

IETF Hackathon

MUD Table

IETF 106
Nov. 16-17, 2019
Singapore



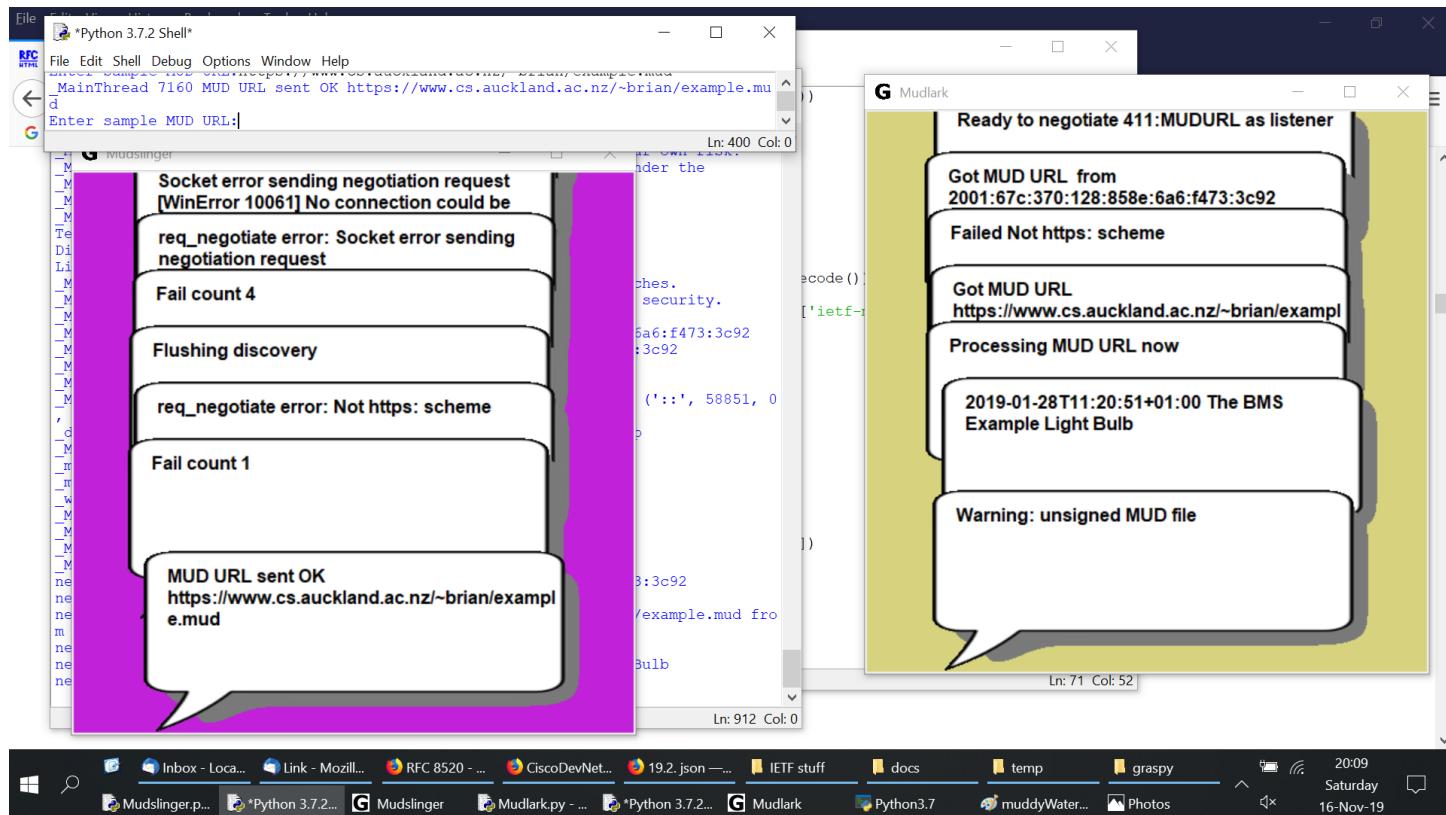
Hackathon Plan

- Improving MUD visualizer
- Visualizing SECOM Recorder
- Implement MUD in GRASP
- Test Proprietary MUD Manager against various devices and configurations
 - Develop model for using MUD for delegating Dynamic DNS updates

What got done

- Brian implemented MUD URL in his GRASP implementation in about 30 minutes
 - Passes to a configured MUD manager
- Sávyo built out the visualizer and mostly added URL input capability
- Eliot was debugging a new code base.
- We tested another SECOM MUD device and reviewed an onboarding approach
- Did some modifications to Cisco's MUD Manager for parsing MUD File Extension.

Grasp.py



IETF Hackathon - MUD

MUD Approval flows...

The image displays two screenshots of the Cisco MUD (Management, Utilization, and Discovery) interface.

Left Screenshot: Device Management

- Header:** CISCO MUD
- Left Sidebar:** Dashboard, Devices (selected), Group Based Policy Matrix, ACL, Network Elements.
- Section:** Device Management
- Table:**| Sr No. | MAC Address | Endpoint Profile | IP Address | MUD URL |
| --- | --- | --- | --- | --- |
| 1 | aabb.cccc.eeff | - | | http://10.64.69.209:8080/blindv1.json |
| 2 | aabb.cccc.eeff | - | | |
| 3 | aabb.cccc.eeff | - | | http://10.64.69.209:8080/blindv1.json |

Right Screenshot: Policies Associated With http://10.64.69.209:8080/blindv1.json

- Header:** CISCO MUD
- Left Sidebar:** Dashboard, Devices (selected), Group Based Policy Matrix, ACL, Network Elements.
- Section:** Policies Associated With http://10.64.69.209:8080/blindv1.json
- Buttons:** < Back, Approve (green), Not Approve (red).

Sr No.	Pretty Printed Policies	Deployment Policies
1	permit https://www.example.com/blind-controllers ip	Group Based Policy SGT Click to Add SGT [Device], [Device] Click to Add SGT with ip
2	permit https://www.example.com/light-controllers ip	Group Based Policy SGT [Device], [Device] Click to Add SGT with ip ACL Policy permit ip any Click to Add IP 0.0.0.0

What we learned

- Autonomic Computing needs to think about ad hoc authorization models
- We reinforced that MUD is not meant for:
 - Device configuration
 - Individualized device identification or policy
- Open Source version management is a pain (versions can disappear from web sites). Github hashes are better
- Some Python APIs need help re CMS

Wrap Up

Team members:

- Brian Carpenter
- Michael Richardson
- Eliot Lear
- Tadahiko Ito
- Yuichi Takita
- Yohei Kaieda

First timers @ IETF/Hackathon:

- Sávvo Morais

Links:

- <https://github.com/tadahik/MUD-HttpsLocal>
- <https://github.com/CiscoDevNet/MUD-Manager>
- <https://www.mudmaker.org>
- <https://github.com/becarpenter/graspy>

