WFAU
Virtual Observatory services

D.Morris
Institute for Astronomy,
Edinburgh University
June 2016

OSA – user interface

- Bug fixing and maintenance

Duplicate columns in results

- Initial fix in place (reject with error)

- Interesting discussion, here and in the IVOA
- What should the best practice response be ?

- Suggested best practice

  - If there is **no** alias rename to random
  - If there **is** an alias accept duplicates

D.Morris
Institute for Astronomy,
Edinburgh University
June 2016

Firethorn – TAP

- MAXREC limit bug - fixed
- Passes 100% of Mark Taylor's taplint validation tests

- Waiting to be deployed on cloud compute platform

Firethorn – distributed queries

- Not looked at for several months
- Basic tests are failing

- Building new set of tests to identify broken parts
- Need to allocate time for getting this working again

D.Morris
Institute for Astronomy,
Edinburgh University
June 2016

Firethorn – ADQL

Working with colleagues from IVOA on support for SQLServer

- Grégory Mantelet (CDS / Heidelberg)
- Theresa Dower (Space Telescope)

- Support for NATURAL joins

- Geometry in SQLServer
    - Adopt and adapt when it is available

- RegTAP functions in SQLServer

    - Support for the latest registry standard
    - Retire the AstroGrid XML based registry

Pyrothorn - TAP/ADQL testing

Test infrastructure for TAP/ADQL services

- Updated to use Python install tools for dependencies e.g. astropy
- Moved to separate project, enabling re-use outside of FireThorn

Genius - Autocomplete

- Autocomplete can now use TAP_SCHEMA for the metadata
- Compatible with ESAC service

- GoogleWebToolkit (GWT) wrapper for Autocomplete textbox
- Compatible with ESAC service

Genius - Crossmatch

- Requires Firethorn distributed query

D.Morris
Institute for Astronomy,
Edinburgh University
June 2016

IVOA - CapeTown

Working with colleagues from LSST

- Brian Van Klaveren (SLAC/LSST) - TAP, ADQL and Qserv
    - Working on LSST implementation of TAP in front of QServ
    - Overall very positive about using VO standards where applicable
- John Swinbank - TimeDomain and VOEvent
    - Technical lead for LSST Data Management at Princeton University
    - Working on VOEvent standard

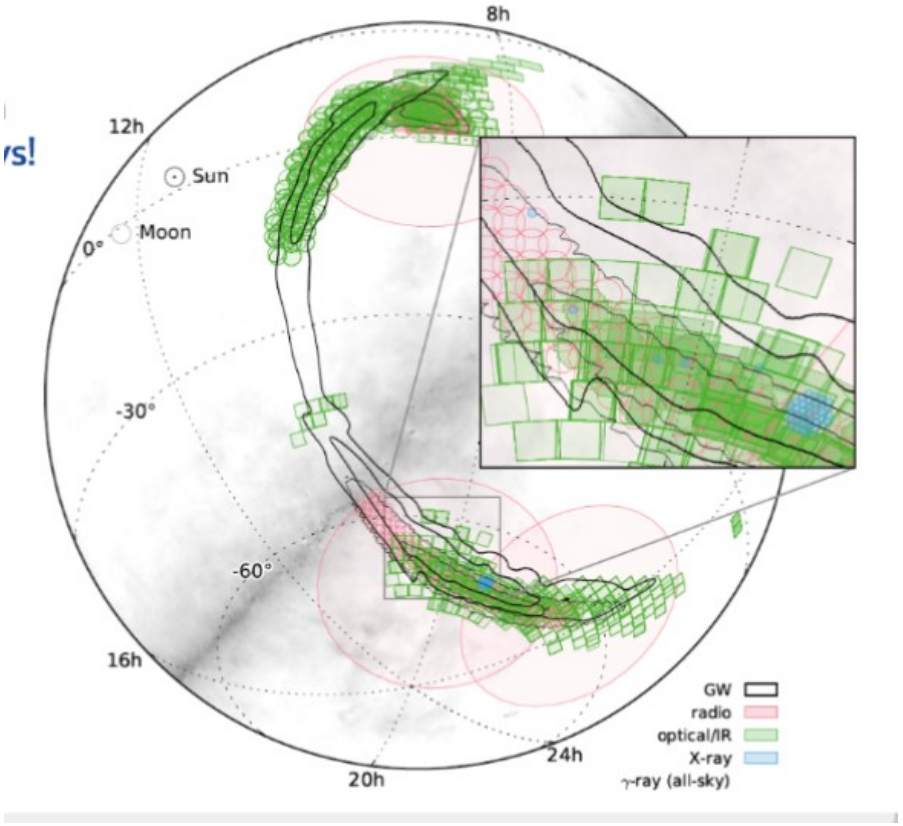
IVOA - ADQL

- Agreement to close version 2.1 and move to Proposed Recommendation

IVOA - JSON

- Significant interest from several groups, not least LSST
- Working on IVOA note to combine input from ROE, LSST, CADC + others

Asterics - LIGO/VIRGO Gravity Wave projects



- Key use case for the VO
- ElectroMagnetic (EM) follow up

- Everything within [date-range]
  for [field-of-view] patch of sky

- Observation date is key for reconstructing the history

- Do we (WFAU) want our data to be used for EM follow up ?
- If so, we probably need to implement ObsCore and SIAP

D.Morris
Institute for Astronomy,
Edinburgh University
June 2016

Asterics - LIGO/VIRGO Gravity Wave projects

- VOEvent : different distinct use cases - firehose and diamonds
  - LSST – firehose
    - 10 million events per night
    - 6hrs = ~ 500/sec
    - ~2ms per event
  - LIGO – diamonds
    - Live service running
    - 1-10 events per week/month
    - Very high value

Cloud compute – KVM

- Basic KVM support - in progress
- Docker hosts for AstroTROP
- Docker hosts for Firethorn testing
- Docker hosts for TAP testing

Cloud compute - OpenStack

- Still learning

IPv4

- Limited resources
- Looking at using separate subnet 192.168.200.xxx

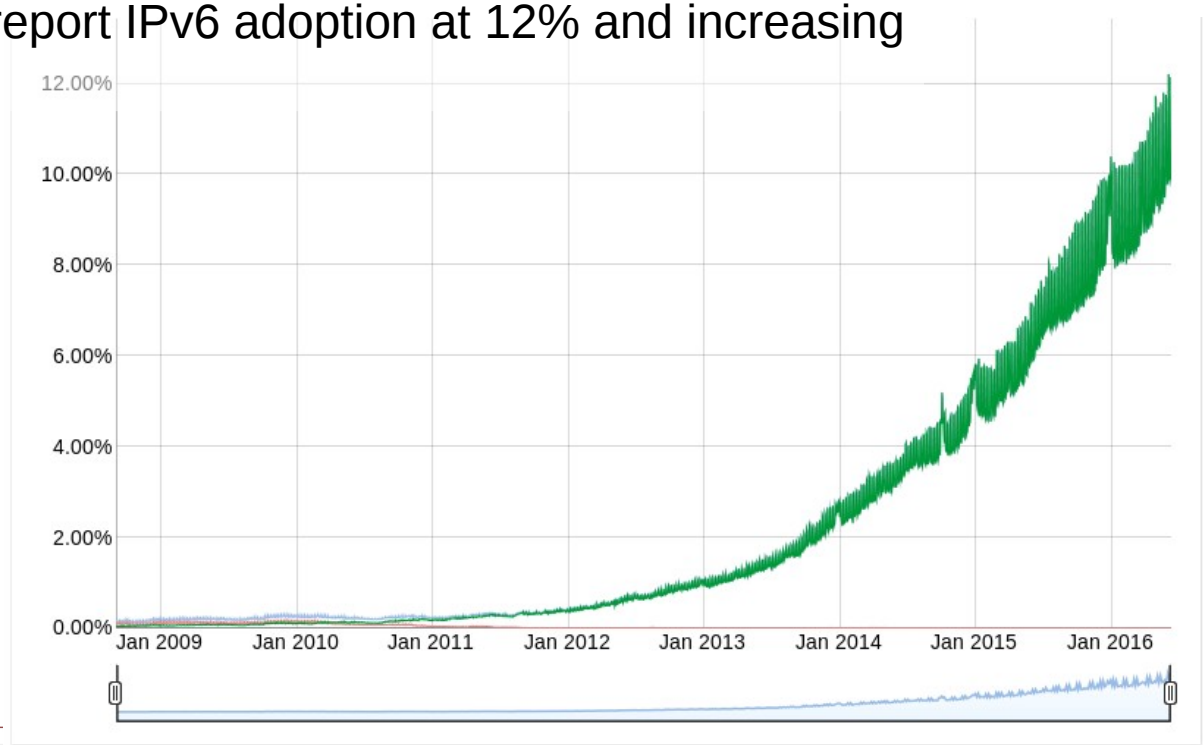
IPv6

- Hope to get a /64 subnet, but we don't know when
- Looking at using physical switch to isolate separate network

Cloud compute – network

IPv6 - Important to learn

- Apple require IPv6 support for all new apps
- Google report IPv6 adoption at 12% and increasing



D.Morris
Institute for Astronomy,
Edinburgh University
June 2016