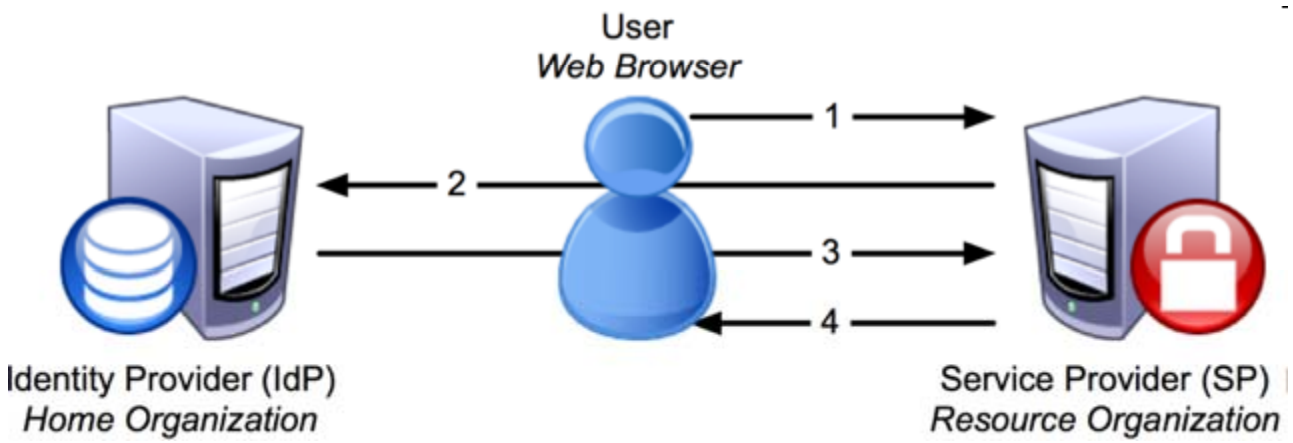
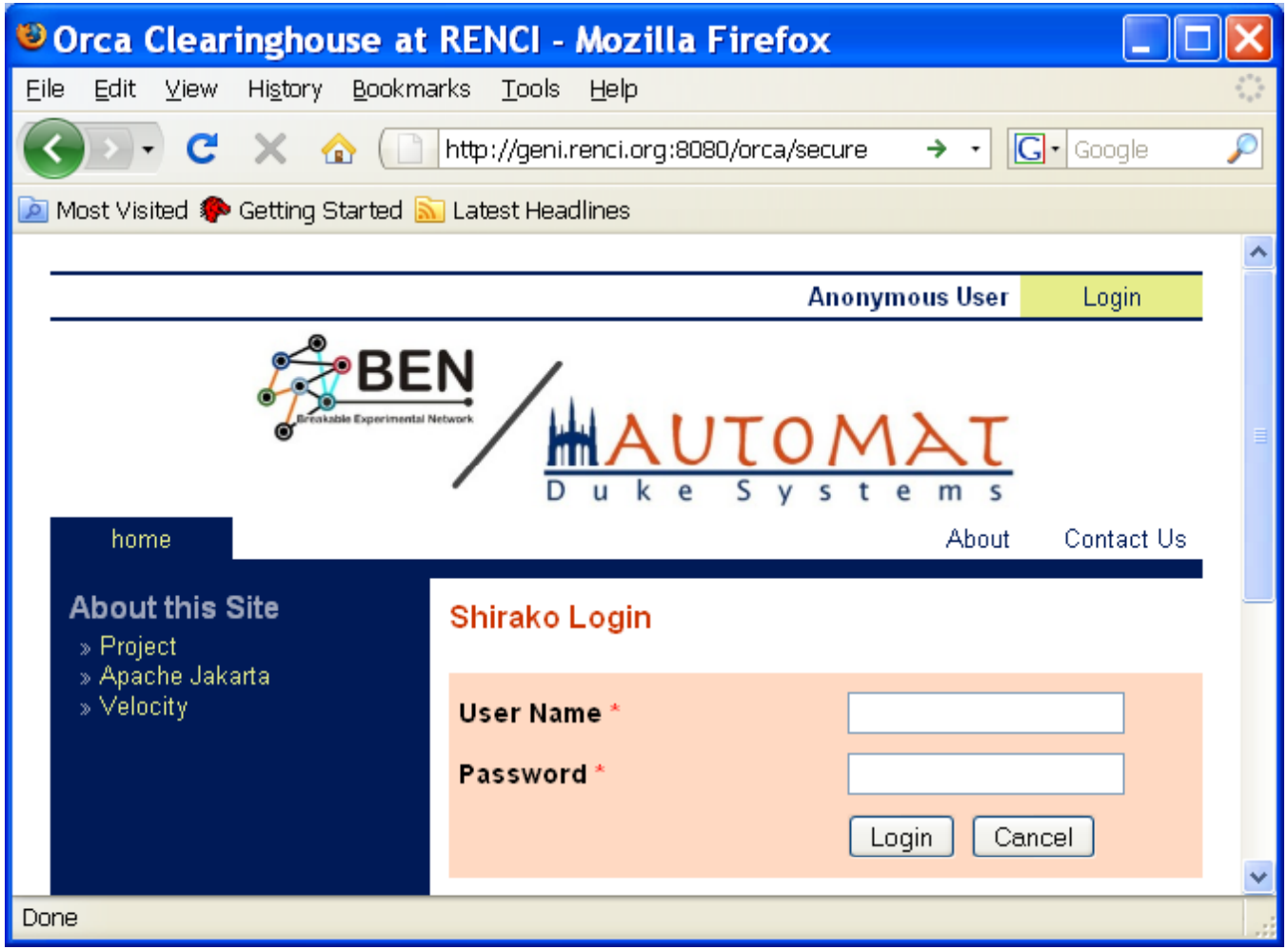
Shibboleth Integration

Shibboleth Basics



- Services need protecting
- Users need authentication
- Identity providers know user information
- Shibboleth glues it all together

Orca today


Orca Clearinghouse at RENCI - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://geni.renci.org:8080/orca/secure
Google
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Anonymous User
Login
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home
About
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About this Site
» Project
» Apache Jakarta
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User Name *
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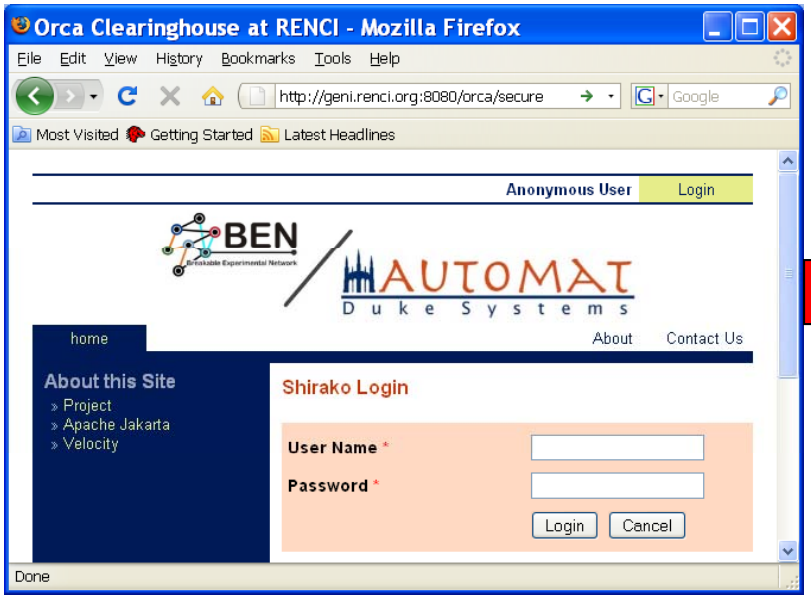
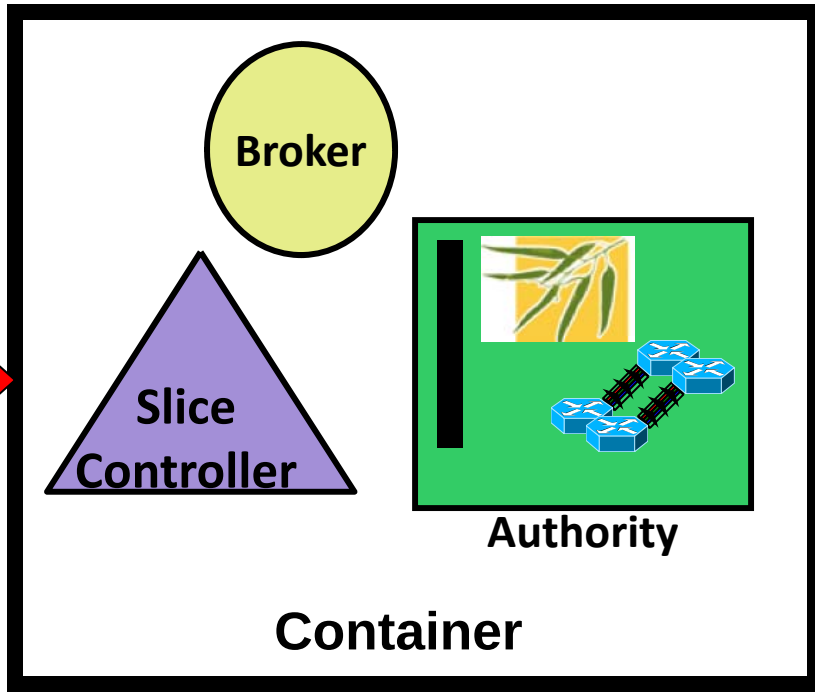
Login
Cancel
Done

Orca today

- User authenticates to portal
- Portal decides user capabilities
  - Role based access control

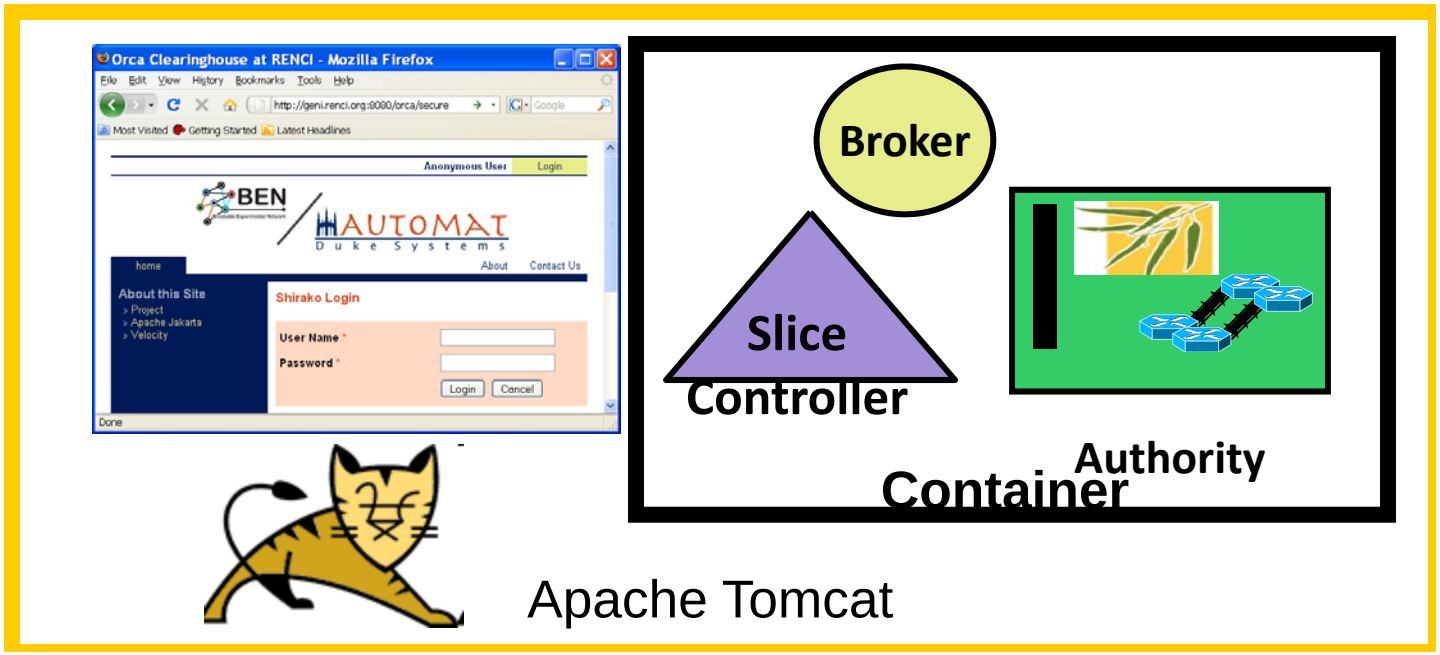




Orca Authentication

- “Container managed security”
  - Tomcat, not ORCA containers
- Tomcat manages access to pages
- Portal manages roles

- “Container”
- “ContainerManager”
- “ContainerSecurity Manager” etc
  - Nothing to do with users



Baby Steps

- Get Tomcat to use shibboleth
  - Instead of database-driven authentication
  - Requires Tomcat to understand shibboleth
- Mostly done already
  - Using OIOSAML from the Danish govt
  - Uses reference shib identity provider
    - Reuses same RBAC the portal already knows
- Investigate using the “real thing”
  - Several new non-standard capabilities
  - Significantly more setup, not quite saml2.0 compliant

Flying Cars and Jetpacks

- Present user credentials to actors
  - Finer-grain access control
  - Policy decisions based on attributes
- Use shibboleth to distribute public keys
  - Let someone else solve PKI!
- Replace ORCAs ad-hoc trust brokering with formal SAML assertions?

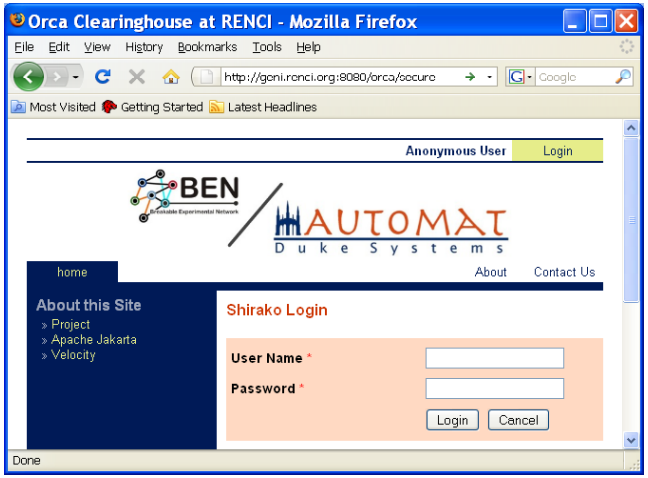
- What else?

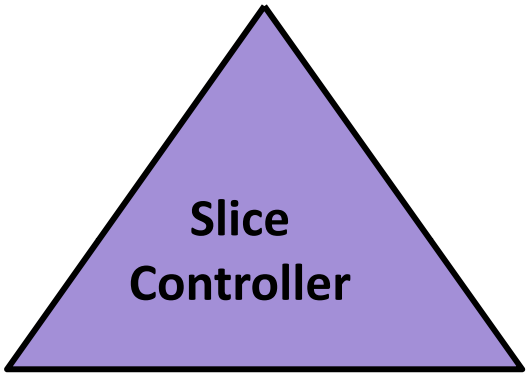
Implementation Details

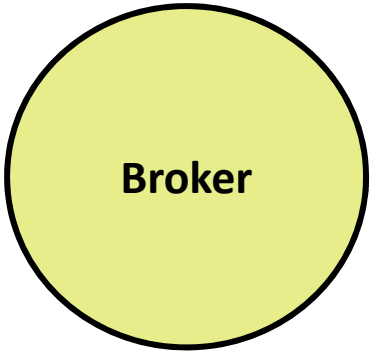
- Option 1: Leverage existing trust relations
- Minimal changes, quick-and-easy
- User authenticates to portal
- Portal sends identity/attributes to SC
- SC adds attributes to request properties
- Broker and/or AM looks at properties
- Basically, attributes instead of roles

Implementation Details – II

- Option 2: Get shibboleth to mediate trust between actors
- Actors policies based user identity, in addition to peer identity.
- Shibboleth to mediate trust between actors
- “Delegated identities”
  - Only SC has to know the identity provider
  - Actors don’t have to do their own signing







Identity Provider (IdP)
Home Organization