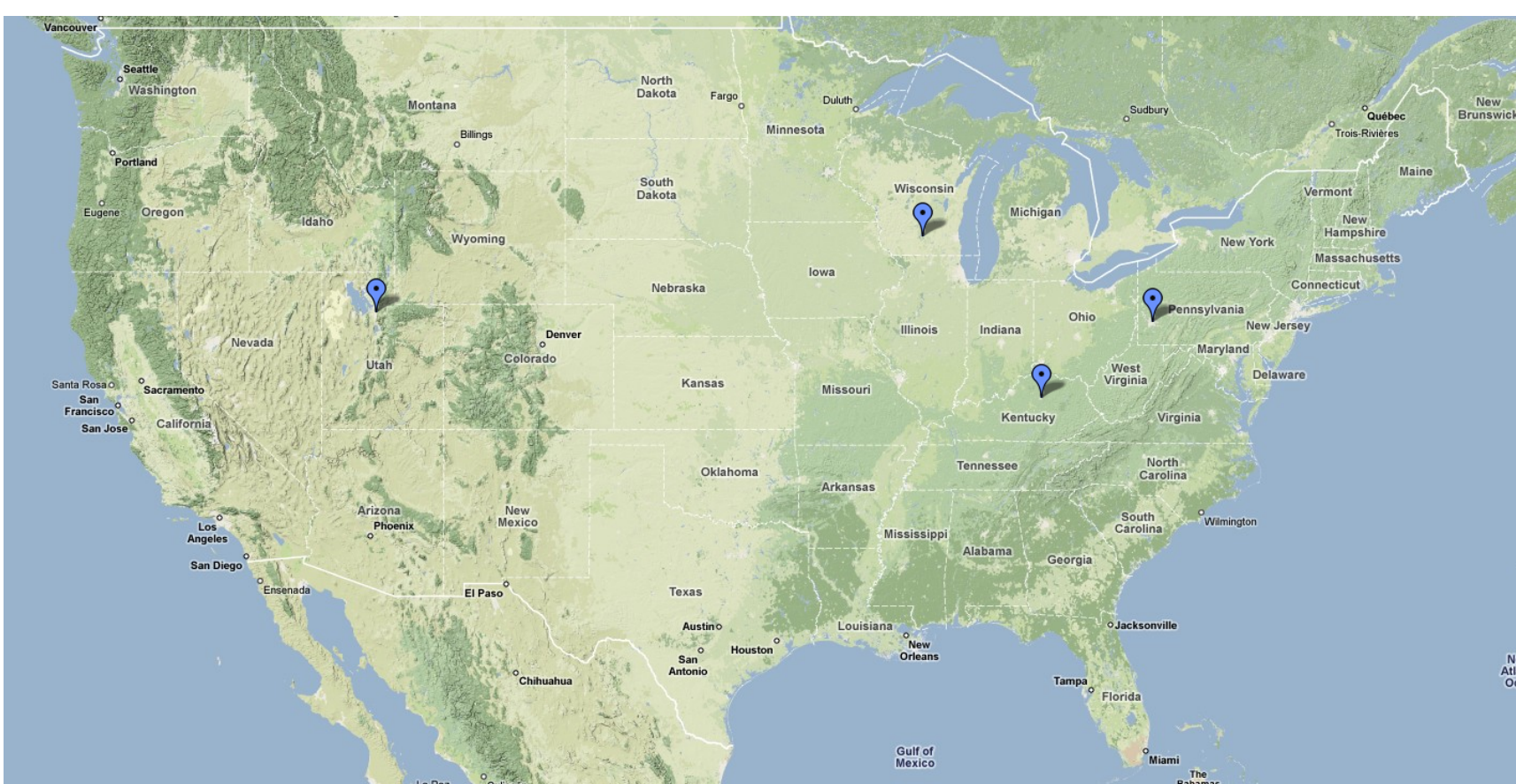


Federates

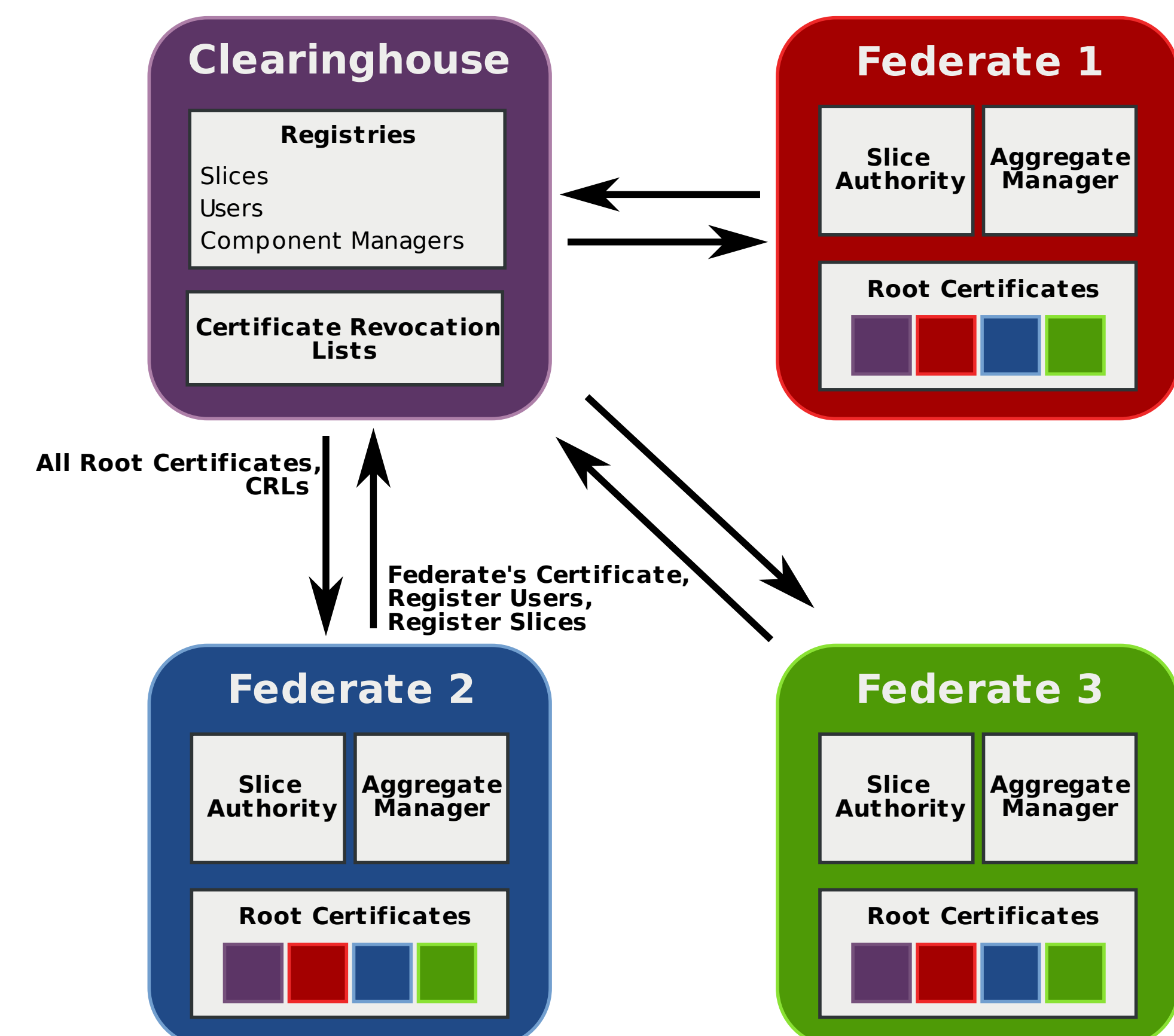
Six federates online

- 3 at University of Utah
- Schooner, part of WAIL at the University of Wisconsin
- Netlab at University of Kentucky
- CMULab

Trust established by exchange of certificates



Federation Design

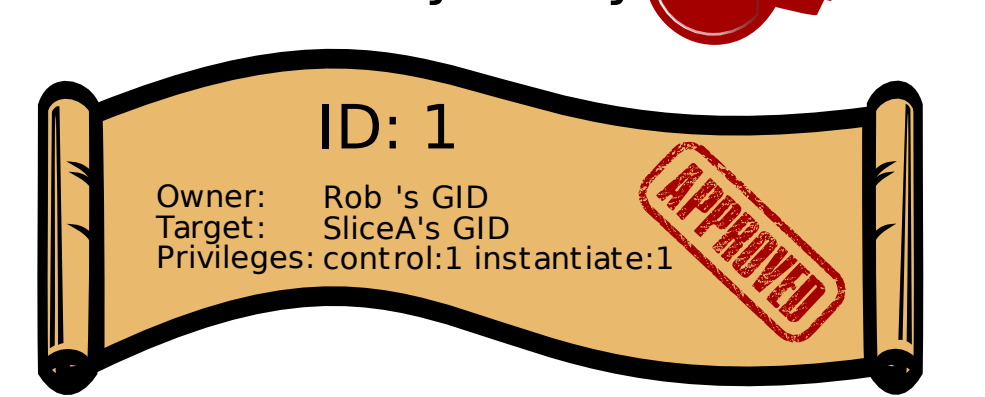


Credentials

Contain:

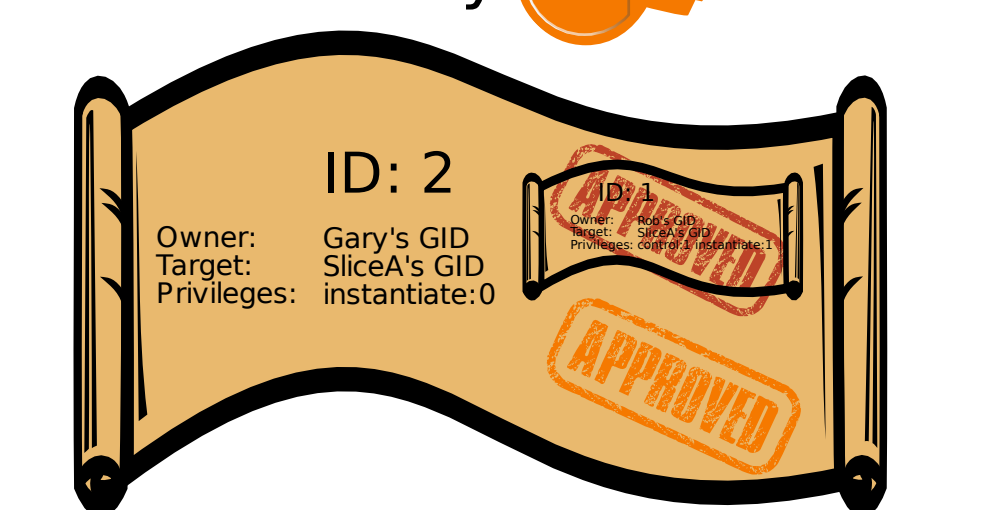
- Unique ID
- Owner GID
- Target GID
- Set of privileges
- Delegate bit

Slice Authority's Key



Signed by target's authority

Rob's key

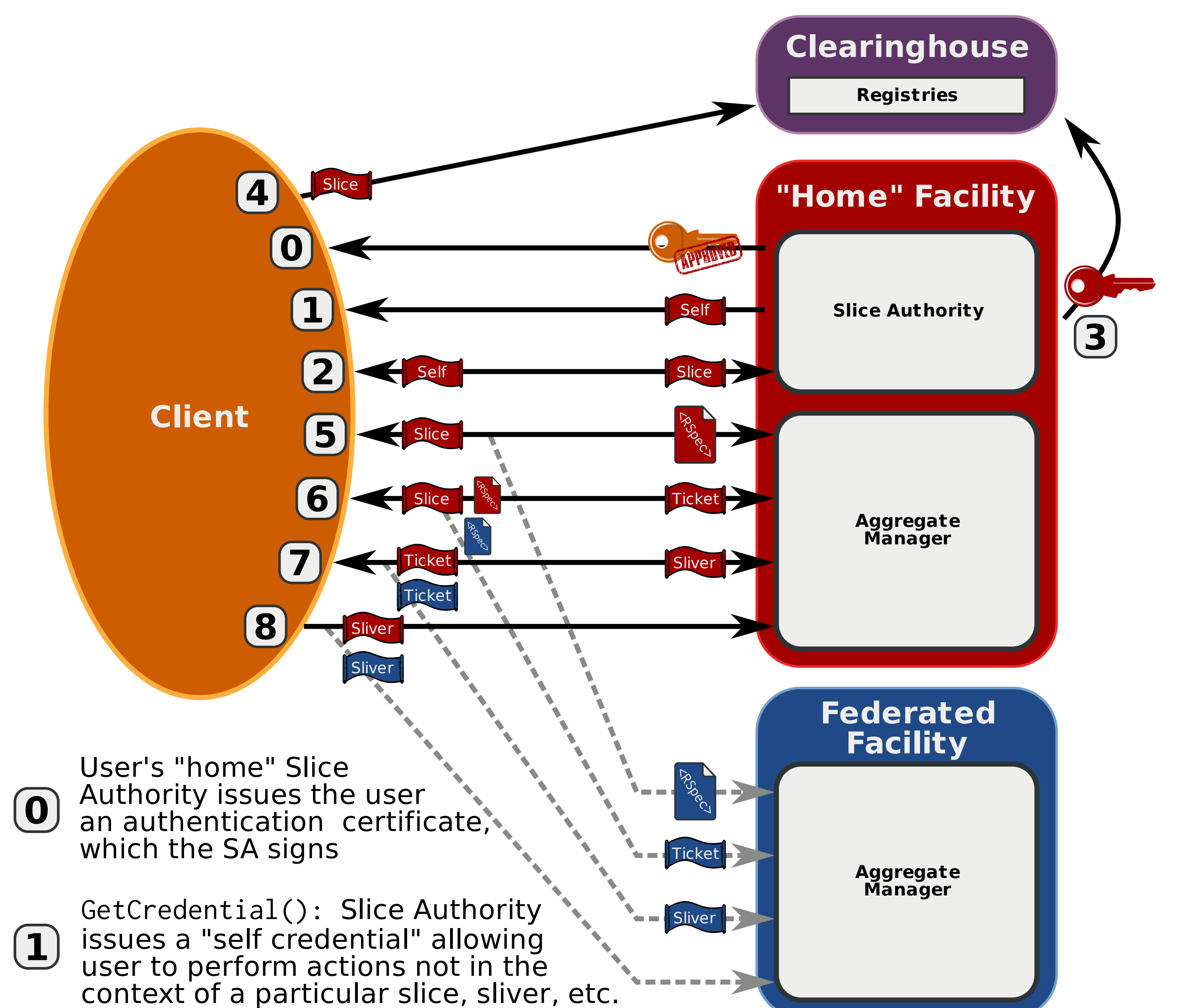


Delegation:

- Include original credential
- Possibly subset of privileges
- Signed by owner's key

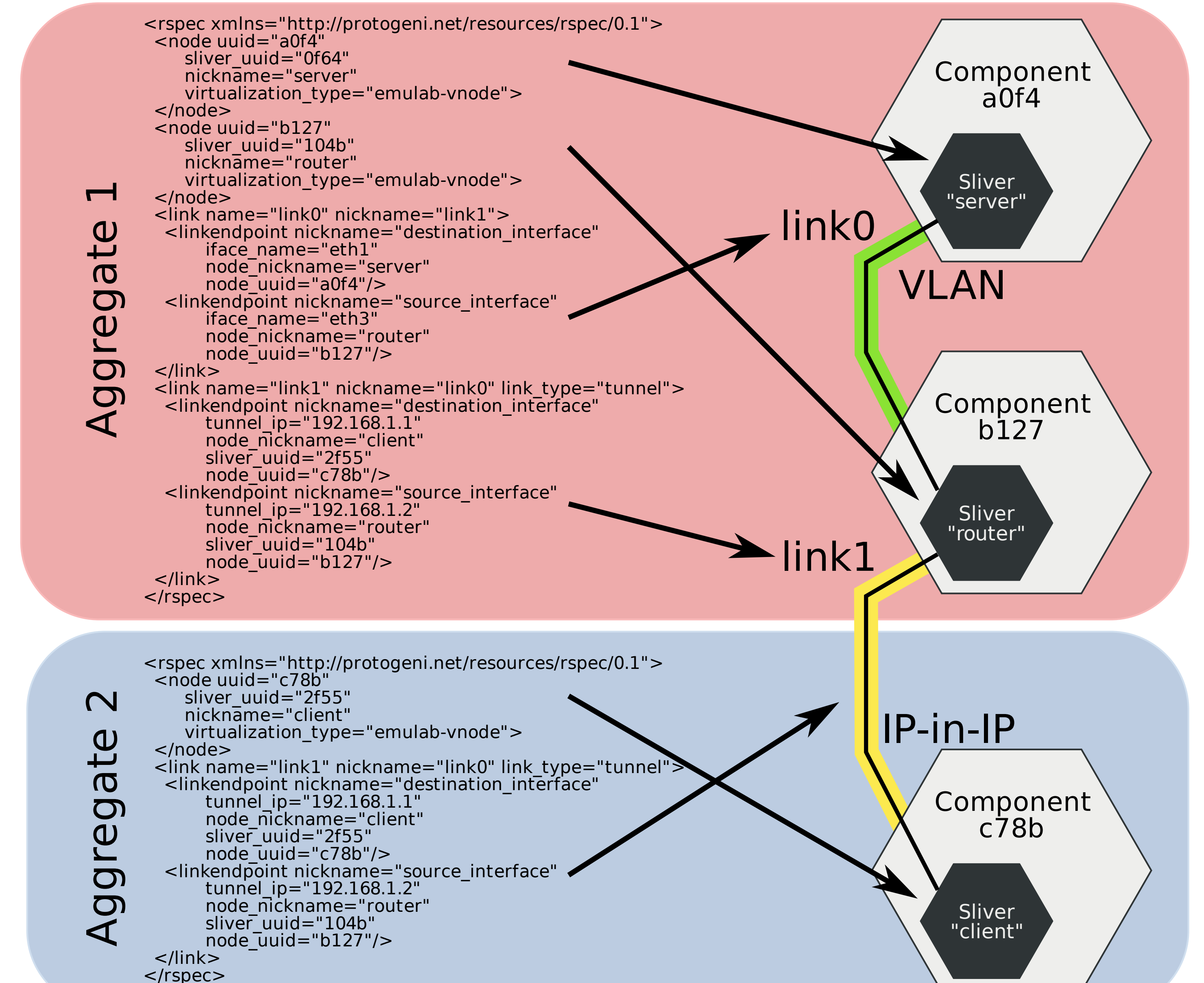
GID:
<UUID,
HRN,
Certificate>

Creating a Slice



- 0 User's "home" Slice Authority issues the user an authentication certificate, which the SA signs
- 1 GetCredential(): Slice Authority issues a "self credential" allowing user to perform actions not in the context of a particular slice, sliver, etc.
- 2 CreateSlice(): User creates a new slice, and receives a credential granting the privilege to control the slice
- 3 Register(): Slice Authority registers the user (if not already registered) and new slice with Clearinghouse
- 4 ListComponents(): Client requests a list of all Aggregate Managers and Component Managers registered with the Clearinghouse
- 5 DiscoverResources(): Client requests an RSpec from each Aggregate Manager of interest, which describes the aggregate's resources
- 6 RequestTicket(): Client selects a set of components, and creates an RSpec for each aggregate describing the components selected and the topology connecting them. If the request is granted, each Aggregate Manager signs the request and returns it as a ticket
- 7 RedeemTicket(): Client redeems tickets with the Aggregate Managers, causing slivers to be created. Aggregate Managers return credentials granting the privilege to control the created slivers
- 8 StartSliver(): Client requests that the slivers be brought to a "running" state

Request RSpec



Emergency Shutdown

