



2019 Highlights

Edward McNair

NANOG Executive Director



Thank you

NANOG Staff + Program Committee + Board + Sponsors
For making this virtual meeting a reality

Inspiring, educating, and empowering our community

We made significant progress made in 2019 + beyond:

Building community and promoting openness

Highlights of 2019 Annual Report

NANO G Stories — Featuring our innovative community

NANO G TV — The latest Internet technologies + industry best practices, all in one place.





2019

North American Network Operators'
Group

Annual Report

2019 Annual Report

Through NANOG's first-ever annual report, we hope to provide even greater insight and transparency into our achievements and operations over the past year:

- NANOG Community
- Education
- Outreach
- Events
- Sponsorship
- Financials

ON

Committed to the ongoing advancement of an open, secure, and resilient Internet, we provide a platform that inspires, educates, and empowers our community to work together in building the Internet of Tomorrow.

VALUES

We work together to meet the ever-changing demands of the Internet of Tomorrow, while upholding our shared values of:

Community

Innovation

Openness

Resilience

Through meetings, events, scholarships, fellowships, digital spaces, and other programs, we offer multiple ways for our community to:

• Learn from other professionals and students, or studying in their field.

• Stay up-to-date on the latest Internet technologies, and industry best practices.

• Explore new and creative technical peering arrangements.

• Address the technical challenges faced by the industry.

• Engage in meaningful conversations about the Internet of Tomorrow, impacting their daily lives.

• Build strategic business relationships, and foster partnerships with like-minded peers.

INCLUSIVE, ADAPTABLE, AND FULL OF DIVERSITY

The ecosystem we're building can handle nearly anything. With 86 nonprofit NOGs now in every major region of the world, NANOG was the first – and is still the largest.



13,000+
INDUSTRY
PROFESSIONALS
AND STUDENTS

200+
ARE FIRST-TIME
ATTENDEES

1,000+
ATTEND NANOG
CONFERENCES

20+
COUNTRIES AROUND
THE WORLD
REPRESENTED

LE IN OUR COMMUNITY

Ps of all sizes, content providers + multi-tenant data centers, cloud companies.

top engineering + computer science programs in the US.

WITH EMPLOYEES WHO ARE ACTIVE IN OUR
TY

- Juniper
- Microsoft
- Netflix
- Nokia
- Twitch
- Twitter
- Verizon

WE MADE SIGNIFICANT PROGRESS IN 2019

Over the past year, the NANOG Staff, Board of Directors, and Committees successfully spearheaded improvements to some of the most critical aspects of our mission.

37
COMMUNITY
AMBASSADORS

157
SPONSORSHIP
PARTNERS

3,421
CONFERENCE
ATTENDEES

553
OUTREACH PROGRAM
PARTICIPANTS

62
COLLEGE IMMERSION
PARTICIPANTS

4
SCHOLARSHIP
RECIPIENTS

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RECIPIENTS

NORTH AMERICAN COMMUNITIES WE'VE SERVED IN 2019

NANOG U Tour:
University of Illinois
Urbana-Champaign

NANOG STEM Tour
Montgomery, AL

NANOG 77
Austin, TX

NANOG 75
San Francisco, CA

**ISOC Indigenous
Connectivity Summit**
Hilo, Hawaii

NANOG U Tour:
Purdue University

NANOG U Tour:
Ball State University

NANOG 76
Washington DC

CaribNOG 18
St. John's, Antigua

CaribNOG 17
Bridgetown, Barbados

A group of people, including men and women, are gathered around a table, focused on their laptops. They appear to be in a collaborative work environment, likely a hackathon. The background is slightly blurred, showing other people and a bright, indoor setting. The text 'NANOG Education' is overlaid in the center of the image.

NANOG Education

Inspiring and educating the next generation of networking professionals

NANOG HACKATHON
Akshat

*of the recipients of
doctoral program
at University of
me to direct all of my
career development in the
g.*

— Sydney Pugh
University of Pennsylvania

62
STUDENTS

4
UNIVERSITIES

2019 NANOG College Immersion Program

The NANOG College Immersion Program (NCI) allows students to connect with Internet tech professionals to gain a competitive edge, while they're still in school, and provides college educators with complete funding to bring up to 5 students to a NANOG conference.

62 students from 4 universities attended NANOG conferences as part of the NCI program in 2019:

- University of Colorado Boulder
- Ball State University
- George Mason University
- Clarkson University



*because I learned
in classroom.*

Caleb Truax III
Ball State University

NANOG STEM + Community Engagement

December 5-6 / Montgomery, Alabama

Two days of STEM-focused talks, lunch and learn sessions, and community meetings regarding industry trends and careers in Internet technologies.

Schools + Orgs Visited

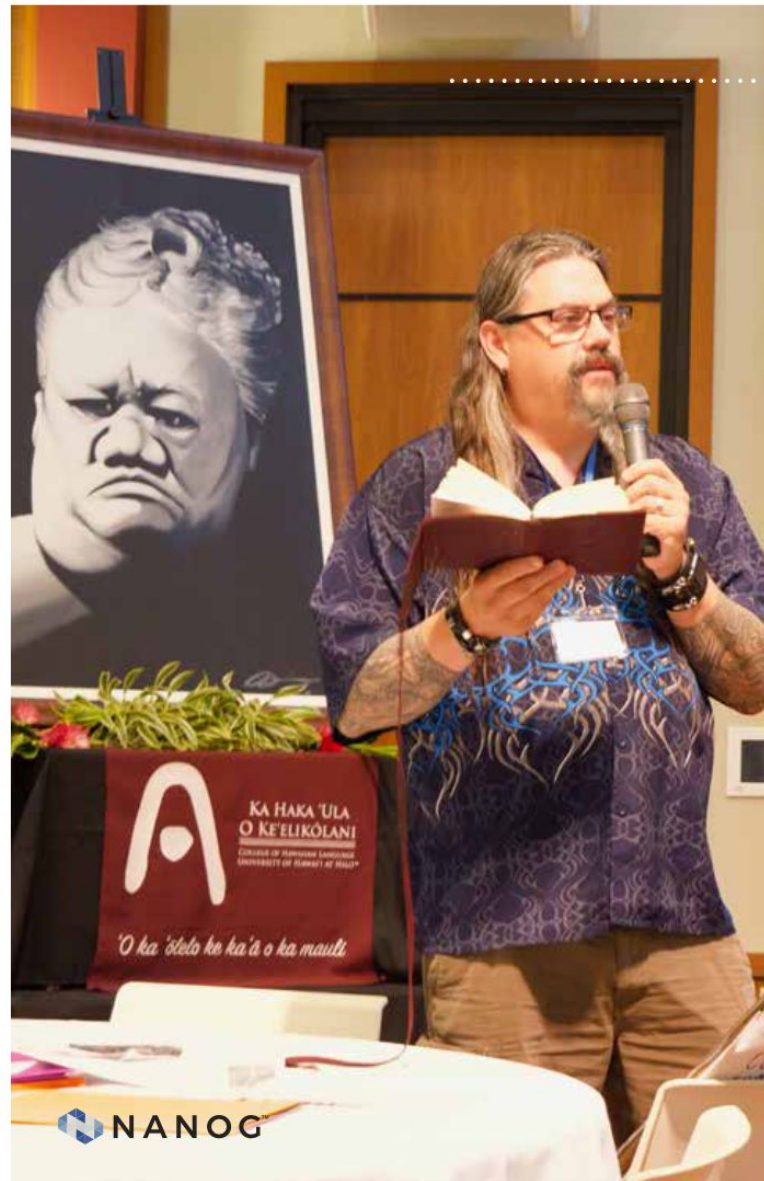
- Montgomery Chamber of Commerce
- Tech MGM
- MGMWERX
- Trenholm Air Force Base
- Auburn University at Montgomery
- Alabama State University
- Valiant Cross Academy
- Air Force University
- Air University Wargaming Institute
- Booker T. Washington Magnet High School



A photograph of a large crowd of people at a conference or event. The scene is viewed from behind a person in the foreground, who is wearing a black t-shirt with a white graphic of a person's head and shoulders, overlaid with a network diagram. The t-shirt also has text: '2019 INDIGENOUS CONNECTIVITY SUMMIT' and 'HAWAII HAWAII'. The crowd is moving through a brightly lit hallway with large windows at the end. The text 'NANOG Outreach' is overlaid in large white letters across the center of the image.

NANOG Outreach

Increasing access to our tools, resources, and programming



ISOC Indigenous Connectivity Summit

November 12-15 / Hilo, Hawaii

Two days of technical training centered on building the skills and capacity needed to launch a community network, followed by a conference focused on building partnerships, advocating regulatory changes, and sharing success stories of community networks across North America.

Nonprofit orgs within NANOG's Internet ecosystem

Representatives from NANOG gathered at the annual meetings of three like-minded organizations in our community who are dedicated to supporting networking engineering, operations, and architecture.

RIPE 78: May 20-24, 2019

IETF 105: July 16-20, 2019

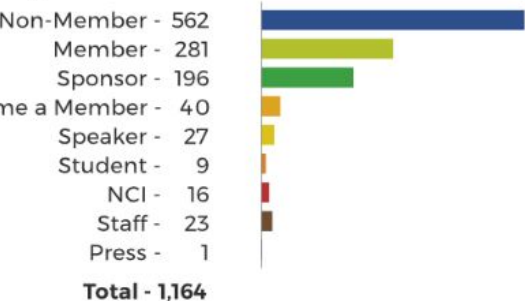
ICANN 66: November 3-8, 2019

NANOG Meetings

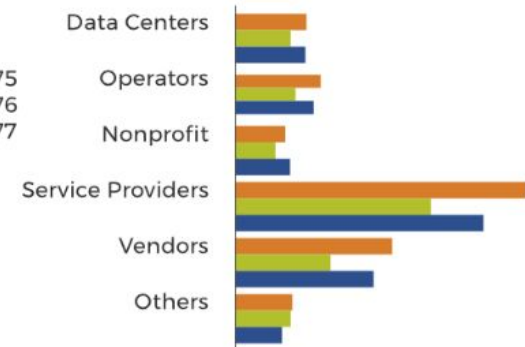
Gathering with the North American networking community



Registration

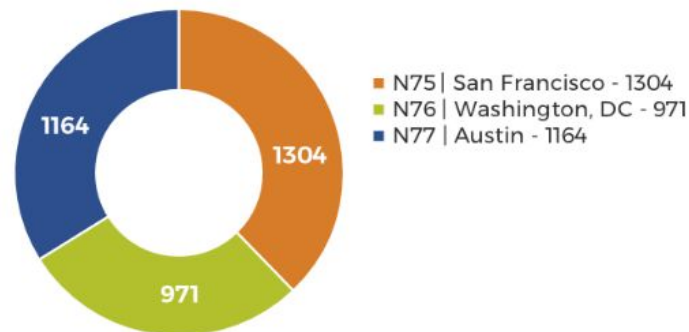


Registration by Organization Type

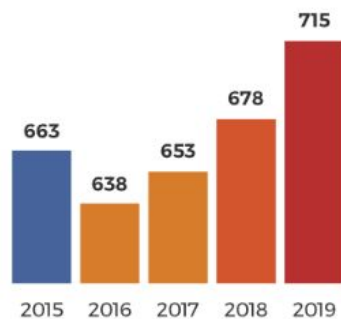


2019 NANOG MEETINGS, AT A GLANCE

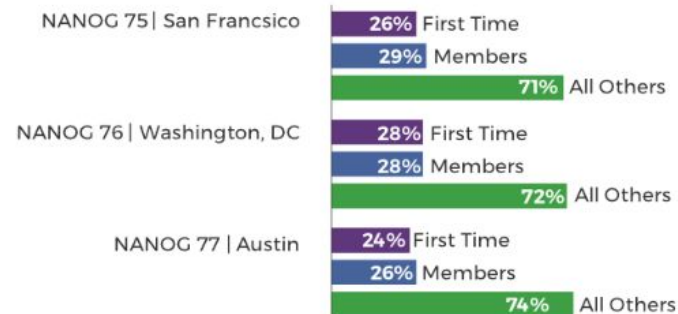
2019 Meeting Attendance



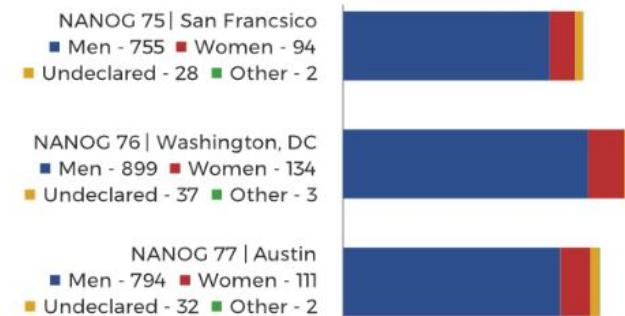
Membership Trend



2019 Meeting Attendance



2019 Meeting Attendance by Gender



NANOG 77 - Austin, TX

Community-wide gathering was held October 28-30 2019, in the JW Marriott in Austin. The NANOG 77 Hackathon took place on October 27, 2019.

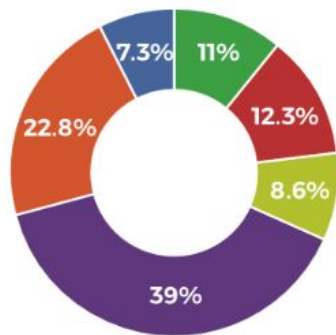
1,164
TOTAL ATTENDEES

364
MEMBER REGISTRATIONS

9
STUDENT REGISTRATIONS

37
SPEAKERS

NANOG 77 Organizational Demographics

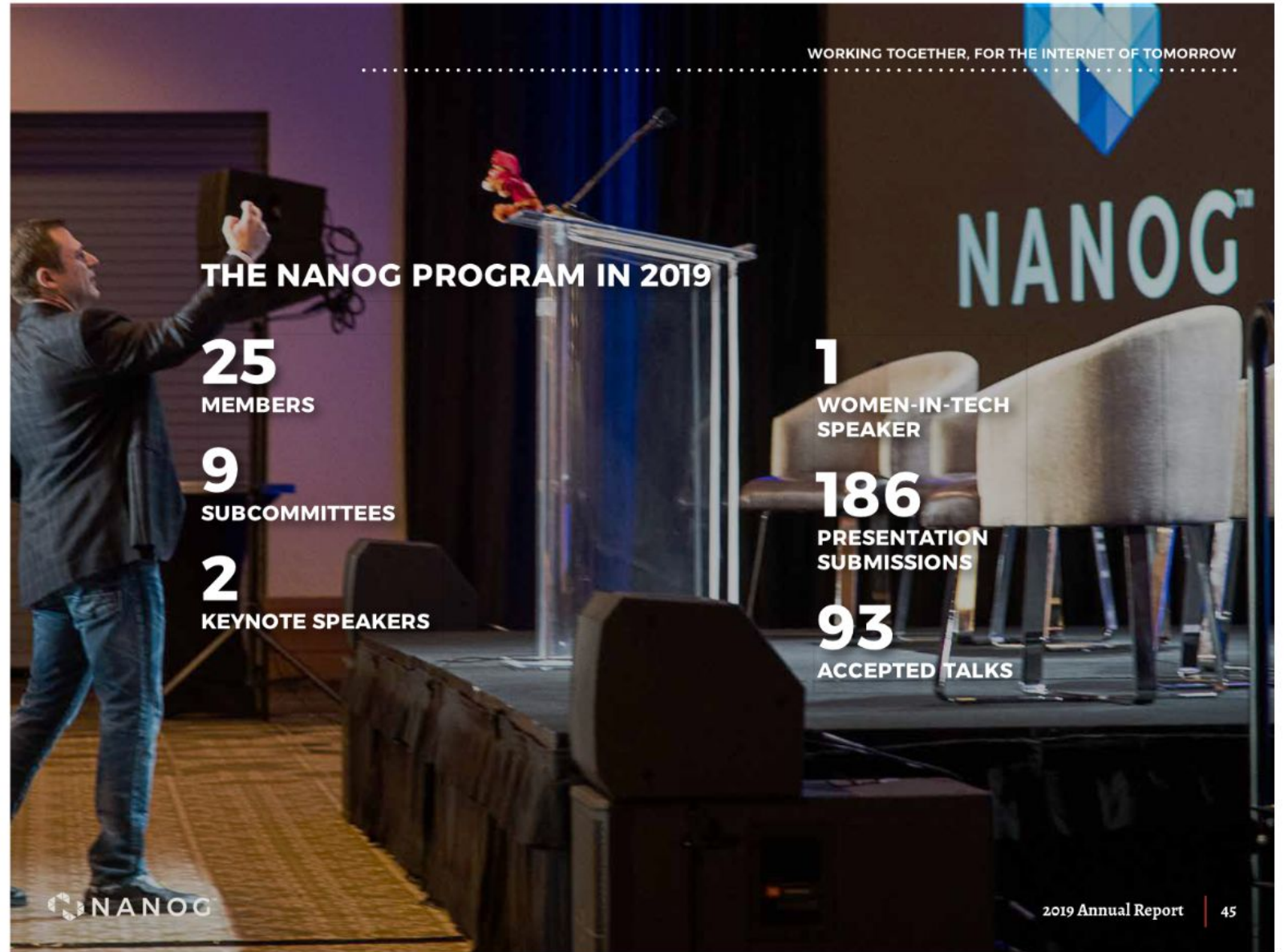


- Data Center/Colocation - 11%
- IX Operator/Network Operator - 12.3%
- Non Profit (Gov't/Education/Research/Organization/RIR) Service - 8.6%
- Provider (Cloud/Internet/Content/Consulting) - 39%
- Vendor (Equipment/Software/WebServerHosting) - 22.8%
- Other - 7.3%

Organizations with greatest attendance

- Juniper - 29
- NTT - 29
- Verizon - 24
- Ciena - 19
- Nokia - 8
- ARIN - 16
- Facebook - 16





THE NANOG PROGRAM IN 2019

25
MEMBERS

9
SUBCOMMITTEES

2
KEYNOTE SPEAKERS

1
WOMEN-IN-TECH
SPEAKER

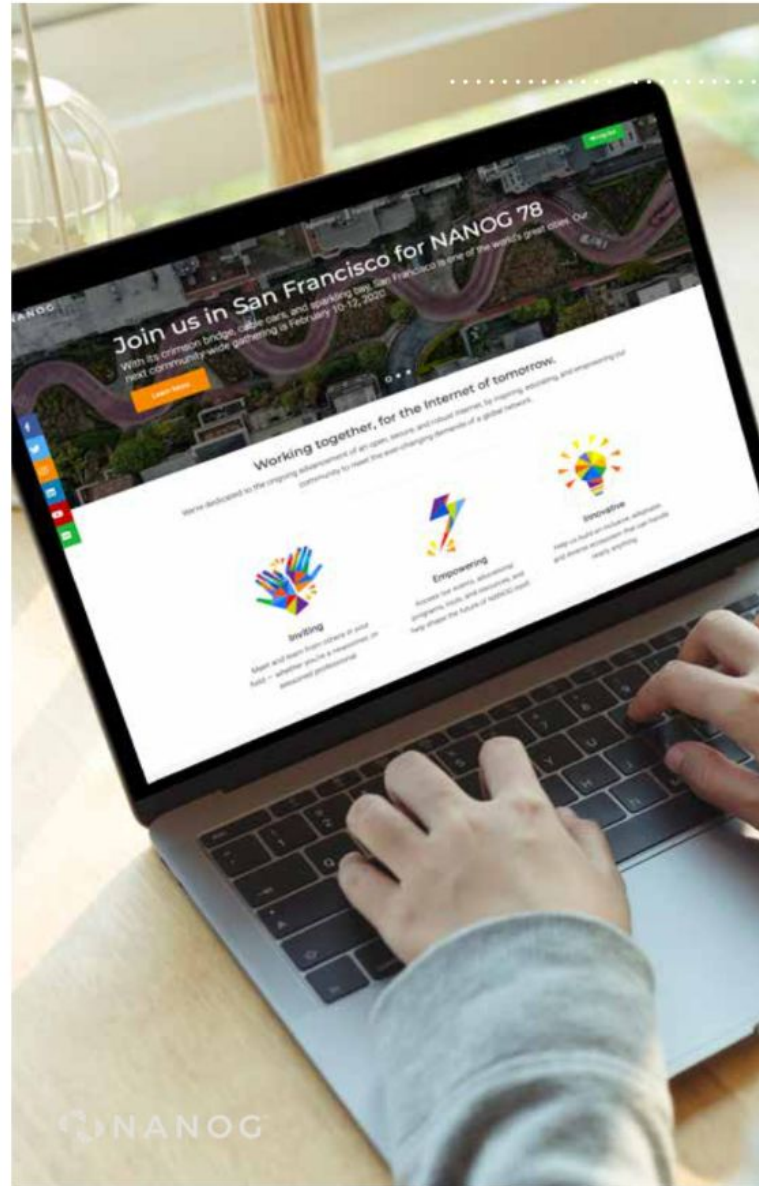
186
PRESENTATION
SUBMISSIONS

93
ACCEPTED TALKS



NANOG Identity, Marketing, Social Media

Engaging new audiences and inspiring change



NANOG.ORG

Developed a digital marketing strategy to boost SEO, increase brand awareness, and drive further engagement on NANOG website + social media channels:

- 14 new features since June, 2019
- New content 2-4 times per month
- Ongoing updates to NANOG News feed
- Press release creation and dissemination

Users since launch in June, 2019

35,095

Total page views

125,955

Users per month

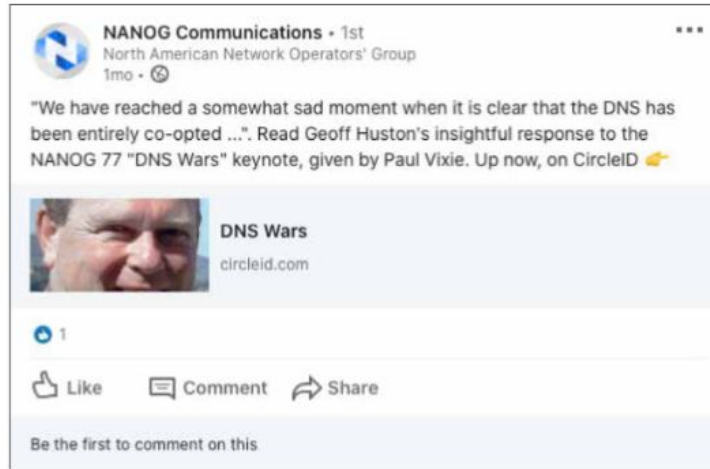
7,786

Page views per month

25,659



LinkedIn



1,123
NEW FOLLOWERS
2,300
TOTAL





NANOG Sponsorship

Forming partnerships to empower and inspire

Statement of Activities

December 31, 2019

Operating Activities:

Membership Dues	66,276
Sponsorship	1,864,766
Grants	1,696,627
Programs Income	45,000
Investment and Dividend Income	113,393
Sponsorship	68,400
Revenues	<u>\$3,854,462</u>

Services Expense	
Programs	2,604,099
Program Expense	662,508
Program Expense	<u>\$3,266,607</u>

Service Expense	
Management and General	572,503
Liabilities and Net Assets	<u>\$572,503</u>

Expenses	<u>\$3,839,110</u>
Net Assets from Operating Activities	145,352

Investing Activities

Investment Return	202,706
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Net Assets	<u>218,058</u>
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Beginning	<u>4,397,055</u>
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Ending	<u>\$4,615,113</u>
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FORMING PARTNERSHIPS TO EMPOWER AND INSPIRE

By working directly with like-minded companies, organizations, and educational institutions to help support NANOG's tri-annual conferences, special events, outreach programs, and initiatives dedicated to education and professional development.

Over the past year, we introduced new tools + restructured the sponsorship program to create greater clarity and ensure seamless event-planning for our partners.

NANOG SPONSORSHIP IN 2019

\$1,895,766
Dollars In Sponsorship Support

5
Platinum

+ \$3,401
Since 2018

24
Beer 'N Gear

157
Sponsorship Partners

2
New Ways to Sponsor:
Women + Diversity In Tech Lunch
Network Lounge

16
New Sponsors



NANOG Financials

Committing to greater openness and transparency

*You have to be able to
imagine positive solutions
and build them.*

— Mitchell Baker
CEO, Mozilla Corp



COMMITTING TO GREATER OPENNESS AND TRANSPARENCY

NANOG is dedicated to providing an enjoyable and educational experience for everyone in our community, including the NANOG staff and volunteers.

Ethical transparency is also critical to our core values as a nonprofit organization. We believe that all members of our community should have a clear view of how NANOG operates, and the opportunity to play a role in our continued evolution.

Over the past year, we made significant improvements to accounting and human tools + resources, including:

- Hiring a full-time staff member dedicated to accounting and HR — who also serves as a liaison to the NANOG BoD — to help ensure we remain open, transparent, and profitable.
- Creation of a unique Meeting Data Tool to help us forecast trends, better determine our organizational health, and provide greater transparency to our community.

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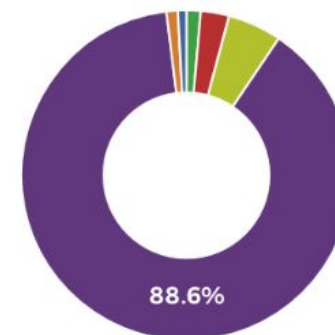
FINANCIAL HIGHLIGHTS

These financials reflect the improved process, resulting in more practical, informative, yet easy to follow reports.

2019 Financial Highlights

- Sponsorship Income: \$1,945,766
- Registration Income: \$1,696,627
- For the last 2 years registration income represented 47% of Total income
- Savings and Investments: \$4,774,547
- Fidelity investments are conservative (mostly corporate bonds and dividend stocks)

2019 Revenue



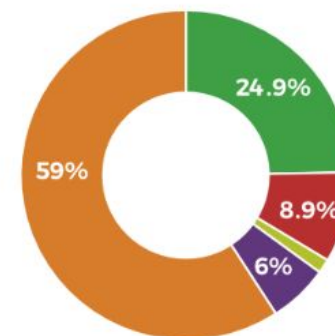
- Membership - 1.6%
- Dividends - 2.8%
- Investments - 5.1%
- Meeting - 88.6%
- Program - 1.1%
- Donations and Interest - .8%

Total Revenues: \$4,057,168

Total Expenses: \$3,839,110

Change in Net Assets: \$218,058

2019 Expenses



- Salaries - 24.9%
- Overhead - 8.9%
- Scholarships - 1.3%
- Programs - 6%
- Meeting - 59%
- Donations and Interest - .8%



Amplifying the voices in our community

NANOG Stories + NANOG TV

NANOG Stories

Stories featuring our dynamic community: nanog.org/stories

Promoting diversity + access in Internet tech:

<https://www.nanog.org/stories/diversity-and-access-internet-tech>

Making the most of a virtual conference:

<https://www.nanog.org/stories/ten-tips-virtual-conference>

The 'cyber warrior' for Tribal broadband who's helping transform Indian Country:

<https://nanog.org/stories/tribal-broadband-access>

NANOG TV

Hours of curated presentations on the latest Internet technologies + industry best practices, all in one place:

Top Talks: The most-watched videos on NANOG's YouTube Channel.

Working From Home: A series of presentations + panels to keep you inspired.

From the Archives: Throwback to presentations from NANOG 16 and beyond.



FEEDBACK



Community Feedback

Our success depends on the collective expertise of the NANOG community to help direct and shape the organization in service of our mission.

We'd love to hear your insights, ideas, or concerns. Share yours at:

feedback@nanog.org





Thank you

NANOG Bylaw Change - Special Election (Board Terms)



Key Dates

- **June 15 Announcement on Website and Member Mailing List**
- **July 20-22 Voting will be open**
- **July 23 Results will be announced**



Program Review & Closing

Vincent Celindro

NANOG Program Committee Chair

N79 Program Review

- 20 Talks
 - 2 Keynotes - Tom Daly and Scott Bradner
 - 2 Panels - Networks' response to Covid-19, and RPKI
 - 16 Talks - New technology, security, automation, and more
 - Return of BoFs at N79

- PC Reviewed 53 talks - some we will see at NANOG 80!

N79 Considerations

- Remote-only meeting
 - Abridged program – mitigating distractions
 - Keeping sessions to 60 min
 - Tutorials – 90-120 min?
 - Time-zone differences + total daily program length

NANOG - Remote Participation

- Remote participation component going forward
 - Both attendees and speakers will be able to participate remotely
 - Opens the door to wider audience, more speakers and content
 - 3 speakers gave presentations for N79 while being international
 - Format evolving, multiple tracks, what would you like to see
 - Return to in-person conferences -> hybrid mix
- Feedback & Surveys
- Submit your talk now for a future NANOG

Questions & Answers

Thanks to our NANOG 79 Virtual Host

The logo features the acronym 'ARIN' in a large, white, serif font. A horizontal teal bar with a slight gradient and a soft glow passes behind the letters. Below the acronym, the full name 'American Registry for Internet Numbers' is written in a smaller, white, sans-serif font. The entire logo is centered on a dark blue background that features a faint, dotted globe pattern.

ARIN
American Registry for Internet Numbers

Thanks to our Diamond, Platinum, and Gold Sponsors

fastly[®]

aws

ciena


EQUINIX

 **kentik**

ORACLE
Cloud Infrastructure

QTS RICHMOND
NAP

Telstra


VERISIGN

Thanks to our NANOG 79 Exhibitors



Special Thanks to

- NANOG members
- Board of Directors and Program Committee
- Staff: Valerie Wittkop, Dé Harvey, Shawn Winstead, Leigh Brooks, Claudia Bristol, and Brandi Herrera
- Contractors: Digitell, Inc.
- HGMP – Allison Renard, Kristen Perry, and Michelle Lee

See you in October

