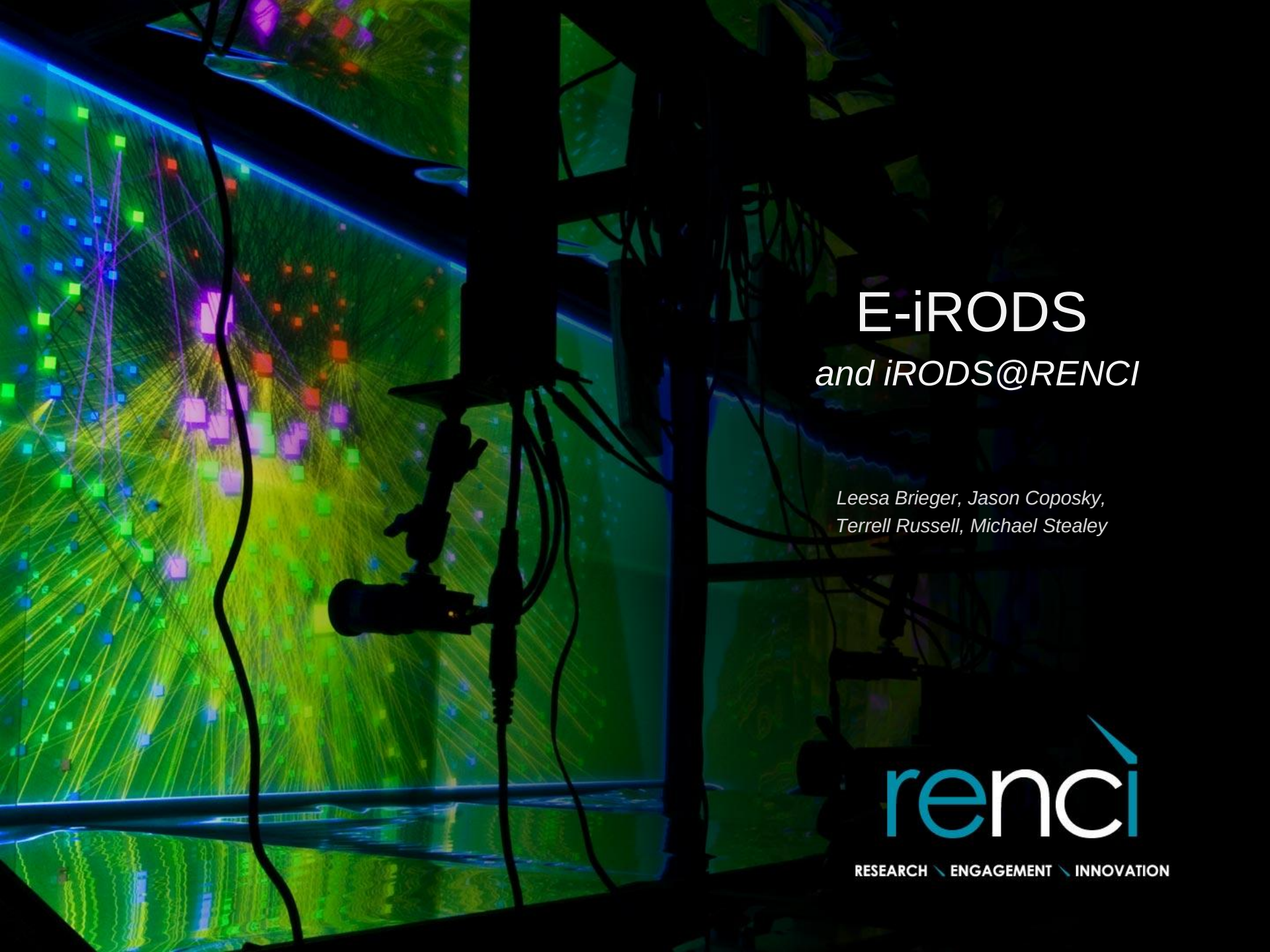


E-iRODS

and iRODS@RENCI

Leesa Brieger, Jason Coposky,
Terrell Russell, Michael Stealey

renci

RESEARCH \ ENGAGEMENT \ INNOVATION

E-iRODS 3.0 Beta

- Initial release based on iRODS 3.0
  - Tracks community code, with a delay
- Hardened binary release of iRODS
  - Passes continuous integration with back-ported bug fixes from community trunk
  - Packaging and signing: initially RPM and DEB
- Certification
- Documentation
- Subscription Support Contracts

Differences in Priority

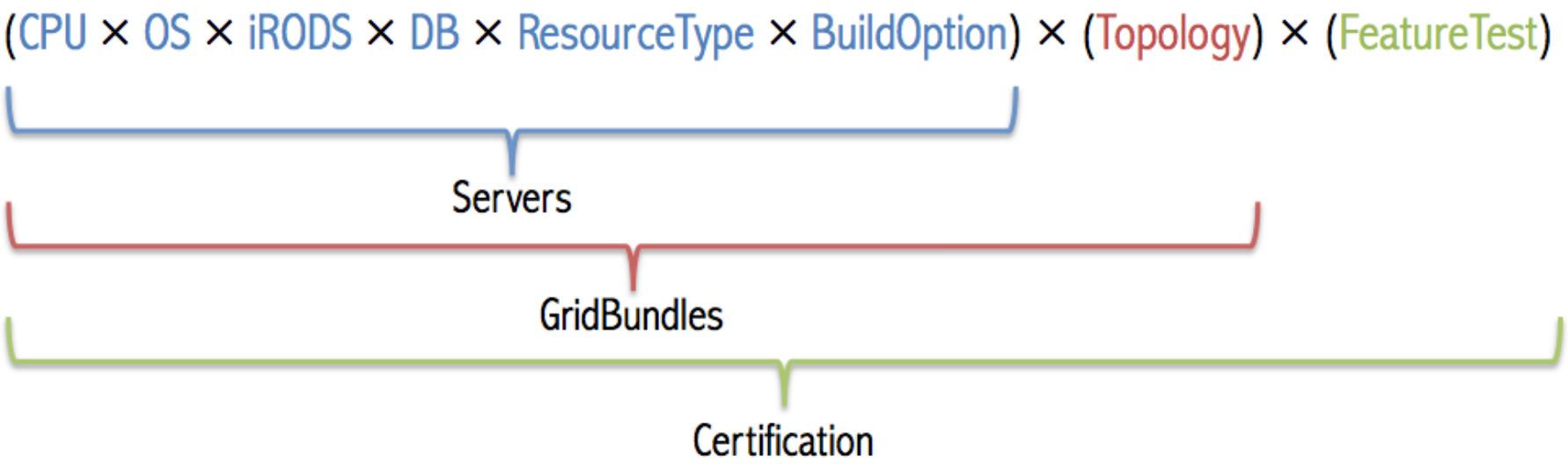
- iRODS – features and funding

- E-iRODS – testing, packaging, and support
  - Newest features are not supported, yet

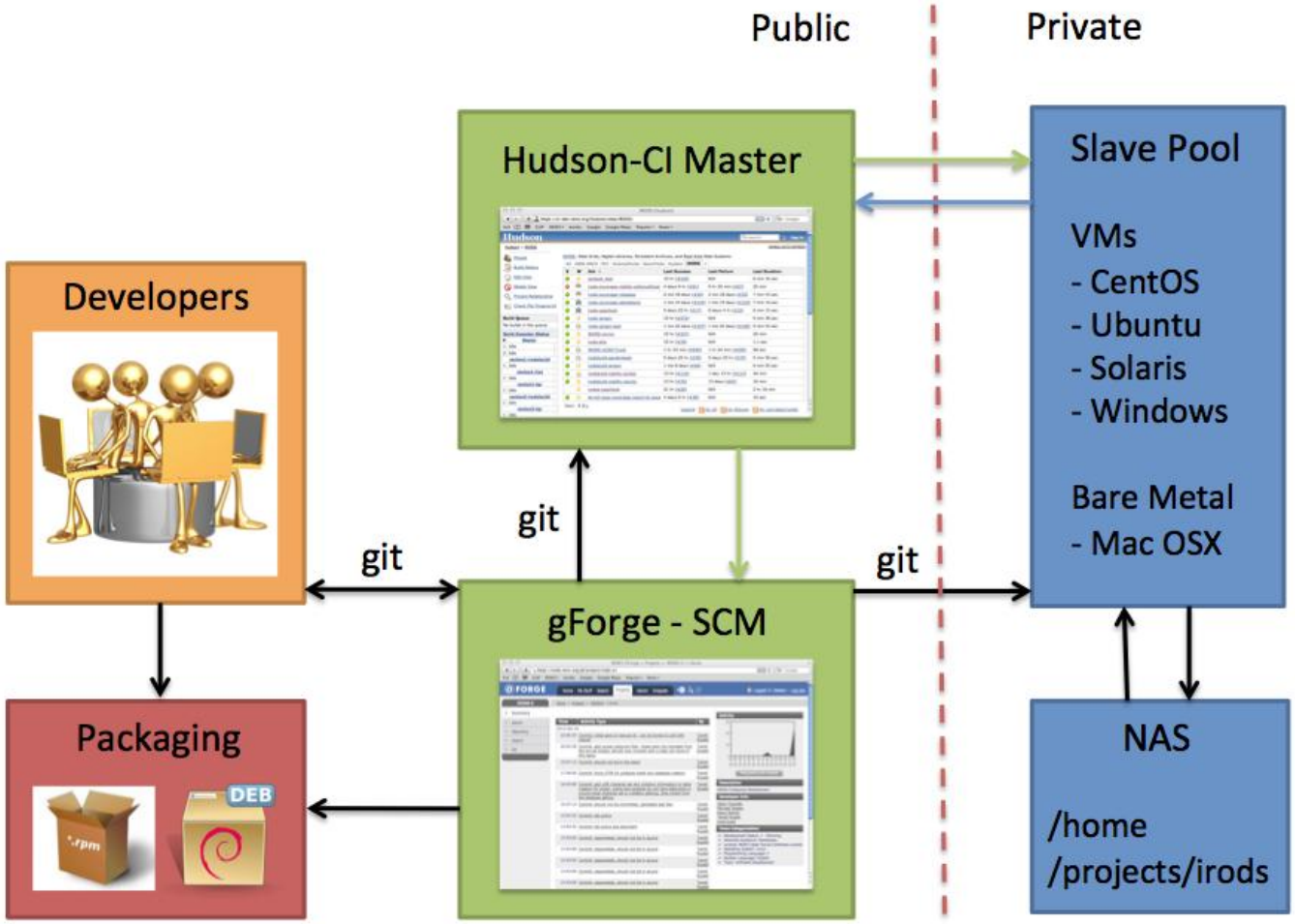
E-iRODS Certification

- 100% test coverage of server-side APIs: n-way testing across all combinations of selected platforms and topologies
- Platforms
  - CentOS 5.7
  - Ubuntu 11.04
- Topologies
  - Single Zone: iCAT server + 2 non-iCAT servers
  - Federation: two single zones

E-iRODS Certification



RENCI E-iRODS Testing Environment



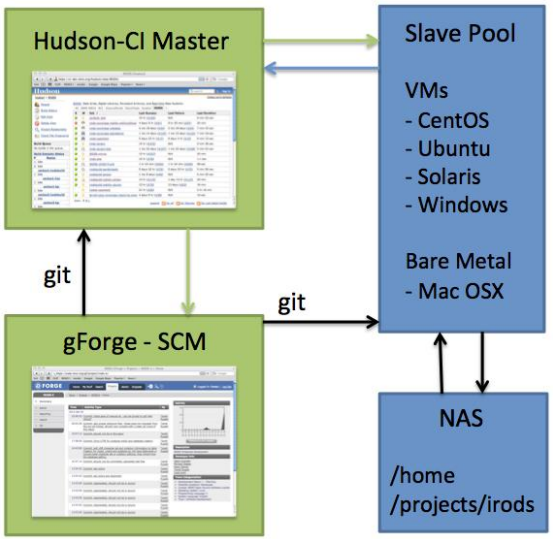
Open Source Software for the Test Environment

- git
- python
  - celery
  - nose
- erlang
  - rabbitmq
- javascript
  - node.js
- bash

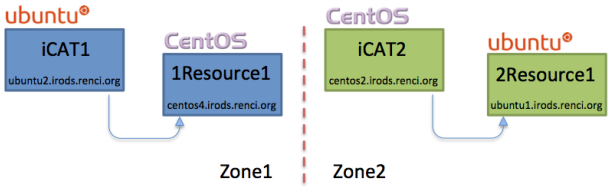
Developed at RENCI:

- gridbundle
  - schema.json
  - validator.js
- deploy_gridbundle.py
- assertiCmd/assertiCmdFail

RENCI E-iRODS Testing



- Hudson launches task on Slave Pool
- Slave Pool runs script to "deploy a gridbundle"
  - gridbundle – topological definition of an n-zone iRODS network (json)



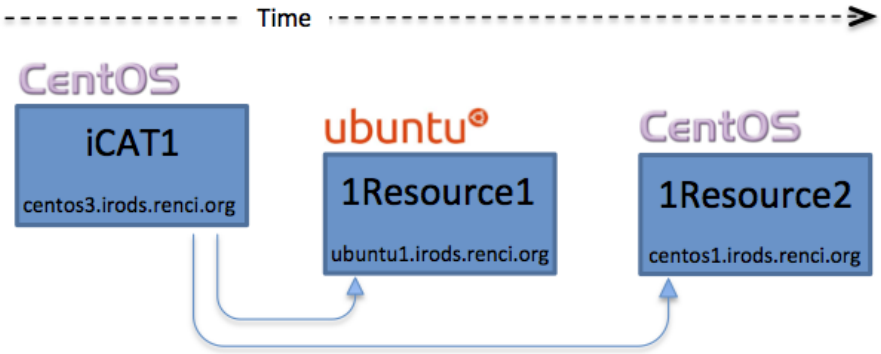
- Tests run against the resulting "live grid"
  - automated and/or manual testing
  - aggregates test results from various machines

Deploying a Gridbundle

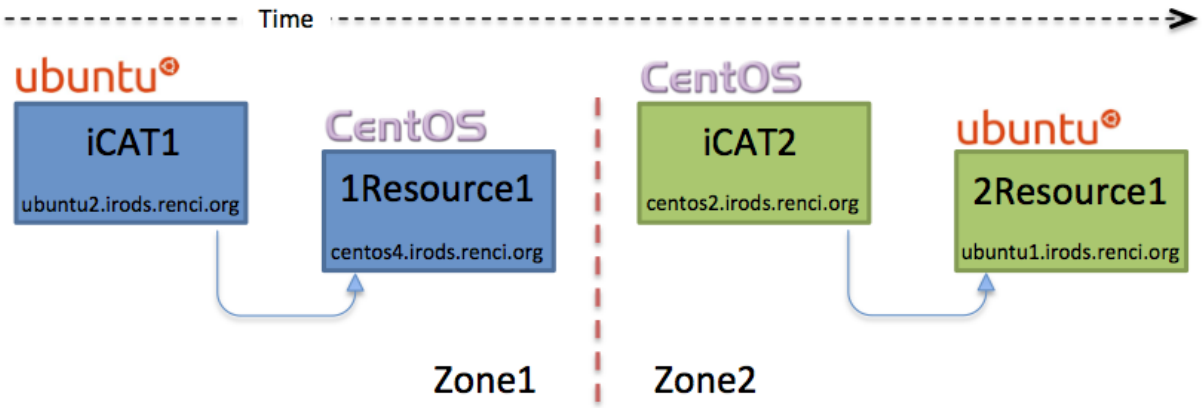
- validate gridbundle is well-formed
- validate testbed capacity is sufficient
- foreach iCAT server
  - send celery request, wait for success
  - populate gridbundle data structure (IP and hostname)
  - foreach resource server
    - send celery request, wait for success
    - populate gridbundle data structure (IP and hostname)
- write out populated gridbundle to livegrid.json

Deploying a Gridbundle

Single Zone: One iCAT with two resources



Federation: Two iCATs with one resource each



Gridbundle Combinations

Topologies - Resource Configurations - Platforms

- Single Zone and Federated
- Resources – cache, compound, DBR (postgres, mysql)
- Ubuntu, CentOS (soon: MacOSX, Solaris, Windows)

Documentation

- (2010) iRODS Primer: integrated Rule-Oriented Data System (Synthesis Lectures on Information Concepts, Retrieval, and Services) http://www.amazon.com/dp/1608453332
- (2011) The integrated Rule-Oriented Data System (iRODS 3.0) Micro-service Workbook http://www.amazon.com/dp/1466469129
- E-iRODS Manual http://e-irods.com
- iRODS Wiki http://irods.org

Support Contracts

- Tutorial packages
  - User and administrator tutorials
  - On-site hands-on or web conferencing
- Technology preview packages
  - Helpdesk response to usage problems: iRODS, E-iRODS
- Production support packages
  - Bug fixes and problem closure for E-iRODS supported components on supported platforms
- Development support packages
  - Community or proprietary feature development

E-iRODS from iRODS@RENCI

- Downloadable binaries available at http://e-irods.com
- Initial release based on iRODS 3.0
- Support contracts available upon request
  - Contact: Leesa Brieger, leesa@renci.org