

Latest Advances in the Antelope Environmental Monitoring System

- *Antelope 5.13*

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CTO, Boulder Real Time Technologies, Inc.

June, 2023

Vienna, Austria AUG



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Boulder Real Time Technologies, Inc.

- Founded 1996
- Based in Boulder, Colorado, USA
- Makers of the ***Antelope Environmental Monitoring System***

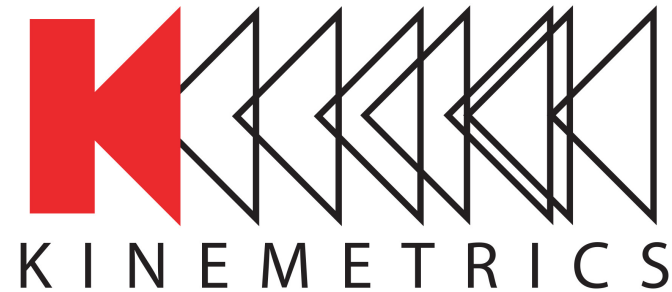


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Thanks to Kinematics

Thanks to our long-time strategic partners, Kinematics, Inc.



Return of the Antelope Users' Group Meetings!

- Virtual Antelope Users Group Meeting January, 2023
- First in-person AUG since Sept. 2019 Calgary, Canada
 - *Thanks Niko Horn and GeoSphere Austria!!*



Outline

- Antelope 5.13
 - Platform Support
 - Interpreters
 - Ubuntu Linux
 - Docker
 - Web Site
 - Web Tech / Thirdparty code
 - Nginx
 - Green Unicorn
- Coming Year
 - Further efforts on next-generation web tech
 - React NPM (Node Package Manager)
 - Contract full-time Front-End Dev
 - Condor, Bighorn, and Structural Health Monitoring
 - Modernizing web contact mechanisms



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Antelope 5.13 Platform Support

- Linux

- CentOS / RHEL 7 (compiled on CentOS 7.9)
- RHEL 8 (compiled on RHEL 8.6)
- Ubuntu 22 (compiled on Ubuntu 22.04)

- macOS

- Intel-architecture Monterey (compiled on Intel macOS 12.6.3)
- M1-architecture Monterey (compiled on M1 macOS 12.2.1)



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Antelope 5.13 Interpreters



- *Qt 5.15.8, Qt 6.3.2*

(Two versions, older for CentOS 7)



- *Perl 5.36.0*

(Aiming to change each release, collision avoidance)



- *Tcl/Tk 8.4.19 and 8.6.0*

(Same as previous Antelope versions. Dead language.)



- *MATLAB R2022b*

(No native MATLAB for M1 macOS available yet)



- *Python 3.10.7*

(Aiming to change each release, collision avoidance)

- Many modules updated



- *ObsPy* support preserved through ***install_obspy(1)*** command



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Ubuntu Linux Support

- 250+ Extant versions of Linux; can't support them all
- Original RedHat / CentOS choice from survey of Enterprise users
- Growing number of requests for Ubuntu, widely chosen OS version
- Much better choice for our Docker image (RHEL paid-support issues)
- Ported all of Antelope, interpreters etc. to Ubuntu 22.04 for Antelope 5.13

Docker Container Support

- Antelope has long supported IP-transparent, distributed and virtualized computing
- Cloud containerization is the next direction
- Antelope 5.13 released as a Docker image with Ubuntu base
- This is a phased approach with multi-year evolution
- Your feedback is welcome and critical to steer in best directions for our clients!
- Full details and discussion in Rohan Ambli's upcoming talk



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New Directory /opt/antelope/thirdparty

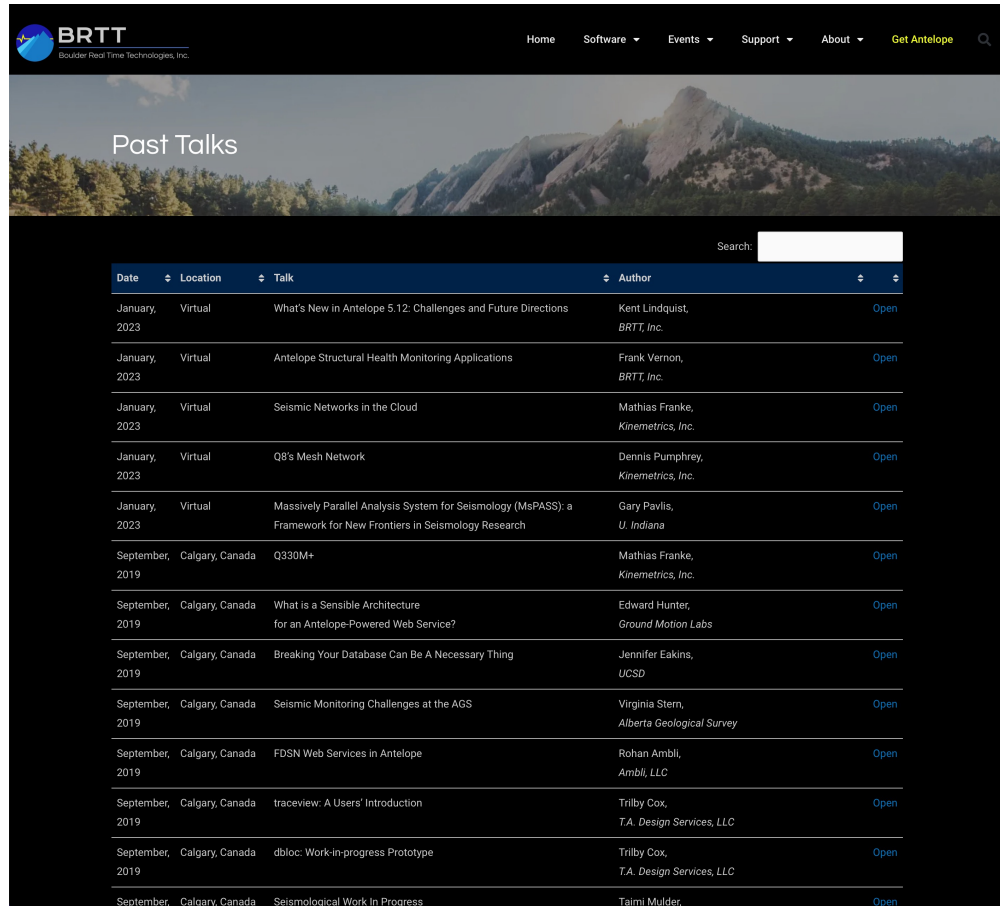
- Repository for Third-party code shipped with Antelope
- Currently contains
 - Openssl
 - Nginx
- Likely to expand in the future
- Full Nginx web-server release
 - Second in popularity to Apache
 - Well-suited to integration with Antelope for next-generation webapps
 - Yes, we are on track to replacing rtcache(1) and rtwebserver(1)



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BRTT Web site – Reinstated all past talks

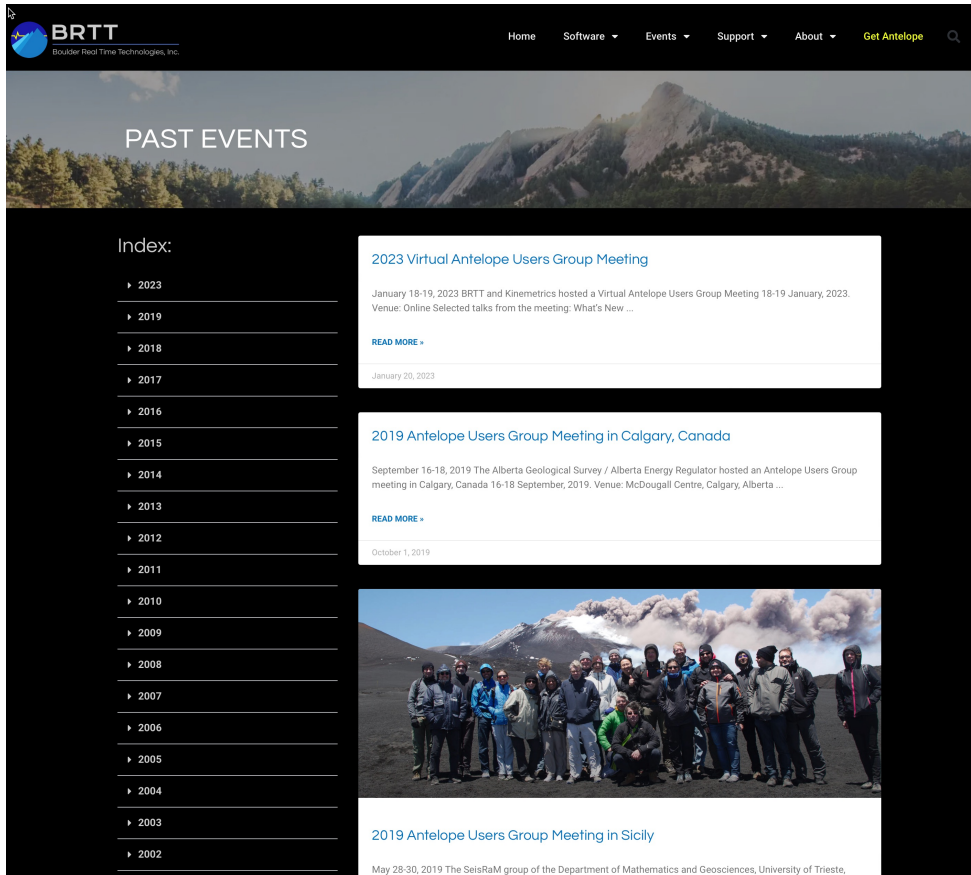


Date	Location	Talk	Author	
January, 2023	Virtual	What's New in Antelope 5.12: Challenges and Future Directions	Kent Lindquist, BRTT, Inc.	Open
January, 2023	Virtual	Antelope Structural Health Monitoring Applications	Frank Vernon, BRTT, Inc.	Open
January, 2023	Virtual	Seismic Networks in the Cloud	Mathias Franke, Kinemetrics, Inc.	Open
January, 2023	Virtual	Q8's Mesh Network	Dennis Pumphrey, Kinemetrics, Inc.	Open
January, 2023	Virtual	Massively Parallel Analysis System for Seismology (MsPASS): a Framework for New Frontiers in Seismology Research	Gary Pavlis, U. Indiana	Open
September, 2019	Calgary, Canada	Q330M+	Mathias Franke, Kinemetrics, Inc.	Open
September, 2019	Calgary, Canada	What is a Sensible Architecture for an Antelope-Powered Web Service?	Edward Hunter, Ground Motion Labs	Open
September, 2019	Calgary, Canada	Breaking Your Database Can Be A Necessary Thing	Jennifer Eakins, UCSD	Open
September, 2019	Calgary, Canada	Seismic Monitoring Challenges at the AGS	Virginia Stern, Alberta Geological Survey	Open
September, 2019	Calgary, Canada	FDSN Web Services in Antelope	Rohan Ambli, Ambli, LLC	Open
September, 2019	Calgary, Canada	traceview: A Users' Introduction	Trilby Cox, T.A. Design Services, LLC	Open
September, 2019	Calgary, Canada	dbloc: Work-in-progress Prototype	Trilby Cox, T.A. Design Services, LLC	Open
September, 2019	Calgary, Canada	Seismological Work In Progress	Taimi Mulder,	Open

- 342 Talk PDFs
- 2002 – 2023
- Search box for
 - Title
 - Presenters
 - City
 - Year

<https://brtt.com/events/talks/>

BRTT Web site – Reinstated all past events



2017 Antelope Users Group Meeting in Vienna, Austria



May 29-31, 2017

The Austrian Zentralanstalt fuer Meteorologie und Geodynamik hosted an Antelope Users Group meeting 29-31 May, 2017 in Vienna, Austria.

- 30 Past Events
- 2002-2023

<https://brtt.com/category/pastevents/>



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Coming Development Year

- Condor – Bighorn-based Structural Health Monitoring with Kinematics
- Docker container support evolution
- More web-site improvements
- Antelope Users Group meetings
 - Volunteer hosts welcome!
- Requests? Suggestions?

Antelope is the product it is today because of our users, your needs and feedback.

We look forward to continuing to support you.

Bring us your ideas!



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Obtaining Antelope

- Evaluation copies, subscriptions or upgrades to Antelope 5.13:
 - Contact Kinematics, Inc.:
 - sales@kmi.com
- Technical questions about Antelope:
 - Contact BRTT:
 - support@brtt.com

Thank You

support@brtt.com

