

CHICAGO

MARCH 4-7

INTERNET2

2024
COMMUNITY
exchange

Deploying eduroam at a Statewide Level
eduroam Support Organizations and K12s

March 5, 2024



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Gabe Matney - Link Oregon
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Ryan Kocsondy - Connecticut Education Network

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- **eduroam overview, adding K12**
- **The eduroam Support Organization Program**
- **Participating States, Tales From the Trenches**
- **Q&A with Panel**

What is eduroam?

- Federated authentication service for global wireless access for the research and education community
- Participating institutions provide access to their wireless networks to users from other eduroam connected institutions.
- Users are authenticated by their home institutions.

The global eduroam community

- Created in the EU by and for education community
- Over 106 nations are part of the global eduroam community
- National Roaming Operators (NROs) manage the service in their country, cooperate internationally
- NROs ensure eduroam is secure and effective at home and across the world
- Internet2 is the NRO for the US

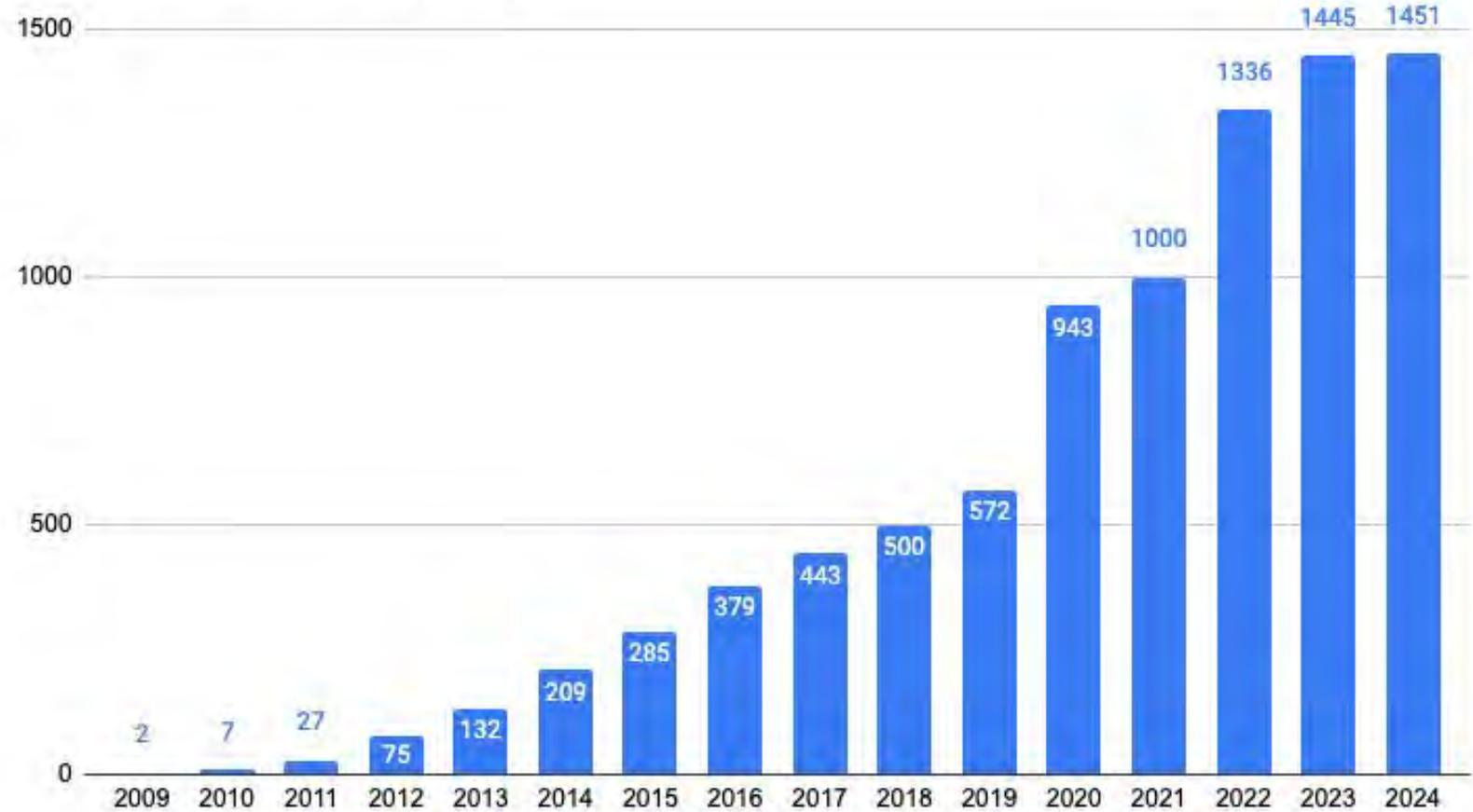




eduroam in the US

- Over 1,400 subscribers
- 3,300+ service locations in the US
 - *2nd highest number in the world!*
- 300+ K12s, libraries, museums

US eduroam Subscribers by Year



Why eduroam for K-12?



Benefits for RENs

- diversify the services you offer
- differentiate yourselves from commercial service providers
- create value for your community

Benefits for K12 community

- simplify network access
- professional development/conferences
- traveling activities - STEM competitions, athletics, debate teams...
- field trips
- dual enrollment students - access at community colleges, 4-years...
- shared instructors

eduroam Support Organization in a Nutshell

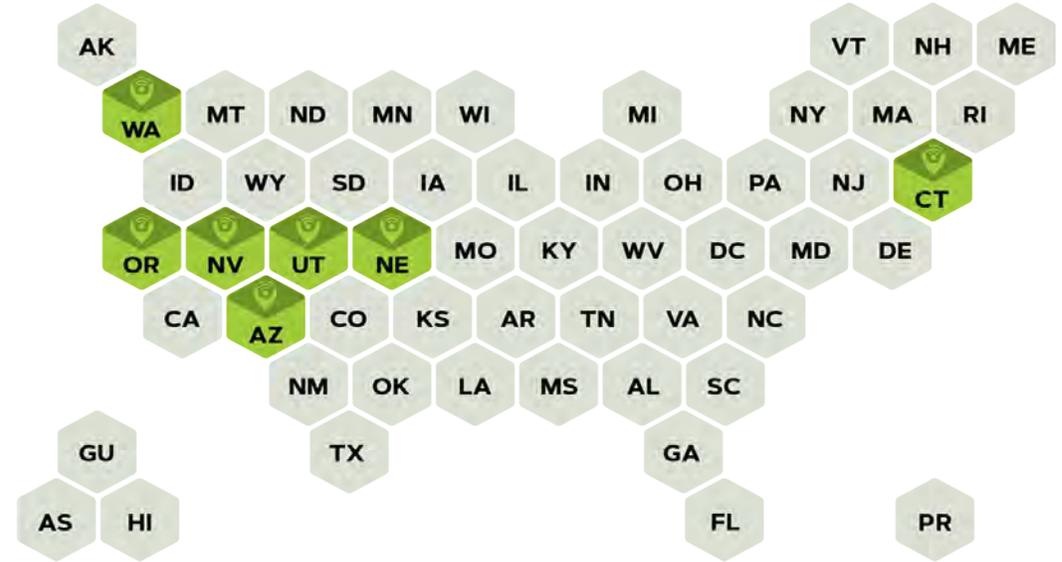


State-wide deployment of unlimited eduroam identity providers for K-12, museums, and libraries with “Hotspots” anywhere.

- REN or other organization serving K-12s in a state/region
- One agreement, single fee for all K-12s, libraries, and museums
 - Can add SP-Only “hotspots” without cost
- Takes on portions of service delivery
 - Provides first line of eduroam support to their constituents
 - Assists constituents in provisioning eduroam service
- Manages any contracting or invoicing of its constituents
- Only one eduroam Support Organization per state

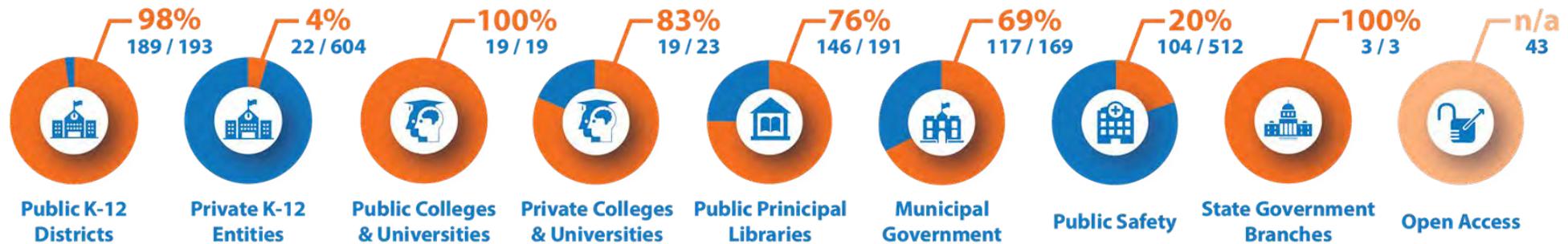
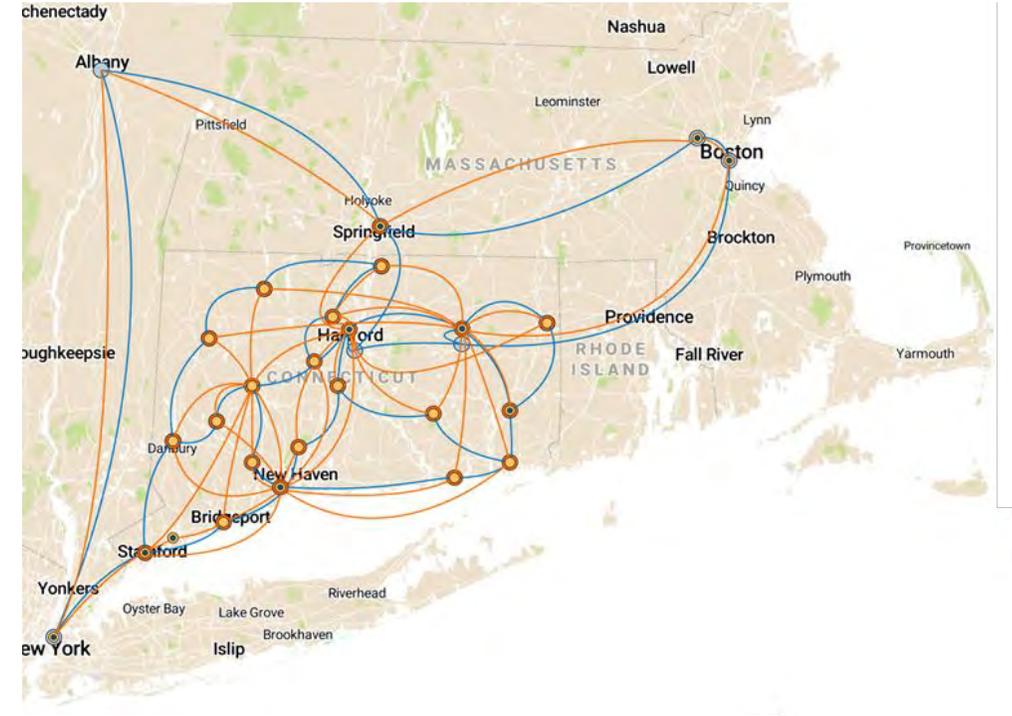
eduroam IN K-12 STATE NETWORKS

eduroam  available for K12



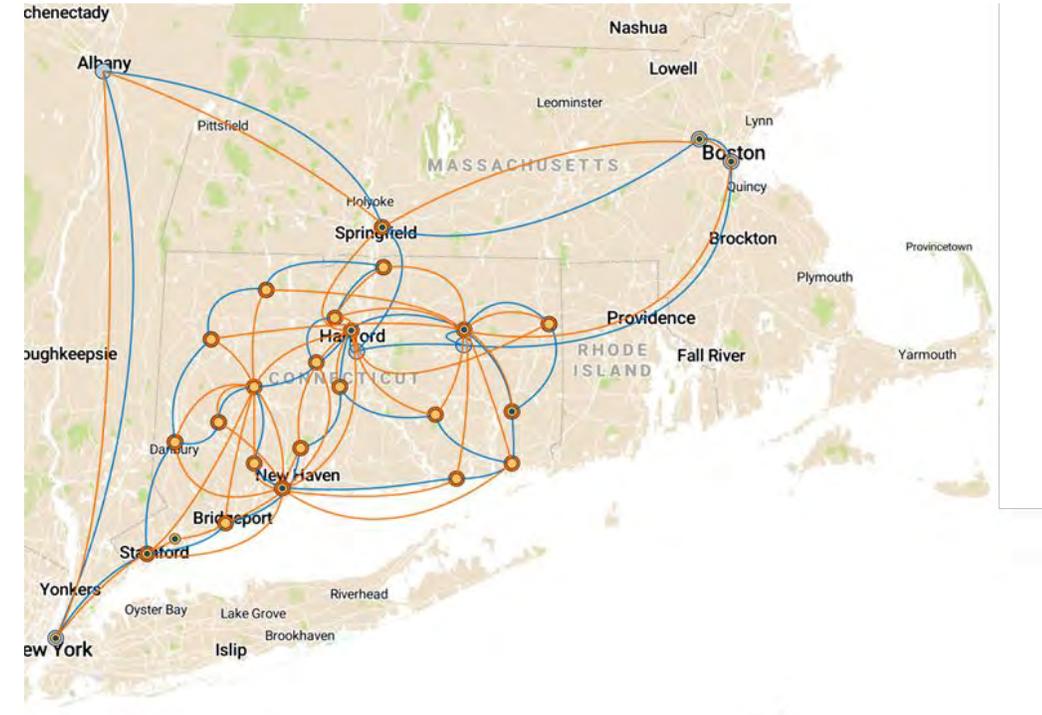


- Connecticut Education Network (CEN)
- Established in 2000
- Governed by the CET (<https://ct.gov/ctedtech>)
- State of CT owned, managed by UConn
- Main office in Hartford, CT
- CT's only Open-Access Middle Mile Network
- ~3500 Route miles of fiber
- Nation's first all optical network to connect every K-12 district (2005)



Recent wins

1. Completed transition to full eSO, moving support of existing districts under our team
2. Continued support of 3 initial school districts, 3 in process, engaging with new schools and other constituents.
3. Promoted eduroam to community, positioning the service as an important part of equity of access
4. Need to add to project team, bringing in existing networking and wireless experts to help with support and deployment





ConnectEd Nebraska

- Nebraska Department of Education
- State of Nebraska
- University of Nebraska
- ESU Coordinating Council

<https://connectednebraska.com/>



- Continued to update to ConnectEd Nebraska site with progress and information.
- Created multiple new marketing logos for stickers and window clings.
- Added 10 more public schools (164 total) and 2 private schools (3 total) in 2023.
- Inspired multiple community colleges to join eduroam (not directly related to the K-12 program). This helps with high schools that have cross programs with community colleges.
- Enable NDE (Nebraska Department of Education) as an IDP (not directly related to the K-12 program). This assists NDE employees that are teachers/specialists visiting schools.
- Ensured eduroam was available at multiple education related conference venues.
- Host regular technical successes with ESU partners.
- Multiple success stories from teachers and students.
- Multiple endeavors with ISP's. Including Cox Communication adding 600 hotspots in Nebraska, making it the state with the most eduroam hotspots.
- Added Omaha Public Library, which includes 13 branch locations across the Omaha metro area.

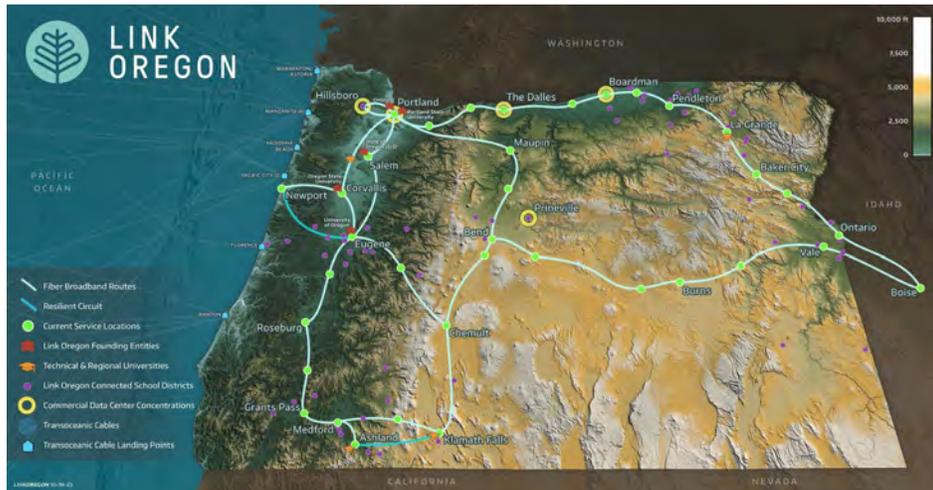
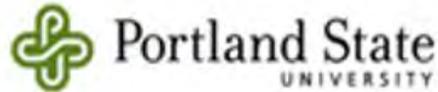




LINK OREGON

About Link Oregon

Link Oregon is a non-profit consortium founded in 2019 by Oregon’s four largest research universities and the State of Oregon through its Enterprise Information Services division.



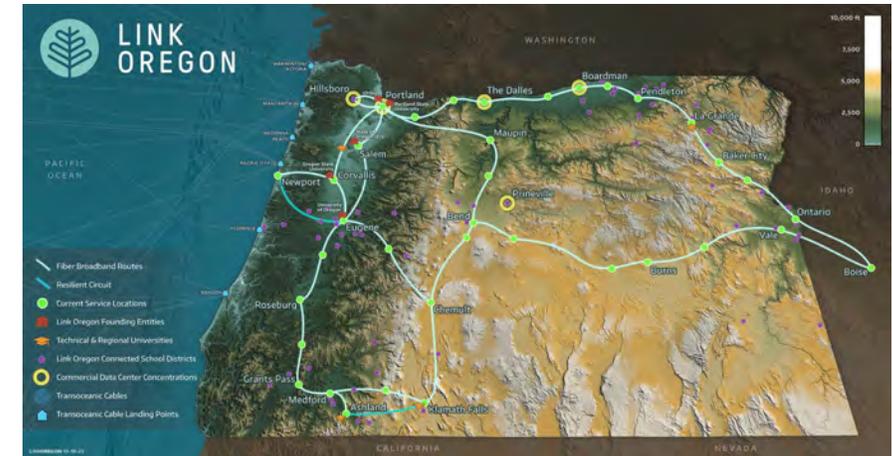
We are a member-based, middle-mile network backbone provider that supports K-12 & higher education, healthcare, libraries, Tribes, state & local governments, and other non-profit and public-sector entities.

Recent Wins



LINK
OREGON

1. Engaged a technical facilitator for the statewide project from a member Education Service District (ESD), to serve as a technical liaison between Internet2, Link Oregon, and the K12 community
2. Met biweekly with pilot team and Internet2 resources to provide support for the pilot eduroam implementation; successful deployment
3. Finalized a contract vehicle that aligns with our membership model and developed a sustainable financial model
4. Engaged additional ESDs to attend the in-depth SO training program in Feb 2024 and will onboard those ESDs in 2024

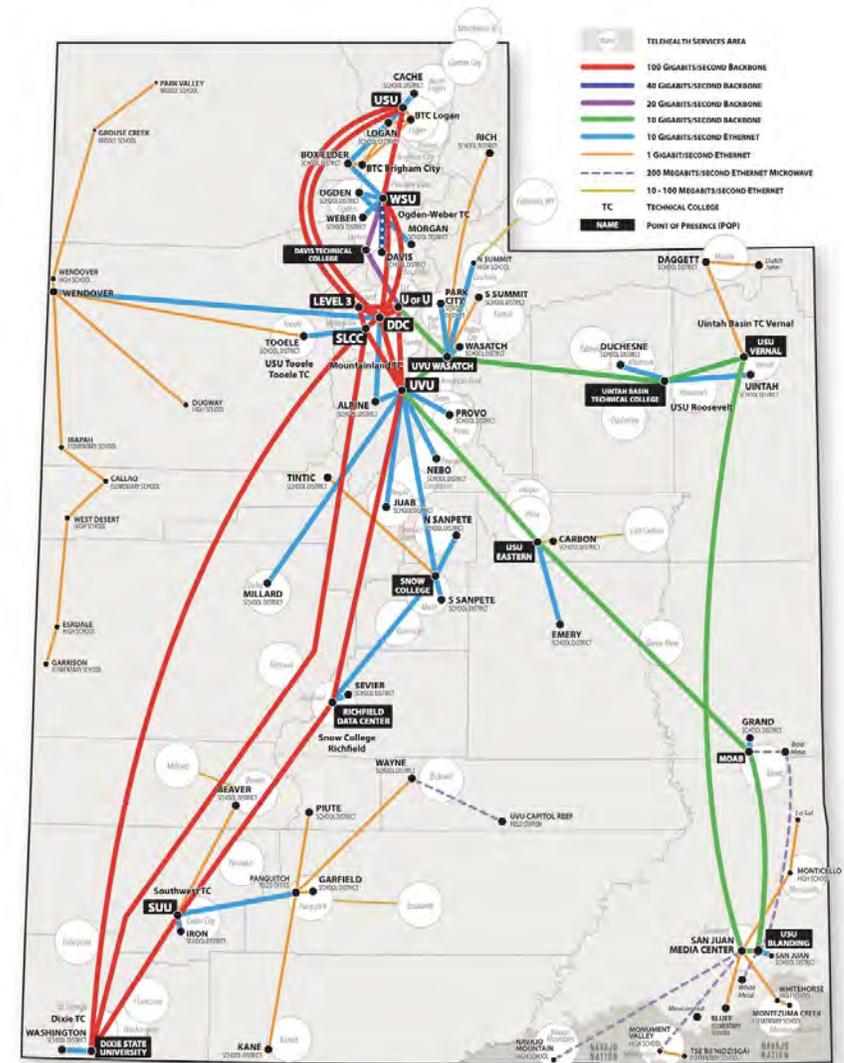


Who is UETN?

We connect people and technologies to improve education and healthcare in Utah.

<https://www.uen.org/tech/eduroam/>

UETN Infrastructure Map Connecting 1700+ locations throughout Utah



Last Updated January 25th, 2022 ~ 16 ~

Panel Question Time



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Cynthia Brown - Link Oregon

Ryan Kocsondy - Connecticut Education Network

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Thank you!

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Call for new eduroam Support Organizations opens soon!



Partners and Collaborators

- Higher Ed partners/sponsors
- Supporting public entities:
 - Rural schools coop
 - Rural broadband task force
 - Dept of transportation
 - State parks
 - DMV
- State legislature: telecom or education committees
- Education Service Districts and school districts
- REN Board of Directors (higher ed institutions CIOs; State CIO)
- Service providers
- *Anywhere learning happens and students, teachers, and/or administrators congregate (convention centers, etc.) congregate - grassroots engagement*



Trying out the eduroam Support Organization

The On-Ramp

- The On-ramp provides a set period of time for a limited trial of the program. **All fees are waived during the On-Ramp**
 - *On-Ramp period begins first week of May, runs through December 31st*
- On-ramp eSO signs the standard agreement and the On-Ramp amendment
- An On-Ramp eSO (regional network, state board of education, or similar entity) can enable up to 5 K12 districts
- When the next Cohort begins, the eSO joins as a full participant
 - *Can also choose to end the Agreement and shut down the 5 IdP/SPs*



eduroam Support Organization program



Program timeline



Privacy, content filtering - our experience with K12s

- Routing of requests is done based on a user's institution, not based on user's identity
- Users are authenticated at home, not where they visit
- Users know the wifi they're connecting to is part of their community, hotspot operators know the users are part of theirs
- "Bad actors" can only be identified by coordinating with their home institution
 - Typically institutions are responsible for following up with those users
- eduroam pairs well with commonly used content filtering approaches for K12
 - School network filters for local users
 - Enabling eduroam mainly/only on district issued devices with an MDM client
 - Faculty/Staff devices or BYOD for educators
 - Some schools have also taken a BYOD approach for students