The Department of Computer Science and Engineering

University of Nevada, Reno

cordially invites you to a Master's colloquium

Beyond Monitoring: Proactive Server Preservation in an HPC Environment

A thesis submitted in partial fulfillment of the
requirements for the degree of Master of Science
with a major in Computer Science.

by

Chad E. Feller

Abstract:

Monitoring has long been the challenge of a server administrator. Monitoring disk health, system load, network congestion, and environmental conditions like temperature are all things that can be tied into monitoring systems. Monitoring systems vary in scope and capabilities, and many can fire off alerts for just about anything they are configured for. The sysadmin then has the responsibility of weighing the alert and deciding if and when to act. In an HPC environment, some of these failures can have a ripple effect, affecting a larger area than the physical problem. Furthermore, some temperature and load swings can be more drastic in an HPC environment than they would be otherwise. Because of this a timely, measured, response is critical. When a timely response is not possible, conditions can escalate rapidly in an HPC environment, leading to component failure. In this situation, an intelligent, automatic, measured response, is critical. Here we present a novel approach to server monitoring, coupled with a response system designed to deliver an intelligent response with High Performance Computing in mind.

9:30 am, Tuesday, May 8, 2012

Scrugham Engineering and Mines (SEM) room 201

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