Report on the ANSS NetOpsV Workshop.

Mitch Withers, February 22, 2011

Fifty-seven people gathered at Caltech in Pasadena on Wednesday and Thursday February 2-3, 2011 for the fifth NetOps workshop. The focus of the workshop was the ANSS Quake Monitoring System (AQMS). Attendees included seismic network managers, software developers, database administrators, seismic analysts, system administrators, and network engineers. Twenty organizations were represented including academia, the private sector, and both earthquake and volcano hazards programs.

The workshop agenda included two full days. It is available on the workshop website below and on the AQMS trac wiki. Trac doesn't require a login for read access; Doug distributed the address and login after the workshop. Part of Wednesday afternoon and Thursday morning allowed for those responsible for data analysis to break off from the main group for hands on training with jiggle. Even the experts were able to learn something new. A wide range of topics were covered during the main session that included nearly every aspect of real-time and post-processing. Unfortunately, there wasn't enough time to cover each topic in depth. One participant succinctly described it as nowhere near enough time and way too long.

Perhaps the most significant result of the workshop is an expanded sense of teamwork. The CISN staff repeatedly offered assistance to other networks and encouraged questions. The reticence of many operators to take up time of CISN on minor questions was diluted. At the risk of sounding Pollyanna, there was general agreement that "we're all in this together".

Numerous observations were made during the workshop, some of which include:

- Database administration is non-trivial and the entire system hinges on a properly operating and maintained database. How much can we rely on volunteer support from larger networks? Should there be a centralized DBA? Is there24/7 crash recovery? Are operators knowledgeable enough to know when to patch and to properly maintain security?
- What is AQMS? What is the supported core (or orthodoxy in earthworm parlance) and what is contributed?
- Do all AQMS installations need a hot backup post-processing capability (standard rollout included dual RT systems and a single PP system)?
- Oracle is expensive for networks without a site license. Postgresql may be a viable database for AQMS (including replication) in less than two years--someone needs to assess where it is now to say.
- Documentation has dramatically improved over the past year and those responsible deserve special thanks. There is still room for improvement particularly with jiggle.
- Need to migrate appropriate sections of SCSN wiki to the AQMS trac wiki.
- Need "best practices" and "cookbooks" in trac.
- Need a space for shared/contributed scripts and tools
- Need to be able to process multiple network codes within a single installation. For example, MB processes its own events by connecting to the UUSS system. It would be useful for MB to have an "MB" view when connecting. Mid-America processes events for NM, SE, and CO networks

(these are authoritative network codes associated with the composite catalog and not necessarily FDSN registered codes used for scnl).

- How are change requests made? How do we expand involvement in CISN? Should there be ANSS AQMS working groups and if so, how do they interact with CISN working groups? Likewise for standards? What happens if there are two schema groups?
- Metadata beyond SEED is an unsolved problem.
- We need another NetOps (though the author wishes to point out that the field techs are also due for a NetOps).
- RSN's may need to reprocess catalogs for inclusion in AQMS.

This report is available at http://www.ceri.memphis.edu/people/mwithers/NetOpsV/