

A large crowd of people is gathered in a modern conference hall. The ceiling features a complex arrangement of circular and rectangular light fixtures. People are seen interacting, some looking at displays or talking in small groups. The atmosphere appears busy and professional.

# Open Source Summit & Embedded Linux Conference North America 2019

Event Report

**August 21 - 23, 2019**  
**San Diego, CA**





For the first time ever, Open Source Summit & Embedded Linux Conference joined together in North America in 2019. This year's combined events gathered more than **1800** developers and technologists from **nearly 900** organizations in **48** countries around the globe.

2019 attracted a strong mix of professionals from across the open source ecosystem. Developers comprised more than a **third** of 2019 attendees with an **additional quarter** of attendees identifying as executives, technical managers, architects, and system administrators. Overall, **65% of attendees were in technical positions**.

We welcomed attendees from nearly **50** countries with nearly **79%** hailing from the United States, Canada, and Mexico.

Of attendees surveyed, **more than 34% attend only one conference annually**, while **52%** attend 4 or fewer conferences a year, making OSS + ELC NA a valuable place to connect with this audience.

**96% of attendees surveyed said that this year's event was a valuable use of their time.**





## Exceptional Content

Featuring **275+** breakout sessions and keynote sessions, OSS + ELC NA delivered top-notch content across numerous critical and emerging open source technologies and topics including Automating Compliance, Diversity Empowerment, Linux Systems, Networking & Edge, Open AI, Cloud Native, Open Source in Gaming, OpenIoT, Open Source Program Management, and more.

This year's call for proposals drew **623** submissions, nearly 100 submissions more than 2018, giving the program committee the challenging job of selecting talks, but providing tier 1 content across the board for attendees.

Beyond keynotes and conference sessions, OSS & ELC 2019 featured:

- 9 Lightning talks
- 4 Tutorial Sessions
- 27 Workshops
- 16 Birds of a Feather sessions
- 10 Speaker Office Hour sessions
- 20 Co-located events

## Sponsor Showcase

In addition to content provided by industry leaders, OSS + ELC NA hosted a bustling sponsor showcase featuring over **45** sponsor booths, interactive demos and an Embedded Linux technical showcase where embedded developers shared Linux software and techniques.

Attendees filled the showcase each day to learn about the latest projects and products and interact with other community members, and **9 out of 10 attendees surveyed indicated that they visited sponsor booths.**

The **average badge scans** sponsors collected was **94**, with the highest scans at **442**.



## Diversity

**23% of speakers at OSSNA 2019 identified as women or non-binary**, a slight drop from 25% in 2018. For ELCNA, **16%** of speakers identified as women or non-binary, an increase from ELCNA 2018 at 8%.

**Women and non-binary individuals comprised 21% of OSSNA attendees** this year, a small drop from 2018 which had 24%, but still an increase from 2017 at 18%. Our goal for 2020 is to have over 25% of our attendees identifying as women or non-binary.

**14%** of ELCNA attendees identified as women or non-binary, a small increase from 13% in 2018. We will be increasing efforts moving forward to help grow these numbers in 2020 and beyond.

## Community Support

To encourage and increase the participation of a diverse community, The Linux Foundation is pleased to offer diversity and need-based registration scholarships and travel funding to our conferences. For Open Source Summit & Embedded Linux Conference North America 2019 this year, we provided:

- **114** Diversity Scholarships
- **91** Need-Based Registration Scholarships
- Awarded **56** Travel Scholarships - **48** Diversity and **8** Needs-Based

In total, we funded \$118,061 in travel funding and registration scholarships.

## Even More Great Event Experiences

Beyond top-notch educational content, Open Source Summit & Embedded Linux Conference 2019 offered a plethora of activities designed to connect and strengthen our community and attendees' experiences, including the:

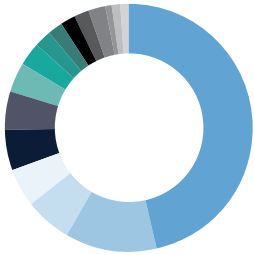
- First-time Attendee Breakfast, which attracted **188** attendees new to Open Source Summit who connected with one another as well as long-time OSS attendees.
- Better Together Diversity Social, which welcomed over **40** underrepresented minorities in tech, including women, people of color, LGBTQA+, and people with disabilities; we will look to hold this event at the main venue next year in order to increase attendance.
- Women in Open Source lunch, where over **125** women attendees were able to meet and share stories of their experiences in the Open Source community.
- Speed Networking & Mentoring session which enabled more than **27** attendees to learn from and discuss professional goals and challenges with **12** veterans and leaders in the open source community who served as mentors.
- Kid's Day saw over **20** youths from local organizations join in on a 4 hour course designed as an introduction to the fun and magic of web design.
- Attendees booked **166** meetings through our networking app onsite.

## Save The Date for 2020

**Open Source Summit & Embedded Linux Conference 2020 will be held in Austin, TX, June 22 - 24, 2020.**

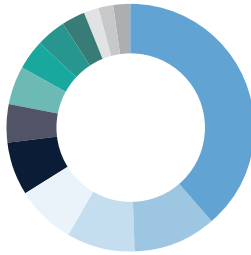


## Open Source Summit & Embedded Linux Conference Demographics



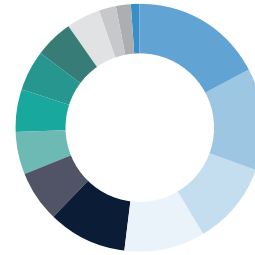
### Industry

- Software / Internet **46%**
- Computer Hardware or Consumer Electronics **12%**
- Internet & Web Services **6%**
- Education / Research **5%**
- Telecommunications **5%**
- Other **5%**
- Aerospace / Defense **4%**
- Media / Publishing **3%**
- Industrial Manufacturing & Machinery **2%**
- Government **2%**
- Healthcare / Medical Devices / Rx **2%**
- Automotive / Transport **2%**
- Carriers / Telecommunications **2%**
- Retail / E-Commerce **1%**
- Energy **1%**
- Transportation / Logistics / Warehousing **1%**



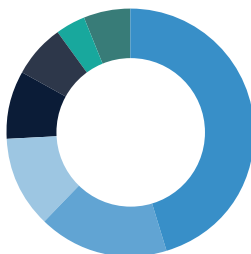
### Job Function

- Developer **39%**
- Architecture **11%**
- Sales/Marketing/Business Development **9%**
- Executive Management (VP/CxO) **8%**
- Other **7%**
- Student **5%**
- IT Operations - DevOps **5%**
- Product Management **4%**
- Program Office Leader **4%**
- IT Operations - Sys Admin **3%**
- Media/Analyst **2%**
- Professor/Academic **2%**
- Legal / Compliance **2%**



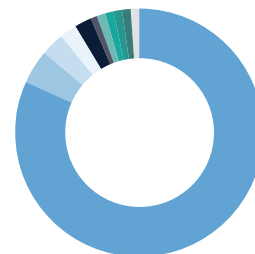
### Interests

- Linux **72%**
- Cloud & Containers **56%**
- Security & Compliance **45%**
- Networking **44%**
- Automotive, Embedded & IoT **43%**
- Blockchain & Data **28%**
- Community & Program Office Managemnet **23%**
- Javascript & Web Platforms **23%**
- Edge **22%**
- Deep Learning **21%**
- AL, ML, & DL **18%**
- Energy **10%**
- Motion Picture **8%**
- Other **4%**



### Job Level

- Individual Contributor **46%**
- Manager **17%**
- Director **12%**
- Other **9%**
- Academic **7%**
- VP / SVP / GM **4%**
- CXO/ED **6%**



### Country

- United States **77%**
- Canada **4%**
- India **3%**
- Japan **2%**
- United Kingdom **2%**
- Germany **1%**
- Isreal **1%**
- France **1%**
- South Korea **1%**
- China **1%**
- Mexico **1%**

- **1808** Attendees
- Attendees from **48** countries
- **79%** of attendees from the United States, Canada, and Mexico
- Women and non-binary individuals comprised nearly **a quarter** of attendees
- **65%** of attendees in technical roles



## Videos & Photos

Videos: All event participants will be emailed a link and coupon code to use view keynote and conference session videos from the event. Keynote videos will also be posted on [The Linux Foundation Youtube Channel](#).

Event Photos: [www.flickr.com/photos/linuxfoundation/albums/72157710475662961](https://www.flickr.com/photos/linuxfoundation/albums/72157710475662961)

## Social Media Highlights

Coverage window spans Thursday, August 15 - Tuesday, August 27.

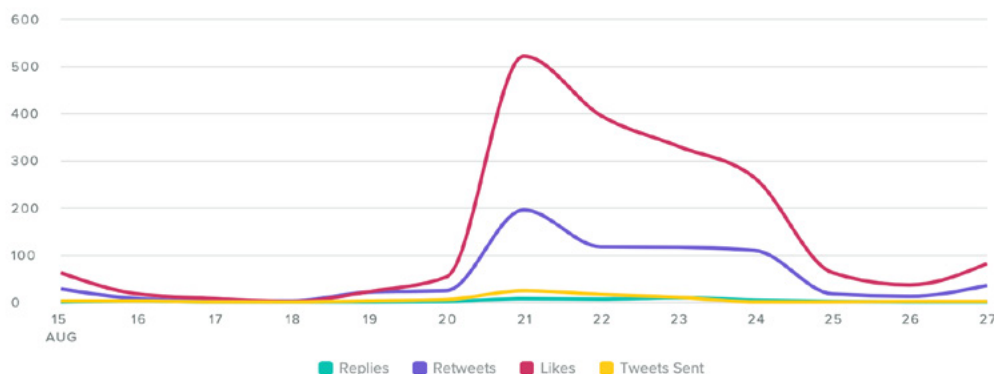
### Twitter:

- Impressions were driven by promotional content, including blog posts, news announcements, and live tweeting.
- The aggregate readership for OSS & ELC NA 2019 was **1,310,892,544** between online news and blogs.
- There were **2,042** total mentions on Twitter during the event coverage period.

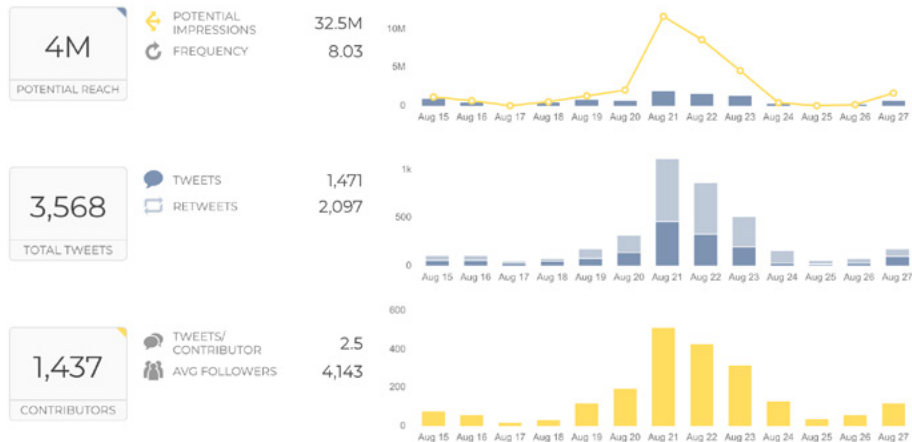
### Twitter engagement on @linuxfoundation spiked during Open Source Summit & Embedded Linux Conference 2019:

Twitter Engagement

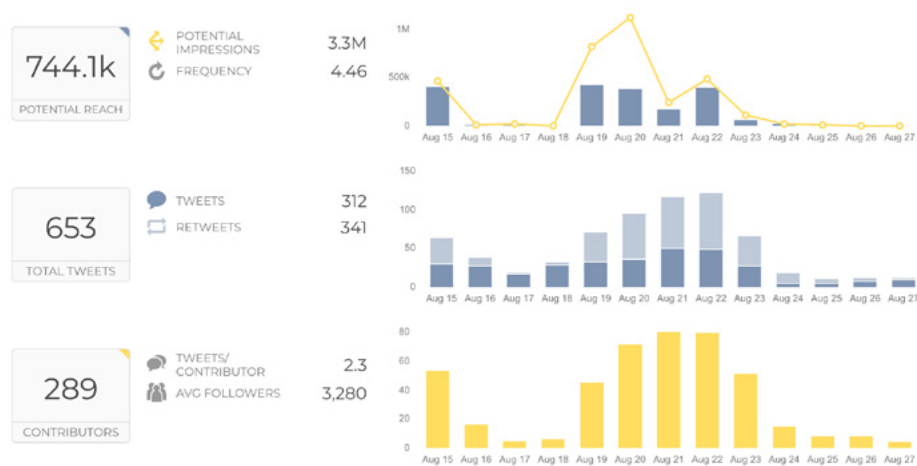
Engagement count




























## Engagement with #OSSummit during the event window (impressions, total tweets & contributors):



## Engagement with #lfelc during the event window (impressions, total tweets & contributors):



## Below were this year's most retweeted tweets.

	1 - 25 of 3,568 Tweets	TIME	RETWEETS ▼	REPLIES	POTENTIAL DIR. IMPRESSIONS	POTENTIAL AMP. IMPRESSIONS
	<b>The Linux Foundation</b> @linuxfoundation @gregkh notes OpenBSD was right. #ossummit Aug 23, 2019, 11:16 AM 		201	0	324.5k	499.5k
	<b>The Linux Foundation</b> @linuxfoundation NEWS: OpenPOWER Foundation will become a Linux Foundation project, expanding cross-community collaboration on open hardware and software: <a href="https://techcrunch.com/2019/08/20/ibm...">techcrunch.com/2019/08/20/ibm...</a> #ossummit Aug 21, 2019, 11:10 AM 		44	0	324.3k	522.7k
	<b>Anton Blanchard</b> @antonblanchard At the #OSSummit @OpenPOWERorg booth demoing #microwatt, our simple Open POWER ISA soft processor on a @Xilinxinc FPGA, connected to a @RaptorCompSys workstation Aug 21, 2019, 4:35 PM 		23	0	215	42.8k
	<b>Open at Microsoft</b> @OpenAtMicrosoft #OSSummit Announcement! @linuxfoundation, Microsoft, and several partners create the Confidential Computing Consortium to accelerate the adoption of confidential computing through open collaboration. Read the news>> <a href="https://msft.social/B1TC7t">msft.social/B1TC7t</a> Aug 21, 2019, 11:07 AM 		22	0	61.5k	426.6k
	<b>The Linux Foundation</b> @linuxfoundation Open Source Summit + ELC North America is this week - August 21 to 23 - and we hope to see you in San Diego! Can't attend? Sign up for the keynote live stream at <a href="https://bit.ly/opensource19">bit.ly/opensource19</a> #ossummit #lfc #opensource #Linux #IoT #AI #CloudNative Aug 19, 2019, 12:45 PM 		22	0	324.2k	415.4k
	<b>Chris Aniszczyk</b> @cra "Linux Foundation Forms the Confidential Computing Consortium to Protect Data in Use" #OSSummit <a href="https://thenewstack.io/linux-foundati...">thenewstack.io/linux-foundati...</a> Aug 21, 2019, 11:25 AM 		21	0	13.5k	82.5k
	<b>The Linux Foundation</b> @linuxfoundation The Linux Foundation Executive Director Jim Zemlin welcomes attendees to the Open Source Summit NA and kicks it off with a cool about Academy Software Foundation <a href="https://aswf.io">aswf.io</a> #ossummit Aug 21, 2019, 11:15 AM 		20	0	324.3k	451.9k
	<b>The Linux Foundation</b> @linuxfoundation Chris from Red Hat clarifies the important differences between open source projects and products. Entering new stage of open source. #ossummit Aug 21, 2019, 12:38 PM 		17	0	324.3k	351.8k
	<b>Christian Brauner</b> @brau_ner Slides for my "New Container Kernel Features" talk at #OSSummit are up: <a href="https://brauner.github.io/img/2019_oss...">brauner.github.io/img/2019_oss...</a> Aug 26, 2019, 10:31 AM 		15	0	360	26.6k
	<b>The Linux Foundation</b> @linuxfoundation @thelinuxfoundation recognizes Jilayne Lovejoy for building bridges between open source developers and the legal community. Thank you Jilayne! #ossummit Aug 21, 2019, 11:50 AM 		14	0	324.3k	356.1k
	<b>The Linux Foundation</b> @linuxfoundation Cheryl Hung, Director of Ecosystem, Cloud Native Computing Foundation @oicheryl @CloudNativeFdn #ossummit - incredible momentum, but much more to come! 40% of companies don't even run 10% of their containers in production. Aug 22, 2019, 11:35 AM  <a href="#">View Report</a>		14	0	324.4k	434.2k
	<b>Cheryl Hung</b> @oicheryl Open source is as much about communicating well as it is about code. #OSSummit Aug 22, 2019, 4:19 PM 		13	0	1,631	21.5k



**Facebook:** The Linux Foundation's Facebook account achieved over **900** engagements during the event window, and there were nearly **200,000** post impressions to The Linux Foundation Facebook page during the same window.

**LinkedIn:** The Linux Foundation's LinkedIn followers increased by **2,087** users during the window, and we achieved nearly **80,000** impressions.

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## Media & Analyst Results

As awareness and excitement swell around open source as the new norm, press and analysts are eager to attend the event. Thanks to news announcements from The Linux Foundation, its projects and event sponsors, Open Source Summit + Embedded Linux Conference saw **1,695** media clips during the events window.

We welcomed **The New Stack**, **Light Reading**, **TFIR.io**, **LWN.net**, **Linux Today**, **SDxCentral**, and **TechTarget** to the event, which proved effective in producing a steady stream of coverage during the event, and continues afterward. Important tech and open source reporters including Paul Krill of InfoWorld, Stephen Belanger & Al Gillen of IDC, Dan Meyer of SDX Central, Alex Williams of The New Stack and Steven Vaughan-Nichols of ZDNet were in attendance to cover the event.

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## Media Highlights

Find just a few media highlights from this year's event below.

**Appuals** - [Confidential Computing By Linux Foundation Gets Backing From Biggest Tech Companies To Encrypt Data In Transit](#)

**BetaNews** - [IBM extends its commitment to open hardware](#)

**BetaNews** - [Microsoft and others join the Linux Foundation's Confidential Computing Consortium](#)

**Channel Futures** - [How the Linux Foundation Can Help Channel Partners Gain More Business](#)

**Data Center Knowledge** - [How Storj Is Building a Storage Cloud Without Owning a Single Disk](#)

**Data Center Knowledge** - [IBM Open Sources Its Workhorse Power Chip Architecture](#)

**FossBytes** - [Google, Microsoft, Intel Join Hands With Linux Foundation To Protect Your Data](#)

**Info Security** - [#OSSUMMIT: Confidential Computing Consortium Takes Shape to Enable Secure Collaboration](#)

**Info Security** - [#OSSummit: Don't Ignore GitHub Security Alerts](#)

**Info Security** - [#OSSummit: Linux Continues to Pay the Price for CPU Hardware Vulnerabilities](#)

**Info Security** - [#OSSummit: Seven Properties of Highly Secure IoT](#)

**Investor Place** - [Is it Time to Start Buying IBM Stock?](#)

**Phoronix** - [Intel Shares Highlights From Their 2019 Open-Source Technology Summit](#)

**Phoronix** - [Open-Source GPU Drivers For Embedded Have Been Improving But RE'ing Take A While](#)

**Phoronix** - [The Linux Foundation, Intel & Co Form The Confidential Computing Consortium](#)

**SDXCenral** - [Can a Composable Hypervisor Re-Imagine Virtualization?](#)

**SDX Central** - [How Will Open Source Deal With Success?](#)

**Slashdot** - [Some Original Berkeley Unix Pioneers Still Work On The FreeBSD Project](#)

**TechTarget** - [IBM Power chip instruction set now open source](#)

**The New Stack** - [Linux Foundation Forms the Confidential Computing Consortium to Protect Data In Use](#)

**Toolbox** - [IBM Introduces Power Instruction Set Architecture; Strengthens Commitment to Open Hardware Movement](#)

**ZDNet** - [IBM's Power-ful open source gift: China wins big, and these are the losers](#)



Don't take our word for it. See what attendees had to say about OSS + ELC NA 2019.

**VMware Open Source**  
@vmwopensource

We agree @sdxcentral, #OSSummit 2019 was a huge success! But they ask an important question & we look forward to helping answer it with the entire community.



How Will Open Source Deal With Success? - SdxCentral  
Last week's Open Source Summit event in San Diego was a brilliant display of the ecosystem's well-deserved success. But what's next?

9:00 AM - 3 Sep 2019

**Sethu Sathyan**  
@sethu

Here is my experience attending the Open Source Summit North America. [link.medium.com/y54r1ewPEZ](https://link.medium.com/y54r1ewPEZ) Thanks to @linuxfoundation for this opportunity. I had a lot of learnings, made new connections and found projects to contribute.



Open Source Summit North America 2019  
I am absolutely thrilled to share that I got the opportunity to attend the Open Source Summit + Embedded Linux Conference by the Linux...

8:57 AM - 2 Sep 2019

**Jill Bryant Ryniker**  
@jbr\_rnrgnt

The LinuxChix LA had a wonderful time at #OSSummit in San Diego!!! Thank you to the @linuxfoundation for such a great event and to all the wonderful people we met and had great conversations with!!! 🥰🥰🥰 @smichelleism @NicoleCasares



12:28 PM - 25 Aug 2019 from Temecula, CA

**Jono Bacon**  
@jono Bacon

Safe travels home, #OSSummit, folks. As usual, always a wonderful time seeing you all. Thanks again to the @linuxfoundation team and the program chairs for all the hard work. Until Lyon!

3:28 PM - 23 Aug 2019

**Nithya Ruff**  
@nithyaruff


One of my favorite events to see new possibilities and new industries adopting #opensource. The power of collaboration at work. Thank you @angelatlf and #OSSummit team!



3:00 PM - 24 Aug 2019

**Brian Redmond**  
@bchbgr71

Great week in San Diego at the #OSSummit with two talks about open source and the great work by the Azure team. Also great to have @SweetDees529 with me. We found some time for fun in San Diego too!



12:44 PM - 24 Aug 2019 from San Diego, CA

**Suzanne Ambiel**  
@suzanne\_ambiel

@vmwopensource fabulous team fabulous show! #ossummit thanks @linuxfoundation



7:50 PM - 23 Aug 2019

**George J.P. Link**  
@GeorgeJLink

I enjoyed a week of reconnecting with friends and making new friends at #OSSummit and #CHAOScon. Ethiopian dinner was a great way to put a cherry on top. Tomorrow, I fly back home to #Omaha.



9:14 PM - 23 Aug 2019

**Dr. Erik Riedel**  
@erikr


sad that I had to leave a few hours early, because it meant missing planned conversation with great #community friends, and unplanned meetings with lovely new folks - another excellent #OSSummit - looking forward to Lyon and Austin



6:28 PM - 23 Aug 2019

**Imad Sousou**  
@imadsousou

Proud of our team at #ossummit NA this week. The confidential computing consortium launched [intel.ly/33Q4aB3](https://intel.ly/33Q4aB3) solid technical breakout sessions, keynotes and demos. Amazing to see the culmination of work across Intel and with our industry partners!



Intel Joins Industry Consortium to Accelerate Confidential Computing | Intel ...  
By Lori Wiegman in Information and Infrastructure security are well versed in protecting data at-rest or in-flight through a variety of methods.

4:14 PM - 23 Aug 2019

**Better Allies™**  
@betterallies

To be inclusive at our events, I'll borrow these ideas from #ossummit:

- Nursing Room
- Complimentary childcare
- Venue Accessibility
- Quiet Room
- All-Gender Restrooms
- Communication Stickers
- Pronoun Stickers

#Allyship #InclusionMatters



8:22 AM - 23 Aug 2019

**Anton Ruchkin**  
@anton\_ruchkin

Last day of #ossummit is up and running! This was a really neat event!



10:58 AM - 23 Aug 2019 from San Diego, CA

**Sean Kerner**  
@TechJournalist

What an amazing event from @linuxfoundation #ossummit



8:27 PM - 22 Aug 2019 from USS Midway Museum

**Tobie Langel** (Moderator) - Aug 24  
Online conference are the future. It's increasingly impossible to fly folks across the planet when half of it is on fire and the other half is melting. But the huge value of conference is the "hallway track." How do we replicate that online?

**Georg J.P. Link**  
@GeorgeJLink

Replying to @tobelangel

been thinking about this since joining @Bitergia. In @CHAOSsproj, I believe our weekly Zoom calls build trust. However, there is no serendipity. / Just last week at #OSSummit, I met many interesting people in sessions - the hallway track was useful to deepen our conversations.

11:18 AM - 27 Aug 2019

**Mariana Balla**  
@mariana\_balla

I knew that #OSSummit is going to be fun, but THIS IS NOT WHAT I EXPECTED TO SEE! 🥰🥰🥰 This was pawfect!



10:54 AM - 23 Aug 2019

**Lance Albertson**  
@lancealbertson

Had a great week at @OpenPOWERorg summit and #OSSummit ... Also happy to be home tonight

10:23 PM - 23 Aug 2019



# What Attendees Said

Don't take our word for it. See what attendees had to say about OSS + ELC NA 2019.

"It was my first time at OSS and it couldn't have been better. I was able to network with other people interested in my work. "

- MARIA IGNACIO

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The OSS was a blast! I was able to meet so many awesome people, learn about projects going on in the community, and attend several very informative talks. 10/10 would recommend!

- SAMANTHA COYLE

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As a newbie in the industry, I was definitely a bit intimidated before I attended OSS, but everyone from industry experts to students who attended the conference were so enthusiastic to share their knowledge that it turned my intimidation into a motivational factor! This is a must attend for people who want to learn and grow!

- VICTOR BASU

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During the "hallway track", I go out of my way to talk to people I've never met because most of us are introverts. I'm always impressed by what people are doing and it fills me with optimism and new ideas. -- KATHY GIORI, MOZILLA IOT

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OSS NA 2019 is amazing and mind blowing. I enjoyed every minute of it from the keynotes session, k8s session, cloud sessions, expo, USS Midway and of course, Kairan Quazi keynotes

- RAMESH KUMAR

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I really like the diversity in projects that are featured at the conference. It really shows how open source is changing so many industries around the world.

- ROBERT TREAT // XZILLA

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