Server-Side Tools

Mike Fitzpatrick
NOAO

VO-CLI Overview

- Hide details of VO protocols from applications
- Provides:
  - Hi-level, *easy-to-use* interface,using common Unix interface
  - Easy to call from any number of scripting environments
  - Can be used to create web-apps on the server that hides VO-CLI complexity
- Task form of underlying VOClient multi-language interface

VO-CLI Applications

VOSESAME

Name resolver using Sesame service (Simbad/NED)

Configurable output, multiple inputs

VOREGISTRY

VO Registry search and resource resolution

VODATA

Uses capabilities of both of the above

VO catalog and image access (SSA/VOSpace/Tap etc planned)

VOSesame: Name Resolution

```
Usage:
    vosesame [<flags>]  [<objfile> | [<target> ...] ]

    -a    print all information about the object
    -d    print position in decimal degrees (default)
    -e    print position errors
    -h    print help summary
    -n    print object name
    -t    print object type
    -s    print position as sexagesimal coordinates
    -v    print verbose warning output
    -i    invert search to print unresolved objects
    -f    force Sesame svc invocation and ignore cached values
    -o    specify output file (default: stdout)
    -A    output an ASCII table of results (default)
    -C    output a CSV table of results
    -T    output a TSV table of results
    -H    output a table heading
```

VORegistry: Examples

1) Find all services with radio data of Abell clusters.

% **voregistry -b radio abell**

2) Find all resources that mention Keck, how many are image services?

% **voregistry -count keck**

% **voregistry -t image -count keck**

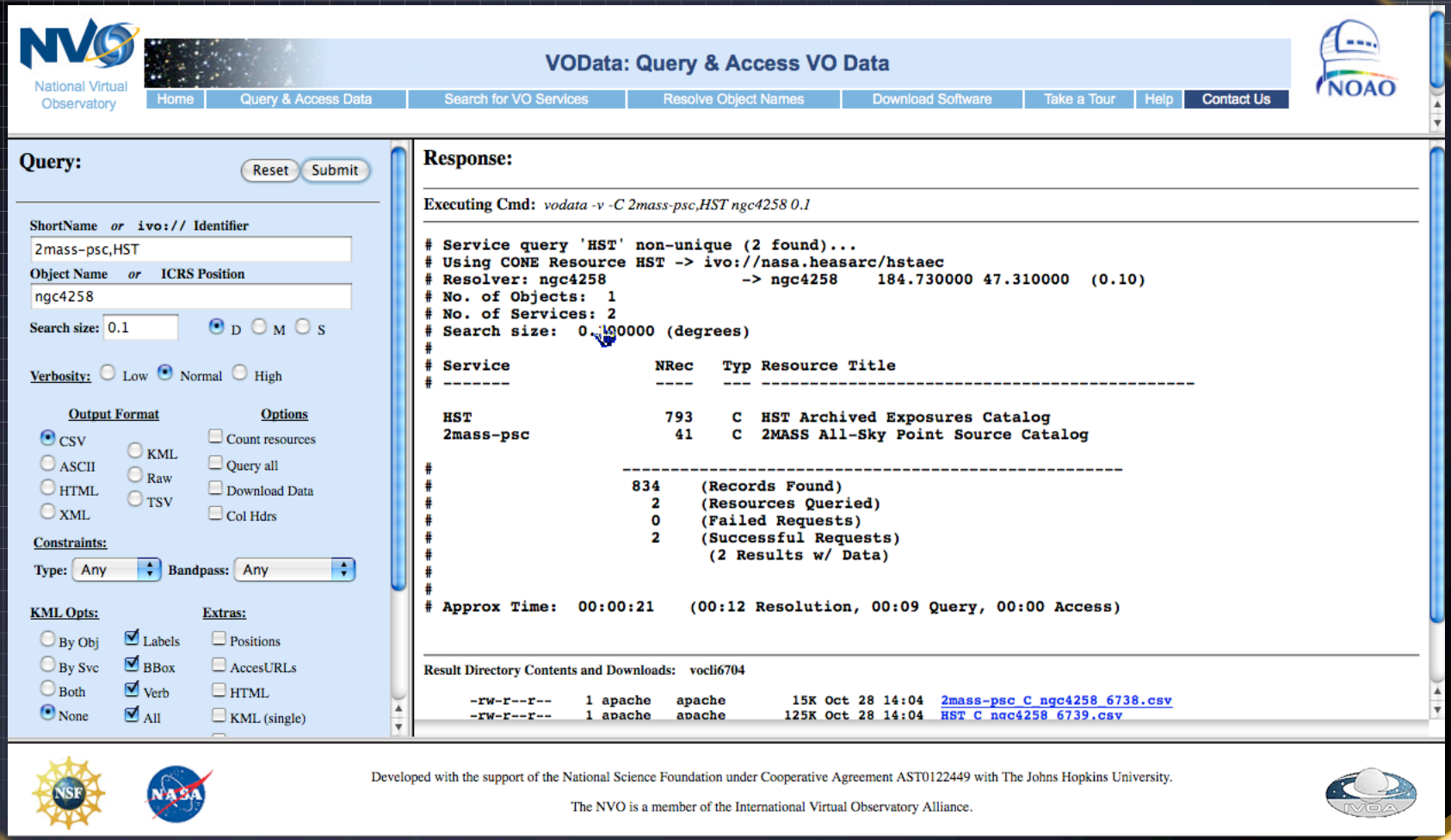
Scavenger Hunt

3) How many Bautz-Morgan type II Abell clusters are within 20 degrees of the south pole?

Solution:

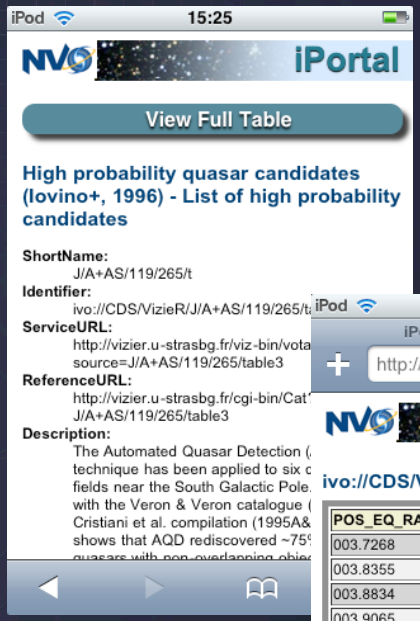
```
% vodata -V -O - ivo://nasa.heasarc/abell 0.0 -90.0 20 I \
        stilts tpipe ifmt=votable in=- \
        cmd='select "bmtype == \"II\""' omode="count"
```

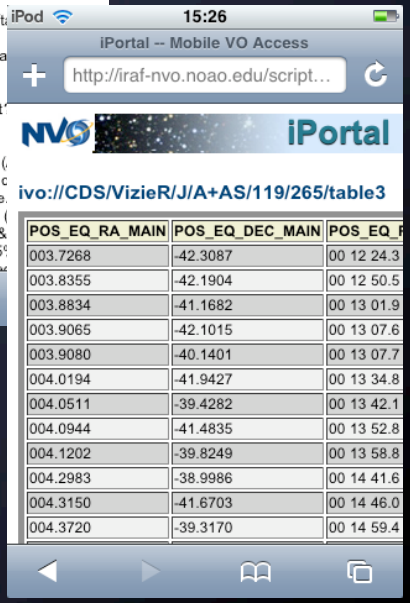
Web-Interface



Other CGI Apps

iPortal

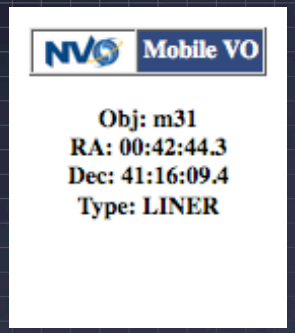


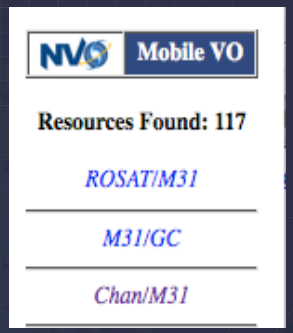


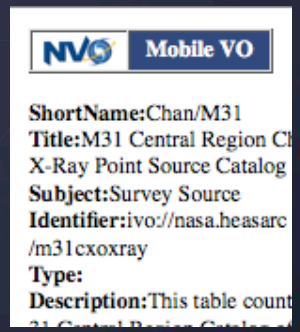
http://iraf-nvo.noao.edu/iportal

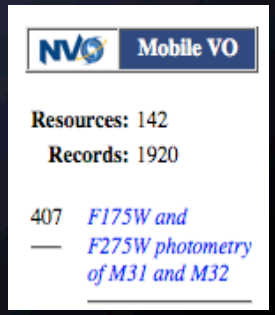
Other CGI Apps

Mobile VO









http://iraf-nvo.noao.edu/mvo

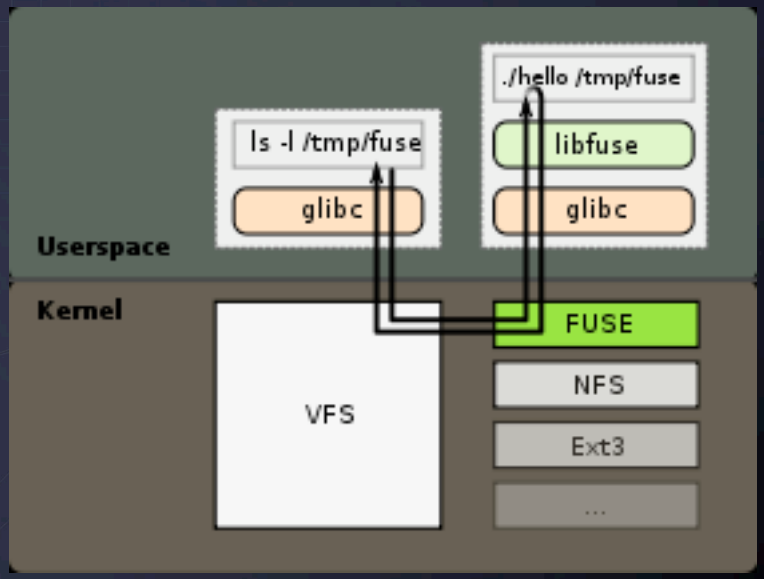
VO-CLI Recent Work

- New Registry Interface support
  - Took longer than expected
  - Modifications more extensive than anticipated
  - Uses VOTable form of the service
- Interface to Inventory service
  - Provides faster lookup of catalog data than direct queries
  - Inventory still being populated, interface still being negotiated

User-Space Filesystems

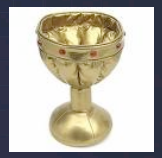
- FUSE
  - Open-source project
  - Loadable kernel module
  - Linux and OSX supported
  - Virtual filesystems can be made of almost anything:
    - Archive/compressed files
    - Gmail data storage
    - Virtual clusters
    - Flickr as a directory tree

      :



So What?

- How could VO use this:
  - VOSpace as a “local” filesystem
  - VOTable browsing
  - Registry Browsing
  - Web-services appear as local executables
  - Specialized data formatters
  - Mount a database table as a directory tree
  - Access in-memory data structure as files
  - ????



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