

Inventory

# Current state of play

- Live server running (bandama)
  - Receiving
    - Client reports
    - Supplier reports
    - Conduits (space, person) from Theon
    - Sync of hostname,allocate,location,manager from existing inventory (currently manual)
  - Can query with 'ii' tool
    - CSOs have played with and provided feedback

# Client report

```
{"os": {"arch": "x86_64", "kernel": "3.10.0-514.10.2.el7.x86_64", "errors": 0, "upsince": "2017-03-27 14:37:52", "_version": 1, "lastupdate": "2017-04-03 05:48:10", "lcfg_os_id": "sl7", "os_release": "Scientific Linux release 7.2 (Nitrogen)", "currenttime": "2017-04-03 11:48:02", "lcfg_release": "develop/unmanaged", "lcfg_os_id_full": "sl72"},
```

```
"dmi": {"cpu": {"model": "Intel(R) Core(TM) i5-3470 CPU @ 3.20GHz", "ncore": 4, "nthread": 4, "nphysical": 1}, "bios": {"bios-version": "K01 v02.05", "bios-release-date": "05/07/2012", "bios-bios-revision": "2.5"}, "memory": {"memslots": 4, "memtotal": 8192, "usedslots": 2}, "probed": 1, "system": {"system-manufacturer": "Hewlett-Packard", "system-product-name": "HP Compaq Elite 8300 CMT", "system-serial-number": "CZC2457YM0"}, "_errors": 0, "_version": 1},
```

```
"dns": {"_errors": 0, "cmdline": "/usr/sbin/named -u named", "_version": 1, "pid-exists": 1, "pidfile-exists": 1},
```

```
"network": {"nics": [{"name": "em1", "driver": "e1000e", "macaddr": "b4:b5:2f:c2:08:52", "firmware_version": "0.13-4\nbus-info"}], "_errors": 0, "_version": 1},
```

```
"journald": {"_errors": 0, "_version": 1, "journaldir-exists": 1},
```

```
"monitors": {"ports": [{"year": "2009", "model": "DELL 2009W", "serial": "G449H98TAD0L", "diagonal": "20 inches", "portname": "card0-DVI-I-1", "bandwidth": "160 MHz"}, {"year": "2015", "model": "HP E241i", "serial": "CN45120YZY", "diagonal": "24 inches", "portname": "card0-DVI-I-2", "bandwidth": "170 MHz"}], "_errors": 0, "_version": 1}}
```

# Sample queries

- How many DICE machines in Forrest Hill only have 4GB ?

```
WITH foo AS (SELECT hostname, CAST(data->'dmi'->'memory'->>'memslots' as INTEGER) - CAST(data->'dmi'->'memory'->>'usedslots' as INTEGER) AS freeslots FROM client_report)
```

```
SELECT i.hostname,model,freeslots,space FROM item i JOIN foo ON (foo.hostname=i.hostname) WHERE i.space LIKE 'FH-%' AND freeslots > 0;
```

# API

- Current inventory
  - ‘invedit’ and ‘invquery’ make SQL calls directly
    - leads to inconsistency
  - No test suite
- New inventory
  - “REST” API
    - read only -> open
    - write -> GSSAPI auth
  - Substantive test suite
    - includes testing transitions
  - ‘ii’ tool tested by CSOs

# Still to do

- Location discovery
  - Existing Inventory and prototype used existing MAC reports
    - TCL format
  - Recent meeting with George agreed cleaner data feed
- Web access for queries
- Documentation
- Make sync with old system live
- Make system live