Cloud Computing: Virtual Clusters, Data Security, and Disaster Recovery

Kai Hwang

University of Southern California, USA

Short Bio:

Dr. Kai Hwang is a Professor of Electrical Engineering and Computer Science and Director of Internet and Cloud Computing Lab at the Univ. of Southern California (USC). He received the Ph.D. in Electrical Engineering and Computer Science from the Univ. of California, Berkeley. Prior to joining USC, he has taught at Purdue Univ. for many years. He has also served as a visiting Chair Professor at Minnesota, Hong Kong Univ., Zhejiang Univ., and Tsinghua Univ. He has published 8 books and over 210 scientific papers in computer science/engineering.

He was awarded an IEEE Fellow in 1986 for making significant contributions in computer architecture, digital arithmetic, and parallel processing. He received the 2004 Outstanding Achievement Award from China Computer Federation for his leadership roles in high-performance computing research and higher education. Dr. Hwang has produced over 21 Ph.D. students and supervised postdoctoral researchers at USC and Purdue. He has delivered two dozens of keynote addresses in major IEEE/ACM Conferences. He has performed advisory and consulting work for IBM, Intel, MIT Lincoln Lab., Academia Sinica, ETL in Japan, and INRIA in France.

Talk:

Cloud Computing:
Virtual Clusters, Data Security, and Disaster Recovery

Abstract:
Gartner Report has ranked virtualization and cloud computing as the top two technologies in 2009. In this talk, Dr. Hwang will assess the role of virtualization technology in cloud computing driven by some killer applications. He presents virtual clusters, fault tolerance, data security, disaster recovery, and performance modeling of cloud platforms. Virtual machines enable dynamic cloud resource provisioning and secure datacenters in web-scale distributed computing applications. The talk reviews how clouds are evolved from clusters, grids, P2P, and high-performance systems. He reports several collaborative cloud research projects performed at USC Internet and Cloud Computing Lab, in cooperation with several leading research groups in US and China.

R. Meersman, T. Dillon, P. Herrero (Eds.): OTM 2009, Part II, LNCS 5871, p. 795, 2009.