



# EPOC

Engagement and Performance  
Operations Center



Award #1826994

Newsletter | September 2, 2021

## A Note from the Pls



Welcome to the fourth newsletter of the Engagement and Performance Operations Center (EPOC), a production platform for operations, applied training, monitoring, and research and education support, jointly led by Indiana University (IU) and the Energy Sciences Network (ESnet). We have recently finished [reporting for Year 3 of the project](#), and we are excited to share some of our accomplishments for this period. It's been a productive and busy year despite the challenges posed by the COVID-19 pandemic: We added Southern Crossroads (SoX), Sun Corridor Network, and the Corporation for Education Network Initiatives in California (CENIC) as Regional Networking Partners. We also worked on 97 Roadside Assistance and Consultation Cases, completed three new NetSage deployments, and published two new Deep Dive reports.

This edition of the EPOC newsletter will focus on highlights from our Roadside Assistance and Consulting efforts in Year 3. Please feel free to provide comments and feedback on these efforts and to let us know what you'd like to see in future newsletters here: [Feedback Form](#).

Thanks!

-Jennifer Schopf, Jason Zurawski, and Dave Jent

## Upcoming Talks and Events (EPOC and others)

- 30 September, 2021, Kim Milford, REN-ISAC. For more information: [CACR Security Speaker Series](#).
  - 1 October, 2021, 12pm EDT: Prasad Calyam, Songjie Wang, & Roshan Neupane, University of Missouri, "Online Learning Platform for Application-Inspired Cloud and DevOps Curriculum", [CI Engineering Brownbag Talks](#).
  - 8 October, 2021, 12pm EDT: Brenna Meade & Ed Moynihan, International Networks at Indiana University, "Investigating, troubleshooting, and improving performance with NetSage and the GNA-G Routing WG", [CI Engineering Brownbag Talks](#).
  - 21 October, 2021, Dr. Russell Buchan, University of Sheffield School of Law, Co-hosted with Maurer School of Law. For more information: [CACR Security Speaker Series](#).
- 11 November, 2021, Eli Sugarman, JD Stanford, Co-hosted with Ostrom Workshop. For more information: [CACR Security Speaker Series](#)

## Roadside Assistance: Year 3 In Review



A key aspect of the EPOC project is the operations center and process pipeline for immediate help, referred to as Roadside Assistance and Consulting, which helps collaborators when data sharing failures occur. Once a Roadside Assistance and Consulting case is identified, EPOC coordinates with

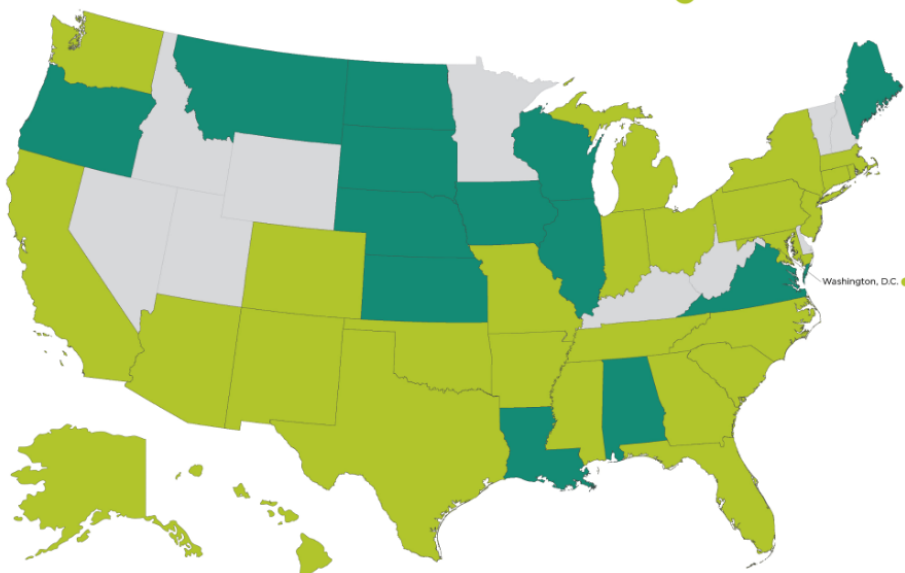
partners and organizations, across multiple network domains, to achieve a resolution.

In Year 3, EPOC participated in 97 total Roadside Assistance and Consulting cases. 47 of these 97 cases, or 48%, were associated with a specific EPOC Regional Networking Partner. We worked with institutions in 28 states and regions, including 21 EPSCoR jurisdictions, and with end users in 12 different countries.

The map below shows our Roadside Assistance and Consultations Cases domestically. Light green shows states where we had interactions with an institution in Year 3, and dark green shows a prior interaction only in Year 1 or 2.

### Roadside Assistance Locations

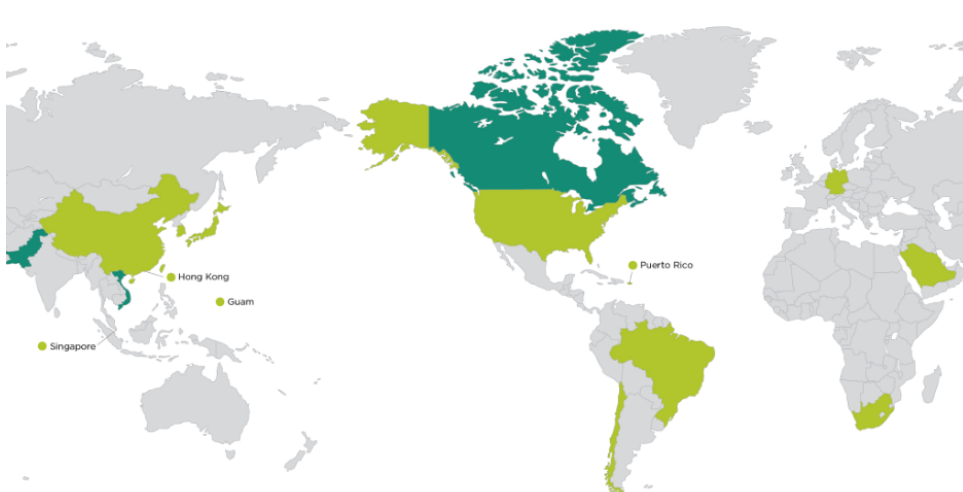
- Years 1 and 2
- Year 3



And this map shows our Roadside Assistance and Consultations Cases internationally. Light green shows countries where we had interactions with an institution in Year 3, and dark green shows a prior interaction only in Year 1 or 2.

### Roadside Assistance Locations

- Years 1 and 2
- Year 3



Overall, Roadside Assistance and Consulting cases increased by 52% in Year 3, and we expect this growth to continue in Year 4. If your institution has a data sharing failure, or is struggling with a “flat tire,” be sure to reach out. EPOC Roadside Assistance can help, no matter where you are.

### Roadside Year 3 Highlight: Continuing Arcicibo’s Legacy



EPOC played a key role in a partnership that will make sure data from the famed Arecibo Observatory will be securely backed up and made accessible to astronomers around the world after the telescope’s collapse in December 2020.

Leading up to the collapse, staff from the University of Central Florida (UCF) reached out to EPOC and requested assistance moving 2 petabytes of data from Arecibo to a Microsoft Azure Cloud storage instance and to UCF’s Advanced Research Computing Center (ARCC) cluster for data processing. It was discovered during these discussions that the data at Arecibo was the only copy of over 20 years of observations, emphasizing the urgency of making a backup copy. Once the telescope collapsed, a larger and more efficient plan was developed with partners at the Texas Advanced Computing Center (TACC), the University of Puerto Rico (UPR), Arecibo, UCF, Globus, and the Cyberinfrastructure Center of Excellence to instead create and transfer a full copy of the data from Arecibo to storage facilities at TACC. While waiting for the necessary hardware to arrive at Arecibo to complete the copy, staff at EPOC, UPR, and TACC performed network baselining of the full network path between Arecibo and TACC using perfSONAR. The initial testing showed a clean path between the UPR campus and TACC using networks provided by AMPATH, Internet2, and LEARN proving the research and education networks were ready to begin the transfers.

In early 2021, the data was copied and transfers began with ongoing performance engagement and monitoring provided by EPOC. TACC engineers also began working to create a portal and workflow to allow easy access to the data for researchers, who will now be able to use the data to continue Arecibo Observatory’s legacy of discovery and innovation for years to come.

Press releases on this partnership can be found here:

[Continuing Arecibo’s Legacy](#)

[Arecibo Data Recovery: Behind the Scenes with Jason Zurawski](#)

[IU and others help continue Arecibo’s legacy](#)

[The Arecibo Observatory: Disaster, and Recovery](#)

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