

Report on the ANSS NetOps XI Workshop November 1-3, 8-10, 15-17, 2021

The eleventh ANSS NetOps Workshop, NetOpsXI was held remotely over a series of 2-hour sessions. There were nine sessions in total: three days per week for three weeks. The three Monday sessions were primarily targeted toward field operations, Tuesdays were for IT, and Wednesdays varied and included analysts and E&O (see the agenda in Appendix A). Most but not all who participated preregistered for the workshop and our formal count totaled 240 participants from 39 organizations. This is a record number of participants that provided an opportunity to include many more people and topics than previous workshops allowed however it also made full participation in discussions difficult for all but a few. The organizing committee was composed of Rayo Bhadha, Glenn Biasi, Peggy Hellweg, Alexandros Savvaidis, Fabia Terra, Mitch Withers (chair), Emily Wolin, and Bill Barnhart (ex officio). The committee wishes to thank Bill Barnhart and USGS for hosting the meeting. The committee also wishes to express our gratitude to the 30+ session leaders for making each session a success.

Part of session 8 was a discussion and brainstorming on the next generation of AQMS. The organizers gained substantial input however this topic is outside the scope of this report.

Due to the Covid19 pandemic, this is the first NetOps held remotely. The organizing committee considered several strategies for the schedule and decided to avoid day long sessions instead favoring two hours each day spread over several weeks. Several participants also regretted that federal restrictions on USGS personnel were not conducive to open discussion and an inability to share recordings was universally disfavored. Participants also universally agreed that a remote NetOps was far better than no NetOps. We also noted several pros and cons for the remote format of the meeting.

Remote meeting cons

- Lack of interpersonal communications outside of formal sessions.
- Lack of opportunities for building relationships among most participants.
- Too many participants to actively participate; most participation was passive
- Missed opportunity to get away from the office and visit other networks in new and interesting places.
- Recordings were only available to USGS personnel.
- Discussions with momentum couldn't continue after the formal meeting session.
- Missed opportunity to learn from smaller networks or more reserved participants who may not share as willingly or easily in large groups.

Remote meeting pros

- Cost, considerable savings achieved from no travel costs.
- Inclusive, many more participants were able to participate and specialties were included that normally would not be, such as E&O and Data Analysts.
- We were able to include a discussion on DEIA.
- The meetings were recorded for later viewing by those USGS personnel unable to attend.
- Remote meetings allow greater flexibility for those with children to attend.

- Participants were able to listen in on sessions outside their expertise; analysts could learn about the concerns of field techs for example, and field techs could learn about data analysis.
- The chat provides an opportunity to share ideas or ask questions for those who are more reserved and reluctant to share in a large group setting.
- Remote meetings remove some of the cognitive load imposed on underrepresented people resisting pressure to conform to negative stereotypes, especially those about ability or credibility. Whistling Vivaldi was referred to in session 9 as a good explanation of this effect.

The NetOps participants identified the following recommendations in no particular order.

1. There should be an ANSS E&O working group.
2. There should be a common repository for routine ANSS RSN tools such as:
 - a. Standard Metrics for waveforms and catalogs and the tools to track them.
 - b. Ticketing and problem tracking systems.
 - c. Field safety best practices, first aid and wilderness training resources, tower climbing training and safety resources, safety checklists, etc.
 - d. DEIA bystander training and resources.
3. The traditional somewhat annual in-person format of NetOps could be augmented by more frequent remote meetings (monthly or quarterly) to focus on specific topics and facilitate more in-depth discussion. This needs more than an hour, perhaps two hours or a full morning or afternoon.
 - a. Multipath telemetry
 - b. Development in the cloud
 - c. DEIA
 - d. Aftershock deployments
 - e. First aid
 - f. Tower safety
 - g. Ticketing and problem tracking systems
 - h. AQMS and jiggle
4. Training is needed that is much more in depth than NetOps in any of the topics mentioned in bullet 3. This could be accomplished in several ways such as
 - a. Vendor certification training
 - b. Extended stay visits for tech staff to other networks for On-the-Job training (OJT)
 - c. Special focus in-person workshops with experienced instructors
 - d. A repository of training modules
5. There is a need for IT networking training for field techs, either in-house training from sys admin data ops types or external resources like CompTIA. Perhaps a repository of IT how-to modules for common hardware configurations would be useful.

6. What can we do to help the analysts? Struggling with burnout. Expand duties to include more than just timing events. Include in periodic field deployments, also do QA, etc.
7. From the SIS session - there was interest in having a client that made standard calls to SIS web services.
8. There should be a standard seismic sensor connector and pinout so that sensors or dataloggers can be swapped without changing cables.
9. A 64-bit version of Willard is needed for the Quanterra dataloggers.

Appendix A.

NETOPS XI Remote Agenda

All times Central US Time zone (don't forget the time change on Sunday Nov 7)

Field Engineering Mon, Nov 1			IT Tue, Nov 2		Analysts and others Wed, Nov 3	
Session 1		session leader	Session 2	session leader	Session 3	session leader
1:00PM	Last mile: telemetry	Marcos Alvarez (c), Jon Rusho (c)	AQMS Update	Alex Hutko (c), Rayo Bhadha (c)	Jiggle Tips and Tricks	Jen Andrews (c), Mitch Gold (c), Hal Macbeth (c)
1:40PM	discussion/break		discussion/break		discussion/break	
2:00PM	Datalogger Tricks, Hacks, and Beefs	Patrick Bastien (c), Jacob Crummey (c)	Processing in the cloud	Ellen Yu (c), ShangLin (c)	Helpful Tools and Utilities for Analysts and QC	Alex Hutko (c), Jen Andrews (c)
2:40PM	discussion		discussion			
3:00PM	Adjourn		Adjourn		Adjourn	
Mon, Nov 8			Tue, Nov 9		Wed, Nov 10	
Session 4			Session 5		Session 6	
1:00PM	SIS Update	Ellen Yu (c), Prabha Acharya (c), Sue Kientz (c)	Data Path Redundancy	Chris Bruton (c), Glenn Biasi (c)	Interfacing with the Public/Community Contact	Bill Steele (c)
1:40PM	discussion/break		discussion/break		discussion/break	
2:00PM	Ticketing Hassles, Helps, and Hopes	Mouse Reusch (c)	Server and Processing Redundancy	Mike Watkins (c)	Interfacing with the Public/Products	Becca Sumsion (c), Katherine Whidden (c)
2:40PM	discussion		discussion		discussion	
3:00PM	Adjourn		Adjourn		Adjourn	
Mon, Nov 15			Tue, Nov 16		Wed, Nov 17	
Session 7			Session 8		Session 9	
1:00PM	ASL virtual Tour	Emily Wolin (c)	SeisComP and Antelope Updates	Alexandros Savvaidis (c) and Natalia Ruppert (c)	Diversity, Equity, Inclusion, and Accessibility	Fabia Terra (c)
1:40PM	discussion/break				Break	
2:00PM	Horror Stories (what was the most difficult repair/install)	Dave Croker (c), Marcos Alvarez (c), Jon Rusho (c)	NextGen ANSS Quake Management System	Lind Gee (c), and Rayo Bhadha (c)	Messages for Management	Withers
3:00PM	Adjourn		Adjourn		Adjourn	

Last update October 28, 2021