Technical Status Report for Million Node GENI project (proposal 1645, NSF Grant CNS-0834243), for July 2009 through September 2009

PI: Thomas Anderson
Co-PI: Justin Cappos

Major accomplishments

Milestones achieved

N/A

Deliverables made

g) Specification for RSpecs for VM resources (11mo)
   Sent to Vicraj on 3 Aug 2009

h) End-host resource advertisement and discovery function using RSpecs (12mo)
   Sent to Vicraj on 12 Aug 2009

i) Collaborate with Security team on security design for Spiral 1. (1-12mo)
   Completed

j) Produce a tutorial describing how to use the programming environment (12mo).
   Sent to Vicraj on 12 Aug 2009

Description of work performed during last quarter

Activities and findings

We specified a resource description format and built a system for locating nodes (using a DHT abstraction).   These resource descriptions are used by an early stage prototype clearinghouse, by our experiment manager, and the node manager.   Our instructional materials were improved to help a new user easily use the programming environment.

Project participants

Tom Anderson (PI)
Justin Cappos (Co-PI)
Arvind Krishnamurthy (Senior Personnel)
Ivan Beschastnikh (Ph. D. student)
Justin Samuel (Programmer)

Monzur Mohammad (Open Source Developer)
Armon Dadger (Undergraduate)
Cosmin Barsan (Undergraduate)
Eric Kimbrel (Undergraduate)
Jennifer Hanson (Undergraduate)
Conrad Meyer (Undergraduate)
Yefete Yemuru (Undergraduate)
Zachary Boka (Undergraduate)
Kon Pik (Undergraduate)
Anthony Honstain (Undergraduate)
Jason Chen (Undergraduate)
Vjekoslav Brajkovic (Undergraduate)

Publications (individual and organizational)

We had a paper on Seattle at the NW-DCSD workshop. We also will host a workshop on Seattle that will be co-convened with the CCSC-NW 2009 conference. An abstract from the workshop proposal will be published in the proceedings for the overall conference.

Outreach activities

We presented Seattle at the NW-DCSD workshop (an educational venue). The upcoming workshop on Seattle will draw educators in the Northwestern United States who are attending the CCSC-NW 2009 conference. We will have an overall tutorial about Seattle as well as different presentations by developers and educators about their experiences with Seattle. We hope that this will spur adoption by educators in the region.

Collaborations

We now have a deployment working on DOME. We have deployed our software on PlanetLab, GpENI, and done automated deployments on Emulab. We have joined the ProtoGENI cluster and have started discussions on integrating with the ProtoGENI Control Framework. We have made some initial strides with the Digital Object Registry folks to try to leverage their data store for Seattle node information.

Other Contributions

None.