Cloud Research with CloudLab

By Dr. Robert Ricci
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Date: March 1ˢᵗ, 2016 (Tuesday)
Time: 1:30pm-3pm
Venue: ESB (Experimental Science Building) 120 (Seminar Room)
Seminar Host: Dr. Yong Chen (yong.chen@ttu.edu)

Abstract:

Clouds have had a tremendous impact on the way that we approach computation and IT infrastructure. They have taken infrastructure that was previously expensive to procure, time-consuming to set up, and complex to manage and provided a software control plane and a new set of economic models that put flexible, powerful, and elastic infrastructure within the reach of many organizations. The existence of public and private clouds is a major asset to the research community, since a large amount of research can be run "inside" of these clouds. There is still, however, a need for ongoing research on the layers of the software stack that "enable" clouds: cloud control architectures, virtualization, multi-tenant networks, storage systems, security systems, etc. To enable this work, what is needed is an environment in which researchers are not simply using someone else's cloud, but building their own. This talk will cover CloudLab, a facility designed to fill this need. Provisioning an entire cloud inside of CloudLab takes only minutes, and gives researchers access to a controlled, instrumented, and repeatable environment in which they have full control over the cloud software stack, from top to bottom. The talk will cover the practical aspects of what CloudLab "is", how to get access to it, etc., as well as deeper questions of what repeatable, sharable environments can do for computer science and other related fields.

Speaker Bio:

Dr. Robert Ricci is a Research Assistant Professor in the University of Utah's School of Computing and co-director of the Flux Research Group. His primary research interests are in the fields of operating systems and networking. He has been building environments for the evaluation of networked computer systems since 2000, starting with the Emulab testbed and now many of its follow-ups, including CloudLab. He earned a PhD from the University of Utah in 2010, and an Honors BS in 2001.