

DiCloud Project Status Report

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I. Major accomplishments

The DiCloud project includes the following major accomplishments between GEC10 and GEC11:

- Software and documentation releases including Public Amazon Images to re-create DiCloud/ViSE demonstrations with Orca and VMs with OpenVPN support for developers. The Amazon Machine IDs for these images are ami-a4d720cd and ami-bad621d3.
- Demo at GEC10 and preparation of a tutorial on DiCloud for GEC 12.

The rest of this document describes in detail the major accomplishments above.

I.A. Milestones Achieved

We achieved the following milestones in the 4th quarter of Spiral 2 and for the beginning of Spiral 3.

- **April 5, 2011 (deadline S3.e) Code and documentation release:** Amazon Images with builds of Orca for the community and operational virtual machines with OpenVPN support for researchers.
- **June 1, 2011 (deadline S3.f):**
 - Repository of pre-configured AMIs for researcher experiments including networking support (openVPN) for GENI integration.
 - Preparation for Orca/Gush integration using Orcas management API, which is currently conforming to the ProtoGENI API. Report on the changes necessary for Gush to use this new API.
- **July 31, 2011 (deadline S3.g):** The GEC 11 demo has been replaced with a tutorial that will be held at GEC 12.

I.B. Milestones in Progress

- Code release (deadline S3.h): Release of Gush changes for Orca integration and related documentation.

II. Deliverables Made

Deliverable S3.e, S3.f, and S3.g have all been made available on time through the DiCloud wiki and Gush web site. The URL for an example of the Gush/Orca integration is <http://gush.cs.williams.edu/trac/gush/wiki/OrcaExample>. This page is linked off the GENI DiCloud wiki page as well.

The software releases are all available for download on the DiCloud wiki, Gush web site or directly from Amazon EC2 for AMIs.

The documentations are also available on the DiCloud wiki and Gush web site for download.

III. Description of Work Performed During Last Quarter

III.A. Activities and Findings

Between GEC10 and GEC11, we have been working on software releases and documentation. The integration with Gush is ongoing and software releases have been made available on the Gush web site. The GUSH project uses the new GENI AM API and Omni client. Omni-integration should enable integration with Orca, which is DiCloud's current control framework. DiCloud's software sits beneath Orca's internal event handlers, as well as the GENI AM API. Thus, our plan to integrate GUSH with DiCloud is through an Omni-enabled Orca service manager.

III.B. Project Participants

The primary PI is Michael Zink. Co-PIs are Prashant Shenoy, and Jim Kurose. Research Staff is David Irwin and Emmanuel Cecchet.

III.C. Publications (individual and organizational)

No publications this quarter

III.D. Outreach Activities

Preparation of a GEC 12 tutorial on DiCloud technology. A draft is available at <http://groups.geni.net/geni/wiki/DICLOUD/GEC12tutorial>.

III.E. Collaborations

We collaborated with other Cluster D projects during the quarter. We provided feedback and participated to discussions on the mailing. We are actively consulting with the GUSH PI on Omni and Orca integration with DiCloud.