



<LEFA>

Spiral 2 Year-end Project Review

Internet2

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- Project looks at application of federated identity and access controls to the GENI environment
 - Particularly the control framework
 - In reach but out of scope is collaboration tools in support of research
 - Tries to understand how all the concepts of federation within GENI align
 - Federated * - Identity, resources, firewalls, circuits, etc.
 - Leverage attributes already available in campus IDM systems (eg student, instructor in CS 101)
 - Leverage international inter-federation frameworks
- Work with the SFA and other security efforts within GENI
- Deep drill down into application of federated identity to ORCA as a proof of concept
 - Using federated identity to authenticate to the ORCA portal/command console
 - Using attributes (group membership) to control allocation of resources

ID	Milestone	Status	On Time?	On Wiki?	GP O sig no ff?
S2.a Federa tion technol ogies within ORCA	Report on the use of modern federated technologies within their control plane approaches: (1) Application of federated identity to the authentication and authorization needs of ORCA, (2) Adaptation of federated identity technologies to other elements under ORCA control – slices, routers, etc.	Work ongoing and productive. Formal report to be delivered at end of grant.	1Q late	?	?
S2.b Demo at GEC7	Demo using regular Duke IT infrastructure to permit appropriate academic classes to access ORCA capabilities.	Demo delivered at GEC8; Live demo at GEC9 with delegation	1Q late	yes	?
S2.c Begin Planet Lab Engag ement	Work with Planetlab on an assessment of the value of federated identity within their activities.	Preliminary discussions only	no	No	?
S2.d White paper on the federat ion knot in GENI	White paper that examines the numerous ways federation is applied inside the GENI framework and suggests possible alignments of federated concepts within GENI. Possibly present this paper at GEC 8 .	V 1.0 circulated March 1, 2010	yes	yes	?



Accomplishments 1: Advancing GENI Spiral 2 Goals

- Integration – The LEFA project has provided the control framework with its first externalized user authentication and authorization option, allowing GENI to be integrated into existing international trust cyberinfrastructure.
- Interoperability – The LEFA project has advanced GENI interoperability by providing a level of abstraction that allows existing and new control frameworks to coexist. That somewhat helps interoperability.
- Identity Management – The LEFA project has been a major driver of this goal within GENI. Working closely with the Security work of Cobham and their P.I. Schwab to refine the SFA. The Spiral 2 Report states a “candidate technology of interest is Shibboleth/InCommon”

Accomplishments 2: Other Project Accomplishments

- In workings with Steve Schwab, helped evolve the SFA and demonstrated key concepts using production software
- In workings with ORCA, implemented federated access with group permissions through the ORCA portal and demonstrated the viability of the approach.
- Working with an ISI team to integrate Shib with their Attribute Based Access Control libraries, following their workshop at GEC8

- The externalization of authentication and authorization was added to GENI SFA but nothing was excluded; more choices mean less interoperability and making scalability more difficult
- The current tangle of authentication vs authorization is a difficult knot to work; most existing GENI approaches use identity (authentication) to control authorization
- Work on a federated and domesticated SSH is beginning under an NSF grant. How should this work be used and integrated with GENI?

- What are your plans for the remainder of Spiral 2?
We will demonstrate two different production ready approaches to integrating federated identity and group management to provide access control for GENI projects, both in extending the Duke work and in deploying a collaboration management platform approach that will integrate GENI and enterprise attributes for control.
- The GPO is starting to formulate goals for Spiral 3. What are your thoughts regarding potential Spiral 3 work?
As a small project, we don't see much opportunity for participation in solicitation 3. For Spiral 3, GENI needs to start to drive interoperability through constraining choices