.ps.gz>

Measurement & Profiling with Mostly Compiler Support

Timothy Sherwood, Erez Perelman, Greg Hamerly, and Brad Calder. “Automatically Characterizing Large Scale Program Behavior.” In *Proc. ASPLOS X*, 2002. <http://www.cs.ucsd.edu/~calder/abstracts/ASPLOS-o2-SimPoint.html> (Everyone should look at the graphs on pages 4 and 5.)

Amitabh Srivastava and Alan Eustace. “ATOM: A System for Building Customized Program Analysis Tools.” In *Proc. PLDI 1994*. <http://portal.acm.org/citation.cfm?id=178260&dl=ACM&coll=portal> – or read the DEC Western Research Lab tech report at <http://research.compaq.com/wrl/techreports/abstracts/94.2.html>

Nicholas Nethercote and Julian Seward. “Valgrind: A Program Supervision Framework.” *Electronic Notes in Theoretical Computer Science* **89**(2), 2003. <http://www.cl.cam.ac.uk/~njn25/pubs/valgrind2003.ps.gz>