



ProtoGENI from Outside

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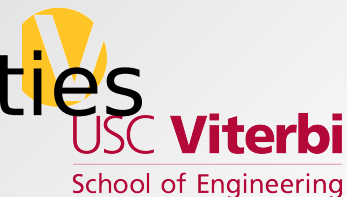
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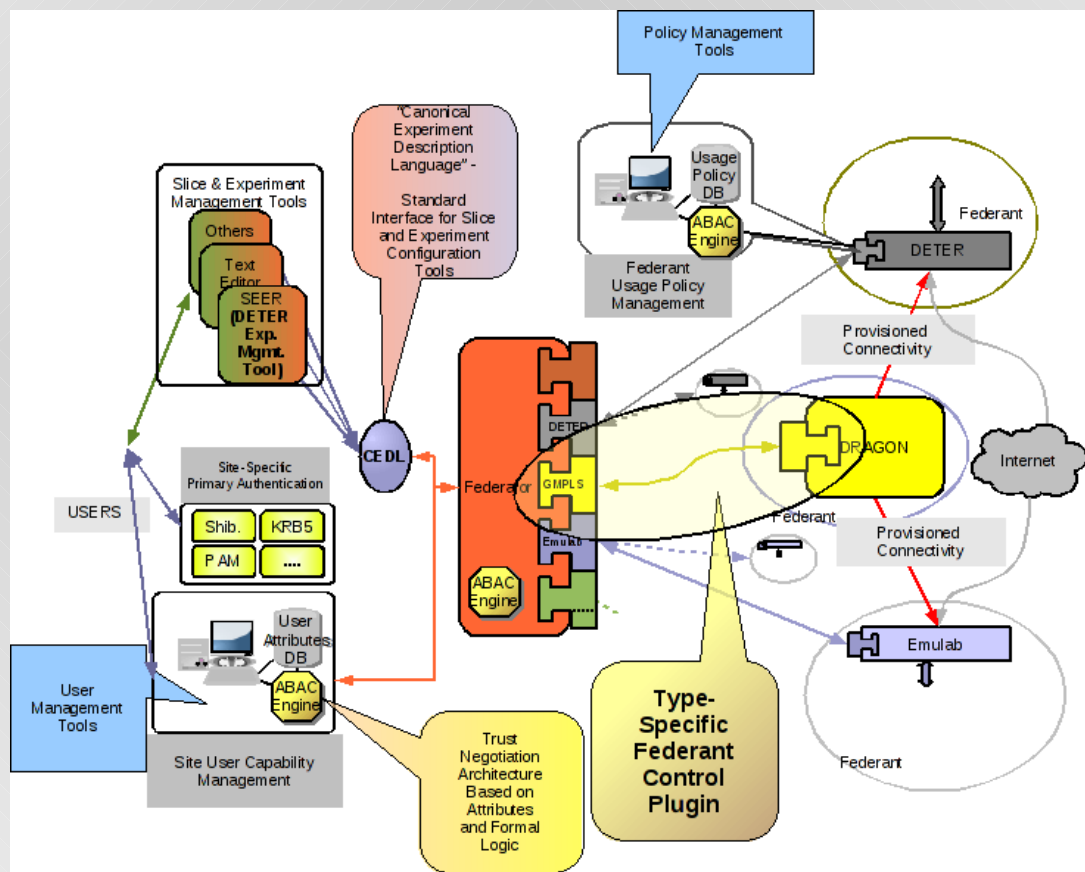
TIED and ProtoGENI

- TIED: DETER Federation system
 - Forms experiments from many testbeds
 - Shared services
 - File systems (SMB), User accounts, SEER experiment control
- New for GEC7: **ProtoGENI support**
 - V1 API
- We sit between users and facilities





Architecture





Topics

- Elephant: Image
- User Credentials
- Slice Credentials
- Soft State
- Renewals
- Nits





The Elephant in the Room

- Red Hat 9 is really old
- Significant time/development in updating
 - `yum.conf` points to dead repository
 - <http://fedoralegacy.lsu.edu>
- Real usability issue for experimenters





User Credentials

- Seem redundant with the X.509 ID
 - Can one delegate a Principal credential?
- Need the X.509 client certificate to make calls, so the role of this certificate is unclear
- Why does a user need this?



Slice Credentials

- Used more like capabilities/file handles
 - Both identify and grant permissions
 - Not a bad thing
 - Can I get one with a nonce HRN?
- Separate the delegation out
 - Bias Alert: Schwab & Co.'s ABAC
- Never used a sliver credential...





Soft State

- Soft State Slices and Slivers: big win
 - Greatly simplifies something like TIED
 - Essentially garbage collects resources
- Registry does not seem to time out
 - Slice names
 - Unnecessary “timed out but here” state



Renewal Interface

- Renew call should return new slice credential
 - Current interface requires a lookup and retrieval after success
- If you want a sliver credential, another lookup...
 - I never used one, so ...



Nits

- Some unexpected errors:
 - Real valued bandwidth in request
 - Error code 2 with no text
 - Bandwidth w/o latency in request/ticket
 - Redeem always fails. Error is vague.
- Error codes – good design
 - Could use a list
 - Had to discover 14 (EAGAIN)

