Command Line Slice Creation

Gary Wong
University of Utah

20th July, 2010

Introduction

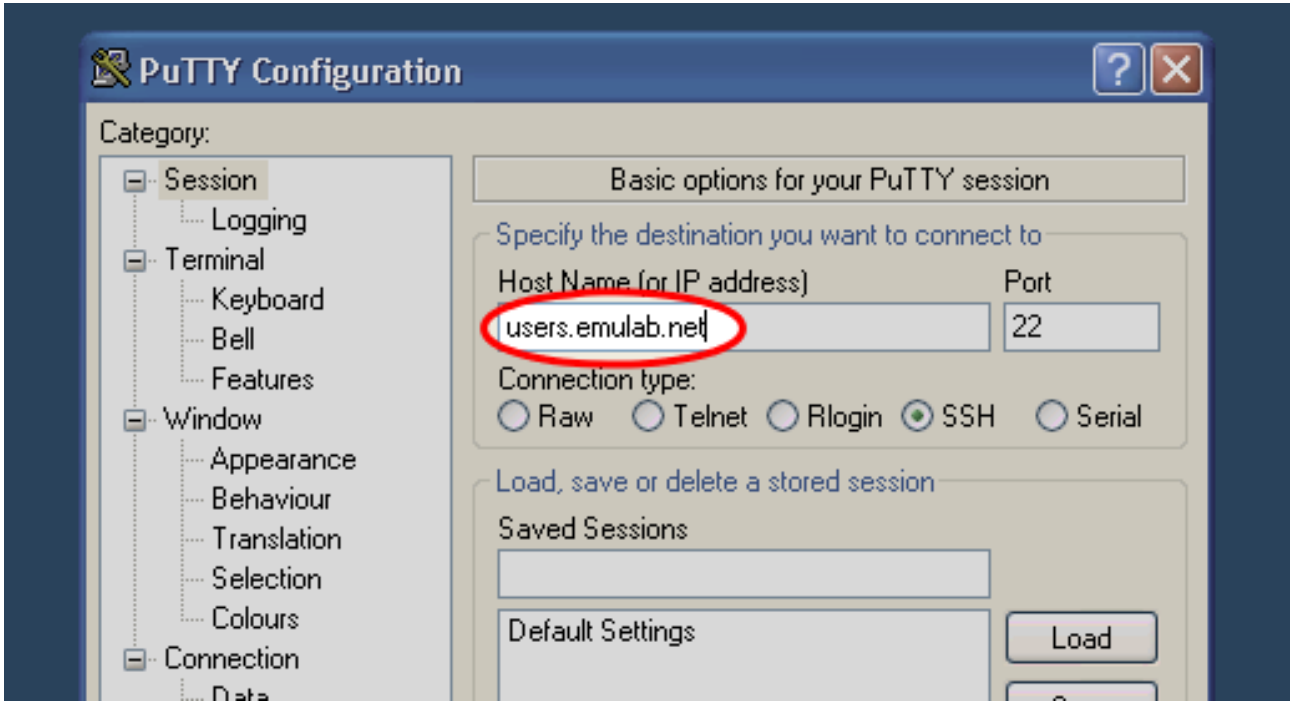
- The client machine
- Your certificate passphrase
- Checking your account
- Slice registration
- Sliver creation
- Using your components
- Cleaning up

1. The client machine

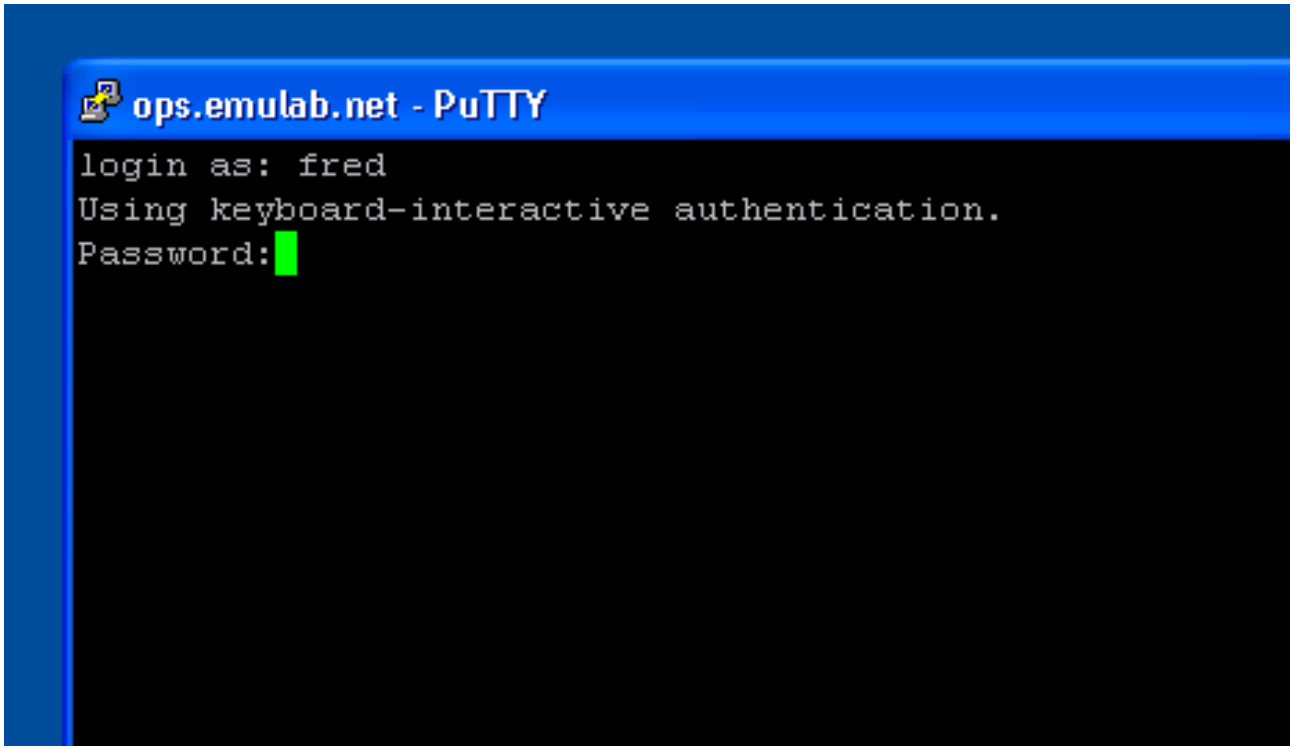
- The one you use!
- It accesses GENI services via the Internet, and GENI resources via the control network.
- In principle, just about any networked machine that can issue XMLRPC requests over HTTPS will do.
- For today:

`users.emulab.net`

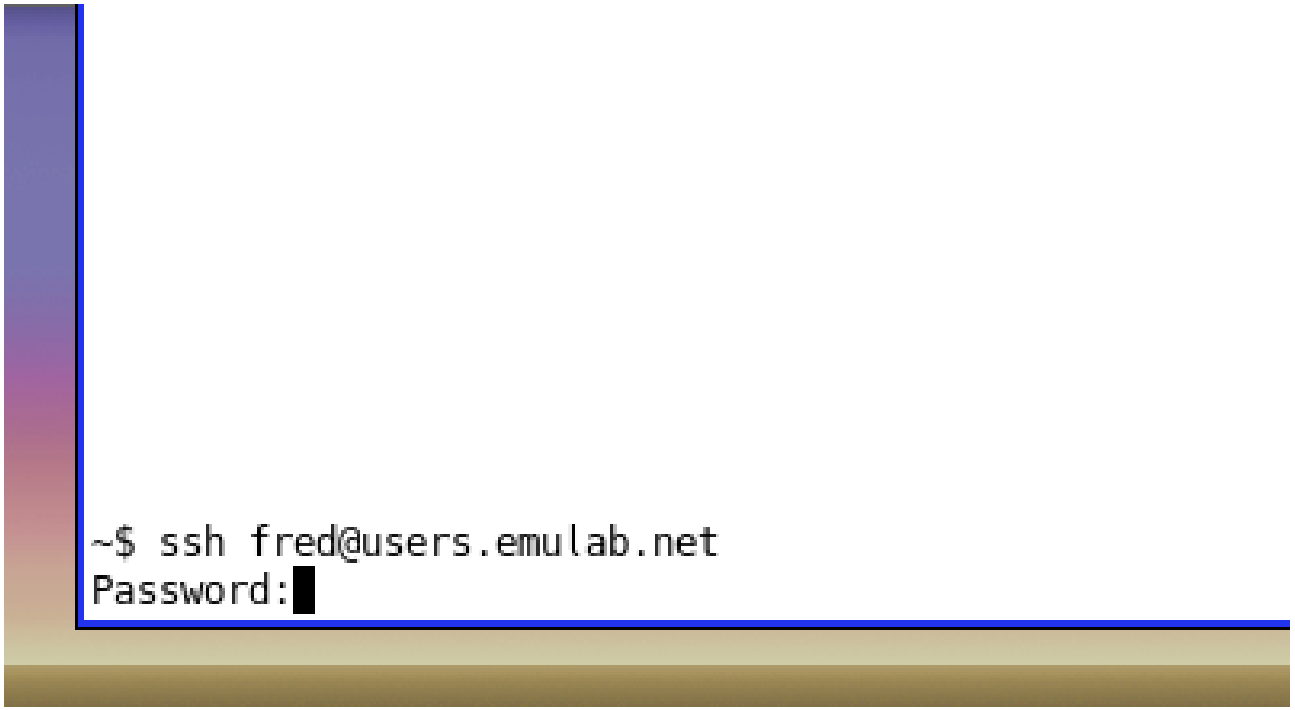
Logging in with PuTTY



Logging in with PuTTY



Logging in with OpenSSH



Getting to the scripts

- On `users.emulab.net`:

```
cd /proj/gec8tutorial/scripts
```

2. Store your passphrase

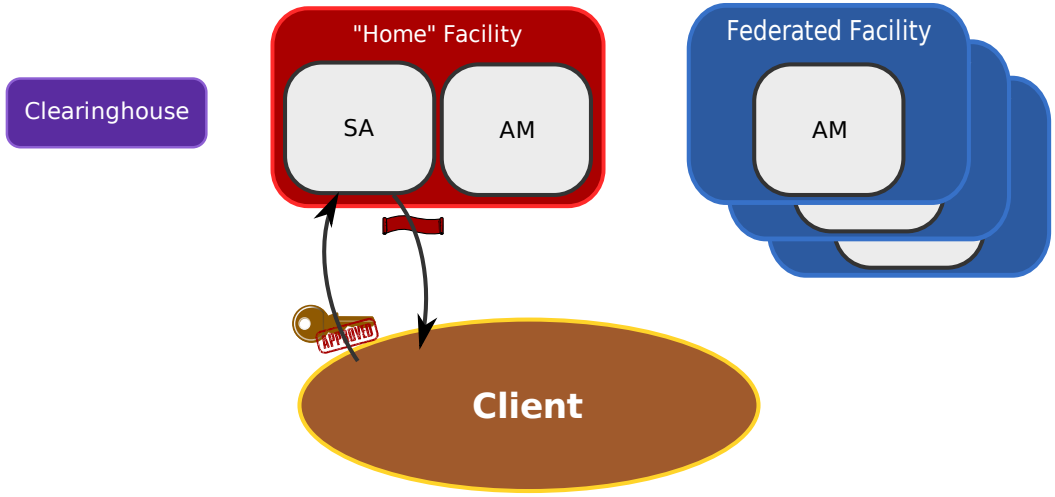
- Your private key (matching your user certificate) is already on the client machine.

- But it's passphrase protected...

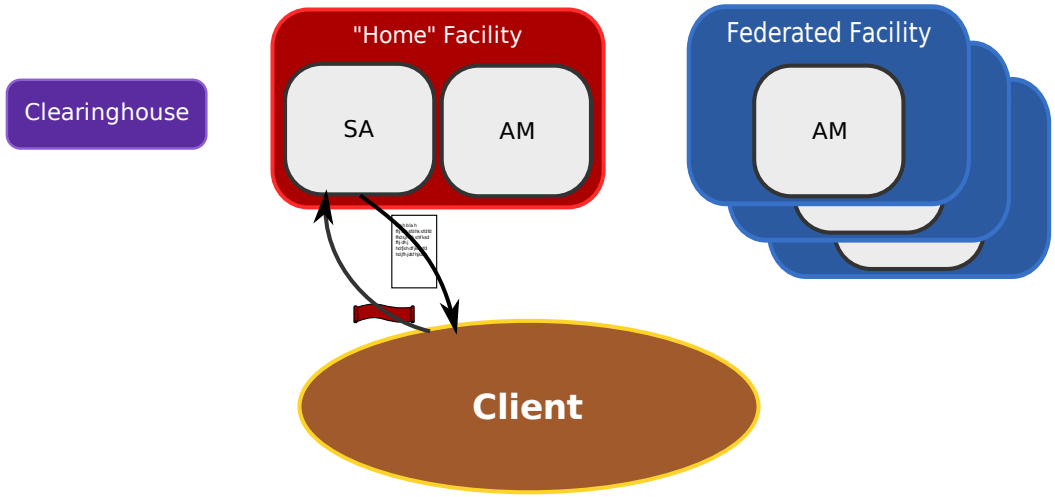
- You can either:
  - supply your passphrase for every script accessing the key
  - or keep your passphrase in a plaintext file during a session (more convenient, but less secure).

`./rememberpassphrase.py`

3. Inspect your account

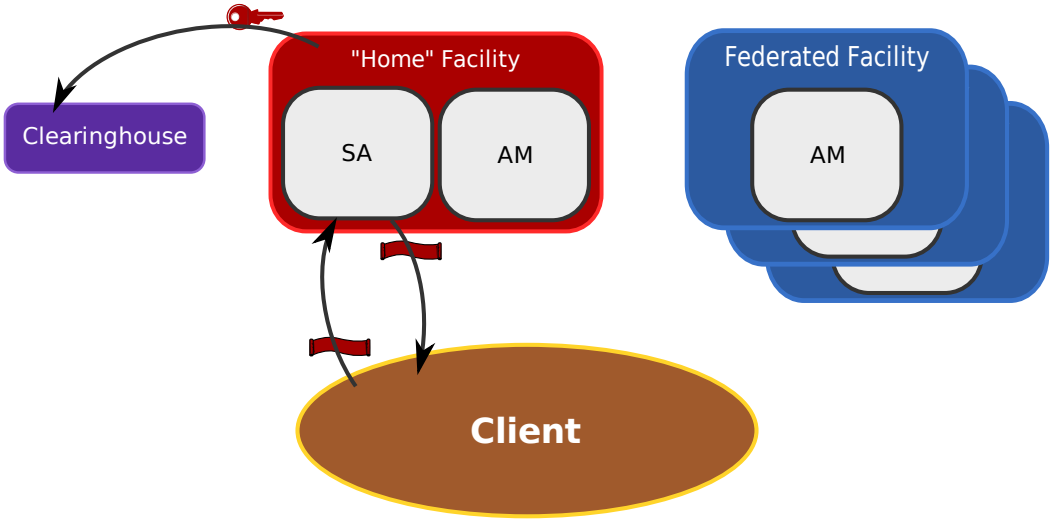


Inspect your account



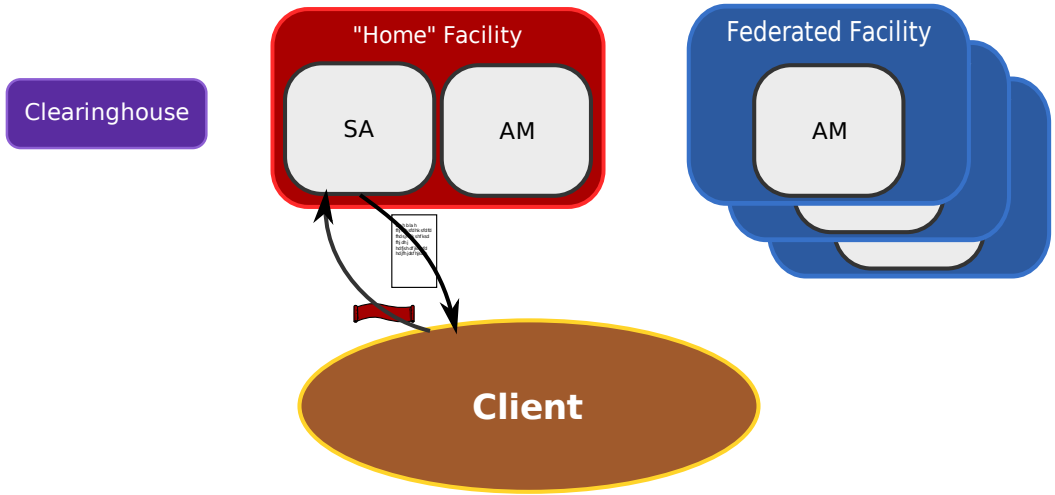
`./showuser.py` *username*

4. Register a slice



`./registerslice.py -n` *username*`slice`

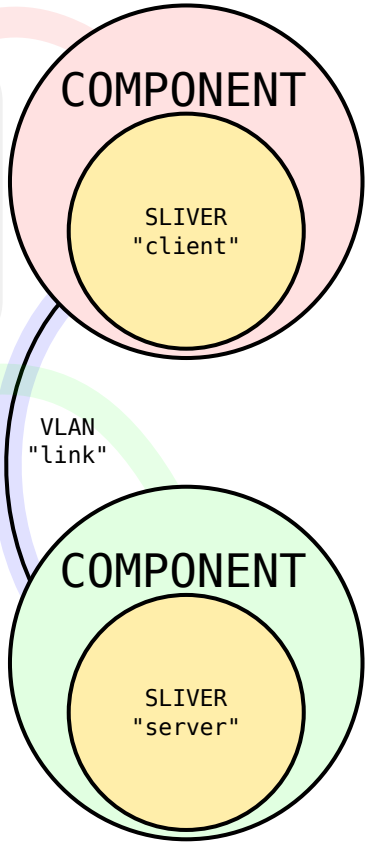
5. Inspect your account (again)



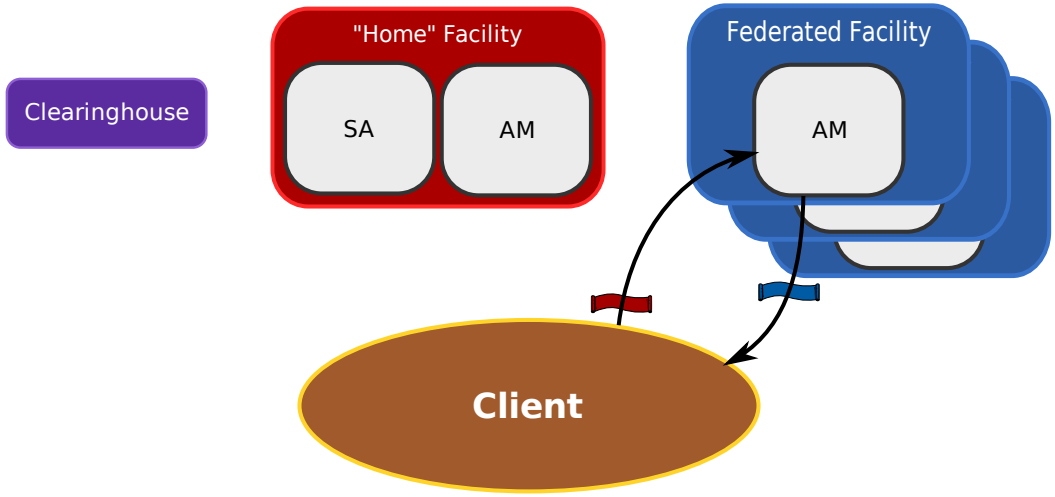
`./showuser.py` *username*

6. Create a sliver

```
<rspec xmlns="..." type="request">
 <node virtual_id="client"
       component_manager_uuid="..."
       ...>
  <interface virtual_id="int1" />
  <interface virtual_id="control" />
 </node>
 <node virtual_id="server"...>
  ...
 </node>
 <link virtual_id="link">
  <interface_ref virtual_id="client"
      virtual_interface_id="int1" />
  ...
 </link>
</rspec>
```



Create a sliver



`./allocatenodes.py -n` *username*`slice gec.rspec`

7. Log in to the components

- From **`users.emulab.net`**, you can run **`ssh`** to access the nodes you allocated in the previous step.

- The hostnames were shown by the **`allocatenodes`** script.

- The script has already distributed a public key from **`users.emulab.net`** to the nodes, so the authentication is automatic.

- For an example, log in to the **`client`** machine, and run:

```
ping server
```

8. Clean up the slice

- Once you're finished with the resources, you can and should deallocate them.
- In general, you should do this at every CM you used.
- Cleaning up does NOT unregister the slice name at the SA. (That will expire by itself.)

`./deleteslice.py -n` *username*`slice`

9. Remove your passphrase

- If you had stored your passphrase on the client machine earlier:

```
./forgetpassphrase.py
```

Optional extras

- Inspect (and modify a copy of) `gec.rspec`
- Look at more advanced `rspec` examples:

  `http://www.protogeni.net/trac/protogeni/wiki/RSpecExamples`

- Try some other commands:
  - `./listcomponents.py`
  - `./discover.py`