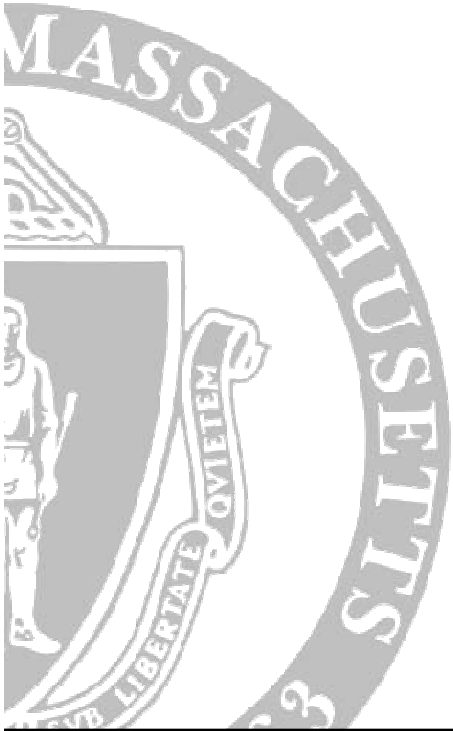


Data-Intensive Cloud Control for GENI

Cluster D Session
July 20th, 2010



Current Status and Plans for Spiral 3

- Enable Orca to allocate resources from AWS
 - EC2 servers (any kind)
 - Storage: EBS volumes and S3 buckets
- Monitors resource usage and pulls the plug when budget is reached

- Spiral 3
 - Availability to researchers by extending Vise's portal
 - Adapting to new AWS offering (HPC oriented instances, S3 ACLs, ...)
 - Gush integration

Connectivity capabilities

- Currently no way to reserve/attach to dedicated circuits with Amazon
 - No isolation from the public Internet; can't link nodes directly to NLR
 - OpenVPN viable solution (GEC7 demo)
 - Amazon Virtual Private Cloud service is beta and no budget for it

- Increase number of VLANs going out of UMass (partially, as part of a GENI racks proposal)

Experiment capabilities

- Ready to use by outside researchers?
 - EC2 and EBS without many issues at end of Spiral 2
 - S3 will be more challenging with dynamic resource creation
- How is it done?
 - Extension to Vise portal
 - AWS handlers + S3 Proxy + AWS monitoring tool
- Use for research experiments? What has been done?
 - GEC 8 demo using Casa data
 - 5000\$ budget for the year (about 5 months for 5 servers (8hr/day), 200GB network traffic and 5TB of storage)