Improving Datacenter Efficiency

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Abstract

Internet companies can improve datacenter efficiency and reduce costs, by minimizing resource waste while avoiding (or limiting) performance degradation. In this talk, I will first overview a few of the efficiency-related efforts we are undertaking at Microsoft, including leveraging workload history to improve resource management. I will then discuss some lessons from deploying these efforts in production and how they relate to academic research.

ACM Classifiers
Computer systems organization~Cloud computing

Author Keywords
Internet services; resource management; cloud workloads

Biography
Dr. Ricardo Bianchini received his PhD degree in Computer Science from the University of Rochester. After his graduate studies, he joined the faculty at the Federal University of Rio de Janeiro, and later at Rutgers University. Since 2014, he has been the Chief Efficiency Strategist at Microsoft, where he leads efforts to improve the efficiency of the company's online services and datacenters. His main research interests include cloud computing and datacenter efficiency. Dr. Bianchini is a pioneer in datacenter power/energy management, energy-aware storage systems, energy-aware load distribution across datacenters, and leveraging renewable energy in datacenters. He has published nine award papers, and has received the CAREER award from the National Science Foundation. He is an ACM Fellow and an IEEE Fellow.

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