

# **“Speaks For” Authorization in GENI**

**GEC 19**  
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**[www.geni.net](http://www.geni.net)**



- “Speaks For”
  - What is it?
  - Why does GENI need it?
  - How does it work?
- Status
- Rollout plan
- Questions

# What is “Speaks For”?

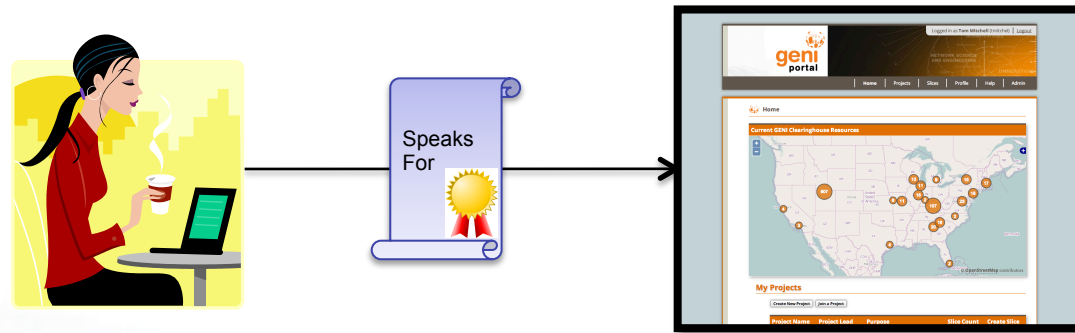
- Like power of attorney
  - An experimenter grants permission to a tool to act on their behalf
  - Can limit by time
- Intended for hosted tools
  - GENI Experimenter Portal
  - GENI Desktop
  - LabWiki
  - *Not* desktop tools like omni and Flack
    - These tools run under the control of the experimenter

# Why does GENI need “Speaks For”?

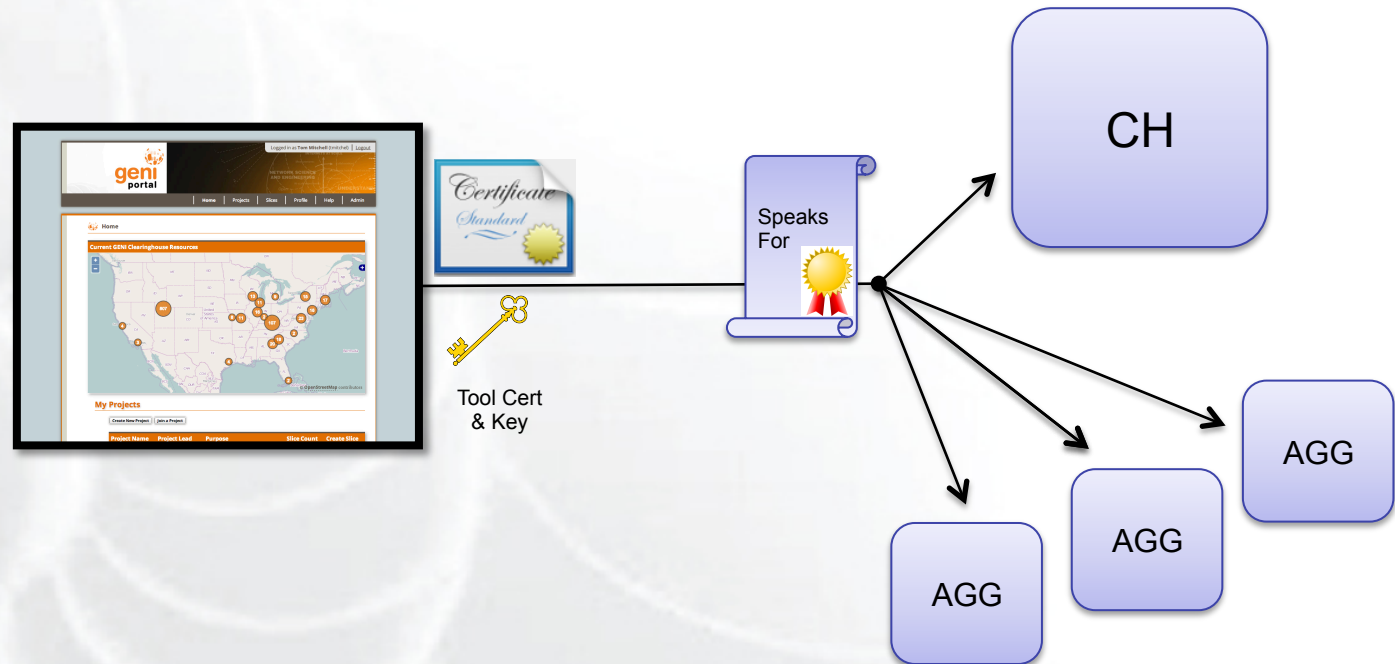
- Keep private keys private
  - Experimenters should not give their private key to hosted tools (running on a remote computer)
- Proper accountability
  - Log which user *and* which tool took action
- Adds a step to authorization:
  - Is the experimenter allowed to do this?
  - Is the tool allowed to act on behalf of the experimenter?

# How are “Speaks For” Credentials Used?

1. Experimenter gives a speaks-for credential to a tool



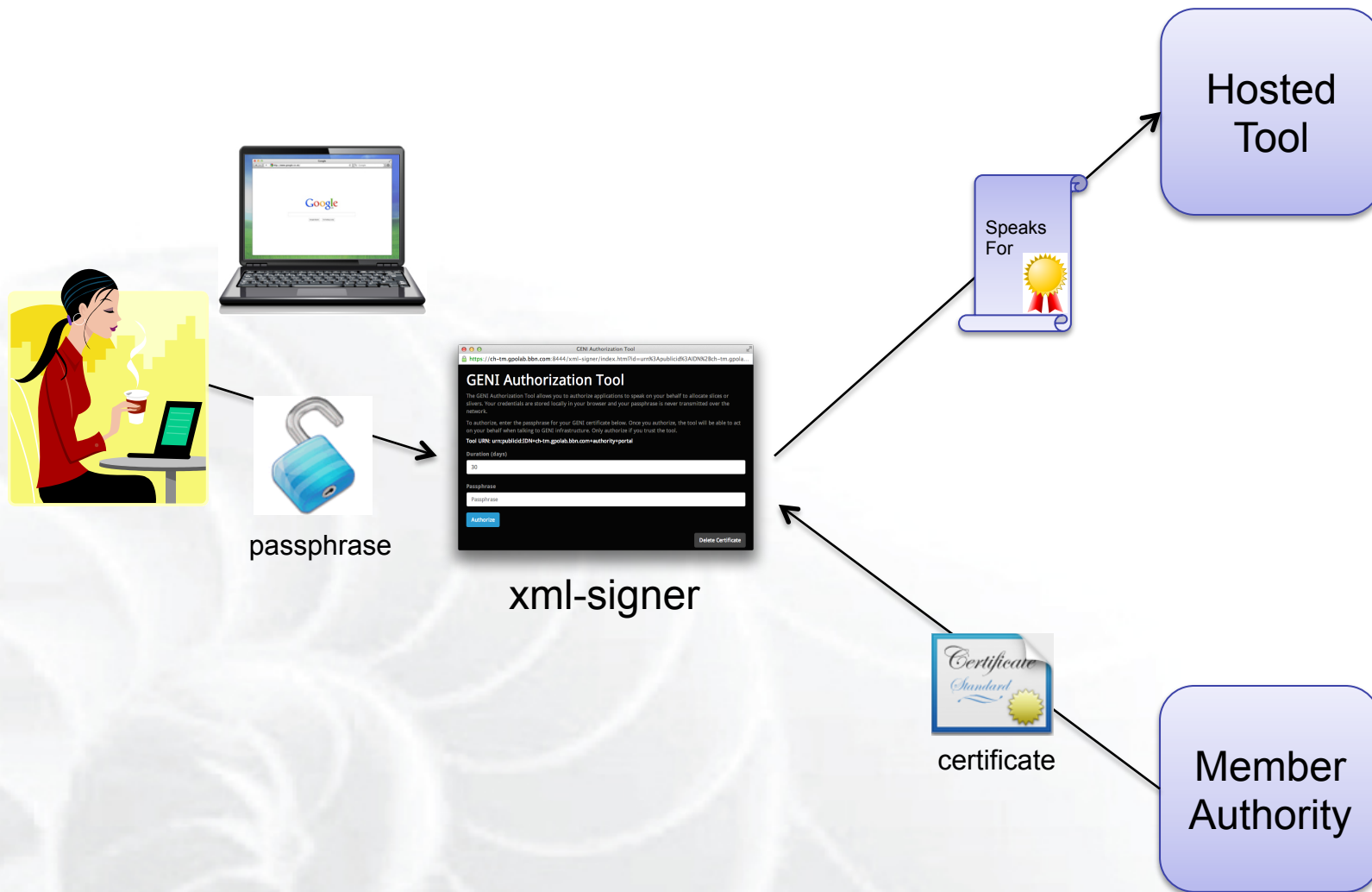
2. Tool uses its own certificate and private key, and passes the speaks-for credential



## xml-signer

- Written by ProtoGENI/InstaGENI team (thanks!)
- Code available at github
- Provides small and simple JavaScript API for Tool and Member Authority
- Runs in experimenter’s web browser
  - private key is local to experimenter and under experimenter’s control
- Private key must be passphrase-protected
  - xml-signer will not sign with unprotected private key

# How are “Speaks For” Credentials Made?



Note: simplified for presentation purposes

- Available as part of Aggregate Manager API
  - Changeset “P”
  - Already in use at some aggregates as an extension
- Core part of Federation API
- Expected to be part of Federation Aggregate API (FAA)



- Federation API
  - ProtoGENI federation services (SA, MA, etc.) (alpha)
  - GPO federation services (SA, MA, etc.)
  - Client support available in omni for testing
  - Client support available in Portal (early adopters only)
- Aggregate Manager API
  - Available at ProtoGENI/InstaGENI aggregates (beta)
  - Available at ExoGENI ExoSM (alpha)
    - Individual ExoGENI racks to follow
  - Client support available in omni for testing

Milestone	Date	Location	Speaks-for Capabilities
GEC 19	March, 2014	Atlanta	<p style="text-align: center;"><u>Infrastructure</u></p> <ul style="list-style-type: none"> <li>GPO Federation Services</li> <li>InstaGENI/ProtoGENI Fed. Svcs. ★</li> <li>Portal (to Federation Services)</li> <li>GCF &amp; SFA code bases</li> </ul>
GEC 20	June, 2014	UC Davis	<p style="text-align: center;"><u>Aggregates</u></p> <ul style="list-style-type: none"> <li>ExoGENI ★</li> <li>FOAM</li> <li>ION</li> <li>InstaGENI/ProtoGENI aggregates ★</li> </ul>
GEC 21	October, 2014	U Indiana	<p style="text-align: center;"><u>Tools</u></p> <ul style="list-style-type: none"> <li>GENI Desktop</li> <li>LabWiki ★</li> <li>Portal ★</li> <li>Additional Solicitation 4 Tools</li> </ul>

★ = In Progress

# Questions?