The IEEE South Alberta Section's Computer Society
presents a seminar titled:

Methodologies for Optimizing Linux Server Performance

Speaker: Dr. Sandra K. Johnson
From IBM's Systems and Technology Group, based in North Carolina, USA

Tuesday, October 13, 2009 @ 3:15 pm – 5:15 pm

WHO SHOULD ATTEND? Persons who are interested in performance tuning and performance engineering of Linux servers.

LOCATION: Room ENA 201, University of Calgary

COST: Free to IEEE members (please bring your membership card). $3 non-members.

Abstract:

The Linux operating system has gained significant popularity in the past several years as a platform for a diverse set of client and server computing machines. This talk describes the various methodologies used to improve the performance of the Linux kernel on high-end enterprise server machines. Described are methodologies for measuring, analyzing, and improving the performance and scalability of the Linux kernel, focusing on platform-independent issues. A diverse set of workloads are described, including web serving, database, and file serving. In addition, various components of the Linux kernel (e.g., disk IO subsystem) are examined. Several well-known benchmarks are used to quantify Linux performance for these workloads and system components. The results show significant improvements in the Linux kernel for enterprise servers with 2 to 16 computing units.

Speaker's Biography:

Sandra K. Johnson is a Senior Technical Staff Member at IBM. Her previous assignments include working as the Chief Technology Officer, Global Small and Medium Business for IBM Systems and Technology Group, the Linux Performance Architect, and managing the Linux Performance, WebSphere Database Development, and Java Server Performance teams within IBM development and research organizations. She has conducted research in a number of computer related areas and was part of the design team that developed the prototype for the IBM Scalable Parallel Processor (SP2), the base machine for "Deep Blue", IBM's world famous chess machine.

Dr. Johnson is a member of the IBM Academy of Technology, which consists of the top 300 of IBM's over 250,000 technical professionals. She has received numerous technical and professional awards, and is a Master Inventor, with over 40 patents issued and pending. She has authored and co-authored over 80 publications, is Editor-in-Chief of the book Performance Tuning for Linux Servers, and is author of Inspirational Nuggets and GREGORY: The Life of a Lupus Warrior.

Dr. Johnson earned B.S. (summa cum laude), M.S. and Ph.D. degrees, all in electrical engineering, from Southern University, Stanford University, and Rice University, respectively. She is a member of the Institute of Electrical and Electronics Engineers (IEEE) and the Association for Computing Machinery (ACM). She is also an IEEE Fellow and an ACM Distinguished Engineer.

Seminar Coordinator:

Dr. Vahid Garousi, PEng, vgarousi@ucalgary.ca, Computer Chapter Chair of the IEEE South Alberta Section. For more information, visit: http://sas.ieee.ca/computer

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