

eduroam Advisory Committee

<https://internet2.zoom.us/j/98691005434?pwd=M3ZqandOZzc4VkZpeEZvSIFNYTdqUT09>

Password:

[Public Minutes from Previous Meetings](#)

eAC wiki: <https://spaces.at.internet2.edu/display/eduroam/eduroam+Advisory+Committe>

Friday, July 31, 11am-12:30pm ET

Committee met but there wasn't a quorum. Held topics for next meeting.

Attendees:

Saira Hasnain - UF
Mark Breen - Vail School District
Mike Dickson - UMass Amherst

With:

Mary Bull
Mike Zawacki

Regrets:

Gloria Stephenson

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.

- Agenda bash
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/spaces/eduroam/pages/423461007/eAC+Meeting+2026-7-10>
 - Gloria Stephenson - Approved
 - Amel Caldwell – Approved
- Working group updates
 - [eduroam BE working group](#)
 - [Cloud infrastructure working group](#)
 - [Best Practices Guide Update working group](#)
 - [eduroam Security & Privacy working group](#)
 - [Mobility Day planning group](#)
- eduroam Support Organizations Update (provide as pre-read)
 - WiscNet
 - Meeting with State Representative from the Racine, WI area who is interested in bringing all the K12s, Library, Higher Eds and City into eduroam
 - eduroam bookmarks!
 - MOREnet
 - Midwest Tech Talk presentation...Christian County Public Library system
 - Talking with a hospital about being a hotspot (hospital in an already-eduroam community)
 - SCN:
 - Mesa Public Schools, largest AZ public school district, has agreed to participate as an eduroam IdP
 - WA K-20:
 - ESD 113 going gangbusters on SPs. Also working on hosting RADIUS with PKI for (smaller) districts.
 - Support user group with mailing list, periodic meetings.
 - Preparing bulk import of all districts to eFM.
 - Need to: Follow leads, develop paperwork & marketing materials.
 - CEN:
 - Lots of SP's onboarded recently, no new IdP's unfortunately
 - Foxpass lying to a member of ours about eduroam support, beware!
 - Link Oregon:

- IMESD turning up and working through open question about chromebook auto-auth possibility
 - CGESD working with SecureW2 for next steps in deployment
 - Bringing in new team member Chris Rowbotham for additional ESD support
- NSHE:
 - Hospital system eduroam SP-only deployment delayed due to staffing change at hospital... re-familiarizing everyone involved with what eduroam is/isn't, etc.
 - Trying to re-jumpstart airport interest
 - Library system in southern NV (SP-only) hopefully coming online soon...
- Merit
 - Kicking off TriCounty eduroam expansion next week
 - MSU Anchor, helping aggregate entities to Merit
 - Still waiting on large ISD to be ready to move forward
- Nebraska
 - Sending eduroam support team to NCSA Administrators' Days July 29-30
 - Full-circle moment! We announced the eduroam ConnectEd Nebraska initiative at this conference in 2021!
- UETN
 - Collaborating with school districts on a set of best practices, common approaches to firewall configuration.
- LNM
 - Met with Anoka Hennepin schools—largest MN district. Facing some barriers in existing network architecture.
 - Working with one more independent school to implement eduroam
 - New CIO at UMN comes from state government role and brings good network—starting communication with Office of Broadband Development
- Update on eduroam 101 training (MikeZ)
 - Based on community interest we will be offering two additional trainings
 - [August 5, 12pm-4pm ET](#)
 - Includes additional office hour for follow-up question with instructor and other attendees (August 12, 10-11am ET)
 - [November 11, 12pm-4pm ET](#)

- Includes additional office hour for follow-up question with instructor and other attendees (November 18, 10-11am ET)
- Infrastructure update (Mary)
 - Should we send something about the Credential Guard update for Win11 in October 2026?
 - Sites which already set the BlockNtlmv1SSO to 0 will be fine
 - <https://support.microsoft.com/en-us/servicing/os/windows/docs/2025/08/upcoming-changes-to-ntlmv1-in-windows-11-version-24h2-and-windows-server-2025>
 - Report out on contacting sites with missing configurations
 - Prepping release for August with bug fixes and FR update.
- Next meeting
 - Friday, August 28, 11am-12:30pm ET
- AOB?

Friday, June 5, 1

- Infrastructure updates from I2 (Mary)
- Derek's idea to host RADIUS services for other eSOs. Concerns? Questions?

Friday, July 10, 11am-12:30pm ET

Attendees:

Gloria Stephenson - MOREnet
 Christopher Dietrich - Ohio State University
 Rob Gorrell - UNC Chapel Hill
 Amel Caldwell – University of Washington
 Mark Breen - Vail USD
 Derek Eiler - NSHE

With:

Mary Bull
 Sara Jeanes
 Mike Zawacki

Regrets:

Mike Dickson, Kevin Morooney, Alicia Marques,

Agenda

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- Agenda bash
 - Bashed!
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/spaces/eduroam/pages/419758292/eAC+Meeting+2026-6-5>
 - Votes to approve/change requests
 - Approve - Gloria Stephenson
 - Approve - Chris Dietrich
 - Approve - Rob Gorrell
 - Approve - Amel Caldwell
 - Approve - Mark Breen
- Working group updates
 - [eduroam BE working group](#)
 - Gloria: Group met earlier this week. Internet2 has [a polished document](#) from their communications team available.
 - Derek: [Desk of the eAC article](#) provided to Internet2 for inclusion on a BE page hosted on InCommon's site
 - Sara: This is an initiative that will likely run through 2027. It's up to this group how to execute. Wanted to thank this group for its work - invaluable effort for the good of the eduroam US community as well as the eduroam US team. Also, Mary Bull has been driving a blog post on eduroam reporting via AWS Quicksite - keep your eyes open for that. Also, the InCommon team is meeting next week to do planning for 2027. Will be folding this work into those discussions. Also looking at ways to work more closely with the international community through the lens of BE. Lastly, your work will be

important for the work being done on client configuration/provisioning.

- Derek: Looking ahead, after BE this working group could pivot to “eduroam maturity” topics.
- [Cloud infrastructure working group](#)
 - Amel: Spoke with SecureW2 on working group efforts. Reviewed institution types and their characteristics related to cloud offerings
- [Best Practices Guide Update working group](#)
 - Rob: Group has put forward a deadline to have a cohesive document. Group met last week, working on harmonizing existing BPG with past efforts to update and current work being done to expand the guide.
 - Derek: Have there been any discussions about make this a more living document?
 - Rob: There’s a desire to have this version of the BPG available as a standalone document that can be handed out to new users
 - Amel: We’d talked about versioning the guide to make it easy to ensure folks know they’re using the most current and relying on links to dynamically managed pages and resources to keep things from going stale
- [eduroam Security & Privacy working group](#)
 - Gloria: Working on a guide, based on Mary’s security FAQ and expanding on key topics. Also designing in mind for both existing deployments and greenfield. Draft:
[eduroam Security and Privacy Guide](#)
 - Derek: Feels like there’s a confluence of security topics surfacing - changes to certificates, etc. Also, Mary did post on geteduroam, other provisioning options
 - Mary: I have info in my infrastructure update. Next month we’ll host a webinar on BYOD options, particularly geteduroam. We’ll have a group of international experts and practitioners on the topic (time and links to join discussion below in Mary’s section)
 - Amel: SecureW2 published a [post about post-quantum computing concerns for password security](#).
 - Sara: This is a really important overlap with eduroam and the cert service. Private PKI is seen as a way to address some

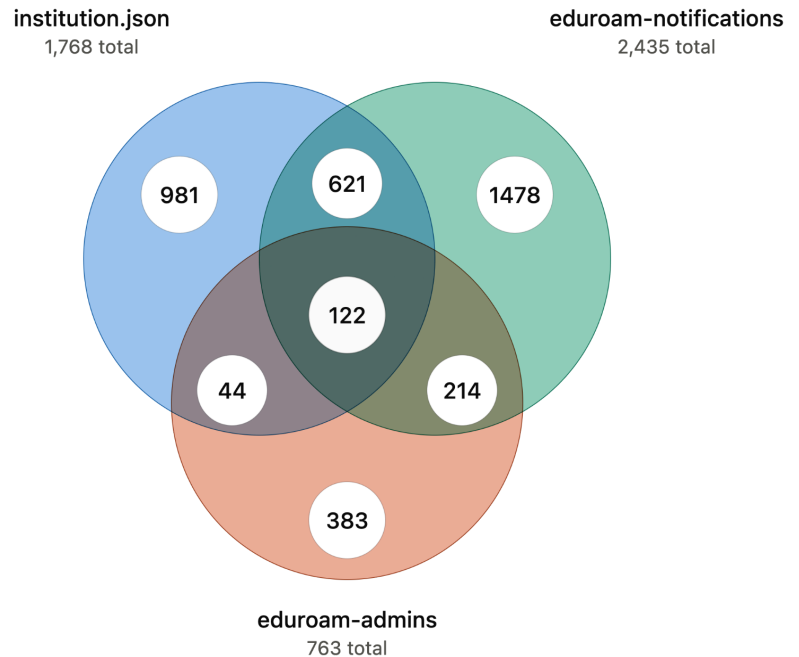
of these concerns - I2 is looking at that as a likely path forward.

- Mary: Sara and I were talking about this crossover. MikeD mentioned adding info on it to the Best Practices Guide. Active discussions on this on the eduroam-admins list.
- Sara: There's a crypto-evolution group spun up by CACTI. Two places in our ecosystem where we need to address this. You all are doing work on it, and we can look at long-lived certs as a part of it as well.
 - Derek: Is there vendor involvement in that working group? For example I'm seeing security warnings on my Android phone which are misleading and needlessly alarming. How do we address that?
 - Sara: We can look at our contacts and see what could be done (and if we can encourage them to address some of those concerns)
 - Rob: Here's a link to that working group
- [Mobility Day planning group](#)
 - Group could use additional staff. Volunteers to join?
 - ...
 - Derek: I'll put in a plug for remote attendance or streaming. Especially helpful for K12s. Could also be helpful to have some info on numbers/types of institutions who want to attend but cannot?
 - Mark: I'd be interested in joining discussions
- eduroam Support Organizations Update (provide as pre-read)
 - CEN
 - Technical high school system in the state (~30k students) is readying their go-live
 - School districts that are using NPS having issues, reached out to InCommon today
 - eduroam discussion at CEN Member Conference May 6-7
 - Working on stealing Merit's RocketMortgage grant format and making it work for CT with a local company
 - MOREnet
 - Locations we are currently in contact with
 - Columbia Public Schools
 - Kansas City Libraries
 - Ridgeway R-V

- Christian County Library 4 branches
 - Nixa Public Schools and Library - Andy Lillard
- Future locations
 - Fulton Public School
 - Southern Boone Public School
 - Holts Summit Public School
 - Hallsville Public School
 - North Callaway Public School
 - South Callaway Public School
 - Northwest Missouri State – Higher Ed
- Higher Ed locations (out of scope for eSO program, but some overlap of staff/students)
 - Columbia College - Higher Ed
 - Westminster - Higher Ed
 - William Woods – Higher Ed
- Link Oregon
 - We hosted our 2nd Annual Member Meeting on 6/23 - special shoutout to Jameka Williams from Merit, Maggie Richardson from WiscNet, Robert Sears from Internet2, Jack Haden-Enneking from WA-K20, and Andy Binder from IRON for their attendance
 - Successful eduroam session at member meeting
 - Still getting off the ground with newly expressed interest and new project management
- NSHE
 - Two regional medical centers/hospitals joining soon - paperwork took > 1 year but we're close now
 - Receiving issues / pull requests / etc. for the containerized eduroam projects (this is a good thing)
 - Meeting w/ Lane ESD staff in OR re: containerized solution in next couple weeks
 - Met w/ IRON folks last month to discuss how we operate as an eSO, advice, etc.
 - Ongoing discussions with state museum division re: bringing connectivity + eduroam to more locations
 - Pondering pros/cons of hosting eduroam containers for folks outside of NV...
- WiscNet
 - 18 members enrolled in the eSO dashboard

- Not as many completed rollouts as expected. We sent out a questionnaire to attempt to figure out what is preventing full roll outs. Just getting results back today.
- WA K-20
 - Presentations at ACPE & Link Oregon generated good discussion & interest.
 - OSPI (state K-12 dept.) renewing press for more deployment.
 - Realizing we have ~30 signed up, but only logging any auths on 7–15. How to tell who's really active or functionally SP-only?
- Merit
 - Kickoff planning session Mich State / Tri County next month
 - Planning back to school communication campaign
 - Met with SecureW2, waiting on cost model
- Nebraska
 - New school district going live this week! David City Schools
- LNM
 - Met with Anoka Hennepin schools—largest MN district. Facing some barriers in existing network architecture.
 - Working with one more independent school to implement eduroam
 - New CIO at UMN comes from state government role and brings good network—starting communication with Office of Broadband Development
 - Would like to get Minnesota Department of Ed on eduroam
- The Sun Corridor Network
 - Continuing to promote eduroam and build out project team. Collaborating with NSHE on approaches for Arizona
- UETN
 - Collaborating with school districts on a set of best practices, common approaches to firewall configuration.
- Infrastructure updates from I2 (Mary)
 - Eduroam communication:
 - eduroam-admins list has traditionally been only opt-in.
 - eduroam-notifications has included all eduroam users invited to Federation Manager (even those who have never logged in)
 - Should it also include support contacts?
 - Are there other ways to communicate with this audience? Institution.json = support contacts

eduroam-notifications = eduroam admins who can log in to FM
eduroam-admins list = opt-in list for discussion



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- Derek: Has there been discussions around how to provide clarity on what each of the lists are, how they're joined, etc?
 - Mary: Could look at cert service mailing lists for some inspiration - they have some materials that provide this info
 - Derek: One thing that came up on BE work was a need for clarity on contact types, mailing lists, and how eFM presents that info to eduroam admins
 - Mary: Realizing that in the "State of the Service" report we could include that info.
 - Derek: What if we let people set up basic info and give them a window of time to complete things like contacts, etc - if they don't complete required info within that window they get unpublished
 - Mary: Interesting - I don't hate it :)
- TLRS IPs are now in AWS
 - This simplifies routing and should improve response times

- Next eduroam release will be a FreeRADIUS update and a list of bug fixes, including fixing the bug that only allows downloading the 24-hr certificate for 2-hrs.
- August 14 10:30am

“There is an **open-source option for BYOD EAP-TLS**. Join a call on **August 14 at 10:30am-11:15am ET** to hear about [geteduroam](#) and the [Let's Wifi](#) portal; Adam Ferraro (Temple University), Neil Johnson (University of Iowa), Bryanna Marihugh (Manhattan Area Technical College), and Paul Dekkers (SURF) discuss their **implementation** and **discovery work** with this tool. Introduced by Rob Gorrell (UNC-Greensboro). The recording will be available on the eduroam wiki. [Put it on your calendar](#)”
- Update on eduroam 101 training (MikeZ)
 - Training was very well attended (49 registrants)
 - Based on community interest we will be offering two additional trainings
 - [August 5, 12pm-4pm ET](#)
 - Includes additional office hour for follow-up question with instructor and other attendees (August 12, 10-11am ET)
 - [November 11, 12pm-4pm ET](#)
 - Includes additional office hour for follow-up question with instructor and other attendees (November 18, 10-11am ET)
 - Derek: Should links to these trainings be shared on eduroam's page rather than just on the Academy website?
 - MikeZ: Not a bad idea. We can look into that
- Next meeting
 - July 31, 11am-12:30pm ET
- AOB?

Friday, June 5, 11am-12:30pm ET

Attendees:

Alicia Marques - VCCS

Saira Hasnain - UF

Chris Dietrich - Ohio State University

Amel Caldwell – University of Washington

Mike Dickson - UMass Amherst

Gloria Stephenson - MOREnet

With:

Sara Jeanes
Mary Bull
Mike Zawacki

Regrets: Jeremy Livingston

Mark Breen
Derek Eiler
Rob Gorrell

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 - Bashed!
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/spaces/eduroam/pages/401866795/eAC+Meeting+2026-5-8>
 - Approved - Mark Breen
 - Approved - Saira Hasnain
 - Approved - Amel Caldwell
 - Approved - Chris Dietrich
 - Approved - Gloria Stephenson
 - ...
 - Approved by majority
- Working group updates
 - [eduroam BE working group](#)
 - BE requirements
 - Spin up "From the desk of the eAC" to do a post about finalizing the [BE document](#) (document already finalized) and "[state of eduroam](#)" report. (Mary/MikeZ)

- Internet2's communications team is preparing a campaign to promote BE and "State of eduroam". Will also create a webpage on InCommon site for BE effort.
- Mary: We're looking at Jun 21 for a draft post. Would be tuned by I2 communications team.
- MikeD: We also talked about having a template for coms from the eAC out to community. Could we create something "plug and play" for future groups to use?
- Mary: Could also include a statement to the effect that eduroam is a service made up by community, and parts of the community
- **MikeZ to get a repository ID and persistent URL from T&I team**
- [Cloud infrastructure working group](#)
 - MikeD: Met with members of SecureW2 last week, got them up to speed on work to date and got good input from vendor's perspective around RADSEC, IPv6 for eduroam, etc. Currently working on ways to differentiate customers in a multitenant vendor environment.
 - Mary: SecureW2 has a test environment in AWS, I met with them to answer some questions. They have one customer testing it, but parts of their POC are working. I want to find out if that test org is a new deployment or if they had an existing implementation
 - MikeD: I'd be interested in that as well - what that process looks like
 - Mary: Feel like the Cloud requirements doc could be updated to remove requirement for I2 to know who each vendor is, and focus on the relationship with customer. Customer could then switch vendor to vendor without I2 needing to make any changes on our end.
 - MikeD: Wonder if it would make sense to have a button in eFM that indicates a customer relies on a 3rd party vendor.
 - Amel: We didn't intend to associate a customer with a vendor. WRT a button we could derive that info from the IP address blocks they were coming in on. SNI is also an option for that differentiation
 - MikeD: Was the SNI a valid replacement for NAS ID?
 - Amel: I believe so - there were multiple attributes on the certs that could be used.
- [Best Practices Guide Update working group](#)

- Proposal to make Best Practices guide less static/more frequent revisions
 - Address changing technical landscape with more frequent revisions
 - Group doesn't have to be active all the time but could convene for specific topics (?)
 - Proposal to add information about value of private CA in near future
- MikeD: Next time we meet we'll do a "state of the sections" discussion to triage the sections that still need work.
- MikeD: Sent out a reminder to the group to update the sections they'd signed up for or let us know if they won't be able to get to their section so we can find a new volunteer. We're wondering if we should publish what we have now given the approach of summer. Could be useful to have something out as IT staff do summer projects. Looking for input from this committee.
 - Gloria: I think if we set a deadline and agree to publish on that date. We can move ahead with the material that we have.
 - MikeD: I like that idea. We'll set a date at the next meeting. Could also consider having version numbering for the guide.
 -
- [eduroam Security working group](#)
 - MikeD: Group met earlier this week. Gloria has been leading that group
 - Gloria: We're using Mary's security write up as the basis for our work. We'll be looking at areas to enhance at next meeting. Also working on a table of security attributes and what good/better/best looks like for each of them. Also discussed adding a column that makes recommendations on what to use when. When we have the document complete I'll work with MikeZ to have it turned into a PDF and published
 - Amel: Also discussed privacy concerns, stripping of RADIUS attributes, anonymous outer identity, etc
 - MikeD: Also discussed recommendations for VLAN segmentation or segregating users via firewall rules.
 - Gloria: Thinking we should relabel this as the "Security and Privacy" working group.

- MikeD, Chris, Amel: Agree with this
- Mobility Day planning group
 - Scheduling poll for first meeting
 - Current members
 - Gloria Stephenson
 - Giselle Martinez
 - Derek Eiler
 - Margaret Cullen
 - **MikeZ to ask eSOs more broadly for volunteers**
 - Gloria: Rich Turiel (WiscNet) would be a good candidate
 - Amel: Could talk to Dave Farmer (
 - Mary: Dan Cummings could also be a good person to include
- MikeD: Wondering generally about lifecycle of WGs and their documentation. No firm decisions there, but we're thinking about it
 - Mary: One thing that concerns me is that we have a lot of the same eAC members in a lot of the working groups. Can we have non-eAC members in WGs?
 - MikeZ: Yes
 - Gloria: I think Adam (Ferarro) would be a good candidate for the security and privacy WG.
 - MikeZ: Could he also be a candidate for the eSO's CAT working group?
 - Gloria: Yes, he'd be great.
 - Sara: Many of our advisory committees do formal workplans, which can be helpful in guiding the work that those committees do. Somewhat selfishly I'd like to have something like this for I2's planning process. Helpful for everyone to understand where these different work streams could work together. Could be helpful to form a 2027 workplan starting in Q4 of this year. We're talking about things like cert provisioning, but we also need to know if there are integrations with eduroam, etc. What we'd look to this group for is an understanding of how much of the eduroam subscriber base these things serve.
- eduroam Support Organizations Update (provide as pre-read)
 - Link Oregon
 - Initial onboarding in progress with 2 new education service districts: High Desert ESD and Clackamas ESD

- Working with community colleges on deployments for schools with proximity and/or shared programs with K12s
- Regional presentation at ACPE May 6-8th. [Implementing eduroam for Seamless K-20 Connectivity in the PNW](#)
 - Russell: ACPE is the CoSN anchor for the PNW. Presented on eduroam with Washington K20 Network. Had a full room, lots of questions, had 8+ schools come forward to join Link Oregon.
- Creating stickers!
- CEN
 - Technical high school system in the state (~30k students) is readying their go-live
 - School districts that are using NPS having issues, reached out to InCommon today
 - eduroam discussion at CEN Member Conference May 6-7
 - Working on stealing Merit's RocketMortgage grant format and making it work for CT with a local company
- Nebraska
 - Two new sites, Zion Lutheran (SP) and Zion Lutheran School (IdP)
- WiscNet
 - Pushing edu out to the UWM Panther Arena and the Miller High Life Theatre this weekend for the UWM, Marquette Law, and Medical College spring graduations.
 - Working with Wisconsin Center District on this
 - Onboarding first Library System in Wisconsin - Winding Rivers Library System
 - 8 members signed up to be deployed over the next few months
 - Member meetings
 - WiscNet Connections
 - Held eduroam session with Green Bay schools, others. Good conversations, interest from membership
 - Merit Member Conference
 - Attended with WiscNet
- NSHE - Nevada now serving up eduroam at > 340 locations 😊
 - eduroam in the wild - identifying more locations for pilot; seen success at the 2 already deployed

- Still can't put these locations on the eduroam map in eFM because they don't have street addresses - need to be able to enter latitude + longitude
 - Large medical network - completed security assessment (NSHE is being treated as a "vendor" offering eduroam as a "product"); waiting for legal review to finish
 - Washoe County - **80 locations** including 11 libraries now live; overtook City of Las Vegas for most municipal hotspots in NV
 - Las Vegas Clark County Library District - 25 libraries going live soon
 - Exciting public sector conference eduroam experiences
 - Carving out funding to generate + send out promotional materials now that we're approaching the end of our eSO "ancillary fee" period
 - Summer office hours in NV - steering colleges/universities to post better public-facing eduroam connection info and consider using CAT + geteduroam
- Merit
 - Member Conference eduroam presentation was big success.
 - Now over 500 eduroam service sites in Michigan.
 - 3 counties' Intermediate School Districts agreement received to turn up eduroam & market (Eaton, Ingham and Clinton)
 - Still very close to turning up many high profile Community Tech Hubs
 - Kicked off collaboration meeting with City of Detroit
 - Washington K-20 Network
 - Looking for synergy opportunities with community colleges, municipal orgs
 - Presenting at ACPE with LinkOregon
 - Lots of great questions, good engagement with audience. Generated enthusiasm with Washington K12s, leads for new deployments. Topic of small districts with no RADIUS servers came up - many ESDs are looking at Derek's containerized RADIUS server
 - Working on user agreement (cribbed from LinkOregon)
 - MOREnet
 - Successful IDP onboarding moving to exclusively eduroam as primary SSID

- Documenting IDP configuration for Akamai PacketFence
 - Onboarding service provider for major library in Columbia, MO (Daniel Boone Regional Library)
 - Onboarding Ritenour SD
 - Moving towards more granular reporting by changing course regarding using freeRADIUS vs TLRS
 - MOREnet internal marketing team creating flyers and handouts to give to our members to raise awareness
 - Creating STICKERS!!!
- LNM
 - Met with Anoka Hennepin schools—largest MN district. Facing some barriers in existing network architecture.
 - Working with one more independent school to implement eduroam
 - New CIO at UMN comes from state government role and brings good network—starting communication with Office of Broadband Development
 - Would like to get Minnesota Department of Ed on eduroam
- The Sun Corridor Network
 - Continuing to promote eduroam and build out project team. Collaborating with NSHE on approaches for Arizona
- UETN
 - Collaborating with school districts on a set of best practices, common approaches to firewall configuration. First meeting of working group was held June 4
- Infrastructure updates from I2 (Mary)
 - Making progress toward moving the “famous” IPv4/IPv6 addresses into AWS, which makes the networking more resilient (removes VPN from the networking configuration!)
 - Dates on the calendar:
 - July 1: move TLRS2 IPs
 - July 8: move TLRS1 IPs
 - 15 eduroam sites need to update the v6 addresses they use to contact us.
 - Only one of these sites is v6 only, Suffield Academy; we have a line of communication with their admin already
 - 2 presentations for Basecamp on eduroam

- “Eduroam wasn’t built in a day” with Rich Turiel from WiscNet and John Blohm (Green Bay Public Schools) talking about the work of eSOs and setting up eduroam at a K12 for the first time
 - “When in eduroam” with Gloria Stephenson and Adam Ferraro talking about baseline expectations, best practices, and user onboarding with eap-tls using letswifi and geteduroam
- Pending issue with CA rollover and eap-tls; talking to SecureW2 about increasing options for CA rollover with their onboarding app; Mary to write a post about this change driven by InCommon changing certificate vendors.
 - Chris: We’re working with SecureW2 about this too. This is also coming up with other Big 10 schools.
 - MikeD: We ran into problems with Android users - method for provisioning with certs is very clunky, counterintuitive, etc.
 - Mary: I was on the eduroam dev call on Tuesday and they stated that deployments with Android have been fixed. If SecureW2 comes back to us would you all like to be included with that call?
 - MikeD, Chris, Amel: Yes please
- Next meeting
 - Scheduled for July 3, might have a lot of folks out for vacation
 - Move one week earlier (June 26) or later (July 10?)
 - July 10th was chosen.
- AOB?

Friday, May 8, 11am-12:30pm ET

Attendees:

Gloria Stephenson - MOREnet
 Chris Dietrich - Ohio State University
 Alicia Marques - VCCS
 Amel Caldwell – UW
 Derek Eiler - NSHE
 Mark Breen - Vail Unified

With:

Mary Bull
Sara Jeanes

Regrets:

Mike Zawacki
Mary Bull (maybe)

Agenda

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 - Votes to approve or amend
 - Approved - Giselle Martinez
 - Approved - Amel Caldwell
 - Approved - Chris Dietrich
 - Approved - Mark Breen
 - Approved - Derek
 - Approved - Gloria
 - Approved - Alicia Marques
- Working group updates
 - [eduroam BE working group](#)
 - Draft of the BE "[State of the Service](#)" Report
 - Mary - Last meeting didn't meet - will meet next Tuesday, 5/12
 - Look at categories and action items; please provide feedback, additions, questions, comments
 - Derek - thumbs up to the graphs, trend lines, etc., great information backed by stats; thanks to Mary for her work on this
 - [Cloud infrastructure working group](#)

- TechEx [Workshop Proposal](#): Cloud RADIUS Discussion
 - Who would benefit from having a cloud radius provider
 - Could be a workshop; eso representatives; community college folks (interested in outsourcing or using the cloud for radius)
 - Tribal college folks in the room and Alabama community colleges? (Mary)
 - [Best Practices Guide Update working group](#)
 - Section writing underway; tentative plan to release in early June in time for summer maintenance
 - No questions or concerns
 - [eduroam Security working group](#)
 - Using [Mary's security FAQ](#)
 - Outlining why you would want to use pieces of security in different circumstances
 - Sometimes misunderstandings as to how secure eduroam is
- Standing item: Infrastructure updates from I2 (Mary)
 - AWS IPv6 Wrinkle: We cannot use the same “famous” v6 addresses after we move the TLRS IPs into AWS, so we will have to ask 18 sites to change the v6 addresses they use to send traffic to the TLRS. The v4 addresses are fine. Plan to complete this work during university/school summer maintenance.
 - Will change v6 IP addresses over summer; shouldn't impact sites significantly
 - IP and DNS in radius binding—is this still an issue we're wrestling with? (Sarah)
 - Yes
 - Would be good to know with the most popular vendors (ie ClearPass), what DNS lookups are used
 - In general radius vendors are based on FreeRADIUS so that behavior is replicated everywhere
 - Painless Security is training additional engineers from Unicon to be able to understand and support the TLRS infrastructure, to provide service redundancy and more engineering, development, and support capacity.
 - Sarah - feel it is worthwhile to bring in additional vendors so that all tacit knowledge is not retained by one vendor/training group

- Infrastructure has resiliency; Painless has added to that. Sometimes if they're stretched thin, they're not available for more potential work in the future (Mary)
- [TechEx 26](#) planning
 - Form up the Mobility Day Planning Committee
 - Half-day event the Monday (PM) of TechEx
 - Possibility of "one day pass"? Pass is about \$250 for one day if they're speaking. Special link from registration (Mary)
 - Past agendas: [2025](#); [2024](#); [2023](#)
 - eAC volunteers? Planners and/or attendees to MC the event.
 - Gloria Stephenson
 - Giselle Martinez
 - Derek Eiler
 - Could use more
 - Check in with eSO community, others? (Your email here!)
 - ...
 - Session proposal for Cloud Infrastructure has been submitted for consideration (Mike?)
 - If we have the workshop - part of the workshop can be a report out perhaps in the exhibitor forum (more visibility) - Mary
 - Session proposal for "eduroam in the wild" also submitted
 - Derek - On mountaintops, etc.
- eduroam Support Organizations & On-Ramp Update (provide as pre-read)
 - eduroam Support Organizations & On-Ramp Update (provide as pre-read)
 - No proposals for 2026 eSO cohort in April
 - Now what?
 - Possibly a couple that have been delayed (Derek) - watch for them
 - Link Oregon
 - Initial onboarding in progress with 2 new education service districts: High Desert ESD and Clackamas ESD
 - Working with community colleges on deployments for schools with proximity and/or shared programs with K12s
 - Preparing for regional presentation at ACPE May 6-8th. <https://acpenw.events/>
 - Creating stickers!
 - CEN

- Technical high school system in the state (~30k students) is readying their go-live
- School districts that are using NPS having issues, reached out to InCommon today
- eduroam discussion at CEN Member Conference May 6-7
- Working on stealing Merit's RocketMortgage grant format and making it work for CT with a local company
- Nebraska
 - Two new sites, Zion Lutheran (SP) and Zion Lutheran School (IdP)
- WiscNet
 - Member conference next week - eduroam heavily featured with a member driven session and lots of eduroam swag
 - Email went out to members interested in onboarding as soon as possible and we have 5 new schools ready to go in May/June
 - We have our first library system that looks like they will be coming onboard
- NSHE
 - eduroam in the wild - identifying more locations for pilot; seen success at the 2 already deployed
 - Still can't put these locations on the eduroam map in eFM because they don't have street addresses - need to be able to enter latitude + longitude
 - Large medical network - completed security assessment (NSHE is being treated as a "vendor" offering eduroam as a "product"); waiting for legal review to finish
 - Washoe County - 11 libraries live, plus misc. administrative / public locations
 - Las Vegas Clark County Library District - 25 libraries going live soon
 - Promotion - carving out funding to generate + send out promotional materials now that we're approaching the end of the eSO "ancillary fee" period
 - Summer office hours in NV - steering colleges/universities to post better public-facing eduroam connection info and consider using CAT + geteduroam
- Merit

- Apple Developer Academy @ MSU
 - Challenge: OneLogin's Virtual LDAP replicating open LDAP
 - Will email InCommon today
- All but have signed MOU to get one of our Members to \$ support 3 counties ISDs to turn up & market plus pay for InCommon setup and 3-years of service at strategic community college
- Very close to turning up many high profile Community Tech Hubs
- Kicked off collaboration meeting with City of Detroit on Monday
- Washington K-20 Network
 - Looking for synergy opportunities with community colleges, municipal orgs
 - Presenting at ACPE with LinkOregon
 - Working on user agreement (cribbed from LinkOregon)
- MOREnet
 - Successful IDP onboarding moving to exclusively eduroam as primary SSID
 - Documenting IDP configuration for Akamai PacketFence
 - Onboarding service provider for major library in Columbia, MO (Daniel Boone Regional Library)
 - Onboarding Ritenour SD
 - Moving towards more granular reporting by changing course regarding using freeRADIUS vs TLRS
 - MOREnet internal marketing team creating flyers and handouts to give to our members to raise awareness
 - Creating STICKERS!!!
- LNM
 - Working to set meeting date with Anoka Hennepin schools (largest MN school district)
 - Upcoming presentation with WiscNet at Brainstorm
- The Sun Corridor Network
 - Continuing to promote eduroam and build out project team. Collaborating with NSHE on approaches for Arizona
- Next meeting

- June 5, 11am-12:30pm ET
- AOB?

Friday, April 10, 11am-12:30pm ET

Attendees:

Derek Eiler
Chris Dietrich - Ohio State University
Giselle Martinez - Moran Technology/Menlo College
Josh Howlett - Federated Solutions
Gloria Stephenson - MOREnet
Mike Dickson - UMass Amherst
Alicia Marques - Virginia Community College System
Amel Caldwell - University of Washington

With:

Mary Bull
Sara Jeanes
Mike Zawacki

Regrets:

Saira Hasnain
Jeremy Livingston
Kevin Morooney

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed!

- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/spaces/eduroam/pages/394592350/eAC+Meeting+2026-3-13>
 - Votes or requests for changes to public minutes
 - Approve - Derek
 - Approve - Mike Dickson
 - Approve – Amel
 - Approve - Chris Dietrich
 - Approved - Giselle Martinez
 - Approved - Gloria
 - Approve - Alicia Marques
- Working group updates
 - [eduroam BE working group](#)
 - Mary: Drafting a “[State of eduroam](#)” document for the community. Would tie current trends to proposed BE items, demonstrate the value of BE and let people know what they can do proactively on their end ahead of BE efforts. Also thinking through resources that could be offered to community to help them meet BE thresholds (e.g. documentation on user onboarding, CAT setup, etc)
 - [Cloud infrastructure working group](#)
 - Mary: Roundtable for vendors at ComEx that will include folks from Juniper/HPE
 - MikeZ: Made a contact at SecureW2. He expressed interest in getting SecureW2 back into the working group's meetings. SecureW2 is undergoing some organizational shifts but he'll work with us to get an SME involved
 - daniel.chenoweth@securew2.com
 - MikeD: Is there a standard practice for getting vendors into the community workflow?
 - Mary: Not at present, but we're developing other community training, info sharing (eduroam 101 training, “mythbusting eduroam” materials, etc) could be a place for that. Wondering if we could come up with a “how to participate” document that lays out current areas of work, relevant community advisory bodies and I2 programs like Catalysts, etc.
 - MikeD: Could be useful to have a set of requirements/standards that would allow a vendor to list its product as “eduroam ready”.

- Derek: I recall some time ago there was a mention that Internet2 was going to acquire the trademark for eduroam in the US.
- Sara: We (Internet2) have the trademark for the US. I did do some work on eduroam branding when we were looking at working with some ISPs, whether to join the WBA. The decision we came up with at that time was to keep things at a higher level rather than get into a granular program of certification/validation.
- Derek: I think there's some value in a basic "stamp of approval"
- MikeD: Thinking about the value of that for smaller organizations, especially for hotspot operators. Could even try to work with vendors to have a prebaked set of configurations that would be an "eduroam button", even just for hotspot operators
- [Best Practices Guide Update](#)
 - Derek: Group assigned sections to volunteers to rework existing BPG
- Time to start [Mobility Planning Committee?](#)
 - Derek: I'm overclocked but am looking for someone to head up that committee. Planning to attend and can help emcee the event
 - Volunteers to join
 - Gloria Stephenson
 - Giselle Martinez
 - ...
- Security / Threat Modeling Working Group update (Gloria/Mike)
 - Gloria: Planning on doing some overlap of the security section of the BPG with this working group's efforts. Could also include discussion of RADSEC.
 - Derek: I'd love to join at least the first call or two
 - Gloria: Also want to include the balance between security and ease of use as part of our work.
 - Initial meeting scheduled for Wed. April 22, 3:30-4:30pm
 - Volunteers
 - Derek Eiler deiler@nshe.nevada.edu to help kick off
 - ...
 - Mike Dickson mdickson@umass.edu (initial meeting at least)
 - Amel Caldwell amelc@uw.edu (initial meeting at least)

- Call for someone to lead eVA / “Guest Access, Round 2” Working Group. Last discussion ended with interest from several eAC members, but no volunteers to lead.
 - Sara: eduroam is inherently guest access - our work has always been around driving ubiquity. For temporary users there are options like open guest networks, cellular connectivity, etc.
 - Derek: I agree - to my mind the main thing something like eVA solves for is removing guest access as a barrier to moving toward eduroam as the sole SSID. Maybe those folks represent a minority, but it is an objection I’ve heard in response to moving to eduroam as sole SSID.
 - MikeD: At large events we’ve seen oversubscription of cellular service. eVA opens up question of using those guest accounts to roam.
 - Derek: Is this something we (eAC) want to pursue?
 - Sara: Would encourage any working group around this topic to do some careful scoping and set of outcomes. Possibly a survey of the community as well.
 - Derek: Agree. Next step if there was a desire to convene this group would be to do that scoping exercise
- Standing item: Infrastructure updates from I2 (Mary)
 - Ongoing work to move the TLRS IPs in to AWS
 - Ongoing work by Painless Security to train engineers from the software company Unicon to understand and work on the eduroam infrastructure. The goal is to add redundancy to support the TLRS and potentially free up engineering development time to work on features.
 - Issues with the rate-limiting release have been resolved by lowering the time that we ignore a rate-limited device from 10 seconds down to 1 second. This gives a greater opportunity for the rate-limited client to “try again” while reducing the overall traffic produced by aggressive clients OS down to a manageable level. This also avoids problems with Clearpass’ maximum 5 second timeout.
 - MikeD: Do rate limiting events show up in the eFM log viewer?
 - Mary: Yes - we added info to the log viewer documentation on that. Search for Capital R for Rate Limited
- TechEx planning
 - Standalone eAC working group session/BoF?
 - Working meeting proposals submissions open in mid-May

- Mary: Setting up an eAC event early helps us to promote the session. Vendor participation in this and other sessions can also drive participation and attendance.
 - Derek: Could we also look at having a remote attendance option?
 - MikeZ: We've had some luck with remote presenters, but I can ask about remote participation
- Talk to Brian Ladrado re: tie-ins with commercial partners/Catalyst folks?
- Mary/Mike report out on discussion with Ivanna
 - Ivanna Park has a track (Exhibitor Forum) that could accommodate interested vendors/sponsors at TechEx
 - Mary: Ivanna is also a good resource for outreach to vendors. She's put me in touch with vendor staff when we haven't been able to contact folks for things like documentation updates, etc. Could also be a good point of contact for things like BPG update, etc.
- eduroam Support Organizations & On-Ramp Update (provide as pre-read)
 - Report out from 2025 eSO webinar, call for 2026 proposals
 - Volunteers to participate in attending proposals for 2026 eSO cohort?
 - Agree to attend between 1 and 5 one hour sessions during April (usually two)
 - Agree to attend a call at the end of April to discuss thoughts on proposals
 - Interested in helping out? (Name and email address below)
 - ...Chris Dietrich - dietrich.61@osu.edu
 - ...Gloria Stephenson
 - ...Amel Caldwell amelc@uw.edu
 - ...Alicia Marques amarques@vccs.edu
 -
 - Link Oregon
 - Initial onboarding in progress with 2 new education service districts: High Desert ESD and Clackamas ESD
 - Working with community colleges on deployments for schools with proximity and/or shared programs with K12s
 - Attended eSO In-Person Summit in early February
 - Presenting at ACPE with Washington K-20
 - <https://acpenw.events/>
 - CEN
 - Working with Bradley Int'l Airport to get eduroam deployed at the airport

- WiFi Grant Program ensured eduroam adoption (41 sites out of 80 that applied agreed)
- Wesleyan University and the City of Middletown partnership
- Technical High School system adopted (10k students)
- Attended eSO In-Person Summit in early February
- Nebraska
 - Onboarding a Co-Working Office space as an SP in Omaha
 - Following the eSO report out, New Mexico reached out to learn more about Nebraska's eduroam rollout. We're meeting with them tomorrow and I can provide an update on our next call.
- WiscNet
 - eduroam Teach and Learn presentation for the WiscNet membership 3/25
 - Prepping for our annual member conference where eduroam will be a major focus, including a full presentation by members using eduroam
 - Working on onboarding 10-20 different schools
- NSHE
 - "eduroam in the wild" SP-only pilot via NSHE-managed proxy is live at 2 remote locations, already seen use between NV + UT
 - Watching for latency/etc. in bandwidth-constrained places, hoping to report back at TechEx26 if session proposal accepted...
 - Want to, but can't due to eFM technical constraint, pin these locations on the eduroam-US map (no street address at the top of mountains, middle of desert, etc., just latitudes and longitudes)
 - Washoe County Libraries (via the County) prepping 10 sites
 - State is ready to talk again about offering eduroam as SP at various additional sites
 - LV-CC Library District preparing to implement as SP-only via NSHE-managed [proxy](#)
 - Washoe County (incl. libraries) preparing to implement as SP-only via NSHE-managed [proxy](#)
 - Major medical center / network preparing to implement as SP-only
 - CCSD actively engaged in discovery for possible staff-only IdP implementation

- Small charter school network in Reno engaged in discovery for possible IdP implementation via NSHE-managed [IdP](#)
 - ✈️ Verbal interest from new airport leadership in Las Vegas...
 - (Not under the eSO umbrella per se): Mulling over starting a “college town” themed promotional campaign to encourage small businesses, etc. to offer eduroam to visitors
- Merit
 - Having real trouble with Charter Schools. My hunch is that Charters are profit based and don't see the value. Thoughts?
 - Continue to connect more Community Centers
 - Getting traction in greater Grand Rapids region (GR Museum just agreed)
 - Meeting with City of Detroit to expand eduroam to more / potentially all related city sites
 - Turning up a number of community centers
 - City of Detroit to host eduroam Detroit map on Cities website
 - Turned up Hotel in Detroit, soon Greektown
- Washington K-20 Network
 - Looking for synergy opportunities with community colleges, municipal orgs
 - Presenting at ACPE with LinkOregon
 - Working on user agreement (cribbed from LinkOregon)
- MOREnet
 - 2 members (k-12) reached out to be idp
 - 1 member (library) is looking to be hotspot
 - Moving away from hosted FreeRADIUS, will keep one for troubleshooting
 - Working on CAT with one of our Higher Ed
 - Trying to create more trifecta Higher Ed, K-12 and Libraries
 - Gloria: Curious about work with medical systems.
- LNM
 - Working to set meeting date with Anoka Hennepin schools (largest MN school district)
 - Upcoming presentation with WiscNet at Brainstorm
- The Sun Corridor Network
 - Continuing to promote eduroam and build out project team. Collaborating with NSHE on approaches for Arizona
- Next meeting

- May 8, 11am-12:30pm ET
- AOB?

Friday, March 13, 11am-12:30pm ET

Attendees:

Giselle Martinez - Moran Technology Consulting
 Derek Eiler - NSHE
 Chris Dietrich - Ohio State
 Amel Caldwell – University of Washington
 Gloria Stephenson - MOREnet
 Josh Howlett - Federated Solutions
 Mark Breen - Vail School District

With:

James Cramton
 Mike Zawacki
 Mary Bull

Regrets:

Jeremy Livingston

Agenda

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- Agenda bash
 - Bashed!
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/spaces/eduroam/pages/388301027/eAC+Meeting+2026-2-13>
 - Vote to approve
 - Saira Hasnain - Approve
 - Derek Eiler - Approve
 - Majority approve
- Working group updates
 - [eduroam BE working group](#)

- Derek: Group discussed high level next steps, communication plan. Looked at options for eFM to assist in communicating compliance
 - Mary: Working group also asked I2 for data points. I plan on creating a report on priority areas that we can provide to community. Working group can use that as a communication tool to demonstrate the need for BE.
- [Cloud infrastructure working group](#)
 - Amel: Had a meeting on Monday. Discussed meeting at ComEx, specifically a round table to assess interest.
 - Mary: Would also look at bringing in Juniper and SecureW2 as sponsor and possible participants. Working with I2 event staff to facilitate that
 - <https://events.internet2.edu/ereg/index.php?eventid=873483&>
 -
- [Best Practices Guide Update](#)
 - 127 replies to [Best Practices survey](#)
 - [March 18 IAM Online](#) to present results from the Best Practices survey
 - Derek: Biggest pain point seems to be provisioning users.
 - Mary: Nadim El-Khoury and Alicia Marques as well as at least one other community member have spoken to this. We'll discuss that topic on the IAM Online. Will likely also talk about EAP types, how that plays into setting up new users
- New working group proposals
 - Security / threat modeling working group (follow up on discussion from TechEx/ACAMP 2025)
 - Derek: Feels timely given new series of wireless vulnerabilities being announced.
 - Amel: Link to story on Airnsnitch vulnerability: <https://arstechnica.com/security/2026/02/new-airnsnitch-attack-breaks-wi-fi-encryption-in-homes-offices-and-enterprises/>
 - Derek: Group could discuss that, Josh's presentation on TOFU and its benefit/risk, etc
 - Gloria: Are you imagining this overlapping with some of the BPG group?
 - Derek: Yes, though the BPG overlap would be around security rather than user experience.
 - Derek: What's folks' general sense of interest, value, etc?

- Gloria: I think it's a good idea. I don't know that I have the expertise to drive the effort
- Mary: Gloria, I think you have expertise on the policy side. Could be a good way to identify experts
- MikeZ: Agree - maybe the ask of this group is less to directly join the group but rather to convene the needed expertise for the group
- Derek: Yes. And consider policy topics like insurance requirements, compliance, etc.
- Gloria: I could ask some CISOs in MO, others who might be a good fit
- Derek: Margaret Cullen also comes to mind, as does Nicole Roy from I2. Gloria, are you up for chairing the group?
- Next steps: Gloria, MikeZ to coordinate on who to reach out to, convene initial group members
- eVA adoption discussion - or working group?
 - Link to presentation at WLPC regarding eVA in Canada
<https://www.youtube.com/watch?v=8eQB1IHKV0c&list=PLXJsNZqZEF9Zpvbozrp21jfe-GtGt311f&index=44>
 - CANARIE's eVA page:
<https://www.canarie.ca/identity/eduroam/eva/>
 - Derek: Mary and I also met up with Ed Kingskote with CANARIE on eVA, how it operates. Would require participation of I2, if not I2 outright operating it for eduroam US.
 - Derek: Thoughts from committee? Interested members in forming exploratory committee/group?
 - Amel: A few years ago there was a Guest Access working group a few years ago. Offering eVA was one of the recommendations of that group.
 - MikeZ: [Running agenda from that group](#)
 - Mary: Nadim El-Khoury could be a good candidate. Also Matt Dillion (Dir Networking at CNU)
 - Josh: Might be worth looking into what led to ANYROAM's guest access to fail. Could be useful to help avoid similar mistakes
 - Amel: Spoke to them about this topic. It was mainly the licensing costs with Cloud Path that led to shutting it down

- Mary: I'd love to make a contact at Cloud Path :) Maybe they could help us understand their infrastructure (e.g. how do they handle RADIUS, etc?) and cost model
 - Josh: I think their offering was full integrated.
 - Mary: I reached out to some schools that appeared to be using Cloud Path but they only use them for front end user provisioning, not guest access
- Derek: Looks like the main pain point with eVA is the use of SMS as part of this provisioning process, issues around reliability of SMS across multiple cell providers. Outside of that, Amel, are you aware of any other issues that cropped up?
 - Amel: I think there were scaling concerns, also MS ChapV2 was a stumbling block.
- Derek: Interest amongst committee members to join this group?
 - Amel: I can join but cannot lead it.
 - Derek: Same, alas.
 -
 - Derek: What's the sense of the committee on whether this makes sense to pursue? Anyone who feels strongly about the value here?
 - Derek, Amel, Dion, Chris (and two others?) indicated there's some value in pursuing this topic
- Standing item: Infrastructure updates from I2 (Mary)
 - Feb 2 release added per-device rate-limiting; a few sites reported issues with valid users showing up on the rate-limit reports. This is connected to intermittent timeouts between these sites and the TLRS. Painless Security is writing a wiki page on troubleshooting intermittent timeouts between a site eduroam proxy and the TLRS.
 - Beginning steps underway to move the TLRS IPs to AWS, which will simplify the eduroam US architecture and increase resilience
 - eduroam RADIUS class was held last week. Delivered by Josh - 14 participants, lots of great discussion.
- eduroam Support Organizations & On-Ramp Update (provide as pre-read)
 - Link Oregon
 - Initial onboarding in progress with 2 new education service districts: High Desert ESD and Clackamas ESD
 - Working with community colleges on deployments for schools with proximity and/or shared programs with K12s

- Attended eSO In-Person Summit in early February
 - Presenting at ACPE with Washington K-20
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 - Working with Bradley Int'l Airport to get eduroam deployed at the airport
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 - Wesleyan University and the City of Middletown partnership
 - Technical High School system adopted (10k students)
 - Attended eSO In-Person Summit in early February
- Nebraska
 - Onboarding a Co-Working Office space as an SP in Omaha
- WiscNet
 - Sent out an email announcement inviting K-12 members to join
 - Currently having members sign up for one-on-one appointments regarding eduroam and onboarding (over a dozen and counting!)
 - Updated our website eduroam page
 - Created an “eduroam explained” presentation to use with members
 - Partnering with Learning Network of Minnesota to present on eduroam at Brainstorm conference
 - Large eduroam banner created for Brainstorm
 - Preparing for eduroam-focused Teach & Learn in March
 - Attended eSO In-Person Summit in early February
- NSHE
 - Planning to re-jumpstart things mid/late March: several irons in the fire cooled off due to organizational changes
 - Attended eSO In-Person Summit in early February
- Merit
 - Meeting with many many non-profit organizations, chief among those are Church leaders, United Way / Connect313 community endeavor leaders,
 - Beginning to plan eduroam breakout for our annual member meeting
 - Received verbal commitment from Upper Peninsula's largest (area wise) ISD - SP to begin with
 - Actively working to up our game on marketing collateral
 - Attended eSO In-Person Summit in early February

- Washington K-20 Network
 - Looking for synergy opportunities with community colleges, municipal orgs
 - Presenting at ACPE with LinkOregon
 - Working on user agreement (cribbed from LinkOregon)
- MOREnet
 - Approximately 30 school districts on the list for information/onboarding
 - Working with ~150 libraries to connect as hotspots
 - Held an informational and technical (Radius) session at our Tech Training Summit last week - Mike Zawacki attended
 - Attended eSO In-Person Summit in early February
 - Handed off eduroam sticker to marketing
- LNM
 - Working to set meeting date with Anoka Hennepin schools (largest MN school district)
 - Upcoming presentation with WiscNet at Brainstorm
 - Attended eSO In-Person Summit in early February
- The Sun Corridor Network
 - Continuing to promote eduroam and build out project team. Collaborating with NSHE on approaches for Arizona
 - Attended eSO In-Person Summit in early February
- Update on annual eSO program report out webinar
 - Wednesday, March 25 4pm-5pm ET
 - [Zoom link](#) for those wishing to attend
- Report out from eSO training (Derek, Gloria, MikeZ)
- Next meeting
 - April 10, 11am-12:30pm ET
- AOB?

Friday, February 13, 11am-12:30pm ET

Attendees:

Derek Eiler - NSHE

Gloria Stephenson - MOREnet

Alicia Marques - Virginia Community College System
Mark Breen - Vail School District
Christopher Dietrich - Ohio State University
Amel Caldwell – University of Washington/WA-K20
Mike Dickson - UMass Amherst
Rob Gorrell - UNC

With:

Sara Jeanes
James Cramton
Mike Zawacki

Regrets:

Mary Bull
Jeremy Livingston
Saira Hasnain

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- Agenda bash
 - Bashed!
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/spaces/eduroam/pages/382501264/eAC+Meeting+2026-1-16>
 - Gloria moves to approve, Amel seconds
 - Majority approves
- Working group updates
 - Want to join the efforts for one of these working groups? Please add name and email address in agenda to be added to meetings (open to eAC and SMEs from the community)
 - Derek: Also open to new working group proposals. Could be more policy focused rather than
 - MikeD: Could have a check in on this topic as a standing agenda item. Revisiting guest access, etc.
 - [eduroam BE working group](#)

- Review, discussion of “[Baseline Expectations for eduroam-US](#)”
 - Gloria: Is this intended to be a living document? Will there be updates/amendments?
 - Derek: This is considered an initial statement of BE items, but will be added onto and adapted as work progresses.
 - MikeD: Agree - it's a stake in the ground and a starting point.
 - Derek: After voting the next step is to engage in communications campaign with community and work with Internet2
 - MikeD: We would gather data, communicate with admins to address compliance challenges they're encountering. There wouldn't be a hard sell per se, but we would work with eduroam sites that were out of compliance as needed.
 - Voting
 - Name, vote
 - Derek Eiler, yea
 - Chris Dietrich, yea
 - Mark Breen, yay
 - Alicia Marques, yea
 - Rob Gorrell, yay
 - Michael Dickson, yea
 - Amel Caldwell, aye
 - Gloria Stephenson, yea
 - Next steps, per Kevin: InCommon Steering will review the document, provide feedback, and then eAC can begin working on communications and outreach. Will most likely happen in April meeting.
 - Derek: Is it possible to have InCommon Steering comment more than request changes?
 - Kevin: I don't perceive this to be a relitigation of the document - more intended to inform and provide additional perspectives
- New members joining?
 - Name, email address
 - Gloria Stephenson, stephensong@more.net
- [Cloud infrastructure working group](#)

- Amel: Had a short meeting on Monday. Feel the requirements document is ready to be sent to Internet2. Also have the skeleton of an MOU vendors
- MikeD: Also, considering paths forward for RADSEC and UDP only solution
- Amel: Using IPv6 address space to solve for some of the need to differentiate end points was discussed, but the issue with going with UDP is concerns around security. Challenge with RADSEC is the need to have a “walled off” section of national infrastructure, since RADSEC requires all component use it.
- Sara: Having a balanced approach is key. Don’t want to hold up adoption and work with vendors, but we’re mindful of the challenges RADSEC poses to the national infrastructure. Need to understand if the main driver is the community or vendors.
- Amel: Vendors are the main driver, but it would also help solve for complexity at the customer level. Sense is that RADSEC may be more desirable to customers too.
- Sara: So it’s more developing a solution ahead of anticipated demand?
- Amel: Yes - by having this
- Sara: Taking the next step, is this a solution we expect vendors would charge for as an additional capability?
- Amel: It would be a separate product, but eduroam would be considered a baked in feature for customers
- Derek: As I work with K12s I want to ensure it’s as cheap and easy for schools as possible. We’ve started offering containerized RADIUS services for our schools. Commercial vendors could address that need - would Internet2 want some sort of “cut” of any fees? I don’t have a strong opinion, but hope that this would steer toward eduroam as a no/low cost add-on.
- Amel: Agree. Vendor’s take on this seems to be that offering eduroam can be a valuable differentiator so I think they’d be incentivized to just incorporate eduroam as a native option
- Sara: Want to be mindful of any difference between K12 and HE demand for this. Also, considering catalyst interest in participating in any solution.
- New members joining?
 - Name, email address

- Chris Dietrich, dietrich.61@osu.edu
- [Best Practices Guide Update](#)
 - Link to survey: <https://forms.gle/ph22vam3QSUyTg9eA>
 - Currently 83 respondents (stated goal of 100 by March)
 - New members joining?
 - Gloria Stephenson, stephensong@more.net
- Standing item: Infrastructure updates from I2 (Mary)
 - Feb 2 [new eduroam release](#) changed rate-limiting for eduroam from a per-site IP limit to a per-device limit. Rate-limiting only takes effect for devices that are rejected by their home IdP and retry immediately (within 1 second). Repeated retries within ten seconds are ignored.
 - [Ongoing investigation into problem reports](#) after this rate-limiting release; some sites are seeing very high reject message counts, but seem to have about the same number of accept messages/accepted devices. One site is reporting that some users were incorrectly rejected, but those devices did not show up on the rate limit report.
 - We will most likely release a hot-fix next week to reduce the number of reject messages we send to a rate-limited device, since each reject notification prompts the device to retry.
- eduroam Support Organizations & On-Ramp Update (provide as pre-read)
 - eSO In Person Summit report out (MikeZ)
 - CEN
 - Working with Bradley Int'l Airport to get eduroam deployed at the airport
 - WiFi Grant Program ensured eduroam adoption (41 sites out of 80 that applied agreed)
 - Wesleyan University and the City of Middletown partnership
 - Technical High School system adopted (10k students)
 - Attended eSO In-Person Summit
 - Link Oregon
 - Initial onboarding in progress with 2 new education service districts: High Desert ESD and Clackamas ESD
 - Working with community colleges on deployments for schools with proximity and/or shared programs with K12s
 - Attended eSO In-Person Summit
 - Washington K-20 Network
 - Following interest leads. Not much progress since holidays.

- How to encourage districts that are broadcasting to configure devices for eduroam?
- Will present at ACPE with Link Oregon.
- Working on user agreement (cribbed from LinkOregon)
- Merit
 - Deep into planning & resourcing for a variety of Detroit & Lansing engagements
 - Meeting with a number of grassroots philanthropic organizations in Detroit area to spread word amongst GenZ, and potential granting monies
 - Meeting w/ Comcast (looking to broadcast eduroam to all Detroit Lift Zones)
 - Another IA provider on west side of state is looking to bring eduroam to the home for student provided houses
 - David and Geoff attended eSO In-Person Summit
- NSHE
 - Published v1.1.1 of the rapid-deployment eduroam IdP (Google LDAP support)
 - <https://github.com/nshe-scs/public-eso-tools/>
 - Hotel/casino/resort conference venue eduroam experience successful. Venue opted not to continue offering it after our “30 day trial” ended, no reason given.
 - “eduroam in the wild” pilot: using eduroam to bring edge connectivity to field science sites with no/poor cell coverage; if successful, will expand to much larger network of field science/observation sites. Waiting on favorable weather conditions at initial service location.
 - Large school district has recently decided to join up but **only** for staff/teachers. Still concerned about blowback if mis-used by a student off-campus.
 - Had productive meeting with rural IT contracting firm that serves many NV K-12s, and they’ve agreed to advocate with their customers to join up - NSHE will host the IdP/SP pieces via the rapid-deployment containerized eduroam project.
 - Meeting with other eSOs to share experiences and rapid-deployment eduroam container details.
 - Attended eSO In-Person Summit
- The Sun Corridor Network

- Continuing to promote eduroam and build out project team. Collaborating with NSHE on approaches for Arizona
 - Attended eSO In-Person Summit
 -
- Learning Network of Minnesota
 - Presenting jointly with WiscNet at BrainStorm (K-12 technical conference) in March
 - Starting cadence of [Zoom meetings](#) to share eSO opportunity for non-higher ed organizations, as well as technical troubleshooting for any organizations.
 - Starting up regular on-boarding and support calls for our community
 - Attended eSO In-Person Summit
- UETN
 - Internal restructuring, bringing new team members up to speed on the program and this community
 - Jeff Egly re-joining as eduroam team member
 - Final school district in the state completed this month
- Network Nebraska
 - Onboarding a Co-Working Office space as an SP in Omaha
- MOREnet
 - Now full eSO (past pilot) with 27 orgs on waiting list
 - Provided hotspot for GPN Winter meeting - KC
 - Tech Summit in February - eduroam session
 - Have 3 members identified; 2 more tentative
 - Presented on eduroam at annual member conference
 - Around 30 new organizations interested in starting in 2026
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 - Seeing lots of traction with schools that have lots of overlap with smaller HEs
 - Also looking to set up sites with Fortinet gear, looking at how to handle RADIUS portion
 - Attended eSO In-Person Summit
- WiscNet

- 2 of the largest school districts in WI fully on-ramped and broadcasting in all of their buildings (Madison & Waukesha)
 - Green Bay School District (another Top 5 in size) to come on in December
 - 2 other onramp members onboarding now (Stevens Point SD & CESA5)
 - Attended eSO In-Person Summit
 - Rich Turiel presenting along with Learning Network of Minnesota about eduroam at Brainstorm conference in March
- Next call
 - Friday, March 13 - 11am-12:30pm ET
- AOB?

Friday, January 16, 11am-12:30pm ET

Attendees:

Gloria Stephenson - MOREnet

Saira Hasnain - UF

Mark Breen — Vail School District (Tucson)

Giselle Martinez - Moran Technology Consulting

Amel Caldwell – University of Washington

Mike Dickson - UMass Amherst

Derek Eiler - NSHE

Rob Gorrell - UNC

Alicia Marques - Virginia Community College System

Chris Dietrich - Ohio State University

Ken Miller - KeystoneREN - ken@keystoneren.org

With:

Mary Bull - Internet2

James Cramton - Internet2

Mike Zawacki - Internet2

Sara Jeanes - Internet2

Nicole Roy - Internet2

Kevin Morooney - Internet2

Regrets:

Jeremy Livingston

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - [iotroam](#) (Amel amelc@uw.edu)
 - Amel: A colleague from PNWGigapop spoke with SURFnet about this. It's a multi-pre-shared-key network whose passwords and MAC addresses are stored and authenticated by a central entity. Allows different Orgs and multiple groups within an org to manage the MAC/password. It could potentially allow IoT devices to roam to other orgs. I can arrange for a demo for this committee
 - Derek: Suggest folks review and if there's interest we can dive into this in greater detail in a future meeting
- Welcome new members, introductions
- Voting for next Chair, Vice-chair
 - [Voting form](#) - open until Wednesday 21st
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/spaces/eduroam/pages/373850457/eAC+Meeting+2025-12-19>
 - Approved by majority!
- Working group updates
 - [eduroam BE working group](#)
 - Review of BE document, voting to approve to send to InCommon Steering: (provided as pre-read - main tab only, to be spun off as fresh document w/o watermark, etc.):

 eduroam Baseline Expectations (post-community consultation...)

)
 - Sara: Suggest waiting until next meeting to move to advance document to InCommon Steering. Provide overview of relationship between eAC, InCommon Steering, process of moving documents from working group up to InCommon Steering.
 - Interest from new members in joining?
 - <https://internet2.zoom.us/j/85652457759?pwd=KFCNyQLLXzlol6aoJx8nBaMX4NgVON.1>

- Next call 1/20 11:00am PST / 2pm EST
- [Cloud infrastructure working group](#)
 - Interest from new members in joining?
 - Next call 1/26 9am PST / noon EST
- [Best Practices Guide Update](#)
 - Current best practices guide:

<https://spaces.at.internet2.edu/download/attachments/174066029/eduroam-US%20Best%20Practices%20Guide.pdf?version=1&modificationDate=1602734211596&api=v2>
 - Community survey almost finalized. View the provisional survey here: <https://forms.gle/dMetPmyZVpsKp9ek6>
 - The WG tried to anticipate the wide range of eduroam-associated staff who could take this survey, and balance the range of things we'd like to know about how they administer it with the information relevant to updating the best practices guide.
 - We wanted to use sentiment assessment (disagree/agree with statements) but one limitation of Google Forms is that there isn't a way for people to choose N/A in the options. We weren't sure if making these questions optional would cut down on our response rate.
 - Interest from new members in joining?
 - Next call 1/20 8am PST / 11am EST
- Share your ideas/thoughts for topics you want to spin into a Working Group
 - MikeD - visitor access for more loosely-affiliated education community members (parents, events, etc.) - eVA was demoed at TechEx 25 Mobility Day for example
 - Previous WG around guest access...
- Standing item: Infrastructure updates from I2 (Mary)
 - New TLRs configuration, rate limit by mac address, almost ready to release in January.
 - Next priority: move TLRs IPs to AWS to remove dependency on Internet2 physical network and OpenVPN
 - Last PDF emailed reports going out January 2026; from now on, eduroam reports/analytics are available inside Federation Manager. Still want to drive eduroam admins to look at the new analytics/reports and add analytics viewers to their organization as appropriate.

- Development work is continuing on internal eduroam statistics that look at the service as a whole, including investigations on which sites do not have active traffic or very low traffic, and which sites have a Federation Manager account but have never published an eduroam RADIUS server.
- eduroam Support Organizations & On-Ramp Update (provide as pre-read)
 - CEN
 - Focusing on supporting existing school districts and public hotspots. Planning on attending eSO In-Person Summit
 - Link Oregon
 - Initial onboarding in progress with 2 new education service districts: High Desert ESD and Clackamas ESD
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 - Presented at ACPE on eduroam and K12, good discussions during session. ESDs are forming up user group
 - Working on user agreement (cribbed from LinkOregon)
 - Merit
 - Most of Oakland School's district up - est completion of all = mid-Jan
 - Turned up 100+ locations in Detroit
 - Turned up variety of other sites
 - Meeting with a number of grassroots philanthropic organizations in Detroit area to spread word amongst GenZ, and potential granting monies
 - Meeting w/ Comcast in late November/early December (looking to broadcast eduroam to all Detroit Lift Zones)
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 - <https://github.com/nshe-scs/public-eso-tools/>

- Hotel/casino/resort conference venue eduroam experience successful. Venue opted not to continue offering it after our “30 day trial” ended, no reason given.
- Spinning up “eduroam in the wild” pilot: using eduroam to bring edge connectivity to field science sites with no/poor cell coverage; if successful, will expand to much larger network of field science/observation sites.
- Met with large school district again, leadership timidity about risk of blowback if credentials used to access risky things off school premises where there’s no content filtering. Shared all the things we’ve talked about here before to help weigh pros/cons, policy things, teacher vs. student access, etc., but it may take peer advocacy...
 - Approached 12 T&I leaders at TechEx to bounce a couple ideas off them - possible “threads” meeting to help show that others (incl. Utah K-12s) have successfully navigated this?
- The Sun Corridor Network
 - Continuing to promote eduroam and build out project team. Collaborating with NSHE on approaches for Arizona
- Learning Network of Minnesota
 - Presenting jointly with WiscNet at BrainStorm (K-12 technical conference) in March
 - Starting cadence of [Zoom meetings](#) to share eSO opportunity for non-higher ed organizations, as well as technical troubleshooting for any organizations.
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 - 2 of the largest school districts in WI fully on-ramped and broadcasting in all of their buildings (Madison & Waukesha)
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 - 2 other onramp members onboarding now (Stevens Point SD & CESA5)
 - Planning on attending eSO In-Person Summit
- Next call
 - Friday, February 13 - 11am-12:30pm ET
- AOB

Friday, December 19, 11am-12:30pm ET

Attendees:

Derek Eiler - NSHE
 Josh Howlett - Federated Solutions
 Chris Dietrich - tOSU
 Mike Dickson - UMass Amherst
 Kendra Ard - CSU
 Amel Caldwell – UW
 Nadim El-Khoury - Springfield College
 Brett Bieber - Nebraska

With:

Sara Jeanes
Steve Zoppi
James Cramton
Mary Bull
Romy Bolton
Mike Zawacki

Regrets:

Jeremy Livingston
Rob Gorrell
Kevin Morooney
Saira Hasnain

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed!
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/spaces/eduroam/pages/372277489/eAC+Meeting+2025-11-21>
 - Mike Dickson
 - Derek Eiler
 - Kendra Ard
 - Chris
 - Nadim El-Khoury
 - Brett Bieber
- Working group updates
 - [eduroam BE working group](#)

- Derek: Group met, covered responses to initial community feedback. Community consultation running into next week.
 - Next steps - wrap up consultation, adjust based on feedback. Present to Steering, then work with I2 on data collection requests
- [Cloud infrastructure working group](#)
 - Amel: Trying to get Foxpass, members of Alabama community colleges they've worked with, together at a meeting.
 - Next steps: Meet with group, Foxpass & Alabama schools after holiday break
- [Best Practices Guide Update](#)
 - Derek: Group is working on looping in additional SMEs - Mark Houtz (UETN) and Jeff Hagley (Pier Group). Met with eSOs and a member of K12 staff to get K12 feedback.
 - MikeD: Group is also working on a community survey. Will finalize questions, MikeZ to create survey, we'll send out to various community facing groups.
 - Sara: For discussions around EAP-FIDO do we foresee that being covered in the new BPG? Or is that a "next round of revisions" item?
 - Derek: We haven't covered it. Feel like it's still emerging tech. We're focusing on presenting the pros/cons of commonly used EAP methods. We could include FIDO if there's a sense it's relevant to current community.
 - Sara: There've been conversations about "passwordless" options but those don't seem like they're used in anything beyond an experimental/trial state in the US
 - MikeD: We do have recommendations to allow all EAP types through so that could cover things like EAP-FIDO
 - Sara: Fair point. We're (the US R&E community) also big enough to drive commercial vendors but we want to make sure that's being driven from the community.
 - Derek: Have been thinking about a working group to address passwordless auth methods and eduroam.
 - Amel: Could also include MFA in that discussion.
 - MikeD: I'd be interested in seeing how passwordless would fit into the landscape.
- Report out from TechEx (Derek, Brett, Sara, Mary, MikeZ)
 - Threat modeling working group - spin up for 2026?

- Discussed in ACAMP session:
<https://docs.google.com/document/d/1qiMQOIqL4HJbacUp96C1KVyIO2DdOSrdMrq4BoE7X-E/edit?tab=t.0>
 - Include Grant Bierly (Internet2), Alan DeKok, others?
 - Discussion of a “black list” of known bad actors and/or attributes?
- Derek: This session was an outgrowth of discussions at Mobility Day. Proposed by Nicole Roy, others in the community.
- Sara: The eAC does have a relationship with with CACTI, so I’d encourage this committee to check in on how they and other advisory groups are tackling things like quantum computing & cryptography, could be goodness to be had by leaning on and lending expertise within that ecosystem.
- eduroam Support Organizations & On-Ramp Update (provide as pre-read)
 - CEN
 - Focusing on supporting existing school districts and public hotspots. Looking at the possibility of a task force to expedite rollout of eduroam in the state
 - Link Oregon
 - Initial onboarding in progress with 2 new education service districts: High Desert ESD and Clackamas ESD
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- Another IA provider on west side of state is looking to bring eduroam to the home for student provided houses
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 - Hotel/casino/resort conference venue eduroam experience successful. Trying to convince to keep it long-term, but that requires an agreement (\$0.00) with us...
 - Spinning up “eduroam in the wild” pilot: using eduroam to bring edge connectivity to field science sites with no/poor cell coverage; if successful, will expand to much larger network of field science/observation sites
 - Met with large school district again, leadership timidity about risk of blowback if credentials used to access risky things off school premises where there’s no content filtering. Shared all the things we’ve talked about here before to help weigh pros/cons, policy things, teacher vs. student access, etc., but it may take peer advocacy...
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- The Sun Corridor Network
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 - Starting cadence of [Zoom meetings](#) to share eSO opportunity for non-higher ed organizations, as well as technical troubleshooting for any organizations.
 - Starting up regular on-boarding and support calls for our community
- UETN
 - Internal restructuring, bringing new team members up to speed on the program and this community
 - Jeff Egly re-joining as eduroam team member
- Network Nebraska
 - Presented at Mobility Day 2025

- Update on On-Rampers
 - MOREnet - Have 3 members identified; 2 more tentative
 - Presented on eduroam at annual member conference
 - Around 30 new organizations interested in starting in 2026
 - St. Louis County Libraries (21) - now live on eduroam as hotspots
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 - Green Bay School District (another Top 5 in size) to come on in December
 - 2 other onramp members onboarding now (Stevens Point SD & CESA5)
- Farewell to members rolling off, next steps for new members
 - **Rolling off:**
 - Brett Bieber
 - John Buysse
 - Nadim El-Khoury
 - Michael Hacker
 - Kendra Ard
 - **Current members:**
 - Derek Eiler
 - Dion Baird
 - Amel Caldwell
 - Mike Dickson
 - Derek Eiler
 - Rob Gorrell
 - Saira Hasnain

- Jeremy Livingston
- **New members:**
 - Christopher Dietrich - Senior Network Architect, Wireless with The Ohio State University
 - Gloria Stephenson - Associate Director of Cybersecurity and LAN Services with MOREnet
 - Alicia Marques - Senior Network Engineer, Virginia Community College System
 - Mark Breen - Chief Technology Officer, Vail School District
 - Ken Miller - Chief Technology Officer, KeystoneREN
 - Giselle Martinez - Senior IAM Strategist, Moran Technology
- Derek: Many thanks to all of you for all the work you've done. Personally it's been rewarding to be a part of the broader eduroam community.
- Romy: Echo Derek's sentiments - you're all engaged and enthusiastic, and do a great job of forwarding some of the most visible work we do.
- Next call
 - Friday, January 16 - 11am-12:30pm ET
- AOB
 - Informational -
 - Leif Johansson has officially started in the position of Executive Director at the SIROS Foundation. For the eduroam space, specifically note the FIDO foundational bits. This could drive further industry adoption of [EAP-FIDO](#).
 - This is the launch blog: <https://siros.org/blog/launching-a-global-web-first-foundation-for-secure-user-controlled-digital-identity>

Friday, November 21, 11am-12:30pm ET

Attendees: Leif is officially the ED at SIROS. This is his launch blog. For the eduroam space. Specifically note the FIDO foundational bits.

<https://siros.org/blog/launching-a-global-web-first-foundation-for-secure-user-controlled-digital-identity>

Brett Bieber - University of Nebraska
Derek Eiler - NSHE
Amel Caldwell – University of Washington/WA-K20
Saira Hasnain - UF
Mike Dickson - UMass Amherst
Josh Howlett - Federated Solutions
Kendra Ard - California State University Office of the Chancellor
Rob Gorrell - University of North Carolina
Nadim El-Khoury - Springfield College

With:

James Cramton - Internet2
Sara Jeanes - Internet2
Steve Zoppi - Internet2
Kevin Morooney - Internet2
Romy Bolton - Internet2
Mike Zawacki - Internet2

Regrets:

John Buyesse

Agenda

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- Agenda bash
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/spaces/eduroam/pages/365920278/eAC+Meeting+2025-10-24>
 - Saira - Approve
 - Derek approves too
 - Mike - Approve
 - Approved by majority
- Working group updates
 - [eduroam BE working group](#)
 - BE requirements doc to go up for community consultation shortly after this call, will be promoted at TechEx. Consultation to close December 21
 - Brett: 2026 to be about community engagement and communication. I highlighted that for the InCommon Steering Group last week
 - [Community Consultation Page for eduroam Baseline Expectations](#)
 - [Cloud infrastructure working group](#)
 - Amel: Met with vendors and reviewed requirement draft. Got some good feedback, made some small changes
 - Brett: One thing that stood out to me was the importance of not hairpinning traffic - want that to reach the top level RADIUS servers to ensure visibility and logging.
 - MikeD: Mary suggested inviting Foxpass - another cloud RADIUS provider plus hosted LDAP. Alabama community college system was their first eduroam experience. We're looking for contact info for them, hoping to have them join upcoming calls
 - Brett: I like that. Alabama has little penetration, plus getting more engagement with community colleges is great
 - Amel: Could just have a one-off call with them.
 - MikeD: Like that idea. They seem very easy to work with.
 - Brett: Have had conversations with Alabama HEs. Lots of challenges for them around extension offices, other potential roadblocks. Having a local partner could help with that. Next steps for the group?
 - MikeD: I'm going to check in with Mary, look for contacts. Amel, if you think an intro call.

- MikeZ: Once you've got contacts firmed up I can help set up that call.
- [Mobility Day 2025 planning committee](#)
 - Brett: Broader representation on this year's program
 - Derek: Agree - good mix of network and service related topics. Program has come together
 - Brett: Discussing meet up with eSO folks, could have out of state guests from Link Oregon join us
- [Best Practices Guide Update](#)
 - Derek: Reviewed OG BPG and an unfinished "v2" draft. Have a list of topics to cover including K12 considerations, eduroam as sole/main SSID. Group is portioning out topics to write up
 - MikeD: Also putting together survey for the eduroam community, will help guide what we include.
 - Amel: I'd like to join this group.
- eduroam at airports (Mary)
 - [eduroam for airports](#) - throw in your comments! I kept it high level and marketing oriented as a start, probably lots of directions for this to go.
 - Brett: AI for me is to identify airports whose boards have HE connections. Could be a good point of engagement.
 - Derek: I'd like to re-ask to see if we can talk with international community on their experiences deploying at airports.
 - Mary: I can follow up with international community on that.
 - MikeD: One of my takeaways from reading this was the importance of highlighting user set up in BPG. Also should think about eduroam badging/signage
 - Mary: Maybe we could have a set of electronic collateral for facilities to display
 - Brett: Like that idea.
- eduroam Support Organizations & On-Ramp Update (provided as pre-read)
 - CEN
 - Focusing on supporting existing school districts and public hotspots. Looking at the possibility of a task force to expedite rollout of eduroam in the state
 - Link Oregon
 - Initial onboarding in progress with 2 new education service districts: High Desert ESD and Clackamas ESD

- K-12 deployment is slow. Current interest is tied to available eduroam resources around the interested districts.
 - A conversation is being planned to focus a pitch to school district executive leadership to gain buy-in.
- Washington K-20 Network
 - Gathering leads for more large districts
 - Presented at ACPE on eduroam and K12, good discussions during session. ESDs are forming up user group
 - Met with Tacoma, one of our biggest systems; they are set up in Federation Manager and are working to get it ready. The CIO there came from Nevada where they had eduroam and wanted to have it at his new location. Amel is troubleshooting RADIUS federation.
 - Working on user agreement (cribbed from LinkOregon)
- Merit
 - Most of Oakland School's district up - est completion of all = mid-Jan
 - Turned up variety of other sites
 - Meeting with a number of grassroots philanthropic organizations in Detroit area to spread word amongst GenZ, and potential granting monies
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 - Another IA provider on west side of state is looking to bring eduroam to the home for student provided houses
- NSHE
 - GMIS conference went well, interest expressed by a rural school district we hadn't been able to reach before
 - Trying to get eduroam at conferences - wrote up "support letter"
 - Working hard to get Google support added to rapid-deployment eduroam IdP+SP container by Thanksgiving
 - Charter school network is interested in joining - contacting boards has been somewhat effective
 - State library co-op is interested, exploring opportunities
 - Rural library and museum are interested, they have offered to bring it to their County for consideration to make eduroam a big-picture thing
 - Large school district that decided not to eduroam is reconsidering
- The Sun Corridor Network

- Met with Sky Harbor International Airport in Phoenix. Working on proposal to bring eduroam to that airport.
- Learning Network of Minnesota
 - Starting cadence of [Zoom meetings](#) to share eSO opportunity for non-higher ed organizations, as well as technical troubleshooting for any organizations.
 - Starting up regular on-boarding and support calls for our community
- UETN
 - Internal restructuring, bringing new team members up to speed on the program and this community
 - Saintcon Conference great conversations at booth with potential new sites, in-person eduroam meeting for solving the filtering and firewall issues we see in between school districts. Solution is proving to be well received.
 - Welcome Kevin Buchan! UEN's new PMO Manager
- Network Nebraska
 - Reporting!
 - Discussion with fiber to the home ISP next Monday
 - Discussion with TMobile on eduroam on hotspots
- Update on On-Rampers
 - MOREnet - Have 3 members identified; 2 more tentative
 - Presented on eduroam at annual member conference
 - St. Louis County Libraries (21) - now live on eduroam as hotspots
 - Special needs district in St. Louis area (partner with 22 districts metro area)
 - Pilot organizations include 2 libraries
 - 1st library deployed! Stood up FreeRADIUS server, will test in the coming week
 - Seeing lots of traction with schools that have lots of overlap with smaller HEs
 - Also looking to set up sites with Fortinet gear, looking at how to handle RADIUS portion
 - WiscNet
 - 2 of the largest school districts in WI fully on-ramped and broadcasting in all of their buildings (Madison & Waukesha)
 - Green Bay School District (another Top 5 in size) to come on in December

- 2 other onramp members onboarding now (Stevens Point SD & CESA5)
 - Brett: There was [an announcement earlier this month](#) on the two On-Rampers
- Standing item: Infrastructure updates from I2 (Mary)
 - Implementation of eduroam rate-limiting by device mac address; planning to complete by end of year
 - Analytics dashboards distributed to eSO admins; scheduled to distribute link to eduroam admins early December.
 - Displayed analytics dashboards of eduroam performance at Supercomputing (eduroam offering through Scinet)
 - Brett: Really like Mary's idea to write up a blog post on the analytics dashboard.
- Community Advisory update
 - Voting on new members complete. 4 incoming members:
 - Christopher Dietrich - Senior Network Architect, Wireless with The Ohio State University
 - Gloria Stephenson - Associate Director of Cybersecurity and LAN Services with MOREnet
 - Alicia Marques - Senior Network Engineer, Virginia Community College System
 - Mark Breen - Chief Technology Officer, Vail School District
 - Rolling off at the end of 2025:
 - Brett Bieber
 - John Buysse
 - Nadim El-Khoury
 - Michael Hacker
 - Sara: Should we do a handoff of candidates who weren't voted in for other committees?
 - Romy: Agree - Brandon is heading up the advisory committee effort. Ken Miller comes to mind as a good example
 - Mary: Also like this idea.
 - Kevin: Consider that we'll have a lot more rollover next year. Maybe ask him to
 - Brett: Also, there are a number of working groups that would be a good way to keep those folks engaged. Ken could be valuable in that capacity
 - Mary: I like that idea.

- Kendra: I am willing to end my term to make space for someone like Ken Miller.
- Sara: I think there's a lot of value in having you on, especially thinking through your involvement with eduroam and the 2028 Olympics.
- Kendra: I'm more than happy to continue to serve as a non-voting member [in perpetuity](#)
- MikeZ: There was a 3 way tie for the runner up slot. Would we need to have a runoff vote?
 - Consensus - yes
- Kevin: We could present the slate to Steering on December 1.
- Kendra formally resigns the remainder of her term, will end on December 31, 2025
 - Brett: The chair accepts
 - Kendra will remain on the calendar invites as a non-voting SME
- Next steps:
 - Approve these members
 - Approved by majority
 - Runoff voting for Kendra's vacated seat
 - Voting open from today until 9am ET Tuesday 11/25
 - Slate forwarded on to steering
 - Candidates will be notified at end of the month/early next
- Next call
 - Friday, December 19 - 11am-12:30pm ET
- AOB?

Friday, October 24, 11am-12:30pm ET

Attendees:

Brett Bieber - Nebraska
 Saira Hasnain - UF
 Derek Eiler - NSHE
 Kendra Ard - CSU
 Amel Caldwell - UW
 Josh Howlett - Federated Solutions
 Rob Gorrell - UNC
 Nadim El-Khoury - Springfield College
 Mike Dickson - UMass Amherst

With:

Sara Jeanes
Kevin Morooney
Romy Bolton
Mike Zawacki

Regrets:

John Buysse
Jeremy Livingston

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Updates to Network Nebraska's eSO news
- Approval of last meeting's minutes
 - September
 - <https://spaces.at.internet2.edu/spaces/eduroam/pages/360644673/eAC+Meeting+2025-09-26>
 - Saira - approve
 - Derek - Approve
 - Amel - Approve
 - Brett -approve
 - Rob - Approve
 - Nadim - approve
 - Kendra - approve
 - August
 - <https://spaces.at.internet2.edu/spaces/eduroam/pages/355729451/eAC+Meeting+2025-8-29>
 - Derek - approve
 - Nadim - approve
 - MikeD. - approve

- Saira - approve
 - Amel - approve
 - Brett - approve
 - Kendra - approve
- Approved
- Working group updates
 - [eduroam BE working group](#)
 - Derek: Met to review details of BE docs before IAM Online (which covered BE). No more revisions planned. Got some good discussion going during the IAM Online. At this point looking at next steps. Put out for community consultation? ACAMP session at TechEx? Feels like we're ready for formal approval via community consultation process.
 - Romy: We have a template for community consultations.
 - MikeZ: We'd need to turn the request doc into a PDF, post to wiki with feedback form.
 - Brett: Do we want to have the consultation period overlap with Mobility Day?
 - Derek: I think it would be more useful to have the community consultation open during TechEx.
 - Brett: The eAC has one more meeting before TechEx. Then we could close after TechEx?
 - Derek: I don't see any harm in keeping it open in December to allow folks time to contribute after TechEx. Would like at least a week past the end of TechEx to allow folks who attend Mobility Day time to add their feedback.
 - MikeZ: I2 closes right before Christmas so we'd want to close before then
 - **Brett: Maybe we could open for comment right after eAC's November meeting and then close December 19.**
 - **Plurality approve of that timeline**
 - Kevin: Things to keep in mind - keeping community informed, including Steering
 - [Cloud infrastructure working group](#)
 - Amel: Brett and I will be meeting with the InCommon Steering committee to present the requirements document. We'll also meet with industry and Catalysts for the next call.

- Brett: Also thinking about the utility of hosted solutions for smaller organizations.
- Amel: Also feel there will be more need/requests for RADSEC and eduroam - this is a good way to dip our toe in that water and try it out.
- Brett: Kevin, any pre-reads needed for the meeting with Steering?
- Kevin: I attached the requirements doc to my update to Steering. It would also be helpful if you could come up with a few slides that we could share with them ahead of the next call (by Friday 10/31). If not, attach the doc and we'll share that out again.
- Brett: Sounds good. Mary, thinking about the slides you came up with on the growth of eduroam over the last few years would be great to include.
- Amel: I'll start that deckhand send it to you
- [Mobility Day 2025 planning committee](#)
 - Derek: Program is coming together, mostly finalized. One thing that came up was that Private Wireless Pros (who're hosting the event directly ahead of Mobility Day) is trying to figure out how much/what to contribute to the private wireless panel. Otherwise program is pretty well firmed up.
 - Sara: Apple has announced satellite connectivity program. Has that come up in relation to private wireless panel?
 - Derek: It hasn't come up, but would could definitely see that there would be interest around that.
 - Brett: Could be great to collect industry topics and share those out to the community, and to use those topics to feed the panel ahead of Mobility Day. Could also add those to the rotating slides
- eduroam Support Organizations & On-Ramp Update (provide as pre-read)
 - CEN
 - Focusing on supporting existing school districts and public hotspots. Looking at the possibility of a task force to expedite rollout of eduroam in the state
 - Link Oregon
 - Initial onboarding in progress with 2 new education service districts: High Desert ESD and Clackamas ESD
 - Washington K-20 Network
 - Gathering leads for more large districts

- Presented at ACPE on eduroam and K12, good discussions during session. ESDs are forming up user group
- Met with Tacoma, one of our biggest systems; they are set up in Federation Manager and are working to get it ready. The CIO there came from Nevada where they had eduroam and wanted to have it at his new location. Amel is troubleshooting RADIUS federation.
- Working on user agreement (cribbed from LinkOregon)
- Merit
 - Detroit Public Schools pilot of 6 schools: LIVE
 - Ottawa Area ISD - almost live
 - Kent ISD - in a week or 2 live
 - Central Michigan University - end of Aug via InCommon LIVE
 - Northern Michigan University - end of Aug via InCommon LIVE
 - Connected Bay Mills College - early Sept via InCommon LIVE
 - Presented at Grand Rapids tech week on eduroam
 - Presenting next week @ Michigan Broadband Summit w/ CIO of C of Detroit & CIO of WSU
 - Procured 3-year funding from Rocket Mortgage for connecting 'all of Detroit'
 - Pensole Lewis College (HBU) in early Nov - Merit will cover InCommon costs
 - Close to closing Oakland Schools (an ISD)
 - Presentation at Michigan Broadband Summit a success. More interest pulled in
 - ORION (Canada) has invited Merit's team to meet with leadership so they can understand what they can do better to drive growth
- NSHE
 - GMIS conference went well, interest expressed by a rural school district we hadn't been able to reach before
 - Pushback from an airport: wi-fi vendor is telling them adding eduroam would be "too many SSIDs"... second potential SP-only who has raised this concern to us. We'd like to be able to point them at something official
 - (Note from Mary Bull) There was some discussion about this from Wireless Pros - could share with this group.
 - <https://design.mist.com/ssids/> - go to the last paragraph in transcript or 12:45 in audio to see relevant section about ssid number with higher MBR.

- Calculator used in video to illustrate point - <https://revolutionwifi.blogspot.com/p/ssid-overhead-calculator.html>
 - We'll be "officially" guiding our higher ed institutions to stop allowing local eduroam auth without a scope/realm; will take time...
 - [Rapid-deployment FreeRADIUS container](#) development continues (incl. [SP-only filtering proxy](#) now in production for City of Reno)
 - Preparing for next couple regional conferences
- The Sun Corridor Network
 - Attending Arizona CTO/CIO Forum - K12 centered event. Tech director for Vale School district is presenting on their eduroam deployment.
 - Met with Sky Harbor International Airport in Phoenix. Working on proposal to bring eduroam to that airport.
- Learning Network of Minnesota
 - Starting cadence of [Zoom meetings](#) to share eSO opportunity for non-higher ed organizations, as well as technical troubleshooting for any organizations.
 -
- UETN
 - Internal restructuring, bringing new team members up to speed on the program and this community
- Network Nebraska
 - State CIO office restructuring. Also shifting around personnel.
 - Re-engaging with fiber to the home ISP, ALLO on eduroam
 - Discussing mobile hotspots and eduroam with T-MOBILE
 - New deployment, Kimball Public Schools!
- Update on On-Rampers
 - KINBER
 - Have several school districts express interest in piloting
 - MOREnet - Have 3 members identified; 2 more tentative
 - Presented on eduroam at annual member conference
 - St. Louis County Libraries (21) - now live on eduroam as hotspots
 - Special needs district in St. Louis area (partner with 22 districts metro area)
 - Pilot organizations include 2 libraries

- 1st library deployed! Stood up FreeRADIUS server, will test in the coming week
 - Seeing lots of traction with schools that have lots of overlap with smaller HEs
 - Also looking to set up sites with Fortinet gear, looking at how to handle RADIUS portion
 - WiscNet
 - Scheduled to begin the onboard process of first 2 members
- Airport sidebar discussion
 - Derek: would be great to have a “playbook” for airport engagements. All the eSO folks who’ve talked to airports are getting the same/similar questions.
 - Sara: We could work with coms team about putting together a glossy for CIO crowd
 - Mary: Also put together a [security handout/chart](#) that folks can refer to as well.
 - Kendra: I’m working with the LA28 Olympic commission who might know people in LAX leadership.
 - Kevin: World Cup is another good use case/inroad
 - Kendra: Olympic athletes also frequently get housed in HE dorms
 - MikeD: From Olympic org’s POV consider there might be more incentive to monetize SSIDs/wireless.
 - Kevin: WRT airports, looking at board composition for familiar faces.
 - Brett: Hearing some next steps to have ready for next eAC meeting
 - [AI - Kendra] Meet with HE contacts ahead of Olympics to stress the value of keeping eduroam up. Maybe even see if there are venues that don’t have eduroam where it would be valuable
 - [AI - Brett] Identify a prioritized list of airports, community members, and contacts on airport boards
 - [AI - Mary] Come up with glossy for airport engagements
 - MikeZ to assist Mary on this
 - Reconvene a call on airports and eduroam when there’s a draft to review?
 - Derek: I’d love to see not just transportation hubs but also athletics as a focus point. Maybe a working group to coordinate out
- Update of Best Practices Guide

- Especially concerns around SSID “saturation”
- Derek: Wondering about revising BPG in light of things like the SSID saturation issue and the upcoming BE efforts.
- Brett: It’s a good idea. Sounds like a working group should be formed up.
- Derek: Happy to participate in that.
- Rob: Happy to help again as well. We had some items that came up during the development of the first version that would be good to fold into new version
- Josh: I would be available also
- MikeD: I’m also interested.
- Nadim: I would be willing as well
- Mary: Please add me as well
 - [AI] MikeZ to send scheduling poll to WG
- Update on Report dashboard (see below for Mary’s update)
- Standing item: Infrastructure updates from I2 (Mary)
 - eduroam bug fix at the end of September include the 24-hr SP testing certificate
 (<https://spaces.at.internet2.edu/spaces/eduroam/pages/212074894/eduroam+Infrastructure+Release+Notes#eduroamInfrastructureReleaseNotes-V2.2.0>)
 - eSO dashboard analytics access will most likely be released on November 3. Updated Knowledge Base page:
<https://spaces.at.internet2.edu/x/KIWhF>
 - We are notifying the list of admins who receive the report in the text of the normal report email. Also plan to announce the availability at the 10/30 Incommon/eduroam Regional Update if possible.
 - eSOs are getting access first; early December, most likely, will be the rollout month for all other eduroam admins and report contacts
 - The report contact is a bit more complicated because contacts will need to be recreated as eduroam analytics viewer users in Federation Manager by their respective eduroam admins.
 - Updating the eduroam HECVAT - in progress to replace the HECVAT from [2022](#).
 - Eduroam security FAQs handout - for the CISO or security team asking about AAA: <https://spaces.at.internet2.edu/x/awBFFQ>
 - Eduroam startup steps - for admins and orgs new to eduroam:
<https://spaces.at.internet2.edu/x/DwA0FQ>

- Plan to use these headings to group the knowledge base into clear categories for easier searching
- IAM Online report out
 - Zoom poll feedback:
 - “What is your biggest pain point as an eduroam administrator or user?” (Top 5 summary of 41 open-ended responses)
 - #1 Troubleshooting / Logging: Difficulty diagnosing failures, lack of visibility, unclear logs, no insight into remote IdP/SP
 - #2 Onboarding & Supplicant Configuration: Getting devices configured, certificate onboarding, inconsistent client behavior
 - #3 Certificates / EAP-TLS Management: Certificate installation, renewal, failures, trust issues, managing expired certs
 - #4 Inconsistent Experiences Between Institutions: “Works at home but fails elsewhere,” lack of standardization, hard to contact remote admins
 - #5 Documentation Quality / Clarity: Outdated guides, missing instructions, difficulty finding good best-practice material
 - “If a cybersecurity incident occurred involving a visiting eduroam user, could you reach someone at the home org in a timely manner?” (74 responses)
 - Yes: 36 (48.6%); No: 38 (51.4%)
 - “Does your organization publish instructions for connecting to eduroam?” (84 responses)
 - Yes: 72 (85.7%); No: 12 (14.3%)
 - “Does your IT documentation tell users to ignore security certificates?” (68 responses)
 - Yes: 15 (22.1%); No: 53 (77.9%)
 - MikeD: Good presentation and attendance. Poll results were telling, too - interesting details on deployments. Feels like there’s lots of interest in knowledge sharing/documentation. Overall well received
 - Josh: I think the issue around a lot of these questions, esp WRT knowing where documentation is, is that the knowledge of where info can be found is siloed within organizations. Also, eduroam is often seen as an “add-on” to the network rather than an integral part of wireless deployments.
- Community Advisory update
 - Nomination window ends today (10/24)
 - [Current nominees](#)
 - Need to determine who will roll off, who wants to re-up

- Nadim volunteers to roll off
 - Assumption will be that anyone up in 2025 will roll off unless they email Brett, Derek, and MikeZ
- Next call
 - Friday, November 21 - 11am-12:30pm ET
- AOB?

Name	Term ends	Intends to roll off?
Brett Bieber	2025	Yes
Derek Eiler	2026	NA
Kendra Ard	2026	(may choose to roll off)
Dion Baird	2026	NA
John Buysse	2025	?
Amel Caldwell	2026	NA
Mike Dickson	2025	Renewed term
Nadim El-Khoury	2026	Volunteered to roll off
Rob Gorrell	2026	NA
Michael Hacker	2025	?
Saira Hasnain	2026	NA
Jeremy Livingston	2026	NA

Friday, September 26, 11am-12:30pm ET

Attendees:

Mike Dickson - UMass Amherst
Derek Eiler - NSHE
Brett Bieber - University of Nebraska
Nadim El-Khoury - Springfield College
Josh Howlett - Federated Solutions

With:

Mary Bull
Kevin Morooney
Sara Jeanes
James Cramton
Romy Bolton
Steve Zoppi
Mike Zawacki

Regrets:

Jeremy Livingston
Saira Hasnain
Rob Gorrell
Amel Caldwell

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed!

- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/spaces/eduroam/pages/355729451/eAC+Meeting+2025-8-29>
 - Notes/votes to approve or amend
 - Derek - approve
 - Nadim - approve
 - MikeD. - approve
- Working group updates
 - [eduroam BE working group](#)
 - Identify milestones, next steps
 - Details on [Enhancement Request document and stats](#)
 - Derek: Seeking some feedback from the committee and then Internet2.
 - Derek: Looking at traffic light rating for compliance with each item. First we need a “national average value” across all subscribers - see “Metrics” column in the ER doc. Would look to I2 to collect/present that info. Initially that could just be a document with those averages. Eventually the goal is to present the traffic light to each admin via eFM
 - Derek: ER3 presents a request for some info for the eAC, like number of IdPs nationally, etc
 - Brett: Some of that is available here: <https://monitor.eduroam.org/>. I'd love to have the ability to drill into that info further. Would also be really helpful to have the ability to present that info for eSOs.
 - Derek: As an eSO person I've been playing with the idea of doing a breakout of the map info for each state.
 - Mary: I2 has been having internal discussions around analyzing and presenting service info. Things like total organizations, orgs that have sat in “editing” state in the eFM for a long time, etc. And the detail that Derek has put in here is very helpful this internal dashboard development, so that we can make that congruent to what the eAC is hoping to see.

- Derek: Also there's been a lot of focus on sharing resources within the eSO community, but I would like to see that sort of info sharing at the national and even international level.
- Brett: Can you talk about the upcoming IAM Online and other next steps?
 - Derek: Mike Dickson and I will be presenting the BE effort in mid-October. We also need to clean up the outstanding comments. Then we'll present the document to I2 and will present on our work at Mobility Day at TechEx. For all of that it would be really helpful if we had some of the stats available to seed conversations and provide some meaningful starting point.
- [Cloud infrastructure working group](#)
 - [Review of Request Document](#) (provided as pre-read)
 - MikeD: Discussion in the comments is ongoing. Amel's position is that the requirements are pretty well formed up. We just need to finish tuning and clear up comments. James, any thoughts from the catalyst perspective?
 - James: That sounds correct. Cirrus is most engaged but Unicon rep has also been regularly attending meetings
 - MikeD: Next steps would be to clean up doc, meet with catalysts, and then present at Mobility Day
 - Derek: At last eduroam dev call there was a lot of discussion from other NROs about doing this sort of work, especially working on ways to integrate RADSEC. Feels like there's a sense of convergence.
 - Mary: It would be good to talk to the international community. My impression was that there might not have been a lot of recent engagements with vendors with the other NROs.
 - James: WRT Catalyst partners, eduroam may need its own class of certified or trusted vendors. We've brought in 2 of the 12 Catalyst partners, but we should consider whether we need a special classification for eduroam vendors. We need to be mindful of how we frame their participation. Catalyst partners serve across a wide range of IAM topics as trusted IAM vendors in R&E, now including eduroam consultation or support. But not all eduroam vendors will be a fit for the

Catalyst program, just as not all Catalysts are a fit for eduroam support.

- Kevin: I'd like y'all to help with finding a sweet spot here. We have two meetings of the advisory board coming up. I'm struck that it would be great to kick off the January meeting with an update on eduroam, but am not sure if we should get that update in during an earlier meeting (November).
- Brett: I'd want to make sure we highlight the collaboration with other NROs, and ensure that our respective communities come to the vendors with a unified front and messaging points. In these sorts of discussions there's always the question of what our peers are doing. I'd like to have that buttoned up.
- Kevin: Agree. November sounds early. I have a meeting with the InCommon Steering committee soon. I can offer to pencil us in to November.
- Brett: I am, but I lack the connections to the NROs so I'm dependent on folks like Sara, Mary, and the eduroam team to facilitate those conversations.
- Kevin: It could be that TechEx could be a good chance to have more substantive conversation. Maybe we could provide very high level overview in November and present more completely in January
- MikeD: I like that idea. The working group meets next week. We can talk about this then, look at international folks to join us?
- Sara: Could be a good topic for eduroam VC calls
- MikeZ: Mary and I are regular attendees of those calls. We can add an item to highlight the work we're doing here and ask if one or more folks from that call could join the next working group call

○ [Mobility Day 2025 planning committee](#)

- Brett: Have an agenda and are working on confirming speakers. We're working on We're also MikeZ and Mary to send out a note to the eduroam-admin lists to call for additional proposals.
- Derek: Plus one - suspect we'll also get more topics once call for participation goes out. Have a research engineer joining who will also present.

- Mary: I got a message back from Canadian colleague who can present on eVA (visitor access system) if we decide to move ahead with that topic
 - Brett: Next steps are to send out call for participation. Scott Taylor is also going to promote the event and call for proposals amongst network community.
- Standing item: Infrastructure updates from I2 (Mary)
 - Successful Ubuntu upgrade on Sunday; additional bug fix release in testing to release close to the end of September.
 - Successful technical RADIUS class with 29 registrants from 23 institutions. More interest from others for future offerings of this class.
 - MikeD: Would you consider providing this to vendors and catalysts? Could be a good way for them to gain familiarity with the service
 - Mary: Would make more sense to include them in the “100 level” class. This is a pretty technical course on one specific aspect of the eduroam service.
 - MikeD: Could we offer discounts for some community members?
 - Sara: We priced the class such that it’s accessible, so we don’t have much/any wiggle room. The amount we charge is the amount it costs to offer it, essentially.
 - Derek: I’d love to see the eduroam US community get to the point where the training is essentially community generated, as we’re doing in the eSO program. There’s a part of the NRO duties that includes “convening the community” so that could be a way to speak to that.
 - MikeD: Maybe the SMEs from other eSOs could be SMEs for the eduroam US community?
 - Sara: Great point. We are approaching the point of eduroam’s growth where we were with the InCommon Federation where the breadth of technical complexity was such that the community ended up doing more mutual support. We may end up at the same point for eduroam soon.
 - Not quite infrastructure but this is a new visual I want to test out for helping new sites figure out how to plan their eduroam implementation; I’d love to hear your thoughts.
<https://spaces.at.internet2.edu/spaces/eduroam/pages/355729423/eduroam+Startup+Steps>
- Advisory group rollover

- eAC membership summary/composition (derek)
 - Derek: I'd encourage you all to review Brett's [message on the composition of the eAC](#)
 - Derek: Mary Bull and I had a conversation with Ed Kingscote (CANARIE) where he expressed interest in working with eduroam US. Could be a good opportunity to have international representation on the committee
 - MikeZ: Maybe Wade Gibson (NE) or Luke Jenkins (UT) for K12s?
 - [Submit nomination for committee](#)
- Call for quotes from members
 - If you have a summary of your experience, benefits, helpful hints, etc please email them to Brett & Derek with MikeZ cc'd.
- eduroam Support Organizations & On-Ramp Update (provide as pre-read)
 - Report out from QUILT (Mike Z)
 - CEN
 - Focusing on supporting existing school districts and public hotspots. Looking at the possibility of a task force to expedite rollout of eduroam in the state
 - Round 1 WiFi Grant Application we have a dozen applicants that have agreed to broadcast Eduroam as part of the WiFi grant process
 - Round 2 we have about 2 dozen applicants that are going to be doing Eduroam once awarded
 - During our annual conference we got our Convention Center onboarded and broadcasting as an SP
 - Still need a better wide adoption method to get more community buy in
 - Had a member identify an issue with v6 addressing and forwarding Eduroam sign-in requests, he contacted Incommon and they found a bug in backend systems, fix pending
 - Link Oregon
 - Initial onboarding in progress with 2 new education service districts: High Desert ESD and Clackamas ESD
 - Learning Network of Minnesota
 - Southwest West Central Service Cooperative - on boarded SP and IDP
 - NSHE

- Media / promotion for WCSD eduroam go-live. Local TV news channels aired at least one 30 second spot. Unfortunately the clips aren't all online, but here are two examples:
 - [Univision](#) (interviewed WCSD and NSHE)
 - [KTVN](#) (used NSHE's press release)
 - NSHE + WCSD [joint press release](#)
 - Hoping to work the broader eSO program into future comms.
 - Hospital / healthcare net in Northern NV has agreed to offer eduroam.
 - Around 50 locations, but haven't settled on which ones will offer eduroam yet. Close affiliation with UNR. Will join as SP-only.
 - Hospital in Southern NV wants to offer eduroam but isn't ready; revisiting middle of next year.
 - New interest from a rural school district. Meeting next month.
 - Revitalized an old K-12 eduroam deployment that was part of a pilot from before the eSO program launched.
 - Local community college staff couldn't roam... district was down ~2mo. over summer without knowing (didn't want to set up eduroam heartbeat when NSHE started offering it).
 - Was sending bare usernames up to tlrs1 + tlrs2
 - Firewall only allowed traffic in from tlrs1
 - Own users generally don't know about eduroam yet
 - Found insidious "issue" at another community college preventing some visiting institutions from roaming. College's RADIUS filtering / policy rules were dropping incoming eduroam auths that were missing a **NAS-Port-Type**. We couldn't find anything in eduroam docs strictly requiring NAS-Port-Type, but various docs in the wild show it in their eduroam setup requests.
 - Discussions with major airports in NV are still ongoing.
 - One is concerned about loss of marketing data by pulling users away from free open wi-fi.
 - Other is concerned about supporting an additional service, even with help from NSHE.
 - Met with PAIU team to discuss containerized FreeRADIUS considerations, architecture, etc.
- UETN

- Facilitating work for filtering and firewall configurations for all school districts. We are finding really excellent solutions using our IP space and web accessible documents for firewalls to pull from. Huge benefit for seamless services
- Merit Network
 - Still working to get DPSCD going (very complicated rules set with Cisco ISE)
 - Preparing for Tech Week presentation in GR & [Michigan Broadband Summit](#) panel (in Detroit October 14th)
 - Signed large ISD: Ottawa Area ISD, turn up staggered over 16 school districts
 - Signed medium sized ISD as SP
 - Enabled eduroam for QUILT Winter Meeting in Dearborn
- Network Nebraska
 - Continuing support for existing communities. Also gave an interview with a staff writer for the Center for Digital Education, who is doing a story about eduroam in the K12 space
 - Engaging with second to last ESU to turn up eduroam (adjacent to final ESU that hasn't implemented)
 - Focusing on public outreach, local partnerships for hotspots
 - Had meeting with state CIO about promotion and building awareness for eduroam
- The Sun Corridor Network
 - SCN: resolving internal SO tech unit responsibility going forward.
 - Vail ISD turned up eduroam
- Washington K-20 Network
 - Gathering leads for more large districts
 - Presented at ACPE on eduroam and K12, good discussions during session. ESDs are forming up user group
 - Met with Tacoma, one of our biggest systems; they are set up in Federation Manager and are working to get it ready. The CIO there came from Nevada where they had eduroam and wanted to have it at his new location. Amel is troubleshooting RADIUS federation.
 - Working on user agreement (cribbed from LinkOregon)
- On-Rampers
 - Update on On-Rampers
 - KINBER

- Have several school districts express interest in piloting
-
- MOREnet - Have 3 members identified; 2 more tentative
 - Special needs district in St. Louis area (partner with 22 districts metro area)
 - Pilot organizations include 2 libraries
 - Seeing lots of traction with schools that have lots of overlap with smaller HEs
 - Also looking to set up sites with Fortinet gear, looking at how to handle RADIUS portion
- WiscNet - Turned up first two pilots (two of the largest ISDs in state)
- Next call
 - Friday, October 24 - 11am-12:30pm ET
- AOB?

eAC member roll-off and recruitment opportunities

We currently have strong representation in the following areas:

- Public Universities/University Systems
- Technical SMEs
- Geographic: West, Northeast, Southeast, Midwest

The following list of categories identifies where we may be missing perspectives and could consider recruitment:

Area/Sector/Theme	Current Representation	Recruitment Opportunity
Community Colleges	None	Add member from a 2-year institution
Libraries & Museums	None	Recruit from library/museum IT leadership

State Government IT	None	Add state-level IT leader (outside higher ed)
K-12 School Districts	One (Michael Hacker w/ Univ. Heights Charter School District) Term ends 2025	Expand to IT directors from a school district or ESU/ESD, especially those deploying eduroam within an eSO
Digital Equity	Not explicit	Invite a member with digital equity expertise, state broadband office, digital inclusion non-profits
Regional Networks/Consortia	Limited (NSHE)	Add members from a regional research/education network, Quilt, or eSO
Broadband Internet Service Providers	None	Consider including a Broadband ISP, eduroam to the home or municipal hotspot provider
International	Limited and currently non-voting (Stefan Winter w/ Restena, Josh Howlett)	Canada, Australia, other regions?
End-User/Student Perspective	Not explicit	Consider a student or end-user advocate

Friday, August 29, 11am-12:30pm ET

Attendees:

Brett Bieber - Nebraska
Rob Gorrell - UNC
Derek Eiler - NSHE
Nadim El-Khoury
Amel Caldwell - UW
Kendra Ard - CSU/CENIC
Mike Dickson - UM Amherst

With:

Kevin Morooney
Mary Bull
Sara Jeanes
James Cramton
Romy Bolton
Mike Zawacki

Regrets:

Jeremy Livingston
Saira Hasnain
Josh Howlett

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed!
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2025-8-1>
 - Notes/approval:

- Derek [moves](#) to approve, Kendra seconds
 - Majority approve
- Working group updates
 - [Cloud infrastructure working group](#)
 - Report out on [eAC Cloud Infrastructure Requirements Outline](#)
 - Amel: Met with Unicon representative and reviewed requirements doc, got him up to speed on work to date. We've finalized the requirements document and would like to move requirements ahead to eduroam US team for input/approval.
 - Sara: I think there's a lot of good detail in here, and like the way it's evolved. Would you all consider adding a contributor section to reflect the people who you've consulted with?
 - Amel: I can add that.
 - MikeZ: Let me know if you need a hand pulling together names from previous calendar invites, etc
 - Nadim: Has there been any discussion of capturing security related info as part of the MOU?
 - Brett: There's some language
 - Nadim: When we sign the agreement for eduroam we agree to keep 6 months worth of logs, but MIST generally only keeps 30 days. They maintain logs internally but are reticent about sharing them
 - Amel: We would include the requirement that they comply with the eduroam ToS, which includes those sorts of items.
 - Brett: Maybe it's worth explicitly calling out the eduroam compliance statement in the MOU
 - Sara: Agree with the above, though keep in mind that the eduroam compliance statement doesn't consider the inclusion of third party vendors.
 - Derek: Maybe the vendor would be a "contractor" / agent of both the NRO and of the Subscriber... without having to revise GeGC/ToS?
 - Brett: Wonder if would be worth reaching out to some of the NROs who are working with third party vendors and approaching the GeGC on updating compliance statement?
 - Sara: I could raise that topic at the next GeGC meeting
 - Brett: Would we be able to include some of the relevant members in a call with the working group?

- Sara: Stefan Winter would be the easiest to schedule for.
 - Brett: That makes sense. Sounds like direct collaboration with Stefan and other NROs would be a logical next step. Could the working group draft an email we could send to those folks? Then schedule a meeting with those people?
 - Amel: I'm game for whatever moves us forward.
 - Brett: How would we handle the requests for updates to the eFM and national infrastructure?
 - Sara: We'd need to meet with Nicole Roy, Johnny Lasker, and other internal staff. Want to be mindful of how to sequence that work against things like requests for eduroam BE and other work segment. This feels like it would be slotted behind BE related work, but am open to input from others.
 - Brett: Would also like to get feedback from other NROs and checking our thinking and get additional perspectives before we fully commit to the work of implementing some of these pieces. Could we do that in parallel with I2 undertaking its internal discussion and review?
 - Sara: Sounds like a good approach
 - Brett: Also would like to hear more from I2 on how the eAC could sequence its work and where the biggest return would be.
- [eduroam BE working group](#)
 - Identify milestones, next steps
 - Brett: Group is detailing out [three preliminary requests](#) for Internet2. Working on 3rd and final item.
 - Derek: One thing that we're missing is a baseline of data for those three compliance items. I feel like having that will make for a more compelling case for the eduroam US community.
 - Brett: Agree - being able to gauge what different compliance levels are is an important next step here.
 - [Mobility Day 2025 planning committee](#)
 - Brett: Have been working with Brian Ladrado on coordinating with Private Wireless Pros on their event which precedes Mobility Day. Looking to dovetail their event's content into Mobility Day and ensure that content enhances each other and doesn't overlap. Also added Scott Taylor from I2 NS to add program material.

- Standing item: Infrastructure updates from I2 (Mary)
 - The IPv6/EAP-TLS MTU issue is resolved as of Thursday, August 28. Mark found a Linux kernel bug documented by AWS. AWS applied the bug fix late Wednesday, and Mark/Painless was able to cycle all TLRS proxies and load balancers to use the new kernel yesterday afternoon. This bug fix resolved the issue of large IPv6 packets being dropped.
 - Beginning Jul 14, 2025 , large IPv6 packets (affected EAP-TLS) were dropped on egress from the TLRS because of an AWS-introduced IPv6 bug that broke the built-in large packet communication aspect of the protocol.
 - Technical RADIUS class is being offered again, **noon - 4pm, Sept 23-24. \$500**. Changed to 2 days to allow more lab time/interaction with instructors on examples, and more entry-level content on the first day. Appropriate for network or infrastructure IT staff who want to gain or increase RADIUS knowledge/troubleshooting. Course info and registration: <https://incommon.org/eduroam/radius/>
 - We're still making progress toward the live analytics report dashboards being made available to eduroam admins, with eSO admins as the first viewers. If things go smoothly, it's reasonable that eSO admins would have access to these dashboards by TechEx.
 - eAC/eSOA Feedback on eSO dashboard titles:
 - Guest Devices: from Constituents (inside) and from other eduroam organizations (outside)
 - Guest Devices: Inside and Outside per Constituent
 - [my org] Users visiting Constituents (inside) and other eduroam organizations (outside)
 - [my org] Users visiting Constituents and other eduroam organizations per Constituent
 - Brett: I feel like we should standardize on terminology for things like "guest" "constituent" etc. Especially with regard to BE (see [glossary here](#) for what BE has been using with eye toward standardizing terms).
 - Brett/Mary - will share screenshots and discuss further in the eAC Slack channel.
- Judgement Free Day report out (Mary)

- The eduroam judgment-free session was simple but well received. We discussed the Internet2-provided systems (eFM, log viewer, reports). 49 attendees completed this poll. We hope to do another call in October and are considering a quarterly cadence. [Poll results](#)
- [Membership roll-off](#) (Sara/Kevin/Mike)
 - Aug-Sept: Call for nominations
 - Oct-Nov: Review, deliberation on nominations
 - Late Nov: Inform new committee members
 - Early Jan 2026: Intro call with new members
 - Interest in current members to re-up their terms?
 -
 - [InCommon advisory committee info page](#)
- eduroam Support Organizations & On-Ramp Update (provided as pre-read)
 - CEN
 - Focusing on supporting existing school districts and public hotspots. Looking at the possibility of a task force to expedite rollout of eduroam in the state
 - Round 1 WiFi Grant Application we have a dozen applicants that have agreed to broadcast Eduroam as part of the WiFi grant process
 - Round 2 we have about 2 dozen applicants that are going to be doing Eduroam once awarded'
 - During our annual conference we got our Convention Center onboarded and broadcasting as an SP
 - Still need a better wide adoption method to get more community buy in
 - Had a member identify an issue with v6 addressing and forwarding Eduroam sign-in requests, he contacted Incommon and they found a bug in backend systems, fix pending
 - Link Oregon
 - Initial onboarding in progress with 2 new education service districts: High Desert ESD and Clackamas ESD
 - Learning Network of Minnesota
 - Southwest West Central Service Cooperative - on boarded SP and IDP
 - NSHE
 - Media / promotion for WCSD eduroam go-live

- Local TV news channels aired at least one 30 second spot.
Unfortunately the clips aren't all online, but here are two examples:
 - [Univision](#) (interviewed WCSD and NSHE)
 - [KTVN](#) (used NSHE's press release)
 - NSHE + WCSD [joint press release](#)
 - Hoping to work the broader eSO program into future comms.
 - Hospital / healthcare net in Northern NV has agreed to offer eduroam.
 - Around 50 locations, but haven't settled on which ones will offer eduroam yet. Close affiliation with UNR. Will join as SP-only.
 - Hospital in Southern NV wants to offer eduroam but isn't ready; revisiting middle of next year.
 - New interest from a rural school district. Meeting to discuss next month.
 - Revitalized an old K-12 eduroam deployment that was part of a pilot from before the eSO program launched.
 - Local community college staff couldn't roam... district was down ~2mo. over summer without knowing (didn't want to set up eduroam heartbeat when NSHE started offering it).
 - Was sending bare usernames up to tlrs1 + tlrs2
 - Firewall only allowed traffic in from tlrs1
 - Own users generally don't know about eduroam
 - Found insidious "issue" at another community college preventing some visiting institutions from roaming. College's RADIUS filtering / policy rules were dropping incoming eduroam auths that were missing a **NAS-Port-Type**. We couldn't find anything in eduroam docs strictly requiring NAS-Port-Type, but various docs in the wild show it their eduroam setup requests.
 - Discussions with major airports in NV are still ongoing.
 - One is concerned about loss of marketing data by pulling users away from free open wi-fi.
 - Other is concerned about supporting an additional service, even with help from NSHE.
 - Met with AIU / PA team to discuss containerized FreeRADIUS considerations, architecture, etc.
- UETN

- Facilitating work for filtering and firewall configurations for all school districts. We are finding really excellent solutions using our IP space and web accessible documents for firewalls to pull from. Huge benefit for seamless services
- Merit Network
 - Still working to get DPSCD going (very complicated rules set with Cisco ISE)
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 - Special needs district in St. Louis area (partner with 22 districts metro area)
 - Pilot organizations include 2 libraries
 - Seeing lots of traction with schools that have lots of overlap with smaller HEs
 - Also looking to set up sites with Fortinet gear, looking at how to handle RADIUS portion
 - WiscNet - Scheduled to begin the onboard process of first 2 members 7/10
 - eduroam Support Organization Day report out (MikeZ/Brett/Derek/Mary)
- Next call
 - Friday, September 26 - 11am-12:30pm ET
- AOB?

Friday, August 1, 11am-12:30pm ET

Attendees:

Saira Hasnain - UF
 Derek Eiler - NSHE
 Brett Bieber - NU
 Kendra Ard - Cal State University
 Amel Caldwell – UW/WA-K20
 Nadim El-Khoury - Springfield College
 Josh Howlett - Federated Solutions

With:

Sara Jeanes - Internet2
 James Cramton - Internet2
 Kevin Morooney - Internet2
 Romy Bolton - Internet2
 Steve Zoppi - Internet2
 Mike Zawacki - Internet2

Regrets:

Jeremy Livingston, Mike Dickson, Nicole Roy, Mary Bull

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2025-7-11>
 - Motion to Approve (Mike Dickson)
 - Second (Saira Hasnain)
 - Majority approve
- Working group updates
 - [Cloud infrastructure working group](#)
 - Amel: Finishing up customer requests flow/demarcations of responsibility
 - James: Unicon also interested in this work. They're planning on engaging more after requirements & vendor position paper are finalized. Cirrus is currently working on an offering and has been attending meetings. As the two catalysts with "aaS" offerings they're best positioned to participate in this effort
 - [eduroam BE working group](#)
 - Derek: eduroam Operations team was looking for top three requirements presented in RFC2119 language. Want to make sure the WG is on the right track. Looking for some feedback from Internet2
 - Brett: As I understand, after these initial 3 requests are approved/okayed by Internet2 we can work on refining additional requirements
 - Derek: That's correct
 - Brett: Thinking back to Federation BE, even if we get initial compliance levels that look bad it's more of a validation of the importance of our work.
 - [Mobility Day 2025 planning committee](#)
 - Derek: Group looked at another [mobility related event](#) scheduled for the first half of Monday. Event is hosted by a commercial organization that does training on wireless, LTE, etc. Also has a

time overlap with Mobility Day, so we need to be sure that it won't interfere with registration. Brett also reached out to James Deaton and JoAnne Bender (I2 Network Services) to see about buy in from NS.

- Brett: James replied that he'd love to have someone from NS participate in planning committee meetings. Also shared that the competing event was submitted by Brian Ladrado (I2 NET+). I emailed with Brian, who said he'd be open to joining planning discussion for Mobility Day.
 - Al: MikeZ to add NS representative and Brian Ladrado to next planning meeting.
- Brett: Also open to input from Romy and/or Kevin on this.
- Saira: Are we too late for Mobility Day?
 - Brett: Impression I got was that the other event is largely vendor driven, whereas we're focused on community generated content and discussion
 - Amel: We're also working with Kajeet, possible to include something around their work as they join NET+?
 - Brett: We included some info from/about them as part of the Future Wireless working group update on last year's Mobility Day. Also wondering if James has Catalyst partners who'd be interested in presenting.
 - Saira: Also should think about timing overlap.
 - Derek: I also worry about competing for attention with what looks like a 'future of wifi in higher ed' session
 - Brett: Do we want to retool to focus solely/primarily on eduroam?
 - Saira: Could help differentiate between Mobility Day and the other event
 - Brett: Suggest moving ahead with next planning meeting to include Brian and NS rep and look at tuning program more toward eduroam. Others interested in joining the planning committee please indicate here or in chat
- Standing item: Infrastructure updates from I2 (Mary)
 - The eduroam log viewer release did not go as planned on July 17; the eduroam infrastructure release completed correctly but the identity configuration system (Midpoint) which supplies the users/groups to the logging viewer did not perform correctly during the update (unlike it had in

testing and QA) and we were forced to continue with the older version of the logging viewer for now.

- There are a couple of new useful log messages to highlight
 - <https://spaces.at.internet2.edu/display/eduroam/Updated%3A+reading+the+eduroam+log+viewer#Updated:readingtheeduroamlogviewer-SpecificLogMessages>
 - “shared secret is incorrect”
 - “server default from unknown client [IP-Address]” - use to identify requests from an IP not registered in eFM.
 - The new log viewer functionality is not available yet; we are making progress on a replacement mechanism to supply users and groups to Grafana/Loki to be able to correctly display log data in the viewer.
- On July 14th, AWS changed the MTU on an IPv6 subnet used by the eduroam infrastructure, which caused a “packet too big” message to begin appearing in the logs for organizations using EAP-TLS/IPv6. Most organizations using IPv6 also use IPv4, but one is an IPv6-only shop and all their authentications have been failing because of this issue. We have a fix and will deploy it likely next week.
- “Judgement Free session” on eduroam August 7, 3-4pm. A venture to invite members of the eduroam admins list to join for an open conversation that starts on eFM, reports, and the log viewer, answer questions, and gather information on communication gaps.
 - [Registration link](#)
 - Derek: Is this open to the public?
 - MikeZ: Is going to be announced on eduroam-admins mailing list and to eAs
 - Derek: Like that this lines up with eduroam BE requirements around NRO messaging out to the community
 - Brett: Looks like something that would be good for eAC members
- Sara: We’re also working on documentation for technical and business operations, including “getting started with eduroam” document
- Update on guest account service deprecation (Derek/Brett)
 - Derek: Main thing is thinking through the need for any information/messaging around this. Looks like only 25 institutions use the service so might not be as critical. Also has me thinking about other inquiries I’ve heard about things like eVA, other guest options. I

understand there was a previous working group on guest services but wondering if something worth pursuing by this committee?

- Brett: Could be a temperature gauge for need for a replacement
- Nadim: We use the guest service but have also settled on making eduroam our main SSID, and have no plan to replace it when it goes away
- Brett: Rob, Amel, MikeD are current users and could provide some perspective on whether it would be a good use of eAC's time
- Derek: Thinking though the need for a guest solution for K12s as a possible driver for re-examining the need
- Amel: We've seen impacts on our end - had to shut it down and have several facilities/satellite campuses that lost guest services temporarily. Still working on replacement options
- Bett: Sense I get is that a hosted guest service is something that would need to be implemented at the NRO level, not sure if the need in the community justifies that
- Nadim: In our case, we're not going to offer guest wifi - visitors are expected to use data/cell connectivity
- Saira: We provide guest networks, as well as special purpose SSIDs for events/games. We're a Cisco shop and their solution gives us good visibility and control over guest use of our network.
- Amel: We run a captive portal for guest services but it's a seriously limited connection. The eduroam guest service was less limited.
- Brett: Lots of approaches to the question of guest use. One thing we could do is look at events like the Judgement Free sessions, Mobility Day, etc to collect community feedback. Not entirely convinced it's something we'd ask the NRO to immediately address, but worth listening to the community, engage where it makes sense.
- eduroam Support Organizations & On-Ramp Update (provided as pre-read)
 - CEN
 - Focusing on supporting existing school districts and public hotspots. Looking at the possibility of a task force to expedite rollout of eduroam in the state
 - Link Oregon
 - Initial onboarding in progress with 2 new education service districts: High Desert ESD and Clackamas ESD
 - Learning Network of Minnesota
 - Meeting with SWWC to follow up on presentation last month and start potential onboarding!

- Reached out to UMN contact working with MSP airport...hoping for some traction on eduroam
- NSHE
 - Washoe County School District (2nd largest in NV) soft-launched, officially goes live mid-August. Provided various materials and support.
 - Wrote "support letter" templates for parents/friends of charter schools and private schools. Statewide charter enrollment is on par with Washoe County School District, but no central IT support. Expect the [eSO-hostable containerized IdP solution](#) to be crucial for these schools.
 - Presented on eduroam to a joint UNR + Renown IT integrations committee. Renown is a large regional not-for-profit healthcare network and hospital in NV with a long-term (46 yrs. remaining) affiliation agreement with UNR Med. Committee is recommending upstream approval to deploy eduroam (SP-only); should know more by end of July.
 - Renown IT leadership was passingly familiar with eduroam from a cancer research conference. Requested a "reference architecture" document, particularly in terms of networking (not a high-level "how do people authenticate?"), a request we've heard in the past. Sent [eduroam KB](#), [BP](#), and the [K-12 diagrams](#) Mike developed last year.
 - State and local partnerships are going well; connectivity has been key to spurring eduroam interest.
 - Washoe County and Reno are connecting to us at local POP, then planning to offer eduroam and general public wifi over those new 10gbps+ connections. The WC Library System falls under WC, and will likely be the first libraries in NV to offer eduroam.
 - New construction for two state-operated museums will take advantage of nearby state fiber to connect to us, and send public + eduroam wifi traffic. Verbal agreement to give us roof/tower space at Boulder City facility to greatly improve our regional field science network connectivity. Being used as the model for state museum capital improvements.
 - Renewed effort by leadership to bring eduroam to the Reno (RNO) and Las Vegas (LAS) international airports. RNO is a quasi-governmental agency authorized by the state legislature, and

LAS is part of Clark County's Department of Aviation (Clark County is already an SP-only eduroam subscriber). Planning to connect networks and people where possible as part of the value proposition of offering eduroam.

- Discussions with Library IT leadership in Southern NV have been mixed - one district is very interested as part of a complete IT overhaul for their district, another seems to be limited by their parent municipal agency.
- UETN
 - Facilitating work for filtering and firewall configurations for all school districts. We are finding really excellent solutions using our IP space and web accessible documents for firewalls to pull from. Huge benefit for seamless services
- Merit Network
 - Continuing deployments, esp. around Detroit. Focusing on libraries and identifying next K12s
- Network Nebraska
 - Continuing support for existing community. Also gave an interview with a staff writer for the Center for Digital Education, who is doing a story about eduroam in the K12 space
 - Engaging with second to last ESU to turn up eduroam (adjacent to final ESU that hasn't implemented)
 - Focusing on public outreach, local partnerships for hotspots
 - Had meeting with state CIO about promotion and building awareness for eduroam
- The Sun Corridor Network
 - Developing outreach plan
 - Added new staff to team that oversees eduroam
 - Brought Vail school district on board (25 schools)
- Washington K-20 Network
 - Gathering leads for more large districts
 - Presented at ACPE on eduroam and K12, good discussions during session. ESDs are forming up user group
 - Amel: we met with Tacoma, one of our biggest systems; they are set up in Federation Manager and are working to get it ready. The CIO there came from Nevada where they had eduroam and wanted to have it at his new location. Amel is troubleshooting RADIUS federation.

- Working on user agreement (cribbed from LinkOregon)
- On-Rampers
 - Update on On-Rampers
 - KINBER/PAIU
 - Have several school districts express interest in piloting
 - MORENet - Have 3 members identified; 2 more tentative
 - Special needs district in St. Louis area (partner with 22 districts metro area)
 - Following up on interest survey
 - WiscNet - Scheduled to begin the onboard process of first 2 members 7/10
- eduroam Support Organization Day report out (Brett, Derek, Amel, Mary MikeZ)
 - [Agenda](#)
 - Brett: Impressed by the wealth of community knowledge and the willingness to share amongst the eSOs and their constituents. UETN did a great presentation on promotion and communication, including some retrospective discussion of how their approach has evolved. Highlight of the eSO community
 - Derek: Agree - I think this event has been a great community builder and knowledge share. Had some really good programmatic and technical questions from the new On-Rampers. They seemed to get a lot out of the event. Think it's a great feature of the program and the community.
- eduroam and Airports discussion report out (Derek/MikeZ)
 - Brett: Staff from UofIdaho who deployed eduroam with Pulman-Moscow (PUW) airport and eSOs, with reps from an additional airport at Boise and the city of Boise. One of the comments from Brian Jemes from Uofl was on his analysis of the eduroam traffic, where they were from, etc. Also discussed student athletes and events
 - Derek: Was helpful to NSHE as we work on getting eduroam deployed at Nevada airports. Would like to see a resource guide from the community - a pitch deck, or something similar. I've noticed that eduroam users that get the most excited are those who go to the EU and come back with stories of eduroam in public

spaces and on transit. Gatherings like this can help with that sort of work.

- Brett: The presenters will be sharing their slides - suggest adding links here when they do.
- Kevin: Just wanted to make you all aware that I reached out to contacts/friends in the Big Ten to plant seeds about getting eduroam in O'Hare and LAX. Feel like that might help with efforts like this. No immediate takers but willing to keep up work like that.
- Brett: Sounds great. The more dominos we push the more likely we are to see results
- Membership roll-off (Sara/Mike)
 - During Futures2 Planning we paused rollofs of advisory committees. With that work wrapping up we'll resume roll-off for those committees
 - Brett: Looks like several of us will roll off at the end of the year (<https://incommon.org/community/leadership/>). Please let MikeZ know if you're interested in remaining on through 2026, or if you know others who would be a good addition to the eAC as we look at refreshing our ranks. Consider candidates from community sectors that might not be as well represented
- Next call
 - Friday, August 29 - 11am-12:30pm ET
- AOB?

Friday, July 11, 11am-12:30pm ET

Attendees:

Brett Bieber - Nebraska
Mike Dickson - UMass Amherst
Saira Hasnain - UF
Dion Baird - Oregon
Derek Eiler - NSHE
Kendra Ard - CSU
Nadim El-Khoury - Springfield College

With:

Josh Howlett
Mary Bull
Romy Bolton
Sara Jeanes

James Cramton
Steve Zoppi

Regrets:

Mike Zawacki
Jeremy Livingston

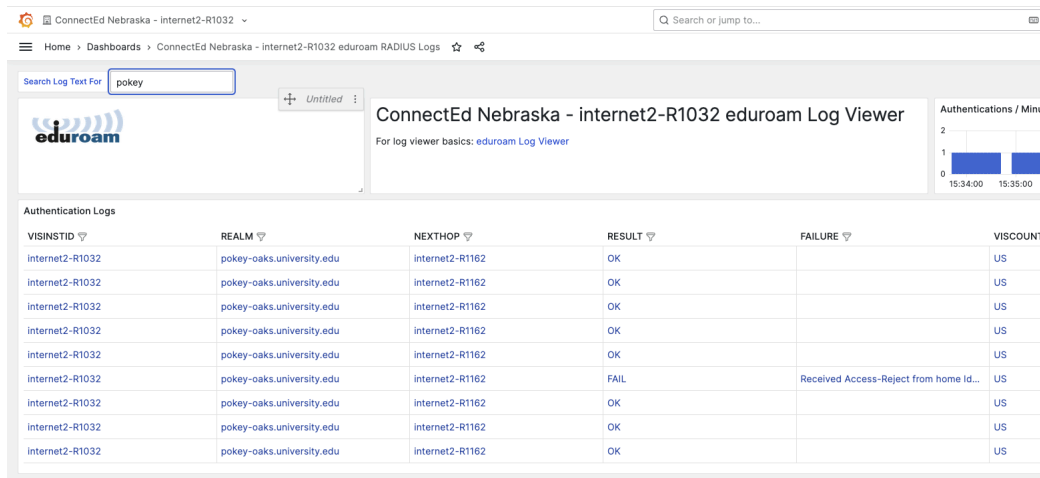
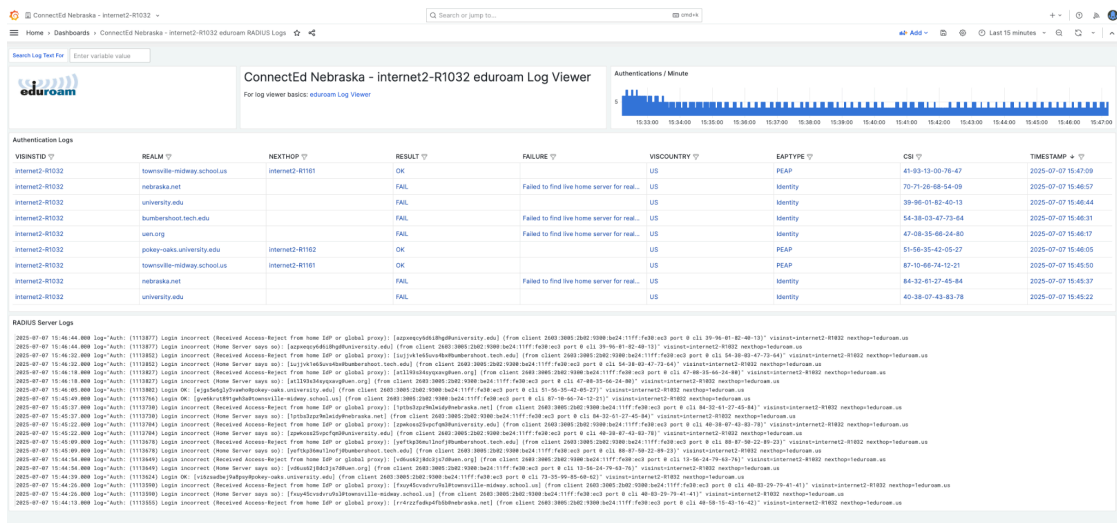
Agenda

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- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2025-6-13>
 - Saira, Derek, Mike Dickson, Kendra, Dion, Brett
- Working group updates
 - [Cloud infrastructure working group](#) (Rob/Amel)
 - (Rob/Amel not present)
 - [eduroam BE working group](#) (Derek/MikeD)
 - Derek: discussed with Internet2 staff about BE adherence measurement. Nicole requested that WG use RFC 2119 requirements for specific enhancements, with prioritization. Work in progress; discussed timeline with Mike. Have already refined requirements with community discussion; feels that the community is already doing most of requests. Timing, meeting the moment, also feels significant.
 - Mike: echoes Derek's thoughts; main takeaway is that it's better to do something in the short term compared to doing nothing. New subscribers/customers need guideline documents. Probably most people are doing these things, and we're not trying to mandate too much. The spirit of eduroam is that IDPs are also SPs. Should that be a firm requirement? Thinks there are some simple things that could be added to the eFM to state guidelines. Wants to know the percentages of adherence to IDPs being SPs to know if there are more actions that should be taken.
 - Brett: timeline for Incommon BE was very long because of changing the legal agreements and adding teeth to requirements.

Simply asking hadn't been successful. Incommon Steering wanted the ability to enforce with removing someone from the federation for non-compliance.

- Steve: we need organizations to realize that they need to appropriately allocate resources to set up the eduroam infrastructure with care
- Mike: agrees, things have evolved with eduroam in the US from a wilder time. Raising all boats means accepting that not all boats have the same tools. Forcing certain characteristics will alienate some sites. Need negotiation in the process for some characteristics.
- Steve: we could be less strict during times of high growth, but now we're reaching a period of more mature guardrails. Categorizing organizations by capacity is appropriate. Educating is often an appropriate mitigation.
- Mary: scoping within the list of requests for analytics is also helpful - choosing 2-3 priority analytics and refining requirements on the analytics.
- Derek: next steps are refining the 2-3 priority analytics requirements. Also hoping for dates on the calendar for a defined timeline in the near future.
- Sara: terms of service could be used as a way to enforce community baseline expectations, opportunities to include these concepts in an actionable way.
- Brett: from Incommon Steering's perspective - they need to be the ones to support the "teeth" on BE. Giving them options and pathways would help clarify the complexities here. Context on the extent of the problem is also useful here.
- Sara: there's a governance issue here around conflict resolution.
- [Desk of the eAC](#)
 - Time to pause this WG ?
 - Change to ad-hoc work flow?
- Spin up Mobility Day programing WG for TechEx25
 - Volunteers?
 - MikeZ will send scheduling poll to pick recurring day/time
 - Will MikeZ send the scheduling poll to everyone or just the people showed interest?
 - Brett: need speakers, topics. Need a programming group.

- Derek: volunteering for the programming committee. Do we know if attendance is a requirement
- Brett: no, not a requirement. Prioritizes TechEx compared to other events.
- Derek: are there other groups we need include? Future wireless working group (FWWG)?
- [AI] Brett will reach out to James Deaton and Joanne Bender for folks on the network side that'd be interested in assisting with the programming for the Mobility Day.
- Sara: suggests reaching out to Karl Newell in I2 Network Services, Brian Ladrido in Net+ who oversees the FWWG and Kajeet RFP in Net+. Explore adding hardware RFC discussion to the topic with JoAnne Bender.
- Standing item: Infrastructure updates from I2 (Mary)
 - New logging module ready to release 7/17, eduroam v.2.1
 - General improvements log line content
 - Graphs authentications per minute to show spikes or valleys for selected time span
 - Includes dashboards that show aggregated view of eSO organizations, so an eSO admin can see all organizations in the same window. (image below)
 - Improved search capability on Home Screen (image below)



- 24 hr cert coming soon.
- ISE issue with automatic monitoring of 1813
 - Help desk ticket from Metro State in Minnesota - RADIUS showing the eduroam TLRS was not responding to status checks, because ISE automatically monitors on port 1813.
 - Changing from Remote to Local accounting; ISE enforces checks on port 1813.
- <https://www.cisco.com/c/en/us/support/docs/security/identity-services-engine/213239-configure-external-radius-servers-on-ise.html>
- I will include information about this issue in the email about the new eduroam release
- Help sites reduce their chance of being rate limited by reducing traffic during busy events
 - Contacted two sites and offered to meet with them to tune their wireless and RADIUS

- For wireless, encourage a short RADIUS cache reuse, perhaps 30 minutes, so that the devices do not need to make a new request every time, and use of 802.11r
 - adjusting the RADIUS infrastructure to ignore multiple reconnection attempts within a few minute span
 - If the call/trial is successful, we will document for the wiki
- eduroam Support Organizations & On-Ramp Update (provided as pre-read)
 - CEN
 - Focusing on supporting existing school districts and public hotspots. Looking at the possibility of a task force to expedite rollout of eduroam in the state
 - Link Oregon
 - Coordinating with 3 ESDs for on boarding. Presented at ACPE (regional CoSN chapter) on eduroam with Washington K20
 - New E-Rate award for Clackamas ESD to join Link Oregon (Portland metro area ESD) - lots of interest in eduroam. Link Oregon includes eduroam as a service in a bundle provided to its membership, includes in E-Rate submissions
 - Link Oregon Member Meeting on June 26th went well. Eduroam BoF table was well engaged. Very successful meeting overall! Well attended, great sessions
 - Google Workspace + FreeRADIUS guide, courtesy of Wade Gibson
 - Merit Network
 - Have recently turned up over 40 eduroam sites
 - Lots of libraries! Detroit Public Library branches account for 20 of these sites.
 - Turning up Detroit Public Schools this week and next
 - Network Nebraska
 - Continuing support for existing community. Also gave an interview with a staff writer for the Center for Digital Education, who is doing a story about eduroam in the K12 space
 - Engaging with second to last ESU to turn up eduroam (adjacent to final ESU that hasn't implemented)
 - Focusing on public outreach, local partnerships for hotspots
 - Had meeting with state CIO about promotion and building awareness for eduroam

- NSHE

- NSHE

- Washoe County School District (2nd largest in NV) soft-launched, officially goes live mid-August. Provided various materials and support.
 - Wrote "support letter" templates for parents/friends of charter schools and private schools. Statewide charter enrollment is on par with Washoe County School District, but no central IT support. Expect the [eSO-hostable containerized IdP solution](#) to be crucial for these schools.
 - Presented on eduroam to a joint UNR + Renown IT integrations committee. Renown is a large regional not-for-profit healthcare network and hospital in NV with a long-term (46 yrs. remaining) affiliation agreement with UNR Med. Committee is recommending upstream approval to deploy eduroam (SP-only); should know more by end of July.
 - Renown IT leadership was passingly familiar with eduroam from a cancer research conference. Requested a "reference architecture" document, particularly in terms of networking (not a high-level "how do people authenticate?"), a request we've heard in the past. Sent [eduroam KB](#), [BP](#), and the [K-12 diagrams](#) Mike developed last year.
 - State and local partnerships are going well; connectivity has been key to spurring eduroam interest.
 - Washoe County and Reno are connecting to us at local POP, then planning to offer eduroam and general public wifi over those new 10gbps+ connections. The WC Library System falls under WC, and will likely be the first libraries in NV to offer eduroam.
 - New construction for two state-operated museums will take advantage of nearby state fiber to connect to us, and send public + eduroam wifi traffic. Verbal agreement to give us roof/tower space at Boulder City facility to greatly improve our regional field science network connectivity. Being used as the model for state museum capital improvements.
 - Renewed effort by leadership to bring eduroam to the Reno (RNO) and Las Vegas (LAS) international airports. RNO is a

quasi-governmental agency authorized by the state legislature, and LAS is part of Clark County's Department of Aviation (Clark County is already an SP-only eduroam subscriber). Planning to connect networks and people where possible as part of the value proposition of offering eduroam.

- Discussions with Library IT leadership in Southern NV have been mixed - one district is very interested as part of a complete IT overhaul for their district, another seems to be limited by their parent municipal agency.
- The Sun Corridor Network
 - Developing outreach plan for AZ schools and municipalities
 - Added new staff to team that oversees eduroam
- The Learning Network of Minnesota
 - Creating documents for K-12s as part of an invitation to join eduroam
 - Added Breck School
 - Working with LOGIS—Local government technology service provider
 - Outreach with US Internet in Mpls
 - Connecting with Minneapolis Public Schools
 - Presented at SWWC Service Co-op June 12
- Washington K-20 Network
 - Gathering leads for more large districts
 - Presented at ACPE on eduroam and K12, good discussions during session. ESDs are forming up user group
 - Amel: we met with Tacoma, one of our biggest systems; they are set up in Federation Manager and are working to get it ready. The CIO there came from Nevada where they had eduroam and wanted to have it at his new location. Amel is troubleshooting RADIUS federation.
 - Working on user agreement (cribbed from LinkOregon)
- UETN
 - Watching NV's IdP project!
 - Have been working with advocacy group on outreach to libraries, seeing more uptake and interest from that community.
 - Setting up working group on filtering and firewall practices. Looking to drive standardization to make for a smoother, more seamless experience for users.
- Update on On-Rampers

- KINBER/PAIU
 - Have several school districts express interest in piloting
 - MORENet - Have 3 members identified; 2 more tentative
 - Special needs district in St. Louis area (partner with 22 districts metro area)
 - Following up on interest survey
 - WiscNet - Scheduled to begin the onboard process of first 2 members 7/10
 - Meeting with Madison, Waukesha School districts in early July
- With anyroam shutdown, eduroam visitors/guest access, how to address this with the community (Mike Dickson, Derek Eiler)
 - Eduroam guest network needs. Encourage use of eduroam for guest visitors as well.
 - <https://www.psu.edu/news/information-technology/story/penn-state-wireless-encourages-switch-eduroam-nov-21>
 - Corollary
 - If personal devices like TVs, speakers and game consoles cannot connect to "eduroam," they must be connected to the "psu-personal" network as an alternative.
 - Sara: some European countries have eVA; lots of countries (NROs) don't solve this problem yet. Goals are to have one ssid that solves lots of different problems
 - Mike: right now eduroam can only help 802.1X devices. Anyroam provided an onboarding system (still 802.1X). What about all the other devices that can't do 802.1X? And can that system be secure/traceable? The security/traceability side needs to be addressed in a serious system. Unaffiliated/quasi-affiliated users would get a lot of value out of a new service like that that helped people beyond an educational affiliation.
 - Sara: our purpose is education users (as an NRO in an international system for education). Not permitted to roam non-research/education users.
 - Derek: site-specific IDP bound visitor access makes the most sense. Want to avoid confusion to end-users and site operators. In the wild, users associate Anyroam with I2/eduroam. Do we need to acknowledge
 - Mike: the spirit is to get people connected, but it's tricky because the technologically-workable and simplest solutions might not scale well

- Derek: the limitation to the education community doesn't make sense to every SP site because they still have lots of other guests. Do we need to address this larger context, though, because otherwise eduroam will not be relevant as technology evolves into the future (OpenRoaming can cover everyone)
- Brett: we might learn something interesting when Anyroam finally really shuts down. A worthy discussion, maybe for an email from desk of eAC or in TechEx. An expensive service to run at the national level, though. Tough to identify if there's an action item here, but something to keep talking about.
- Mike: should we ask Incommon Steering about this?
- Brett: we should make a recommendation to them on how we want to solve this. Making them aware is probably helpful.
- Mike: rules at the local level could redirect this "other visitor" traffic away from the eduroam tlrs. But that's tricky, and could get expensive, as probably Anyroam figured out.
- RADIUS training available in Q3
 - Updated version of the training that was offered in March of this year
 - Will share event page when training goes public
 - End of Sept
- Next call
 - Friday, August 1 - 11am-12:30pm ET
- AOB?

Friday, June 13, 11am-12:30pm ET

Attendees:

Derek Eiler - NSHE

Rob Gorrell - UNC

Kendra Ard - CSU

Brett Bieber - Nebraska

Josh Howlett - Federated Solutions

Amel Caldwell - University of Washington/WA-K20

Michael Dickson - UMass Amherst

Nadim El-Khoury - Springfield College

Saira Hasnain - UF

With:

Mary Bull - Internet2

Regrets:

Mike Zawacki

Sara Jeanes

Agenda

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- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2025-5-9>
 - Minutes approved.
- Introduce new Vice-Chair (Brett)
 - Congratulations Derek Eiler and many thanks to those who threw their hats in the ring for the position!
 - Derek: thank you all, and I hope I don't let you down. I will do my best.
- Working group updates
 - [Cloud infrastructure](#) (Amel, MikeD, Rob)
 - Mike: Also in a holding pattern; canceled last meeting because it overlapped with Basecamp. The next meeting will be to meet with catalysts on Monday (June 15). The idea needs broader exposure and feedback.
 - Amel: I have updated the document to be in compliance with RFC 2119, so a review of that document would be good.
 - Brett: Cirrus announced their pilot and search for five institutions with Entra-ID. Waiting to hear back from the response they have from their search; we don't know if they have found those institutions. We could request an update from Dedra. Perhaps we (eAC) should do some promotion to help them get the clients they need. Mentioned cloud infrastructure promotion at Basecamp last

week, hoping that results in feedback on the topic but waiting to see what emerges.

- Nadim: do you think schools will choose a SaaS provider for RADIUS? It's sensitive information and can be very expensive for small schools.
- Derek: that's a real concern; I've met with Dedra and Cirrus to learn more about the pilot and compare it to my eSO-hosted FreeRadius container solution; my concern is that smaller organizations may avoid SaaS provider for cost reasons. SaaS can feel like a slippery slope - we start with email, then Entra, then RADIUS because we already accepted the risk with entry-level applications. Bundling would alleviate cost concerns.
- Rob: we just don't know how people will react yet, but Incommon/Cirrus Bridge has a lot of adoption. It might not translate, but it could. The pilot will help answer those questions.
- Brett: Higher Ed landscape has a lot of concerns about cost, hearing this from other leaders in the broader landscape. Incommon Steering is aware of the sensitivity around fee increases. "Promote" may not be the right word - but a Catalyst partner to help identify the functions of these services with a community-vetted company with a shared vision in higher ed might align better than a commercial vendor without a higher ed focus. We just need enough information to guide working group efforts.
- Mary: did someone talk to Mist (Derek mentioned)?
- Amel: yes, but you have to buy a hardware appliance at this time. Talked to Wes at this time. SecureW2 is also interested, but haven't returned anything firm yet. Tom Rixon.
- Mike: they seem to be delaying that rollout (SecureW2). RADIUS is not only applicable to eduroam. Would a school use the cloud RADIUS for everything? That's what Juniper wants to do. Customers might not want a mix of on-prem and cloud service - they want cloud to handle all their needs.
- Amel: wants to keep them split out.
- Mike: agrees that it might be time consuming to move everything to cloud radius; long term goal, not an immediate goal, but vendor should be capable.
- Nadim: Entra ID is the sticking point; AD is still on prem but Entra is in the cloud and schools might have a mix. Cirrus is only supporting

Entra - is that turning off clients? We already have to pay Microsoft, so now we have to pay an additional SaaS just to use MS?

- Brett: K12 is mostly using Google identity, not MS. Need for mobility in customer space - they want to have vendor options. The WG touched on this as a key value to find in vendor options. We don't want to lock in clients.
- Rob: This is all new and challenging; there's a mix of vendors but Cirrus is trying to limit scope to make the pilot reasonable. It's hard to bite it all off at once. It'll be interesting to see what phase 1, phase 2, etc look like in this area.
- Josh: There's nothing in the Cirrus solution that requires Entra; they're using TTLS and PAP so it would apply to Google IDs as well. They chose Entra because their current customer base uses this frequently. Also, in my capacity on the help desk, we see some cloud migrations, but it's usually moving an on-prem service to VMs. People want to use the cloud but keep managing their servers. However, there is a concern about lack of skills.
- Mary: I agree that the skills issue is key for small schools.
- Nadim: skills gap is tough when you are the only person who can run a service; what if you get sick, etc. Open source is cheaper but requires significant human cost. However, the people who decide what services to pay for may prefer open source and ignore the human cost. This is an important part of the cloud radius conversation. There's also many ways we use RADIUS and we'd have to decouple those aspects if we put it in the cloud.
- Brett: appreciate all the feedback; we don't necessarily want to promote a vendor but we want more information from schools who are trying to use the service so that we can get more information.
- Derek: who are we trying to help by doing this? We're trying to make eduroam more attainable for all organizations. We'd like to know, from the pilot, what kind of customers are they attracting, and why? Do they like cloud services? Is it a skills gap?
- Rob: can the eAC get a regular cadence with Cirrus so we know how the pilot is progressing?
- Mike: early cloud radius WG discussions were about greenfield customers, especially in K12. Schools with no identity management. This pilot may be based on people who have

RADIUS, but with the knowledge gained from it, we can move to more customers with no RADIUS.

- Rob: align architecture decisions from eduroam with future evolving customers.
- Nadim: so are you looking for volunteers to test the Cirrus solution?
- Amel: Cirrus is outside the WG, although they benefited from the discussions of the group.
- Rob: it's separate now, but maybe we should try to get them closer together in the future.
- Mike: why TTLS and PAP? Simpler to separate the PKI overhead?
- Josh: it's a feature of the domain services - the credential is stored in an NTLM hash, no access to the plaintext. They need the plaintext from the supplicant.
- Mike: and it conveniently takes onboarding out of the process.
- Amel: that's not necessarily a good thing.
- Mike: SecureW2 is our onboarding provider but it's not mandatory so we don't have as wide adoption as we'd like. Apple still requires more attributes and SecureW2 will turn those on if asked. But because we don't make adoption mandatory the landscape is still mixed.
- [eduroam Baseline Expectations](#) (MikeD, Derek, Nadim)
 - Derek: Group is at a temporary pause, waiting on information from Internet2 about measurability. Request went out to Sara and Mary to respond on the feasibility of analytics.
 - Derek: added a section on expectations for eSOs after feedback from CTAB.
- [Desk of the eAC](#) (Nadim, Saira, Brett)
 - Nadim: I just got back from bereavement and did not have the chance to make progress.
- eduroam Support Organizations Update
 - CEN
 - Focusing on supporting existing school districts and public hotspots. Looking at the possibility of a task force to expedite rollout of eduroam in the state
 - Link Oregon
 - Coordinating with 3 ESDs for on boarding. Presented at ACPE (regional CoSN chapter) on eduroam with Washington K20

- New E-Rate award for Clackamas ESD to join Link Oregon (Portland metro area ESD) - lots of interest in eduroam. Link Oregon includes eduroam as a service in a bundle provided to its membership, includes in E-Rate submissions
- Gearing up for member meeting June 26
<https://www.linkoregon.org/2025-annual-member-meeting/>
- Google Workspace + FreeRADIUS guide, courtesy of Wade Gibson
- Merit Network
 - Turned and turning up a bunch of schools, libraries, Parks & Rec this month and next
 - MISEN, Merit, and I2 (Mike) presented on eduroam at our annual Member Conference. Received lots of feedback, good questions, and a few entities signed up (ie NMU -> passed on to InCommon)
 - Turning up Iosco-Arena District Libraries this afternoon (9 locales)
 - Turned up North Central Michigan College last week (waiting on them to test success)
 - Turning up Ypsilanti District Library week of May 26th
 - Turning up Detroit Public Schools - next planning / timing call May 1
- Network Nebraska
 - Continuing support for existing community. Also gave an interview with a staff writer for the Center for Digital Education, who is doing a story about eduroam in the K12 space
 - Engaging with second to last ESU to turn up eduroam (adjacent to final ESU that hasn't implemented)
 - Focusing on public outreach, local partnerships for hotspots
 - Had meeting with state CIO about promotion and building awareness for eduroam
- NSHE
 - Helping Washoe County School District prepare to go live; ~120 campuses, 68k users
 - NSHE is in talks with Washoe County (not school district) about adding eduroam and NevadaNet connectivity to their facilities. This would include the Washoe County Library System, which is operated by the County.
 - We've had promising discussions with the UNR Med school about adding eduroam to their local hospital/clinical partner's facilities as part of an ongoing clinical IT integration project

- Work is underway to have eduroam added to two state museum facilities, in addition to bandwidth through NevadaNet
 - Several irons still in the fire (see previous update)
- The Sun Corridor Network
 - Developing outreach plan
- The Learning Network of Minnesota
 - Creating documents for K-12s as part of an invitation to join eduroam
 - Added Breck School
 - Working with LOGIS—Local government technology service provider
 - Outreach with US Internet in Mpls
 - Connecting with Minneapolis Public Schools
 - Presenting at SWWC Service Co-op June 12
 - Brett: presented with Mike to 25 schools at this local Minnesota organization; joined with Dan who has set up eduroam since 2019 in a private school. Presented about all the value they got out of eduroam, and now, through the learning network, all over K12 schools can join. Becca Kingery also joined and talked with Brett about their experience in Nebraska and shared a testimonial from an ESU admin about how his schools had benefited from eduroam. Hopefully we planted some seeds for expanding eduroam in Minnesota.
- Washington K-20 Network
 - Gathering leads for more large districts
 - Presented at ACPE on eduroam and K12, good discussions during session. ESDs are forming up user group
 - Amel: we met with Tacoma, one of our biggest systems; they are set up in Federation Manager and are working to get it ready. The CIO there came from Nevada where they had eduroam and wanted to have it at his new location.
- UETN
 - Watching NV's IdP project!
 - Have been working with advocacy group on outreach to libraries, seeing more uptake and interest from that community.
 - Setting up working group on filtering and firewall practices. Looking to drive standardization to make for a smoother, more seamless experience for users.

- Update on On-Rampers
 - Internet2 is working with the new eSO On-Rampers to get their agreements signed. I2 will not be formally announcing the new organizations until the agreements are finalized, but they're welcome to announce their own participation.
 - All 3 have completed an on-boarding session and are getting set up in the eFM as eSOs
 - MORENet
 - WiscNet
 - KINBER/KeystoneREN/PAIU
- Report out from CTAB meeting (Rob, Derek)
 - Brett: did we already talk about this in last eAC meeting?
 - Rob: I wasn't able to attend the last CTAB meeting.
 - Brett: Update - David Bantz introduced the BE WG. worked with Tom Barton for background on BE for Incommon/SAML. Derek walked through the document for the group. Group recommended adding a section for eSOs, which has been done; now there is a dedicated tab for eSOs. Asking Internet2 for support on the level of monitoring possibilities.
- Report out on BaseCAMP (Brett, Mary)
 - Mary: First time eduroam content included in BaseCAMP. Had about 30 attendees in each of the sessions.. The first was eduroam 101, basics of the service, second presentation was community involvement and eSO programs. Good fit within topic of identity.
 - Brett: agree, good fit within the program. Hopefully we get invited for future Basecamps.
- Ongoing contact data cleanup in Federation Manager (Mary)
 - cleaning up data we imported from Anyroam; have removed the obviously invalid users, but working on the approach for valid or possibly valid user emails that lack names
- Next meeting
 - Currently falls on July 4th
 - Alternate dates?
 - Wednesday, July 2
 - **Friday, July 11 - eAC decided on July 11th.**
 - Others?
- AOB?

Friday, May 9, 11am-12:30pm ET

Attendees:

Saira Hasnain - UF
Brett Bieber - Nebraska
Rob Gorrell - UNC
Derek Eiler - NSHE
Josh Howlett - Federated Solutions
Mike Dickson - UMass Amherst
Amel Caldwell – University of Washington/WA-K20
Kendra Ard - CSU
Nadim El-Khoury - Springfield College
Mike Dickson - UMass Amherst

With:

Steve Zoppi
Romy Bolton
Sara Jeanes
Kevin Morooney
James Cramton
Mary Bull
Mike Zawacki

Regrets:

John Buysse, Dion Baird

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- Agenda bash
 - [Session proposal deadline for TechEx25](#) is today
 - eSO related updates from NSHE (Derek)
 - Guest services (Amel)

- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2025-4-11>
 - Approve:
 - Amel moves to approve, Derek seconds
 - Majority approves
- Selection of Vice-Chair (Brett/Mike)
 - Mike will set up voting poll, ensure that voting is complete ahead of next full eAC meeting. If you are interested in taking on the position and haven't already done so, please email Mike.
 - Already stepping forward for consideration: Derek, Nadim. Others?
 - (your name here)
 - **Please let Mike know of your intention to stand for election by Monday, May 12th. Mike will send out voting poll Tuesday the 13th. Voting to conclude by Friday**
- eduroam Support Organizations Update (provide as pre-read)
 - CEN
 - Focusing on supporting existing school districts and public hotspots. Looking at the possibility of a task force to expedite rollout of eduroam in the state
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 - Merit Network
 - Turning up eduroam for Merit annual conference today (having issues with controller, perhaps firewall)
 - Turning up Iosco-Arena District Libraries this afternoon (9 locales)
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- Engaging with second to last ESU to turn up eduroam (adjacent to final ESU that hasn't implemented)
- Focusing on public outreach, local partnerships for hotspots
- NSHE
 - Made new state-level contacts at NV Public Sector Cybersecurity Summit.
 - State CIO office positive about adding eduroam to various state buildings, now pending paperwork.
 - Clark County broadcasting eduroam at 28 locations. [Press release.](#)
 - City of Reno signed up as SP-only but not yet deployed. City in Southern NV pending City Council approval.
 - Washoe County School District (2nd largest in NV) almost ready to deploy as IdP.
 - NSHE published a “rapid deployment” EAP-TTLS + PAP only FreeRADIUS container for smaller schools, libraries, and museums. [GitHub project link.](#) Just plug details into a .env file and build/run.
 - Idea is that NSHE will host/manage for Nevada-based IdPs; other eSOs can deploy for their constituents who have reasonable latency but minimal technical expertise. Self-hosting is also possible of course.
 - Built-in “token” use case (plaintext creds stored in sqlite)
 - Remote syslog + persistent file logging
 - Automagic server cert provisioning
 - On-prem AD support (LDAPS, LDAP + StartTLS) and Azure AD DS (i.e. managed AD).
 - Next up: Entra (via OAuth2 token/password flow) and Google...
 - MikeD: So this runs as a VM?
 - Derek: They could run it on bare metal but it's a container. Also designed to be hosted by others.
 - Saira: How do you handle integration of identity store?
 - Derek: Way it works right now is you connect LDAP via EAP-TTLS. Geared toward those with on-prem AD (most common environment in NV). Working on a token based auth flow for Entra. Then will look at connection to Google. In cases where we host for our

schools the realm for any hosted constituent would point to the appropriate IdP

- MikeD: So if they're an IdP/SP the container would still accept all auth types?
- Derek: We believe so but would need to test if anyone's interested :)
- Brett: Where do you see this fitting into NV's role?
- Derek: Our rural school districts don't want to run a RADIUS server, so if we can do that they're more likely to deploy. The other main use case is for charter and private schools we serve. Around Las Vegas there are high numbers of non-public schools. This helps them solve for the IdP.
- Brett: Interested in any intersections between this and some of the work Cirrus and Unicon are thinking about for hosted IdPs.
- Sara: They're [currently testing a hosted option](#). Looks promising - want to be clear that this doesn't signal the end of Cloud Infrastructure working group.
- MikeD: So this isn't a RADSEC connection?
- Sara: No, it's closer to what Derek is describing and is built into Cirrus' ecosystem (e.g. cloud bridge and other related InCommon enhancements)
- Brett: Sounds like that has different requirements and use cases than NSHE's development but still complementary.
- Derek: I met with Dedra and Karen (from Cirrus) and shared some of our work. I led with NV's perspective that it would be really valuable to make EAP-TLS easier, esp given the strong recommendation for cert based authentication / password-less auth
 - Starting development of SP-only / proxy for multi-state field science / research station access.
- The Sun Corridor Network
 - Developing outreach plan
- The Learning Network of Minnesota
 - Creating documents for K-12s as part of invitation to join eduroam

- Creating basic set of roles and responsibilities for school districts and eSO support.
 - Washington K-20 Network
 - Presenting at ACPE (Washington CoSN chapter) this month
 - Leads for more large districts
 - Limited by internal resources
 - Updates on 2025 cohort submissions (MikeZ)
- Working group updates
 - [eduroam Baseline Expectations](#)
 - Derek, others presented requirements to eSOs
 - Derek: Got some feedback that it might make sense to have additional requirements for eSOs. Will be presenting that to the working group
 - Derek and Rob will present on the group's work to CTAB on Monday
 - Brett met with John Krienke (Internet2 Service Management director, contracting lead) at ComEx about the work the group's been doing.
 - [eduroam Cloud Infrastructure](#)
 - Amel: Planning on meeting with catalysts, they'll join call on May 19
 - James: Cirrus and Unicon were the two that stepped up and wanted to meet with the working group
 - ["From the desk of the eAC"](#)
 - Nadim: We were not able to meet lately because of conflict on my calendar and requested that we move the date and time of our meeting.
 - Brett: I'm also planning on a piece for Baseline Expectations.
 - Interested in joining the working group? [Vote for the new call time slot here](#)
 - Guest Services discussion (Amel)
 - Rob: If major provider of guest services discontinues, should the eAC make some kind of statement?
 - Sara: Can discuss internally and get back to the committee
- eduroam sessions at [BASECamp](#) (Brett/MikeZ)
 - Registration has a "two for one" offer right now
- Next meeting
 - Currently set for Friday Jun 6, 11am-12:30pm ET
 - Conflicts with BASECamp - move to Friday June 13?

- Consensus is yes
- AOB?
 - Brett: Mary, is there anything new around eduroam enhancements?
 - Mary: Last major update was eduroam 2.0 - those [release notes are available here](#)
 - Mary: Heard a request from a few sources that there would be benefit to some kind of delegated access for the eFM. Granular Grafana access is challenging but could allow a view into the IdP/hotspot configurations. Would that be useful?
 - Brett: Reminds me of the “auditor” role in the Internet2 network infrastructure. Could be helpful?
 - Rob: Generally agree but I wonder about the overall value prop without Grafana. Not sure if just a view of the configs would be worth the development time
 - Derek: I agree with Rob. If the delegated config view were a stepping stone to getting access to the logs then I’d be interested in that.
 - Rob: When reporting changes to dashboard model then I think the value of that approach goes up
 - Others have thoughts on this? Add in here and Mary and eduroam US team can consider
-

Friday, April 11, 11am-12:30pm ET

Attendees:

Brett Bieber - Nebraska
 Derek Eiler - NSHE
 Amel Caldwell - UW
 Josh Howlett - Federated Solutions
 Kendra Ard - CSU
 Nadim
 Dion Baird

With:

Steve Zoppi
Mary Bull
Romy Bolton
Mike Zawacki

Regrets:

Sara Jeanes, Jeremy Livingston

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Romy Bolton is acting AVP for T&I - Ann West is reducing workload, focusing on strategic partnerships.
 - eduroam just crossed over 3500 service locations!
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2025-3-7>
 - Brett, Derek, Amel, Kendra, Nadim, Dion approve
 - Mike will email other members with request to approve
- Selection of Vice-Chair (Brett/Mike)
 - Please email Brett and Mike before 8pm ET Tuesday 4/15 with willingness to serve as Vice-Chair
 - Responsibilities of vice-chair
 - 4-5 hours/month
 - 30 minute planning call once per month
 - Participating in quarterly advisory chair meetings (1.5 hours 4x a year)
 - In the event that Chair isn't able to attend InCommon steering calls, represent the eAC in those meetings.
- eduroam Support Organizations Update (provide as pre-read)
 - Recent eduroam Support Organization training (Mike/Derek/Rob)

- Report out from eSO presentation at CoSN 2025 (Mike)
- Seeking eAC members to review proposals from prospective cohort members. If interested please add name under the proposal time slots:
 - Tue, April 22 4pm-5pm ET
 -
 - Wed, April 23 12pm-1pm ET
 -
 - Thu, April 24 11:30am-12:30pm ET
 -
 - Fri, April 25 4pm-5pm ET
 -
- CEN
 - Steady state, focusing on supporting existing school districts and public hotspots.
- Link Oregon
 - Coordinating with 3 ESDs for on boarding. E-Rate schedule is impacting availability, so these will be picked up later in March. Presenting at ACPE (regional CoSN chapter) on eduroam. Also presenting on eduroam K12 panel at CoSN's annual conference
 - New E-Rate award for Clackamas ESD to join Link Oregon (Portland metro area ESD) - lots of interest in eduroam. Link Oregon includes eduroam as a service in a bundle provided to its membership, includes in E-Rate submissions
- Merit Network
 - Detroit Public Library (23 sites) board reviewing MOU and looking to connect ~ early April; same with City of Detroit Parks & Recreation
 - In talks with the State of Michigan, multiple ISDs and Com Colleges
 - Detroit Public Schools - in last round of legal review
 - City of Detroit - in legal review
 - Ypsilanti Public Library in legal review
 - Created marketing materials for 'welcome toolkit' for both iDP and SPs (stickers, how to cards, more)
- Network Nebraska
 - Continuing support for existing community. Also gave an interview with a staff writer for the Center for Digital Education, who is doing a story about eduroam in the K12 space

- Engaging with second to last ESU to turn up eduroam (adjacent to final ESU that hasn't implemented)
 - Focusing on public outreach, local partnerships for hotspots
- NSHE
 - Many irons in the fire for SPs, just waiting on paperwork.
 - Developing eSO-hostable FreeRADIUS container with EAP-TTLS + PAP pre-configured for a quick and reasonably secure IdP+SP solution for smaller and less-resourced schools/districts. Geared toward two identity options:
 - 1. Plug in your LDAP details (Entra/Google)
 - 2. Use self-hosted randomized identities in local pre-baked sqlite DB. Print/hand out slips of paper with username + password on it.
 - (server) TLS in containers is hard.
 - NV Public Sector Cybersecurity Summit next week - hoping to connect with more SPs and build awareness of eduroam. Handing out [eduroam flyers](#).
 - Derek: After training, started thinking about engagements we'd had in promoting eduroam in Nevada, roadblocks those folks identified. RADIUS servers were a recurring problem. Working on a hosted, containerized version.
- The Sun Corridor Network
 - Gabriel is working with his team to develop a go-forward plan to make demonstrative and effect efforts for eduroam awareness, interest, and participation
 - No other current updates
- The Learning Network of Minnesota
 - Creating documents for K-12s as part of invitation to join eduroam
 - Creating basic set of roles and responsibilities for school districts and eSO support.
- UETN
 - MarComm team revamping website and materials. Asking about yearly reports for strategies and statistics to share. Stats have been a great storytelling/recruiting tool.
 - Signing up Provo City Library this week
 - Could be opportunity to present on eduroam for rural ISPs. UEN will look into coordinating a session for URTA conference
- Washington K-20 Network

- Joined CoSN eduroam panel
 - Presenting at ACPE in May
 - Leads for more large districts
 - Limited by internal resources
- Working group updates
 - [eduroam Baseline Expectations](#)
 - Review of community BE feedback (Include as pre-read)
 - Proposed CTAB outreach (Brett)
 - Meet with eSOs on April 22 coordination call
 - Common thread - BE items that are already part of the GeGC's compliance statement.
 - Question from Brett: Should we look at places to build onto compliance statement?
 - Derek: Something to keep in mind is how we'd handle issues where we go "above and beyond" compliance statement items that get changed or removed.
 - Brett: Thinking through some parallels with InCommon BE. One example would be self attestations as covered under other governing bodies.
 - Derek: Important thing is to call people back to self attestation, have them periodically review and renew those attestations. We brought that up to I2 - some way to bake that annual "check box" into eFM.
 - Josh: One note on roaming reciprocity - is that a requirement under BE?
 - Derek: More of an expectation, but strongly encouraging it wherever possible. Planning on eventually expanding on that expectation.
 - Josh: One approach I've seen work well is to encourage deployment of either IdP or SP, and then tackle the other where appropriate. Helpful to recognize IdP only subscribers still benefits the community by dint of reducing support burden on institutions they visit.
 - Derek: That's a great point. I suspect many who advocated for reciprocity may have been concerned that without a requirement too many IdPs would be "selfish" and not deploy SPs

- Brett: This might be a good opportunity to use [RFC 2119 language](#) (e.g. IdPs SHOULD also be SPs)
- Derek: When should the working group reconvene?
 - Brett: I'd like to present the draft to CTAB first. Also want to be sure that we're extremely clear on what the BE for eduroam is and the difference between eduroam BE and InCommon BE. Would also look to Internet2 to help with branding, communications.
 - Steve: Internet2 has been trying to normalize "Federation BE" to provide a point of differentiation. Use that approach here.
 - Romy: Do we want to consider showing this to users? InCommon BE was aimed only at admins.
 - Brett: Good question. We were imagining targeting eduroam Admins. I was mostly thinking about how to message to that audience.
 - Steve: Need to be precise with every segment.
 - Derek: Also wondering if we should engage with the international eduroam community. Also thinking about how to do outreach to SP-only subscribers. Are we calling coffee houses and restaurants, for example?
 - Steve: We should run the statement through John Krienke as well - his contracting expertise would be helpful
 - Brett: Romy, would you be able to check in with Kevin about that?
 - Romy: I'll work with the team on that. We have internal meetings that would be the correct venue to get John looped in and figure out how/how much to involve him.
- [eduroam Cloud Infrastructure](#)
 - Interest from catalysts, Cirrus Identity and Unicon
 - Amel: I'm also going to do some cleanup on the requirements doc.
- ["From the desk of the eAC"](#)
 - [NEK] I am behind and I sincerely apologize to everyone and the group. We finally hired a new Director of Enterprise Applications and I am in the process of handing over my interim duties to her

and will have more time to complete the document and share it with Mike, Saira and Brett.

- Brett: I self-volunteered to write an article about eduroam BE, stressing the importance of service maturity, spelling out the basic process and some key milestones. Could be helpful for starting to open communication channels with the community, esp those who don't routinely interact with or have awareness of the eAC.
- Also interested in hearing from others in the eAC about potential topics!
- Community Exchange meeting of the eAC
 - MikeZ, Brett to coordinate on an external dinner event
- Next meeting
 - Friday May 9, 11am-12:30pm ET
- AOB?
 - Mary: Release of eduroam 2.0 is complete. Josh, any comments on analysis?
 - Josh: Clear improvements in the load balancing already.
 - Brett: Suggested standing agenda item for ongoing improvements, work on infrastructure
 - Mary: I'm working on a write-up to present to eduroam US community. Happy to share with this group.

Friday, March 7, 11am-12:30pm ET

Attendees:

Saira Hasnain - UF
Mike Dickson - UMass Amherst
Brett Bieber - Nebraska
Rob Gorrell - UNC
Nadim El-Khoury - Springfield College
Derek Eiler - NSHE
Jeff Egly - UETN
Amel Caldwell - UW/WA-K20
Kendra Ard - CSU
Josh Howlett - Federated Solutions

With:

Steve Zoppi

Sara Jeanes

Mary Bull

James Cramton

Mike Zawacki

Kevin Morooney

Regrets:

Ann West, Jeremy Livingston

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Temp test credentials
- Approval of meeting minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2025-2-14>
 - Kendra moves to approve
 - Derek seconds
 - Rob Gorrell still needs edit access to wiki
 - Approved
- Selection of Vice-Chair
 - To be announced in April meeting
- Working group updates
 - [eduroam Baseline Expectations](#) (Derek/Amel/Sara)
 - Derek: To Saira's comment in 7.1, group wanted to emphasize that eduroam users should have a higher level of trust than anonymous guest users.
 - Derek: Group feels that it's completed work on the statements document, would like to pause until I2 provides feedback, community consultation is complete unless substantive changes

are requested from eAC or I2. Next task we anticipate is the eduroam BE Guidance (e.g. the “how” to comply with BE)

- Brett: Some possibilities for next steps. Community consultation is usually 4-6 weeks. Given that we’re talking about a change that impacts everyone operating eduroam we should be very deliberate about moving from phase to phase, and clear communication of timelines. Runway for this should be long. Feel like we should start socializing this via IAM, articles from Desk of the eAC, messages to mailing lists, etc.
- Rob: Should that communications effort begin with a report out to CACTI?
- MikeD: That feels like the first stop - want to make sure community advisory bodies are looped in
- Sara: Agree with that thinking. Should consider similarities and differences between this and InCommon BE. There’s an important element of the community coming together on this. Value prop for eduroam is more around access to connectivity. Wondering if we’re considering the “extra burden” that community could perceive here, since the scope of eduroam is narrower than InCommon Federation. Feels like there might be a little disconnect here? Wonder if the BE group has thought that through?
- Derek: We haven’t dug into that as much. I think the people currently doing this work are more enthusiastic about the service, though we are trying to keep in mind that we don’t want to raise the bar too high. Encouraging more service maturity is the goal. So compared to InCommon BE, we’re trying to focus less on how to throw people off the service.
- Saira: Maybe we could do a request for comment from eAC to get feedback on community sentiment WRT perceived burden of BE as it stands now. Would also drive community engagement, and provide opportunities for them to provide input
- Brett: Because this is the first time we’ve tried this sort of thing for eduroam we need to put extra effort into community engagement. Wonder if we could also get on agenda of CTAB to report out on our work, ask for guidance and input. Would also demonstrate our commitment to including community in decision making process. Rob, are you still our liason with CACTI?
- Rob: I am. Derek, are you also involved with CACTI?

- Derek: I'm the liaison for TAC
- Brett: Rob, can you reach out to Margaret Cullen about presenting to CACTI? (Next meeting 3/26). Can also reach out to David Bantz to get on CTAB agenda. Derek, can we share out document to those folks, start collecting feedback from those advisory bodies?
- MikeD: To Sara's point, we should stress need to understand service guidelines and principles as we take this to advisory bodies.
- Derek: Agree - this represents a shift in maturity level for eduroam, want to be deliberate about communicating that. Also, what are the stakeholders in these changes?
- Brett: InCommon Steering committee should be engaged, as well as CACTI and CTAB. Latter two would be more "informed" that InCommon Steering. Thoughts, Kevin?
- Kevin: Agree with importance of including InCommon Steering. Sufficient diversity that their feedback is always worth course correcting against. Also need to ensure they're consulted with for "air cover" - proves to community that we've done due diligence. Be ready for longer lead times, more deliberation. May take 2-3 meeting cycles.
- Brett: Thanks, Kevin. Consider that the "stakes" for InCommon BE were higher, as it could mean participants were kicked out. May not be as much a feature of eduroam BE but still need to have rigorous engagement with community bodies. Also need eAC to have a set of "talking points" to ensure consistent messaging to community. Have a "why are we doing this" ready.
- Brett: Next steps
 - Get "Draft" watermark in doc
 - Brett to reach out to CACTI and CTAB chairs. Derek to reach out to TAC. Share our work with them, explain goals and parameters of work.
 - Sara put us in touch with I2 comms about IAMOnline slot
 - eAC to develop aforementioned talking points
- [eduroam Cloud Infrastructure](#)
 - Amel: Met on 2/24. Worked on request doc, focused on how customer might switch between vendors, certificate management for RadSec. Will send to this committee for review.
 - Sara: James Cramton and I were going to huddle about how to wrap catalysts into this work. They're a friendly audience, good to

take initial steps with. We'll be reaching out to working group on next steps

- [“From the desk of the eAC”](#)
 - I am finalizing the document and will send the document next week. I will not be able to attend next week's meeting because I will be in training.
 - Nadim to send final version to MikeZ to be shared out as GoogleDoc
- Derek - Update on discussion re: temporary test credentials
 - Derek: Wanted to see if cert lifetime for eFM test tool has changed.
 - Sara: Internal team signed off on 24 hour lifetime. Current plan is to include new cert lifetime with Q2 update if testing is successful. Q1 update is still pending, so we're a few months off yet.
- eduroam Support Organizations Update (provided as pre-read)
 - Brett: Can we get on the agenda for eSO coordination call to discuss eSO?
 - Mike: We can do that - would be helpful to focus on concepts, goals of work and potential impacts on eSOs
 - Brett: That sounds good.
 - AI: MikeZ - add to eSO coordination call, increase duration of call to accommodate overview of BE efforts
 - CEN
 - Steady state, focusing on supporting existing school districts and public hotspots. Preparing to open application period for [Community Wi-Fi competitive subgrant](#), which includes funding to offset the cost of deploying eduroam.
 - NSHE
 - Working on press release for hotspot-only deployment in southern NV that should go live soon.
 - Two cities are going through legal review of our eduroam participation agreement before joining as hotspot-only deployers.
 - One just signed up this week!
 - Revamped one-page flyer for in-person events and “eduroam advocates” at colleges/universities to share with their K-12/library/museum/municipal friends. [Shared here](#).
 - Working on strategy to get eduroam broadcasting at healthcare facilities, trying to find ways to couple with additional bandwidth without putting us in a 24/7 support position.

- Network Nebraska
 - Continuing support for existing community. Also gave an interview with a staff writer for the Center for Digital Education, who is doing a story about eduroam in the K12 space
 - Engaging with second to last ESU to turn up eduroam (adjacent to final ESU that hasn't implemented)
 - Amanda: Utah found it helpful to have regular meetings within our community and engaging at conferences on eduroam (especially those colocated with "holdouts"). Also be prepared for more detailed questions, dig into tech more, and work with 3rd party companies that do tech services for schools.
 - Becca: We're also looking at moving the focus of our outreach to superintendents
 - Amanda: Agree. Also, handing out test accounts to decision makers and let them experience eduroam. I also use that approach for hotspot operators
 - Kim: The Big Ten Academic Alliance is in the process of onboarding as an eduroam member right now.
 - Derek: Have you worked with healthcare providers on becoming hotspot operators?
 - Amanada: We have. In a few cases there were issues with local configurations
 - Focusing on public outreach, local partnerships for hotspots
- UETN
 - MarComm team revamping website and materials. Asking about yearly reports for strategies and statistics to share. Stats have been a great storytelling/recruiting tool.
 - Signing up Provo City Library this week
 - Could there be opportunity to present on eduroam for rural ISPs? UEN will look into coordinating a session for URTA conference
- Merit
 - Detroit Public Library (23 sites) board reviewing MOU and looking to connect ~ early April; same with City of Detroit Parks & Recreation
 - Detroit Public Schools - in last round of legal review
 - City of Detroit - in legal review
 - Just started talks with the State of Michigan

- Creating more marketing materials for 'welcome toolkit' for both iDP and SPs (stickers, how tos, faq, etc)
 - Just brought in our 'Sales' / Outreach Team to start spreading the word statewide
- Learning Network of Minnesota
 - Working with a couple of potential school districts to onboard—three potential metro area districts, plus a couple of outstate districts.
 - Hoping to send a person or two to the eSO training.
 - We are working with Metro State University to expand eduroam in the Twin Cities metro area. They will be sending two reps to the RADIUS training next week.
 - They will provide technical support to school districts wanting to onboard (alongside our current support from Dan Cummings and UMN)
 - Partnership established with Minitex—statewide library group
 - Planning outreach at State Fair Education Building
- The Sun Corridor Network
 - Continuing to support pilot deployments, look toward hotspot rollouts.
 - Looking for a PM to help with this effort (and elsewhere) :)
- Washington K20 Network
 - Continuing to engage with pilot schools, working on leveraging overlap between K12 and community colleges. Presenting on eduroam K12 panel at CoSN's annual conference
- Link Oregon
 - Coordinating with 3 ESDs for on boarding. E-Rate schedule is impacting availability, so these will be picked up later in March. Presenting at APSCE (regional CoSN chapter) on eduroam. Also presenting on eduroam K12 panel at CoSN's annual conference
- Upcoming cohort window
 - Info on eSO program:
 - <https://spaces.at.internet2.edu/display/eduroam/eduroam+Support+Organizations>
- RADIUS training report out (Mike/Josh)
 - Josh: Went well. Largely similar to training offered at TechEx24. Looking at how to accommodate all the material (might spread training out over two days, etc)

- MikeZ: Still collecting surveys, but overall feedback has been very positive. Lots of interest in next session
- Mary: Was great to see the engagement from attendees - they felt it was high value
- Update on ToS change
 - Effective April 1
 - Applies to eSOs (and their constituents) and SP-onlys
 - Sara: Legal team asked us to include a couple of phrases for clarity's sake - the substantive content is identical.

Current	3.4 Suspension. Internet2 shall have the right to suspend any IdP's, SP's or User's use of the eduroam service immediately, without prior notice if any IdP's, SP's, or Users' continued use of the eduroam service presents a threat of harm, damage or injury to Internet2, any other eduroam organization, or the eduroam service, or if a governmental authority with appropriate legal jurisdiction notifies Internet2 of a violation of local, state, national or international law, or orders Internet2 to do so.
Effective April 1, 2025	3.4 Suspension and Limits. Internet2 shall have the right to suspend or rate limit any IdP's, SP's or User's use of the eduroam service immediately, in its sole discretion and without prior notice, as it deems necessary, including if any IdP's, SP's, or Users' continued use of the eduroam service presents a threat of harm, damage or injury to Internet2, any other eduroam organization, or the eduroam service, or if a governmental authority with appropriate legal jurisdiction notifies Internet2 of a violation of local, state, national or international law, or orders Internet2 to do so. Internet2 also shall have the right to rate limit any organization's use of eduroam if transactions exceed a reasonable threshold as determined by Internet2.

- Bonus item! Thank you Jeff!!!
- Next meeting
 - Friday April 11, 11am-12:30pm ET
- AOB?
 - Jeff: Updates with Cox Communications?
 - Sara: Update to ToS was to accommodate ISP partnerships like Cox, Lumos, CentraCom, etc. We opted for ToS update to make it

easier to work with these sorts of organizations, create a pathway for future partnerships. Will be effective as of April 1.

Friday, February 14, 11am-12:30pm ET

Attendees:

Brett Bieber
Rob Gorrell
Josh Howlett
Kendra Ard
Michael Dickson
Saira Hasnain
Amel Caldwell
Nadim El-Khoury
Derek Eiler

With:

Kevin Morooney
Elaine Alejo
James Cramton
Steve Zoppi
Sara Jeanes
Mike Zawacki
Romy Bolton

Regrets:

Ann West, Mary Bull

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)

- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed!
- Approval of meeting minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2025-1-17>
 - Saira's vote to approve the minutes
 - Mike D. seconds
 - Amel C approves
 - Brett approves
 - Kendra Ard approves
 - Rob G approves
 - MikeZ to email remaining members for approval
- Report out from InCommon Steering Co update on [eAC presentation](#) (Sara/Brett)
 - Sara: Part of move of eAC under InCommon Steering Committee. Steering members are more C suite folks, less likely to dig into technical weeds so it was telling that they were as interested in more details on what the eAC is doing. They're pleased with what you all are doing and didn't have a lot of questions, no concerns.
 - Brett: Agree - was a good presentation. Suspect they hadn't had a view into this group's work so it was good to put that in front of them.
- Working group updates
 - [eduroam Baseline Expectations](#)
 - Sara: Looking at how we (Internet2) can collect the data needed to measure compliance. Working with data team with that. Also, updates to reporting pipeline is playing into that work.
 - Brett: Group is working on tightening up and simplifying requirements write up and build out more technical info in appendices, etc.
 - Derek: Group is about 80% of the way through that rewrite. Hope to have the document in its final form by next WG meeting and will then share with entire committee to get your blessing. For now we're setting aside compliance enforcement and focusing on measuring compliance.
 - Brett: Agree with that approach. We're in the "educate/inform" phase for now. Enforcement is future state
 - [eduroam Cloud Infrastructure](#)

- Amel: MikeD and I met with Sara, Mary, and MikeZ yesterday. The request document is nearing completion, have some formatting and polish to do yet but I'm working on that.
- MikeD: Looking at how to handle communication between vendor and I2 if a cloud customer changes vendors or drops the service. Good suggestions from the group that we're going to incorporate into the request document
- Brett: Are there any sections you'd like the full committee to provide input on or other resources you might need?
- Amel: Not yet. The working group will refine and then ask the full committee for feedback.
- Sara: Think it's a good that the group is being so mindful about incorporating cloud tenants into the existing infrastructure and ensuring business processes and trust fabric is maintained. Feel like it's coming along well towards the point where we can share the doc more broadly with the eduroam US community. Appreciate that MikeD and Amel are doing a great job of presenting requirements in a "human readable" form rather than diving into API specs or other technical rabbit holes.
- Brett: Sounds like next steps are to continue to tune the document as discussed here and then present to eAC at March meeting
- MikeD: Agreed
- Brett: Is there a target we should look towards for this and BE? Should we start deciding when to start community engagement and announcing consultation via IAMOnline or mailing out to eduroam-admins list?
- Brett: MikeZ, can we add community engagement goals to this and BE agenda?
- MikeZ: I can add a standing agenda item for both groups on planning towards community engagement
- Brett: Should be mindful that each of those groups will have their own needs and sequencing. Could start by having each group define that for their respective workflows
- Brett: Also feel there's an opportunity to fold in the work of the "From the desk of the eAC" working group for community engagement.
- ["From the desk of the eAC"](#)
 - Nadim: I'm going to get the reworked draft to Saira and MikeZ
 - Brett: Bearing in mind the points above, are there ideas and volunteers for the next article?

- Derek: Agree with the idea to use next or upcoming article to begin community engagement on BE and cloud topics.
 - Brett: THinking through and talking about challenges of, for example, the Cloud Infrastructure group could be a good next step. Or for BE. Also thinking about some of the community discussion around 5G/private LTE - maybe that's a topic to cover?
 - Amel: I'd be happy to write about 5G/private LTE.
 - MikeD: eduroam guest? EVA?
 - Sara: I'd +1 that. There was a paper the eAC generated a few years ago that could be revisited or used as a starting point.
- eduroam Support Organizations Update (provide as pre-read)
 -
- Working group at Community Exchange 2025?
 - How many/any eAC members plan on attending CommEx?
- Voting for Vice-Chair position
 - Voting form <https://forms.gle/8MggXFtZ1nJKy1p99>
 - **Voting closes Friday February 21**
 - Hand off to new Vice-Chair on March 7 meeting
- Article on eduroam and K12 in Gov Tech!
 - Brett and Kevin Morooney contributed: <https://www.govtech.com/education/k-12/eduroam-wi-fi-access-program-bridges-k-12-digital-divides>
- How eAC can help promote upcoming eSO cohort
 - Derek: I know MikeZ has mentioned some misconceptions about Internet2 being a vendor (e.g. CoSN) and having some resistance to their participation. Are there ways we can help with that sort of community messaging? Especially thinking through Futures2
 - Kevin: I'm wondering how we (Internet2) could help with that "sculpting" could be perceived as manipulating/putting our thumb on the scale. One of the things I like about the eSO program is that you all have more feelers into the national K12 community. Wondering how to square/synthesize those two realities
 - Derek: Don't disagree - just want to think about how we (the eSOs) could help and/or work with I2
 - Brett: Might be a perception that "Higher Ed has a fantastic solution for securing wifi" and could step on toes. I think things like CoSN presentation by eSOs are great for helping reframe that discussion

- Next meeting
 - Scheduled meeting time of March 14 conflicts with eSO training event
 - Propose moving March eAC call to Friday March 7
- AOB?
 - Action Item from last meeting
 - 24hr cert change is approved, and should be straightforward to implement. It will be going in the Q2 maintenance release.

Friday, January 17, 11am-12:30pm ET

Attendees:

Kendra Ard - CSU
 Jeff Egly - UETN
 Derek Eiler - NSHE/SCS
 Amel Caldwell – UW/WA-K20
 Nadim El-Khoury - Springfield College
 Mike Dickson - UMass Amherst
 Robert Gorrell - UNC
 Brett Bieber - Nebraska

With:

Kevin Morooney - Internet2
 Sara Jeanes - Internet2
 Steve Zoppi - Internet2
 Mike Zawacki - Internet2
 Josh Howlett - Independent
 James Cramton - Internet2
 Ann West - Internet2

Regrets:

Saira Hasnain
 Jeremy Livingston

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Increasing TTL of test certs in the eFM (Derek)
 - Derek: Lifetime of credentials is currently 2 hours. Possible to test in that time, but if you're working with someone who's new to eduroam (esp. For non-technical folks at SP-only locations) it's not been enough. Understand that there are policy and security implications but would like to propose extending the lifetime to a week, or at least two days.
 - Rob: Isn't the test credential only via for the site that generates it?
 - Josh: Yes, it can't be used anywhere else
 - Rob: I think that would help with security concerns
 - Derek: Additionally, whoever generated that credential is well known since they're an eduroam admin. Would further discourage misuse
 - Sara: Architectural consideration - Internet2 doesn't want to be in the business of running a root cert authority. Part of the constraint was to minimize our exposure to running and managing certificates. Having a two hour lifetime mitigates a lot of concerns around that. Extending the lifetime could bump into that. At some point of lifetime extension we'd open ourselves to that. If two hours isn't enough that's okay - just want folks to understand where the decision came from
 - MikeD: Is there any reason the user couldn't request a new credential?
 - Derek: The interface says that when you request a new cert the old one is revoked. Bigger issue is that by the time your cert expires you might not have completed testing. When you're looking at a constituent who's testing on their own by the time they've gotten ahold of the eSO for assistance the cert has expired and the generation and installation process has to be repeated. Extending the life would relieve some of the time pressures there
 - Rob: Would 8 hours be enough or do you need to have a full day?

- Derek: Won't know for sure until we try it but my guess is that at least 24-48 hours would be better. Our interim solution has been to generate our own certificates, which more or less works for now but won't scale when you start working with multiple organizations.
- Rob: 8 hours could be a good compromise to try first
- Amel: I agree that 2 hours feels short.
- Brett: A question - what does the workload of implementing a change like that look like for I2?
- Sara: Good question. Next steps for us would be to review request internally, then it's a variable in a file and a redeploy. Most of the work would be the security review.
- Brett: Appreciate that info. I'm hearing that there's a need being expressed by the community to extend the lifetime of the certs to at least 8 hours, and that we'd like I2 to review that
- Sara: Is there a threshold for how many hours would NOT be acceptable? If it's shorter than 24 hours would you like me to come back to this group?
- Rob: I feel like any increase is good.
- Amel: Is it possible to have the certs revoked at, say, 11:59pm ET (or any time zone) every day? The predictability could help
- Derek: I'd push back on that a little. If someone, for example, decides to do this as a lunch time project maybe the next time you could get help from your eSO would be the following morning. We'd be back to having to start over from scratch. If the duration is less than 24 hours I don't feel like it's a marked improvement, so that would be my threshold.
- Brett: I think that simplifies it. 24 hours makes the most sense to me. Having the eFM provide some cut and paste-able text stating the 24 hour lifespan it would help eSO staff.
- **Sara: Sounds good. I'm putting on our internal agenda for our next planning meeting. We'll report back to this body.**
- Approval of meeting minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2024-12-20>
 - Derek moves to approve the minutes
 - Nadim seconds
 - **Majority agree, minutes approved**
- What changes of reporting to InCommon Steering looks like for eAC (Kevin/Ann)

- Kevin: Some background - InCommon Steering committee met this past Monday, mostly about what we (I2) saw as priorities for the committee. Committee agreed, and wanted to review eduroam at their next meeting in February. They've asked for eAC to give an eduroam update at that call.
- Ann: Would add a word about how other advisory committees work. InCommon Steering approves new members of its subcommittees. Also, reports and other official documents need to be reviewed and vote their acceptance/rejection of those docs. Will be a good process when looking at, for example, eduroam BE - more community visibility and involvement.
- Brett: Sounds great. Also glad to hear Steering is interested in eduroam. To this group, what things do we want to make sure are elevated? Also, how can the eAC help in putting together slide decks and other materials?
- Kevin: I think we should design 30 minutes of material for discussion. Both eAC and I2 staff should present, demonstrate those two parts of eduroam working together. Sara indicated that we might be able to reuse some of the materials from Mobility Day24. Will probably have to create a handful of new slides, but majority of material is there. Talk about the service, the composition of eAC, and what you all plan to focus on for 2025.
- Jeff: That sounds good. What's the date?
- Kevin: Monday, February 3rd at 4pm ET. We could push out to March but eAC might want to capitalize on Steering's enthusiasm.
- Brett: Agree - we have a lot of the content assembled. What are the ratios of topics? Want to be sure Sara and Josh have time to cover things like infrastructure planning, other development priorities. Big 10 CIO review of Nebraska's medical center is that day but think I can be available at 4pm ET. How many/who from eAC would need to be there?
- Kevin: What we try to do in Steering is that areas that have a lot of change, risk, etc get priority. Because this would be the first eduroam update to them, they will likely identify topics they'd like to dig into on future meetings. So Sara could represent management slides and one member from this committee would present the community
- Sara: I have an internal slide deck that we could include items from. Happy to set up a deck for us based on the TechEx material and then work on with you all.
- Kevin: I would include both "eduroam classic" and the eSO program, make differences between those two stacks clear and demonstrate that we're paying attention to both.

- Brett: Sounds great. Next steps would be to ensure we have our working groups represented and include the items this committee wants to include. Given timeline of next Steering committee meeting we should start next week. Spend the following week polishing, then any final tweaks the next week.
- Brett: I'll volunteer to draw up list of topics for the eAC to cover and share out with this group. Sara can share link of draft of slide deck and we'll share out to committee at large, have draft done by the end of next week.
- Jeff: Happy to help with that as well
- MikeZ: I can assist with scheduling if need be
- Brett: Thanks all - if others want to contribute please note it here and we'll loop you in
 - MikeZ
 - Kendra Ard - (Happy to help if you think I can be useful...)
- Kevin: We'll also have an opportunity to share the draft deck with the executive committee ahead of the Steering call.
- Changes to eAC membership (Brett/Jeff)
 - Jeff: I'll be retiring from UETN in March and will need to step down from the eAC. Huge pleasure and privilege to have worked with this group!
 - Brett: Many thanks for all your contributions, Jeff.
 - Point of order question: Does Steering need to have input on eAC electing/appointing a new vice-chair?
 - Kevin: I think making them aware of the change. If they choose to be involved they can state it. If not, they've been informed.
 - Brett: Question of how to select our next vice-chair?
 - **MikeZ: I can send out a voting poll to select a vice-chair effective as soon as Jeff steps down.**
 - Brett: For this committee, be aware that chair/vice-chair does involve some work outside of the meetings. Move that we have election next month and select our new vice-chair by next meeting.
- Updates on Working Groups
 - [eduroam Baseline Expectations](#)
 - Derek: Met last week, discussed outcomes from TechEx and ACAMP. Got feedback from the community on draft [BE statement document](#). That's the "what" of BE (~2 pages) - plan is to pivot to the "how" community can meet compliance items. Included an outline of how I2 could monitor/measure compliance (appendix B). We'd like to get a more complete picture of where compliance is

today before community consultation starts, even as we refine the exact BE items' language. Want to check our understanding of what is and what's achievable before engaging with the community.

- Ann: If we (I2) have questions should we put those in the document?
- Derek: That would be great. Feel free to use the comment feature.

- [eduroam Cloud Infrastructure](#)

- Rob: Met on the 13th. Group is reaching a point where we'll pivot from listening, gathering thoughts from vendors and start developing set of requirements which speak to all segments of eduroam US community. Also want to look at how to do some initial trial deployments of RADSEC in a limited fashion. Want to engage with vendors and leverage their skills in those trial deployments. Also interested in incorporating needs of eSOs to use cloud infrastructure to reduce complexity, lower barriers to adoption and look at how to offer a managed IdP service.
- MikeD: We also talked about the technical aspects of how to deploy limited instances RADSEC and considered how to make RADSEC available to members of the eduroam US community that are ready to try RADSEC. Also want to get some clarity around I2's role in this.
- Brett: If others are interested in joining this group indicate it here and MikeZ will add you to the meeting instance

- ["From the desk of the eAC"](#)

- Group will meet next Friday

- eduroam Support Organization updates

- CEN
- Steady state, focusing on supporting existing school districts and public hotspots. Preparing to open application period for [Community Wi-Fi competitive subgrant](#), which includes funding to offset the cost of deploying eduroam.

- NSHE

- Positive discussions underway with state division of museums and history. Second-largest school district piloting eduroam now. Largest county (municipal) deploying now (SP-only). Working on "eduroam ambassador" program to engage higher ed institutions in NV in spreading the word and developing public-private partnerships to expand the service. Winter break technical project

to make an “eduroam map clipper” completed (extract regions from the eduroam-US map file published by Geant into your own .kml file for embedding on your website, etc.)

- Network Nebraska
 - Continuing support for existing community. Also gave an interview with a staff writer for the Center for Digital Education, who is doing a story about eduroam in the K12 space
- UETN
 - MarComm team revamping website and materials. Asking about yearly reports for strategies and statistics to share
- Merit
 - Good engagements continue; first SP site about to go live. Ann Arbor Hands-On Museum. Have also been engaging with largest school district in the state - have a verbal agreement to deploy. Are engaging with other schools and potential SPs as well. Working with a conference venue to become an SP, for instance
- Learning Network of Minnesota
 - We have two SPs live, working on finding our next opportunity. Have a few candidates interested but haven't committed as of yet. MN technical leadership conference is coming up
- The Sun Corridor Network
 - Continuing to support pilot deployments, look toward hotspot rollouts.
- Washington K20 Network
 - Continuing to engage with pilot schools, working on leveraging overlap between K12 and community colleges
- Link Oregon
 - New implementations coming up for two districts in the state of Oregon
- **Brett: Possible February item for this group - how this committee can help with community messaging**
- Derek: Any concerns around infrastructure capacity as we look at adding more eSOs?
- Sara: The team has been deploying updates to national infrastructure that have made significant improvements to our capacity. At this point we're comfortable with adding new eSOs outside of the “big 5” (5 states that have the highest amount of metropolitan population).

- Josh: We've also done more research into traffic patterns, how the infrastructure is used and handles load that have substantially improved our understanding of existing and future capacity. We're in a much better position now than we were 12 months ago, especially as we look at how to expand our capacity.
- Next meeting
 - Friday, February 14, 11am-12:30pm ET
- AOB
 - eduroam team staffing update (Sara)
 - New team member in Internet2 - Mary Bull. Mary will provide enhanced technical support, analysis, and developing service improvements.
 - Article on eduroam and K12 will come out next week. Brett and Kevin contributed interviews and other info to the author

Friday, December 20, 11am-12:30pm ET

Attendees:

Saira Hasnain - UF
 Derek Eiler - NSHE
 Kendra Ard - CSU
 Mike Dickson - UMass Amherst
 Nadim El-Khoury - Springfield College
 Amel Caldwell – University of Washington
 Rob Gorrell - UNC Chapel Hill

With:

James Cramton - Internet2
 Nicole Roy - Internet2
 Kevin Morooney - Internet2
 Sara Jeanes - Internet2
 Mike Zawacki - Internet2
 Josh Howlett - Federated Solutions

Regrets:

Jeremy Livingston
 John Buysse

Jeff Egly

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- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Note from Kevin WRT committee leadership - while Internet2 has asked that committees suspend rollover during the work of InCommon Futures2, the committees are welcome to determine their own chairs and vice-chairs. Something to keep in mind for 2025.
- Approval of meeting minutes
 - Minutes for 11/22:
<https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2024-11-22>
 - Please read notes, indicate below your name, your vote to approve, or any requests to correct/amend notes
 - Derek approves, but notes that Saira's name is misspelled as Siara once.
 - Amel approves
 - - Approved and concur with the name correction please.
 - Saira moves to approve
 - Kendra Ard
 - Nadim El-Khoury moves to approve
 - Mike Dickson
 - Brett Bieber
- Updates on WGs
 - [US Mobility Day 2024](#) /report out from TechEx24
 - RADIUS training
 - Brett: Had 2 related workshops - one the morning of 12/9 on RADIUS configuration and troubleshooting (led by Josh Howlett and Mark Donnelly). Interest expressed in offering the training as part of InCommon academy. Josh, can you report out on that?
 - Josh: Overall went well. Mix of experience levels with RADIUS, eduroam, and wireless technologies - challenging to teach to that range but seemed to go well. If we wanted to

deliver the training online we'd need to adjust the material, given the amount of hands-on content.

- Brett: Enjoyed the training - lots of good, foundational concepts and information covered. Saw requests on the eduroam-admin list for the training to be more broadly available. Interested in hearing additional feedback.
- Derek: +1 to the above. There's a wealth of information out there on eduroam but fewer distilled sources like this training. If we're getting requests and positive feedback on the mailing list it seems like there's a need in the community for more of this sort of training/info. Maybe even as an IAM Online.
- Brett: Would the feedback gathered by Internet2 be available? Could also be good to follow up with InCommon Academy team. What would next steps be?
- Sara: I agree that there's some potential here. We'd need to work with Jean and her team on how to formulate a business case for training, adapting material. MikeZ and I can take an action item to make that available to this committee
- Brett: I'll take an action item to follow up with Jean

■ Mobility Day24

- Brett: Lots of good conversation, particularly around Cal Poly's Private LTE/5G presentation. Questions raised around how this could augment/replace/supplement wifi. Seeing the technology become more accessible. With NET+ there could be more drivers to that end. How do we make access to staff/students more accessible, tie in to eduroam and wifi at large.
- Sara: Definitely appreciate the enthusiasm of the presenters and panelists. We knew that we were including a vendor in the presentation, panelists managed it well. In terms of eduroam tie-ins I'm a skeptic of 5G. Feel wifi and ethernet can cover most use cases, even in large settings like stadiums. E911 could be a good use for integrations, but increasingly the use case ends up being for private networks that are specialized and device intensive (e.g. IoT, sensor networks) rather than people/user-centric. Open to pushback from others on this and want to keep an eye on this. But also

want to be mindful of it distracting us from the main work of eduroam.

- Saira: Agree with the adobe
- Derek: I'm about 60/40% on this. Could be distracting if we let it be, but also think there's room for integration. 5G is good but isn't a magic bullet. Devices are limited in their ability to use it, for example. There are use cases that make sense - it's great for things like long distance rural backhaul. I feel if we're going to have a stance on it need to lay out a coherent argument for where it fits and doesn't fit
- Amel: I'm on the committee for neutral host evaluation. Agree there is room for appropriate integration - phones in healthcare settings, IoT, etc. I'm with Sara on this, though. It has a place but isn't a replacement for wifi.
- MikeD: I'm of a similar mind. Would be interested in exploring ways to onboard eSIMs, related tech into eduroam. Also see limitations with LTE/5G others have pointed out. But want to be mindful of how to best integrate this tech with eduroam given its increased adoption. Consider some institutions will be driven by cost factors - could drive uptake even if it's a technically inferior choice. We should think about how to work with it.
- Brett: Amel's participation in the neutral host evaluation committee is a great touch point. This committee should be a space to continue this conversation and keep tabs on evolution of this work
- Kevin: Thinking back to when DAS tech first came out - some assumed it would replace wifi. Think we should continue to look at these technologies as complimentary. This body can continue to create balance in the conversation and keep clear on when it does and doesn't make sense. It's unlikely that wifi will go away and near certain that it will continue to exist alongside this tech
- Amel: I'm excited about being able to do both.
- Nicole: Think we need to continue to engage with these technologies - convergence will keep happening. For example, some APs have CBRS, other cellular tech integrated out of the box.

- Amel: Agree. If we completely ignore this tech we'll effectively cut ourselves off.
- Brett: Suggest this committee look over Mobility Day24 agenda and slides via the link above. Last thoughts?
 - Derek: Lots of good feedback - encouragement to do it again ongoing
 - MikeD: Agree - I heard much of the same
 - Brett: Nicole Harris (GEANT) said that it was a great event, good conversations, and believes it should be an ongoing event
- [eduroam Baseline Expectations](#)
 - Feedback from [TechEx ACAMP session on BE](#)
 - Brett: Rob, MikeD, and myself were present for this
 - Rob: Comments brought up on finer detail, wording but overall the consensus was that the group's work is on the right track. Lots of interest in implications of BE on NRO (Internet2) as well. Also folks felt it was good to align eduroam-us BE with GeGC compliance statement and ensure the two frameworks work in concert.
 - Brett: I think next year part of our workplan should include refinement of BE, communication with community, and then driving towards broad adoption. Also noteworthy that we had representation from other NROs. CANARIE in particular participated and expressed enthusiasm for the group's work.
 - Next steps: Incorporate feedback from ACAMP, plan out approach to collect community input, and begin work of measuring compliance and drive adoption
 - Derek: Want to be clear that we kept the summary high level and not fine grained but appendices contain more detail, particularly around requirements for the NRO.
 - Brett: Great point. Definitely want to ensure engagement with Sara, eduroam team at large. Important that BE requirements and community needs are reflected in infrastructure, eFM, other operational aspects of the service.
 - Brett: Also want acknowledge Derek for taking on the work of drafting the requirements and making them available ahead of TechEx!
- ["From the desk of the eAC"](#)

- Brett: Nadim continuing work on current article. Group discussing how to parallelize the work of writing
- [Cloud Infrastructure](#)
 - Amel: Group met on Monday, reviewed last version of requirements document. Need to get a polished version in the hands of Sara and the eduroam team.
 - MikeD: Talked about vendor segmentation, avoiding large blockers for vendors. Also, the more we've discussed RADSEC the more we agree that it's a good thing to aim for independent of vendor's preference for it in cloud offerings. Seems like there's general interest from the community (mentioned more than once at TechEx24). May be a good framework to use to engage with community, drive interest, start the work of moving towards broader adoption of RADSEC in the US.
 - Brett: Important to note that the group's work isn't fixating on one solution but rather a framework for engagement with vendors. I appreciate that continues to be reflected in the group's work.
- eduroam Support Organizations Update (provide as pre-read)
 - CEN
 - Steady state, focusing on supporting existing school districts and public hotspots. Preparing to open application period for [Community Wi-Fi competitive subgrant](#), which includes funding to offset the cost of deploying eduroam.
 - Link Oregon
 - No updates on implementations. Looking forward to the Nov 14th eduroam Support Organization Day - promoting that with their community.
 - Network Nebraska
 - Continuing support for existing community. Worked with other eSOs on putting together programming and recruited SMEs who assisted with eSO Day
 - NSHE
 - Good conversations during TechEx, exploring possibility of an eduroam2go-like Unifi-based collaboration between NSHE, UNLV, and possibly others. Great call with UETN, et al. regarding lessons learned from eduroam2go project.
 - Expecting more municipal hotspots and the second-largest school district to begin deployment early/mid January.

- The Sun Corridor Network
 - Continuing to support pilot deployments, look toward hotspot rollouts.
- UETN
 - Ongoing work with ISP (CentraCom). Assisted in planning and hosting eSO Day
- Washington K20 Network
 - Continuing to engage with pilot schools, working on leveraging overlap between K12 and community colleges
- On-Rampers
 - Merit Network
 - Continued work on pilot deployments in two major school districts (Detroit, Ann Arbor public schools) and hotspots in Detroit Public library system and children's museum.
 - The Learning Network of Minnesota
 - Added three new school districts to existing pilots. Cool use case in latest school - northern-most elementary school in the continental US. Part of the city is north of US/Canada border and students have to do 2 border crossings each day to and from school
- Next meeting
 - Friday, January 17, 11am-12:30pm ET
- AOB?

Friday, November 22, 11am-12:30pm ET

Attendees:

Brett Bieber - Nebraska
 Jeff Egly - UETN
 Kendra Ard - CSU- OC
 Derek Eiler - NSHE
 Amel Caldwell - UW
 Nadim El-Khoury - Springfield College
 Mike Dickson - UM Amherst
 Saira Hasnain - UF

With:

Ann West
Mary Denler
Sara Jeanes
Mike Zawacki
Josh Howlett
Kevin Morooney
James Cramton
Steve Zoppi

Regrets:

John Buysse, Dion Baird, Jeremy Livingston

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- Agenda bash
 - Bashed
- Approval of meeting minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2024-10-25>
 - Approved
 - Brett
 - Derek
 - Jeff
 - Kendra
 - Amel
 - Nadim
 - Mike
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2024-9-27>
 - Will move to approve via email
 - 6 approvals - all members currently in attendance
 - Kendra final vote to approve
 - Nadim

- <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2024-8-30>
 - Derek moved to approve via email
 - Amel,
 - Kendra
 - Nadim
- InCommon Branding overview (Ann, Mary)
 - [Link to presentation](#)
 - Feedback on unique value proposition slide
 - Nadim: I like it. Very straight, to the point.
 - Brett: Agree - I see eduroam here, understand how it fits in.
 - Derek: One thing that we're doing in eduroam that might not align 100%, which is the work on K12
 - Kevin: This has come up in other conversations. How I think about it is that I2 has 4 different membership types. HE, R&E networks, government entities, industry partners. There are organization types under each of those that *they* serve - constituents downstream from them. I feel like K12 fits into that model. For example, there are agriculture extension organizations under HE - still matters that they're supported, even if I2 doesn't directly do it
 - Siara: Could you say that Internet2 serves "education" rather than "higher education"? Would encapsulate both use cases
 - Feedback on Quick Pitch slide
 - Brett: Love it, especially the call to action at the end
 - MikeD: I like it as well
 - Nadim: Agree - also speaks to the fact that I2 understands that space and wants organizations to be a part of the community
 - Overall feedback
 - Derek: I think this will be great for getting new folks acquainted with InCommon and our community.
- Updates to key documents (provide as pre-read) - Sara
 - [Update to ToS](#)
 - Changes to section 1.4
 - Outgrowth of findings from ISP pilots
 - Allows for ability of eduroam US operation team to rate limit (authentication request count, not bandwidth). Geared toward hotspot operators which generate large amounts of authentication requests.

- Brett: Appreciate this new language - feels appropriately scoped. Thinking about how it could fit into BE efforts, like that it provides some enforcement power. InCommon BE didn't have this starting off, so I like that it's included here. Suggest a procedure document about how rate limiting would work, steps and communications templates, etc. May not need to go in the ToS, but would like to see a document created and shared with this committee
- eAC majority accepts updates
- [Update to eAC Charter](#)
 - Reflects the move from eAC from reporting to CACTI to reporting to InCommon Steering. There will still be a liaison between eAC and CACTI. Also, chair of the eAC would become a non-voting member of InCommon Steering, attend meetings.
 - Voting eAC members asked to vote on acceptance of updates to charter
 - Brett: I'd move to accept all of Derek's changes. Sara, are we okay incorporating those into the final charter?
 - Sara: Yes, we can add those changes in
 - Brett: Motion to approve changes to charter?
 - Kendra moves to approve
 - Saira seconds
 - Votes in favor:
 - Amel
 - Derek
 - Jeff
 - Kendra
 - Nadim
 - Saira
 - Brett
 - MikeD
 - No votes against
 - New charter is approved
- Review of Josh Howlett's [K12 IdP/Hotspot deployment guide](#)
 - Josh: Intended for eSO staff, especially incoming/newer eSOs. Provides a framework for thinking about deployments for their constituents that will better serve K12s.
 - Brett: The document builds on itself, so it may not be something to pick and choose from. But Table 1 is particularly important, imho. The practices

outlined in the green area are what to aim for, but easier steps further out can be good for jump starting K12s - just want to be sure that there's always progress toward the best practices. Providing concrete recommendations to eSOs is very important.

- Jeff: Want to acknowledge Josh's efforts - time and work put in has been very valuable.
- Brett: What are next steps?
- MikeZ: Will be run by On-Rampers for another set of eyes. We'd then refine internally, and then make it available as one of the info resources for new and existing eSOs. Could be included along side the eSO planning tool as a way to help prospective eSOs what their work would look like.
- Sara: Agree - we would also look at how to fold this into our communications efforts, branding considerations, logo lockups for eSOs, etc.
- Updates on WGs
 - [US Mobility Day 2024](#)
 - Brett: Agenda has been sent out to eduroam-admins list. 33 attendees at last count, attendance capped at 45.
 - [eduroam Baseline Expectations](#)
 - Derek: Created a [draft summary document of BE requirements](#) for eduroam-US. Presents requirements in the BE item spreadsheet. Would like to share this at Mobility Day 2024 as part of the eeAC update. From there we could start soliciting feedback from the community.
 - Brett: Really appreciate the document, and the work of the WG to develop these requirements and approaches for measuring compliance. I think WG can provide feedback on Derek's document.
 - Derek to send his document to MikeZ. MikeZ to set it up as a Gdoc
 - ["From the desk of the eAC"](#)
 - Brett: Group discussed folding Josh's IAM material
 - [Cloud Infrastructure](#)
 - Amel: Last meeting was focused on review of a [Cloud Infrastructure Requests document](#) I'd put together which spells out requests the group is making of I2. Synthesized from original requirements draft and cloud infrastructure options documents.
- eduroam Support Organizations Update (provide as pre-read)
 - CEN

- Steady state, focusing on supporting existing school districts and public hotspots.
- Link Oregon
 - No updates on implementations. Looking forward to the Nov 14th eduroam Support Organization Day - promoting that with their community.
- Network Nebraska
 - Continuing support for existing community. Worked with other eSOs on putting together programming and recruited SMEs who assisted with eSO Day
- NSHE
 - Working with eduroam “authentication heartbeat” system for Nevada IdPs based on UK/Jisc’s prior work, works great for EAP-PEAP but not EAP-TLS - hard to get test TLS credentials. Made request to eduroam team to extend life of test certs.
- The Sun Corridor Network
 - Continuing to support pilot deployments, look toward hotspot rollouts. Attempted to work with conference venue to have eduroam available at state CTO/CIO conference, but hotel IT staff had trouble with deployment. Plan to engage earlier for future conferences.
- UETN
 - Ongoing work with ISP (CentraCom). Assisted in planning and hosting eSO Day
- Washington K20 Network
 - Continuing to engage with pilot schools, working on leveraging overlap between K12 and community colleges
- On-Rampers
 - Merit Network
 - Working on pilot deployments in two major school districts (Detroit, Ann Arbor public schools) and hotspots in Detroit Public library system
 - The Learning Network of Minnesota
 - Added two new pilot school districts to existing pilots
- Guilford County schools pilot
 - Planning to spin down eduroam portion of pilot, focus on residential broadband
- Report out from eduroam Support Organization Day (Brett, Derek, MikeZ)

- Next meeting
 - Friday, December 20 11am-12:30pm ET
- AOB?

Friday, October 25, 11am-12:30pm ET

Attendees:

Brett Bieber - Nebraska
 Amel Caldwell - UW
 Saira Hanain -UF
 Josh Howlett - Federated Solutions
 Derek Eiler - NSHE
 Mike Dickson - UM- Amherst
 Jeff Egly - UETN

With:

Kevin Morooney
 Sara Jeanes
 James Cramton
 Mike Zawacki

Regrets:

Ann West, Kendra Ard, John Buysse

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed!
- Approval of meeting minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2024-9-27>
 - Will move to approve via email

- 6 approvals - all members currently in attendance, 1 more needed via email
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2024-8-30>
 - Derek moved to approve via email
 - Amel votes to approve via email
- Updates on WGs
 - [US Mobility Day 2024](#)
 - Brett: [Agenda has been drafted](#). Submission from Cal Poly and others for a panel on neutral host/private LTE. Update on IETF work, international/GeGC update, updates on eduroam service and eSO program.
 - Derek: Do we have a confirmed speaker for international segment?
 - Sara: I'll provide that, include update from the GeGC
 - Brett: Kevin, anything else we might need to include?
 - Kevin: Overall good, could be useful to include update on eAC reporting change. May want to send steering with an update email so they're up to speed before TechEx
 - Brett: I can help with that too. MikeZ and I will get the agenda added to the event wiki page. Will also get abstracts/summaries to add and share with steering
 - Kevin: Would be helpful to include Brian Ladrado as he's been working on neutral host projects
 - Brett: I'll reach out to Brian and Sean O'Brien about the program as well. Derek, MikeD, others can send out notes to speakers, share wiki agenda and let them know we have space for slides.
 - Al: Update wiki page Brett Bieber mzawacki@internet2.edu
 - Al: Send final agenda to presenters, request abstracts Brett Bieber
 - Al: Send note to steering + Ladrado + Sean Brett Bieber
 - [eduroam Baseline Expectations](#)
 - Derek: Met with Tom Barton, asked him about process of BE for Federation, lessons learned, etc. Tom had a lot of good feedback, validated some of the points the working group has been discussing. Want to be mindful that this is framed as the eduroam community holding itself to a set of standards. Also looked at

phased approach for Federation's BE, may want to take a similar approach for eduroam.

- ([Link to recording](#) of meeting with Tom)
- Tom also pointed out that the act of reaching out to contacts was a lot of effort and required some additional staffing on I2's part. When we asked Johnny Lasker about eAs it came to light that there were many orgs that didn't have an active admin, so it seems like that might happen as part of our work as well.
- Need to communicate the compliance items as a way to improve eduroam for the whole community.
- Link to recording
- Sara: After the work of developing requirements is concluded what's next? Communication, technical discovery, other steps?
 - Derek: Definitely, though at the moment we're focused on finalizing the requirements. Would likely look at discovery of current compliance levels next. We feel there's more data discovery to do to inform our next steps. Would be helpful to meet with eFM team soon. How should we make that request?
 - Sara: Mike and I can facilitate that. We're also working on an overhaul of reporting process, so your requests might be folded into that work. Will also be looking ahead to 2025 priorities for eduroam, likely to include some of your work as well
 - Brett: I like the emphasis on data discovery. Great that Josh and Johnny have provided some already. Wondering if we should also approach NRO community and see if they would be interested in working collaboratively on some of the same issues we're identifying in the US. Sara, your connection to that community will be very helpful for us. We had a similar experience with the international community in InCommon's BE effort
 - Sara: Great points. More maturity in things like eduGAIN and REFEDS, but could be an opportunity here as well. Would be interested to hear Josh's thoughts
 - Josh: While I don't have as much direct engagement with the international community, I think this is a good point, good to keep in mind in light of work on things like eduGAIN.

- Brett: Looking at issues we're experiencing and extending the work beyond our borders could help global community
 - Derek: Thinking about some of the work in GEANT's cat-dev group. They've been talking about things like WPA3, Wifi6, etc. and the patchwork of adoption they see with protocols. Would hate to have portions of the international community left out or vice versa
 - Sara: Many of the conversations in the GeGC tend to get filtered down to that call informally, and they take some cues from that group. Want to be mindful of our size as an NRO, but still think about the role we could play. Lots of parallels with eduGAIN, REFEDS, etc.
 - Josh: 15% of all transactions that go through TLRS1&2 are international. So there's clearly a need for coordination here
 - Brett: Great data point. Feels like we're making good progress. Next steps sounds like development of requirements, measuring current compliance, and/or engage in community consultation (one could be sequenced before the other), then look at enforcement
- ["From the desk of the eAC"](#)
 - Suspend activity until Q1 2025?
 - Saira: We've also been single threading the work. Maybe if we had multiple topics being worked by multiple people and could pick from the most developed.
 - Brett: That's a good point. Lots of the work of the group has rested on Nadim's shoulders (as he had the current lone topic). Wondering if there's an opportunity to shorten Nadim's article and point it to the recording of this month's IAM Online. Could support each other and get an article out, as well as relieve the pressure on a lone committee member
 - Saira: Putting it on hiatus could lead to the group being abandoned.
 - Derek: Mention of things being single threaded makes me wonder if it's possible to include others from the community outside of the eAC. Could let the topics emerge organically, distribute the work of editing, etc
 - Saira: Devil's advocate argument - even with drawing in others from outside the eAC, the eAC would still need to commit the cycles to

review, edit, and make sure the final work reflects the eAC's views and approaches.

- Brett: MikeZ - can you email a summary of this discussion to the WG and go ahead meeting on the next call

- [Cloud Infrastructure](#)

- Amel: Reviewed Josh's position paper. Group has settled on one approach for a requirements set for cloud vendors (TLRS supports RADSEC). Group will incorporate that into the requirements document.
- MikeD: RADSEC was seen as a way to address shared IP addresses as well. Also discussed issues like where certs would be created, who would own them. Margaret provided feedback as well, and the group talked that through with her. Would look at setting up a sandbox/test bed for RADSEC testing with top level servers. Group considered testing the ability of FreeRADIUS to handle RADSEC and dealing with multiple organizations coming from shared IP address space. Margaret also mentioned leveraging eSO features for cloud vendors, and tempered expectations around what RADSEC can do as well as highlighting what it *can't* do.
- Brett: Interesting to think about industry entities as community partners. James, hoping some of these conversations are of interest to you!
- James: That's exactly what's on my radar. Talking to catalyst partners about how to dovetail into this work.
- MikeD: Also looking at completing some of the needs for a phased approach to the requirements.
- Sara: Really appreciate the work of this group! Will factor into our efforts to bring in the "next 2,000 universities"

- eduroam Support Organizations Update (provided as pre-read)

- CEN

- Steady state, focusing on supporting existing school districts and public hotspots.

- Link Oregon

- No updates on implementations. Looking forward to the Nov 14th eduroam Support Organization Day - promoting that with their community.

- Network Nebraska

- Continuing support for existing community. Working with other eSOs on putting together programming, recruiting SMEs to assist with eSO Day
- NSHE
 - Met with several museums, good partnership opportunities on the horizon. Working with NSHE research engineering team to plan eduroam hotspots at field science stations. Large metro city in southern NV wants to offer eduroam, agreement is in the legal review phase. Trying to get a meeting together with one of the major airports; contemplating an arrangement where traffic from eduroam users would route back to/through NSHE. Now piloting an eduroam “authentication heartbeat” system for Nevada IdPs based on UK/Jisc’s prior work.
- The Sun Corridor Network
 - SCN: we are attending the Arizona CIO/CTO Forum in November, largely a K-12 event. Intent is to drive awareness, interest, and ultimately participation in our eduroam program. Working to get prepared and hope to get the venue to broadcast the eduroam SSID.
- UETN
 - Ongoing work with ISP (CentraCom), support of existing community, and assisting with upcoming eSO Day
- Washington K20 Network
 - Washington K20’s board approved funding for 2025 participation. Continuing to engage with pilot schools, working on leveraging overlap between K12 and community colleges
- On-Rampers
 - Merit Network (Michigan)
 - Continuing to work with prospective pilots
 - The Learning Network of Minnesota
 - Continuing to work with prospective pilots
 - Brett: [Announcement went out on new On-Rampers](#)
 - Guilford County Pilot
 - Working on transition with departure of Rob Gorrell from UNCG
- eSO eduroam Day (MikeZ, Brett, Derek, Jeff)
 - Half day virtual training, skillshare event for eSOs, On-Rampers, and their constituents

- Report out from IAM Online (Derek, Sara)
 - [Recording of webinar](#)
 - [Slides](#)
 - Sara: Well attended - peak of 94 attendees. I provided service update, main body of webinar was Josh's security/privacy practices. Josh also plugged the half day workshop at TechEx24 :)
 - The Seven Things You Should Do (and 1 thing you shouldn't!)
 - Use Anonymous Identities
 - Don't Send Location-Based Attributes
 - Use Secure Authentication Methods
 - Review Your PKI
 - Don't Send Or Consume VLAN Attributes
 - Harden Your RADIUS Configuration
 - Design For High Availability
 - (DON'T) Wait For RADSec
 - Derek: Josh, you mentioned that there were some support requests that came out of the webinar?
 - Josh: There were several, mainly around PKI questions.
 - Sara: eVA was mentioned - I thought it was open source? Does anyone have a link?
 - Derek: skimmed the login page source for a few eVA login pages, found references to SURFnet...
<https://www.surf.nl/en/services/eduroam-visitor-access> ?
 - Derek: What do you think of Josh's last slide would be helpful to share on eduroam US knowledgebase? (slide 32 from the deck)
 - MikeD: I think that would be good. It was a very helpful resource
 - Brett: Wonder where we could put that in the knowledgebase? Also, what are the communications channels out to the community where we could share this sort of thing? Maturing our communications could be part of maturing the overall service.
 - Brett: Thinking through our discussion around "Desk of the eAC" working group, that might be the place to direct people
 - Josh: Wondering if there are other segments of the community that would benefit from this? For example, network services, etc?
 - Brett: I think so. There's the eduroam admins list. There are networking groups in I2 that might be good points to reach out to as a "wireless best practices" message

- Sara: We have a new strategic communications manager for NET+ - Mary Denler. Could be a good thing to discuss with her, and to think about how we might work with our direct community and those external ones that we engage with like EDUCAUSE
- Brett: Feels like we could do a lot of work at TechEx as well - lots of technical members of the community. EDUCAUSE is good for C-level folks. Need to keep our steering committee aware of these items, but also ensure that they get filtered to the implementers
- Saira: WRT EDUCAUSE, agree it's a different audience, requires different messaging
- Kevin: Consider strategic directions of other organizations, what they prioritize, and let that inform how we engage.
- Brett: My ideal is that the C suite folks from our community cite our BE requirements and other best practices when talking to vendors.
- Brett: Next steps to disseminate the recommendations from the webinar out?
 - Meet with Mary, ask about I2 groups to share this
 - Post Josh's slides on eduroam US knowledge base
 - Send slides/recording to Nadim, ask him to trim down his
- Update on moving eAC under InCommon steering (Sara/MikeZ)
 - In flight -
- eduroam in 2025 (from Sara)
 -  Futures2 ExecSummary 1March2024[100].pdf
 - Sara: Just wanted to collect thoughts from this committee
- Next meeting
 - Friday, November 22 11am-12:30pm ET
- AOB?

Friday, September 27, 11am-12:30pm ET

Attendees:

Kendra Ard - CSU- OC
 Mike Dickson - UMass Amherst
 Derek Eiler - NSHE
 Rob Gorrell - UNCG
 Josh Howlett (Independent)
 Jeff Egly - UETN
 Brett Bieber - NE

Nadim El-Khoury - Springfield College

With:

Nicole Roy, Mike Zawacki, Sara Jeanes, Steve Zoppi, James Cramton, Jody Tracy

Regrets:

Jeremy Livingston - Stephens University

Saira Hasnain - University of Florida

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - James: Intro to the committee. James is Industry Relations manager for T&I, works with catalysts
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2024-8-30>
 - No quorum, will approve notes via email
- Updates on WGs
 - [Desk of eAC Working Group](#) (MikeZ)
 - Recruit additional members to group? (currently only 3 members)
 - Those interested can leave name here or
 - [BE Working Group](#) (Rob)
 - For full committee - when/how to include Tom Barton in upcoming calls to provide guidance
 - Rob: Feel like sooner is better. We're closing in on a first draft of requirements - his input would be valuable.
 - Al MikeZ: Invite Tom to next meeting
 - Rob: Have been working with Josh, others on the eduroam team on collecting metrics for compliance items. Want to ensure the requirements are measurable and realistically achievable for most/all of the eduroam US community
 - [eduroam Mobility Day 2024 planning committee](#)

- For full committee - discussion on whether to include Future Wireless group
 - Derek: Have a session submission from CalPoly on 5G/private LTE. Felt “vendor-y” so asked them to rework it.
 - Sara: Could also add in update from NET+ on neutral host offerings and their networking related projects.
- [Cloud Infrastructure Working Group](#) (MikeD/Derek/Rob)
 - Share [vendor position paper](#)
 - MikeD: Josh’s position paper was reviewed by committee, has evolved into more of an “options paper” on how to accommodate vendor requests for proxying to TLRS1&2. RADSEC was their state preference so this paper was intended to offer alternate technologies and provide possible intermediate steps. Still need to address questions of client onboarding, PKI infrastructure and make sure whatever is proposed can provide or integrate with existing solutions for those.
 - Josh: Paper is also intended to draw out pathways, approaches to mature cloud based options. Also want to be mindful of going down roads that lead us to unsustainable infrastructure
 - Sara: Did the group contemplate impacts of dynamic discovery as part of RADSEC or was it just about supporting the protocol?
 - MikeD: Mostly about supporting the protocol
 - Sara: Is this considered the final output?
 - MikeD: No, still being refined.
 - Derek: Want to be able to make a well articulated set of requirements. Also looking at possible catalyst partners.
 - MikeD: Group also looked at interested industry partners with an eye toward how quickly they’ll get us to a solution
 - Sara: Strongly encourage the group to work with James on that
 - James: Cirrus very interested in participating, assisting.
- eSO traffic analysis presentation
 - [Link to presentation](#)
 - Rob: WRT CEN’s roaming pattern, is that the result of lower user numbers?
 - Josh: Possibly, yes. Also, early on in CEN’s deployment they did something that generated a huge amount of bad authentications. Filtering out that statistical noise could have distorted data as well

- Rob: Is there room for improvement in the high level infrastructure that could help with high amounts of eSO authentications? Regional proxies, etc?
- Josh: If schools that act as SP-onlys configured their systems to send authentication requests directly to the IdP that their district office operates it could help. That wouldn't help with other sources of traffic.
- Rob: Wondering if a hierarchical approach like the EU would help
- Josh: The EU approach was more of an organic development that resulted from having lots of countries in close proximity, less of an intentional deployment strategy.
- Brett: Let's say we take all existing authentications, move those to regional proxies. As Josh mentioned in earlier discussions that just moves the cost around. If we provided more resources and technical guidance on how to deploy your environments. Containerized RADIUS servers that can be stood up by smaller organizations, some way to enable certificate based authentication, etc.
- Derek: For a while I was interested in regional proxies, but have stepped away from that. It would make reporting harder since the national infrastructure is removed from auth flows. We could get around that by aggregating logs, but that could just be another example of moving cost and complexity around. BE and cloud infrastructure working groups have talked about RADSEC, peer to peer routing, but would also reduce visibility at the national level.
- Jeff: Begs the question - in the long term if local reporting is valuable then how do we enable that for all participants? Also, having Josh's data is hugely helpful in spurring conversations about things like the differences between eSOs and standard participants.
- Rob: Curious about higher number of devices in eSO populations. That feels like more an artifact of how K12s approach device management, 1-to-1 programs, etc
- Brett: Is there any assumption that eSOs will hit a plateau eventually? At some point will there be little to no additional growth once we've saturated K12s?
- Rob: I would expect that to be the case
- MikeD: Wondering if there was any ability to get granular info on EAP types?
- Josh: The EAP types showed up at similar levels.

- MikeD: WRT eSO device discrepancies, did we consider shared identities on multiple devices?
- Josh: Possible. If so, it would be difficult to tease that out.
- eduroam Support Organizations Update (provided as pre-read)
 - CEN
 - Steady state, focusing on supporting existing school districts and public hotspots.
 - Link Oregon
 - Lots of work the ESDs are doing for start of school year. Getting ready to address new pilot candidates via our advisory board.
 - Network Nebraska
 - Getting eduroam in Kearney area conferences. That's where the NE educational tech conference is held. Also least populous and more rural, should help with making in-roads in that part of the state. Other than that, battering down hatches for start of academic year.
 - NSHE
 - Also dealing with start of school year. Clark County school district has declined to deploy eduroam, so will focus on hotspot and other HE deployments in the county. Starting to see more momentum with one of Nevada's larger cities. In discussions with two museums in Northern NV, and rural library system. Renewed discussion about providing eduroam at field science sites.
 - UETN
 - Focusing on work with libraries. Met with State Library director. State library is a hotspot, working with them on an IdP implementation for their staff. Salt Lake County library turned eduroam up as well. Digging into Digital Equity grants, while it's not the focus of those proposals, eduroam does come up as part of the process. Looking at how to engage with smaller libraries.
 - The Sun Corridor Network
 - Ongoing engagement with state library system, helping them with ERate filing for wireless and network gear, folding eduroam into that. Thinking through DE opportunities as well, esp how to incorporate eduroam into those
 - Washington K20 Network
 - Working on promoting, enticing new pilot schools. 2 pilots, others interested but need to engage more with potential schools. Working

on setting that up. Looking into signing group connector agreement for technical colleges.

- On-Rampers
 - TLN
 - Ongoing work to bring up pilot schools. Met with director of state libraries about being included in pilot deployments, laying groundwork for ongoing engagements after On-Ramp
 - Merit Network
 - Agreement has been signed. Starting initial engagements with pilot schools
 - Guilford County Schools pilot
 - Attended in person meetings at our 4 pilot schools. Saw improvement of student uptake, better community engagement. Planning on expanding the “in person” effort. Up to 50% of project goals in terms of student users.
- eSO “Statewide eduroam Day”
 - Collaboratively programmed half day event for eSOs and On-Rampers
 - Designed to provide training, cross-pollination of processes and approaches to supporting eduroam, make introductions, build the eSo community
- Update on moving eAC under InCommon Steering (Sara/MikeZ)
- Next meeting
 - Friday, October 25 11am-12:30pm ET
- AOB?

Friday, August 30, 11am-12:30pm ET

Attendees:

Jeff Egly - UETN

Rob Gorrell - UNCG

Derek Eiler - NSHE

Kendra Ard - CSU

Amel Caldwell - UW, Washington K20

Mike Dickson - Umass Amherst

Nadim El-Khoury - Springfield College

With:

James Cramton
Jody Tracy
Romy Bolton
Kevin Morooney
Sara Jeanes
Steve Zoppi
Mike Zawacki

Regrets:

Brett Bieber
Saira Hasnain
Josh Howlett

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Hellos/intro for James Cramton, Jody Tracy, intro to committee members
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2024-8-2>
 - Derek moves to approve, Nadim seconds. Approved
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2024-7-12>
 - Derek moves to approve, Kendra seconds. Approved
- eduroam Support Organizations Update (provided as pre-read)
 - CEN
 - Steady state, focusing on supporting existing school districts and public hotspots.
 - Link Oregon
 - Had our office hours call - good intro for ESDs in early stages of their implementation. Continuing to engage with pilot schools.
 - Network Nebraska
 - Working on expanding eduroam availability in Karney area conference center. That's where the NE educational tech

conference is held. Also least populous and more rural, should help with making in-roads in that part of the state. Other than that, battening down hatches for start of academic year.

- NSHE
 - Largest rural city (Elko) expressed interest in offering eduroam hotspots as part of our work getting them connected to NevadaNet. Eduroam was a part of getting them to join our network. Have had recent success with engagement after announcing eduroam office hours (even though most of them didn't attend!). Published press release on "1 year with eduroam". Met with Clark County tech staff on implementation. Also had further meeting with a 3rd party contractor that supports a lot of rural schools. Another large city is interested in joining as an SP. Second largest school district in state is almost done with paperwork to join as an IdP. Lots of higher ed eduroam engagement this month. Brief presentation to NSHE board of regents next month about eduroam efforts.
- The Sun Corridor Network
 - Ongoing with IDIA (Institution of Digital Inclusion Acceleration) on standing up Tech Hives in AZ. Have already built 7 in Maricopa county and they all include eduroam as part of the environment. Working on SCN internal implementation. Ongoing engagement with state library system, helping them with ERate filing for wireless and network gear, folding eduroam into that.
- UETN
 - Met with State Library director. State library is a hotspot, working with them on an IdP implementation for their staff. Salt Lake County library turned eduroam up as well. Will be presenting on eSO program to Washington K20
- Washington K20 Network
 - Ongoing work with candidate districts and ESDs, promoting eduroam with them. Looking at adding technical colleges via group connector agreement through Washington K20 network.
- On-Rampers
 - TLN
 - Ongoing work promoting the eSO program and turning up 5 pilot institutions as part of On-Ramp process.
 - Merit Network

- Finalizing eSO agreement and identifying additional pilot institutions as part of On-Ramp process.
 - Guilford County Schools pilot
 - Manned a presence at our pilot schools open house events for the start of the school year. Spoke to families, handed out thousands of flyers, signed up ~200 families for residential service across 3 nights.
- Updates on working groups
 - [Desk of eAC Working Group](#)
 - Nadim continues to work on the article. Group meets on Sept 4.
 - [Cloud Infrastructure Working Group](#)
 - MikeD: Have broken out first/second/third phases. Amel and Josh working on position paper to spell out needs for phased approach, concerns around RADSEC, how we might address future needs. Will be shared with vendors for their input.
 - Sara: WRT timing - what we'd (the eduroam team) be looking for are the requirements you're developing. Ultimately want requirements from the eduroam US community - HE, eSOs, education systems on what you want, what makes it easier for you to deploy, and secondarily what the vendors want. Currently fielding request for RADSEC from another customer, so we'd synthesize those streams into one approach. From there we'd do a solution study to determine way forward. Our pipeline is pretty full so will require some careful staging.
 - Rob: This process is more about driving community requirements in achievable phases, with input from vendors.
 - Sara: Agree. Also want to nod to JamesC as there may end up being a place for eduroam catalysts in future
 - Rob: Comparing where we are and where, say, Europe is we could be looking toward cloud IdP/SP as a solution analogous to the managed SP and IdP GEANT operates
 - [BE Working Group](#)
 - Derek: Main thrust of the last few meetings was around metrics that we could use to monitor compliance. Last meeting was focused on attribute leakage, who should be responsible for filtering those. Identifying those that are harmful enough to warrant national level filtering. Also looking to get a list of specific data that logs could capture and reveal as potential issues.

- [eduroam Mobility Day 2024 planning committee](#)
 - Note: MikeZ to reach out to attendees from international community about presenting
 - Group met Aug 13, brainstormed topics, put together survey for proposal submissions. Brett to share that out to eduroam-admin mailing list, has also been shared out in other community
- Next meeting
 - Friday, September 27 11am-12:30pm ET
- AOB?

Friday, August 2, 11am-12:30pm ET

Attendees:

Saira Hasnain - UF
 Jeff Egly - UETN
 Nadim El-Khoury - Springfield College
 Rob Gorrell - UNCG/TDI
 Margaret Cullen - Painless Security
 Dion Baird - Oregon State University
 Amel Caldwell - University of Washington
 Josh Howlett - Federated Solutions
 Derek Eiler - NSHE

With:

Kevin Morooney - Internet2
 Mike Zawacki - Internet2

Regrets:

Brett Bieber - Nebraska
 Sara Jeanes - Internet2
 Steve Zoppi - Internet2
 Ann West - Internet2

Agenda

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 - **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
 - Agenda bash
- Mobility Day planning committee for TechEx24
- MikeZ: I can email committee members and call for volunteers, set up scheduling poll for initial meeting
 - Jeff Egly
 - Rob Gorrell
 - Margaret Cullen
 - Mike Dickson
 - Derek Eiler
 - Brett Bieber
 - Nadim El-Khoury
- Approval of last meeting's minutes
<https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2024-7-12>
No Quorum, MikeZ to email committee for a vote to approve
- eduroam Support Organizations Update (provided as pre-read)
- CEN
- Steady state, mostly focused on budgeting
- Link Oregon
- Working on engagement with candidate districts/ESDs. Hosted an office hours event to get overview of service, tips on implementing, review of their networks/environments to help them get started.
- Network Nebraska
- Spun down ISP pilot with Cox. Helping other eSOs plan office hours events, sharing materials with other eSOs from their eduroam training event
- NSHE
- Working with Public Information Officer to share eduroam awareness with State of Nevada Dept. of Education (K-12), also helped promote our own eduroam Office Hours events. Also published press release on one year of eduroam with City of Las Vegas

- <https://nshe.nevada.edu/system-administration/news/2024/07/nshe-celebrates-one-year-partnership-to-offer-eduroam-in-the-city-of-las-vegas/>

The Sun Corridor Network

- Work ongoing with Vale and additional newer district as well. Both have emerged as good advocates. Also continuing to work with Maricopa county and have made good progress with state library system.

UETN

- Have an initiative to work with libraries, bringing them onto UETN, including upgrading connections, and will fold eduroam into those deployments. Looking at having libraries host e-sports events for local high schools. Also planning on merging existing Utah state wireless and network meetings.

Washington K20 Network

- Have been following up with candidate districts and ESDs, promoting eduroam with them.

Guildford County Pilot

- Received grant extension to fund pilot for an additional year. Currently discussing contracting way forward with Internet2.

On-Rampers

- The Learning Network of Minnesota
 - Spinning up eSO under LNM in partnership with University of Minnesota. Finalized paperwork with I2, planning training sessions, info share with I2 team.
- Merit Network
 - Finalizing agreement with Internet2

- Updates on working groups

[Desk of eAC Working Group](#)

- Nadim: Met on Tuesday to review the article. It will look at readiness levels using the TLP approach. Strong emphasis on privacy preservation, attribute and auth traffic release, other security concerns. Will be doing testing with external schools and using logs and other captures to provide real world examples.
- Margaret: Another thing you could do is to take a snapshot of the traffic over the internet. Can show things like calling station ID and other info. Can be another source for things like building name, room numbers, etc.

- MikeD: I assume there's a way to limit that data going to the proxy but still retain it internally.
- Margaret: Yes - many of the attributes can be stripped
- Rob: We see this most in simpler sites, like SP-only sites with no RADIUS server.
- MikeD: Happy to work with Nadim to see what's making it to TLRS 1&2. Thinking through implications for different EAP types, users who self configure instead of using CAT, etc.
- Rob: There are topics the eAC could speak to here. For example, do we include attribute stripping in the Best Practices Guide? Seems like it could be a good thing to education the community on as well.
- Margaret: Thinking through to BE, we could check for compliance at the national level.
- Josh: Ideally if we were to make recommendations on things like anonymous outer identity to promote the use of CUI (chargeable User ID) to help eduroam team with troubleshooting.
- Rob: Want to be careful about what attributes are useful to run the service and which are noise or dangerous to privacy
- Margaret: Consider risk/benefit aspects, too. Releasing user IDs might make troubleshooting easier, but would pose a bigger privacy risk that outweighs the benefit of
- Josh: EAP session tracking requires the release of NAS ID or NAS IP address. The NAS ID includes things like building names, etc. Stripping that without also asserting NAS IP address breaks EAP session tracking. Things like that should be considered
- Jeff: To Rob's point, what are those mechanisms to create community awareness?
- Rob: We can include it in BPG, BE, technical updates to TLRS for proper attribute stripping, etc.
- MikeD: Agree. Having the info out in numerous contexts helps.

Cloud Infrastructure Working Group (MikeD, Amel)

- MikeD: Met with vendors for input. They were amenable to whatever guidelines we put forth but signaled a strong preference to avoid reliance on IP address to deal with multitenant deployments. Part of the discussion was the ability to selectively aim only eduroam traffic at our national infrastructure
- Amel: They also expressed a strong preference for using RADSec.

- MikeD: Also discussed the concept of incremental development, phased deployments that add features like RADSec.
- Rob: One of the exciting points for me was the opportunity to move eduroam toward more mature protocols like RADSec, TCP instead of UDP, etc. Good way to get those approaches tested in the real world and demonstrating possibilities for general eduroam community.
- MikeD: Also talked about segregating vendor cloud deployments into dedicated top level proxies that could handle these newer protocols and approaches.
- Margaret: One thing to keep in mind is that most people who connect to GEANT use northbound RADSec. Allows their RADIUS traffic to take a direct route through each other. Very few are using downstream RADSec. Germany is using all RADSec, but they're smaller and have a different relationship with their universities, so they can mandate things like that. Could be some value in waiting to IETF's work on RADIUS updates. Josh, can you speak to your presentation at TNC?
- Josh: It was on RADSec. My takeaway is that it's not a well adopted protocol at the institution level, much more broadly used at NREN level. So it's still at the early stages of adoption, problems are still being shaken out. Germany is definitely an outlier here, with the mandate to use RADSec. Just something to keep in mind when talking about requiring its use nationally. Smaller deployments definitely seem like the way to go
 - [Link to presentation recording](#)
- MikeD: That was part of what generated the idea of having these initial deployments go through a "TLRS3" or similar dedicated infrastructure. Reduces the complexity for the rest of eduroam US
- Derek: Vendors said that they'd like APIs to aid in integration. Agree that building out a "TLRS3" is probably safest approach and could make the deployment of these new/updated protocols easier. If we were to do something with this my one caution would be looking at recent eduroam Cox pilot - they farmed out a lot of work to a contractor who didn't seem to have a solid grasp of how eduroam worked. Getting an MOU with strong requirements/requests for technical expertise on their team could be helpful.

- Margaret: WRT a TLR3, we currently have a high redundancy model that essentially has multiple TLRs. Want to be sure that any dedicated proxy would work with that architecture
- Amel: Would we treat a TLR3 like another NRO?
- Margaret: Yes and, Internet2 would be responsible for maintaining that convergence point. So we'd parse traffic from eduroam US and any "TLR3" and get it out to the world.

BE Working Group (Rob, Nadim, Derek)

- Rob: Group is starting to center around a set of themes, creating categories like QoS, monitoring, etc. Requirements for each of those buckets are being formed up. For example in the QoS side we're looking at things like making sure sites are passing traffic, whether admins are maintaining configs in the eFM, etc. Also looking at some of those attributes that were discussed earlier in the meeting. Putting together a list of questions and data for eduroam team (e.g. what sites haven't had a user log into eFM for a year, etc). Knowing what can be monitored and metric-ed will help guide us in what a set of realistic requirements/expectations would look like. Also want to identify what monitoring/measuring could represent low hanging fruit
 - Derek: Looking at where tooling from the SAML federation could be adapted/adopted for this work. Thinking about a recent presentation from Johnny Lasker on some of the work his team did on InCommon Federation's BE. Also looking at working groups like the Federation Testing WG and seeing what they've done/are doing that we could adapt for eduroam BE. CTAB is having discussions around this too, so we want to check in with them. Looking to learn from existing efforts to avoid any wheel reinvention.
- Report out from IETF (Margaret Cullen)
- #### Recording of Margaret's update
- EAP Method Update
 - EAP EDHOC
 - Protocol for things like IoT devices to authenticate. Adoption could up the number of devices connecting nationally via eduroam
 - EAP FIDO

- Token/dongle based authentication using EAP.
Interesting thing about this is that it could also be used for 2FA/MFA enabled eduroam
- RADIUSExt - three approaches to updating RADIUS protocol
 - ALPN Draft for DTLS PSK (removes MD5 from RADIUS and can only be run using RADSec). Would authenticate sessions via a cert or other PSK. This one seems like the easiest move for eduroam US.
 - PSK with RADSec discussed but is currently experimental
 - TLS over TCP
 - Looking at how to sequence those approaches for incremental adoption, ease the burden of change.
 - Advising that NAS IP is a weaker approach than other attributes like NAS ID or CUI.
 - Method for including role based authentication being discussed (i.e. would client and server connections be treated as separate steps or considered as one authentication?)
 - Another point of discussion is how to differentiate accounting and authentication data in current RADIUS spec.
 - IETF RADEXT Mailing list:
<https://mailman3.ietf.org/mailman3/lists/radext@ietf.org/>
- SAG - Security Advisory Group
 - BlastRADIUS exploit. Again, doesn't impact eduroam. There are EAP methods out there (e.g. un-tunneled EAP methods) that are not supposed to be used due to the lack of message authenticator attribute. Only a few use those methods. Good item for BE. Might even consider dropping them at the national proxies.

RADEXT session at IETF: <https://www.youtube.com/watch?v=8GNL2omMbjA>

- Next meeting
Friday, August 30 11am-12:30pm ET
- AOB?

Friday, July 12, 11am-12:30pm ET

Attendees:

Brett Bieber - Nebraska
Rob Gorrell - UNCG
Amel Caldwell – University of Washington/WA-K20
Derek Eiler - NSHE
Josh Howlett - Independent
Mike Dickson - UMass Amherst
Nadim El-Khoury - Springfield College
Jeff Egly - UETN
Kendra Ard - CSU

With:

Steve Zoppi
Sara Jeanes
Mike Zawacki

Regrets:

Kevin Morooney

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash

eAC Slack channel?

- Would be intended for voting members only
- MikeZ to check on having that spun up, invites to voting members
- Approval of last meeting's minutes
<https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2024-6-14>

- Derek moves to correct small error in NSHE's eSO update. All agree
- Jeff motions to approve. Nadim seconds.

- eduroam Support Organizations Update (provided as pre-read)
CEN

- Steady state, mostly focused on budgeting

Link Oregon

- Continuing to engage with pilot schools. Adding new folks to team

Network Nebraska

- Partnerships with ISPs - Local ISP Allo has gone with PassPoint rather than eduroam. Cox pilot with Internet2 has spun down. Saw higher traffic for HE users from those hotspots. Saw much lower stats on successful authentications, turned out to be issue with Cox contractor (Single Digits) configurations/network design.
 - Sara: We're currently finishing up a series of report outs and would be happy to provide update to this group
 - Derek: I have a constituent that would be interested in ISP pilots like this. Could we share info with them?
 - Sara: The reports are largely intended for internal audiences, not appropriate for audiences outside I2 and advisory bodies.

NSHE

- Adding two larger school districts. Working with NV's Public Information Officer on engagements with city of Las Vegas government on hotspot deployments

The Sun Corridor Network

- Continuing work with Vale schools, including engagement with 3rd party contractor that provides service to those schools.

UETN

- Lots of work on promotion, esp with hotspot providers. Held Tech Summit, presented on eduroam.

Washington K20 Network

- Continuing to develop relationships with pilot schools. Libraries in WA state are organizing their own network. Planning to circle back with them at a later date

Guildford County Pilot

- Grant was originally scheduled to end Sept '24, but have received approval from program office for one time no cost extension that will allow us to operate the program/collect data for the entire 2024-25 school year due to late start. Working on evaluation report for Y1, though will be brief due to limited operation during 2023-24 school year.

Sara: No official public announcements but have signed agreement with The Learning Network of Minnesota, closing in on Merit/Michigan. Have reached internal decision with regard to Pennsylvania's proposal and will be working out with them.

- Update from eduroam dev calls (Derek, Rob, Sara, Mike Z)

BlastRADIUS Vulnerability

<https://www.blastradius.fail/>

Sara: Vulnerability that was identified earlier this year, initially planned announcement in May but was delayed to July 9. There was a presentation at TNC in June, GeGC [created blog post and published](#) after July 9 webinar. Alan DeKok, IETF, and others are [working up updating RADIUS protocol](#). eduroam isn't vulnerable but this does point to the value of Best Practices Guide and upcoming work on eduroam BE

Derek: Have heard questions from others that given the stated risks of RADIUS over UDP what isn't eduroam using RADSec, other more secure updates? Feel we could do more to message out to the community on this, especially given some of the more alarmist [reporting out there](#).

Steve: There's a balance to be struck - want to keep community informed but want to avoid commenting on every development, esp if there's little/no impact and not much chatter in the community. We identified the handful of subscribers that could have been impacted and reached out to them directly.

- Josh: There were about .1% of requests that weren't configured securely but most turned out to be automated system health checks.

Brett: I like the GeGC's announcement - simple, to the point, lets folks know that if they're using the service as intended then there's no impact. Wondering what else we'd need to message.

- MikeD: Could be a topic for the [eAC's Transitional Technology Updates](#). Could just be a simple paragraph with links to resources like the GeGC's post, etc.
- Rob: Are we asking anyone to do anything in response? That was more the intent of that page.
- MikeD: True. Haven't seen updates on how this affects EAP-TTLS.
- Josh: EAP-TTLS isn't impacted either.
- Nadim: Should we just advise to patch FreeRADIUS and other infrastructure? Should we address questions about RADSec?
Sara: RADSec is a topic that's top of mind for our team, but there's a lot of change management needed from the entire eduroam US community. The things that RADSec protects against can be prevented by other steps we're currently taking short and medium term, though, especially with scaling work and Baseline Expectations.
- MikeD: Thinking about discussion with SMEs in Cloud Infrastructure where they specifically called out advantages in RADSec
 - Sara: Cloud implementation of RADIUS portions could be a compelling case *for those implementations*. Want to be mindful of trying to push out into the eduroam US community, unless they come clamoring for us to implement it. Happy to engage when/if that happens.
 - MikeD: Makes sense. Could be a test bed of sorts.
 - Rob: Agree with points above. I feel like cloud infrastructure would be the most logical place for RADSec in eduroam US ecosystem. Broader implementation outside that sphere feels pretty far away.
 - Derek: WRT eduroam BE we could get questions from the community about TLS1.3/RADSec, etc and why those aren't part of BE. We should think through how to message out to the community on that.
 - Sara: I think the infrastructure is more than capable of handling RADSec, it's more a concern around continuing to serve smaller, less resourced communities like smaller HEs, K12s, etc. BE work needs to keep that in mind as well.

Brett: To conclude, do we feel like communication out is needed? Or do we respond if we hear chatter

- Nadim: I think waiting makes the most sense.

Brett: Let's send folks to GeGC article. We can coordinate via email and Slack as needed.

- Updates on working groups

[Desk of eAC Working Group](#)

- Nadim: Met with I2 communication team on formatting, general style guidelines. I'm working on rounding out draft this weekend. Question about whether to mention BE for eduroam and Josh H's Preserving End User Privacy article.

[Cloud Infrastructure Working Group](#) (Amel)

- Amel: Met with HPE, Juniper, SecureW2 SMEs to get their feedback on draft requirements. They provided good input on topics like handling end user identification (NAS ID was the attribute proposed rather than IP address), interfacing with I2 infrastructure (logging, routing requests, etc). Group has plenty of info to chew on for future calls.
- MikeD: Feel like we arrived at a useful place in terms of planning out next steps. Seems like the changes needed for both I2, vendors, and users would be doable.
- Derek: Agree. Strong preference states for RADSec (per conversation above). OpenRoaming model is something they have experience with via work with EU NROs.
- Rob: One topic of discussion was around how far down the feature stack of RADSec to implement. Some were more interested in deeper features
- Amel: Got the sense that they were flexible, willing to work with us on implementation strategies
- MikeD: Agree. They want to take "baby steps" approach
- Nadim: Were privacy concerns raised? I'm concerned about amount of data being released to cloud providers. As stewards of our students' data privacy we have to be mindful of our ability to control/monitor/audit use of that data by 3rd parties.
- MikeD: I agree - it's potentially problematic but it's also a part of cloud infrastructure
- Derek: True, but if we work with limited number of vendors and portions of our community we could have more say over issues like data sovereignty.

- Brett: Curious if the group could summarize next steps for vendors, Internet2, and the working group.
 - Amel: For vendors, they were tapped for input on requirements. Would need to better understand how they'd interact with I2's infrastructure.
 - MikeD: At the end of the conversation we asked the vendors if they'd heard any non-starters and the answer was "no".
 - Rob: Also want to be sure that we don't impact existing subscribers by dint of what we're doing with any vendor's cloud implementations.

BE Working Group (Mike Dickson/Rob)

- Rob: Identified key buckets of requirements.
 - MikeD: Also talked through how to ensure that we developed requirements that would preserve security and privacy, operational needs, and how to balance those in a way that was still achievable for smaller institutions. Want to nudge folks towards existing best practices.
 - Rob: Need to consider what actions impact your own institution and what impact the broader community, decide how to prioritize those two aspects.
 - MikeD: Thinking through how to work with vendor settings as well. Any way we can leverage those to help smaller institutions.
 - Brett: One suggestion could be submitting a talk for Mobility Day at TechEx. Good deadline and opportunity to communicate out to community.
- Next meeting
Friday, August 2 11am-12:30pm ET
 - AOB?

Friday, June 14, 11am-12:30pm ET

Attendees:

Brett Bieber - Nebraska

Kendra Ard (CSU)

Jeff Egly - UETN

Nadim El-Khoury - Springfield College

Rob Gorrell - UNCG

Mike Dickson - UMass Amherst
Amel Caldwell – University of Washington/WA-K20

With:

Steve Zoppi
Mike Zawacki

Regrets:

Sara Jeanes, Kevin Morooney, Ann West, Nicole Roy, Saira Hasnain

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
Bashed!
- Approval of last meeting's minutes
<https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2024-5-10>
 - To be approved via email
- Scaling needs for service (MikeZ/Steve)
Presentation
 - Brett: Question around confidentiality - can you speak to the need for that?
 - Steve: It's a bad actor problem. The current architecture could be abused with the right knowledge. We want to be transparent with the correct audiences, though.
 - Brett: The presentation and material brought to mind expertise in my immediate community that could be brought to bear. Just want to understand how/if those sorts of resources could be put to use here.
 - Steve: Short answer is "it depends". The software/network scaling is the smallest part of the issue. In scaling we need to factor in how

authentication happens, how the infrastructure serves that. How the eSOs deploy eduroam is outside the norm, internationally.

- MikeD: One thing that struck me was the discussion around addressing the single flow of IdP-> SP and risks to the service with that approach. Also thinking through the Azure model where you choose a region and how that compares with the TLRs 1&2 model. Wondering if there's a lesson there for us.
- Steve: Also the administrative overhead of keeping TLRs 1&2 up and talking to each other. We're basically 50 countries all routing to the same top level. Consider that one bad actor or misconfigured IdP can have an outsized impact. Also, if we have state or regional proxies, who operates those? And what are the cost and complexity impacts of adding that hierarchy? Finally, need to consider the raw technical/protocol limitations.
- Rob: I'm curious about backwards compatibility - if we make changes to the underlying protocol do we stick with the "lowest common denominator" approach? Or look at new technologies?
- Steve: There's an equivalence between sticking to the technology in place today and what the cost is today. If we start trying to run ahead on the technology we need to make sure we won't break anything for ourselves AND the global community. We're cognizant that adding new tech adds not just to service costs and complexity but downstream cost and complexity for our subscribers in supporting their users.
- Brett: Wondering if there are partners we could engage with in this work
- Steve: I agree that's a possibility. Also think that wherever we land we are going to rely on this body (and others in the advisory community) in helping with outbound coms. The elegance of eduroam is in its curation. We want to be sure we are curating the service cautiously but recognize it isn't optional.
- Brett: Lots of thoughts around hierarchical models. Also thinking about how federal funding could align with a need for regional/state RADIUS proxies.
- Steve: Two sides to funding - good for one-time capital costs but can pose risks for ongoing operational costs.
- Jeff: This answers a big question I've had - what are the limitations on scaling and how does that influence Internet2's approach to the

service? Looking at it from an eSO perspective, what's the programmatic risk to taking on no eSOs in 2025? How eSOs be part of the solution, given that we're the biggest driver for scaling challenges? We'd like to have a spot at the table in these discussions, given that fact

- Naadim: Is the plan to connect to your nearest eSO?
- Steve: Currently we're still routing all requests to TLRS1&2. If we added hierarchy it would be state or regional level.

Discussion of scaling document

- Updates on working groups

Desk of eAC Working Group

- Set to meet next week. Nadim to share out his draft of "End user privacy and scoring your organization's posture"

Cloud Infrastructure Working Group

- Next steps - meeting with WG, key I2 staff, industry SMEs
- Lots of conferencing, travel have complicated calendars. Meeting to be set ahead of next eAC gathering

BE Working Group

- Again, lots of conferencing, travel have complicated calendars. Meeting to be set ahead of next eAC gathering
 - Brett: Following the last call with Tom Barton's presentation, I spoke with David Bantz (CTAB chair) - he offered assistance on how to form up requirements and community consultation.

- eduroam Support Organizations Update (provided as pre-read)

CEN

- Adding team members, including technical support team. Moving up to about 8-10 schools, largely due to word of mouth.

Link Oregon

- Gearing up for outreach with more ESDs. Also working with districts that have already deployed eduroam and are adding new staff

Network Nebraska

- Completed deployment with Lincoln Diocese - includes dozens of Catholic schools in the Lincoln area. Have been presenting on their work with K12s for several Regional networks

NSHE

- Working with two new larger districts Washoe County School District and the city of Henderson. Also engaging with state Department of Education.

The Sun Corridor Network

- Engaging with school systems around Tucson. Working on coordinated approach for promotional campaign, especially in Phoenix area. Also deploying public hotspots - early stages of project

UETN

- Working with local ISP on public hotspot deployments. Also continuing to transition our team from “project” to “program” footing.

Washington K20 Network

- Engaging with new ESDs, coming up with standardized processes for that work. Working on how to do initial outreach, messaging for prospective schools.

Guildford County Pilot

- With the school year ending, signups have slowed. Intend to use summer months to establish a direct calling/marketing program supported by district employees to reach eligible families. Coordinating to be present during open-house programs at the beginning of next school year. District owned devices are also collected during the summer months, limited eduroam-capable devices in the hands of our students.
- Update on eSO program, additions to 2024 cohort
Minnesota: The Learning Network/University of Minnesota
Michigan: Merit Network
- BE for eduroam
On hold until eduroam team available to meet
- Next meeting
Currently set for Friday, July 5th - change to July 12th?
- AOB?

Friday, May 10, 11am-12:30pm ET

Attendees:

Brett Bieber - Nebraska
Jeff Egly - UETN
Nadim El-Khoury - Springfield College
Derek Eiler - NSHE/SCS
Rob Gorrell - UNCG
Kendra Ard - CSU
Kevin Hickey - UD-M (Liaison from CACTI/Vice chair of CACTI)
Margaret Cullen - Painless Security (Chair of CACTI)
Saira Hasnain - UF
Mike Dickson - UMass Amherst

With:

Nicole Roy, Steve Zoppi, Kevin Morooney, Tom Barton, Albert Wu, Sara Jeanes, Mike Zawacki, Ann West

Regrets:

Josh Howlett

Agenda

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- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - See KevinM's items below re: reporting change and not rolling off members
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2024-4-15>
 - Derek moves to approve, Nadim seconds
 - Approved by majority
- BE for eduroam (Brett, Margaret, Sara with special guest TomB)
 - eAC to consult with CTAB on InCommon Federation BE effort, get guidance on this effort
 - Brett: Also would like to consider how we could work more closely and coordinate with CTAB.
 - How to scope this effort, outstanding questions
 - What are compliance requirements
 - How to measure compliance

- What is the timeline for this?
 - How to handle non-compliance, dispute resolution
 - Any contractual needs?
 - Are there impacts/needs with regard to international eduroam community?
- Tom: Couple of other points to add - there were two additional problems that we confronted.
 - Compliance with additional federal regulations on identity management/security
 - Staff turnover within the community, which impacted functioning and overall value of the federation as a whole, could drive away participants.
- Tom: Also worth noting that the community was heavily involved in driving requirements and compliance efforts. Buy-in from them was central to our efforts. User experience was a key consideration as well. Think about what a more punitive approach would have on overall participation (honey vs vinegar)
 - Derek: Once we form up requirements and go into 'enforcement' mode should keep in mind that we will likely lose participants. Saw that in InCommon and will see it here too
 - Tom: Keeping requirements "baseline" helps - they should be achievable by every participant. Obviously there's a greater spread in technical capabilities here compared to InCommon. There are no pizza shops in InCommon, for example. So think about how to stage expectations, have easier phases first, etc.
 - Albert: In thinking about BE for eduroam, think about the minimum needed to provide the security which allows all participants to trust each other, feel safe about using the service. To the point of losing participants we've found that nobody left because we were asking them to change the way they operate but rather because we were engaging with organizations that had stopped using the service (especially where there was staff turnover and the incoming staff didn't know what the federation was, or that they were even participating in it). So it was more house cleaning than anything else.
- Nicole: Wanted to mention the eduroam case is slightly different from InCommon in that the eduroam US service is in the middle of every single authentication, whereas InCommon participants manage more of their own authentication. Need to think about the impacts of a single eduroam entity on the national infrastructure - much more of an issue here.
- Brett: Also provides us with the ability to more directly monitor and metric eduroam in the US. I think measurement is key to our efforts in a BE for eduroam. There are risky behaviors out there right now that the community needs to be aware of. Consider how the different risk tolerance of each participant in eduroam can impact every other participant. eAC also needs to

keep in mind the the differing requirements for IdPs, SPs, and the NRO. Each needs to be addressed, including requirements for Internet2 as the NRO.

- Rob: Another difference is those three roles might not be as far removed from each other than they are in InCommon's federation.
- Margaret: For each of those roles should also consider security and operational requirements.
- Brett: Next steps?
 - Brett: Get BE working group formed up. Come up with volunteers and cadence (suggest bi-weekly at first).
 - Identify technical requirements for participants and for I2. Margaret's and Josh's assistance would be appreciated.
 - Also want to think about requirements from user experience standpoint.
 - Needs and approaches for communication out to the community. Include a statement for the community of why we need to do this.
 - Ann: WRT dispute resolution, we relied on community to report issues/request assistance. There was a community group that would look into and resolve any issues. Federation approaches and policy could be leveraged here
 - Brett: Propose having this be a standing item for this committee's agenda
 - Working group volunteers
 - Rob Gorrell
 - Nadim El-Khoury
 - Brett Bieber
 - Derek
 -
 - Al MikeZ: Send out scheduling poll for BE Working Group calls
- Updates on WGs (MikeD, Saira)
 - Cloud WG (MikeD, Amel, Rob, Derek)
 - MikeD: Discussed approach for getting 3rd party vendors involved in requirements forming. A lot of unknowns for the group where they could help us with that forming process, both in technical considerations and in business requirements. . Group feels that automation should come later - the process of managing hosted subscribers should be manual in first phase. Folding eduroam into apps on vendor platforms is another point of consideration.
 - Next steps for the group
 - Put together a call with WG members and Tom Rixom, Tim Capalli, and Josh Howlett. We would present the overview of our thoughts and proposed approaches to collect their feedback.
 - Brett: That sounds like a good approach.
 - Desk of eAC WG (Saira, Brett, Nadim)

- Brett: Good success with first article. Second article will be drafted by Nadim
 - Nadim: Agreed. I'll be sharing a draft with group within the next week.
 - Brett: We might also want to cover BE for eduroam as an upcoming article. Good opportunity do some initial engagement with community.
- eduroam Support Organizations Update (provide as pre-read)
 - CEN
 - Steady state operations - no major updates from last month
 - Link Oregon
 - Continuing work with pilot ESDs, working on recruitment efforts with additional schools and districts
 - Network Nebraska
 - Brought on Catholic school system in Lincoln (about 30 schools total). Cox Communications is finalizing deployment of public hotspots throughout the Omaha metro area. Network Nebraska staff gave presentations for CENIC, The Learning Network of Minnesota, and is slated to present at WiscNet's member meeting this month.
 - NSHE
 - Published updated program page for Nevada constituents. Looking at hosting a workshop to assist some of our rural districts with setting up eduroam. Also had an interesting deployment for a gifted student school that's co-located on UNR's campus - unique cross institutional considerations.
 - The Sun Corridor Network
 - Working on internal deployment of eduroam. In discussion with Maricopa county on public hotspots and schools and Vale district schools. Adding new staff to eduroam team, gearing up for a bigger push on the project.
 - UETN
 - Working with ISP Centracom on public deployments of eduroam. Transitioning eSO work from project model to program model.
 - Washington K20 Network
 - Started working with pilot districts to add new schools. Also identifying single schools outside districts to work with next. Planning to begin work on marketing materials to promote eduroam within our constituent community
 - TDI Pilot (North Carolina)
 - 200+ program participants, increased eligible population to 1700 with addition of 4th school. Our fiber-to-the-home ISP Lumos is to be acquired by T-mobile. Adoption rates continue to be slow, apprehension of the community "too good to be true". Efforts focused on direct marketing and

reaching trusted community partners outside the school system to enforce the program is real and not a scam.

- Jeff: Will that acquisition by T-mobile impact the project?
 - Rob: Too early to say - waiting to hear from new leadership
 - Update on next cohort (Mike, Sara)
- Change in eAC reporting relationship, roll-off changes (Kevin, Brett)
 - All members of advisory committees are being ask to suspend roll off of members whose terms end this year. The ask is to remain on for one additional year during the community work that will grow out of the Futures2 project
 - [Link to current members and terms](#)
 - The eAC will be moved out from under CACTI and under InCommon Steering. Aligns with discussions between Steering and CACTI. Feeling is that eduroam is a service which touches more than CACTI's area of responsibility.
 - Derek: What does this achieve?
 - Kevin: Brings work of this committee closer to Steering, provides more direct engagement and coordination with community leadership and I2 leadership. Also removes a burden from CACTI, but in terms of practical effects from the eAC's view it won't change much.
 - Brett: My experience in working with a committee that reported directly with Steering (CTAB) was that there is more face time/direct work with community leadership. Also frequently have cross attendance of each others' meetings.
 - Margaret: CACTI fully supports this move, but would also like it if we could maintain liaisons with each others' committees (as we do with CTAB and TAC). Having a direct working relationship is helpful to us as there are sometimes eduroam related/adjacent topics that come up.
 - Brett: I'm supportive of that as well. Jeff and I are interested in continuing that working relationship.
 - Rob: Agree with everything that's been said. As the liaison with CACTI I find the eduroam discussions that happen in that body have a lot of similarities to some of the topics the eAC addresses. Having that cross pollination is helpful in both directions, imho.
 - Brett: Also to Derek's point, I see this as a recognition of the work we've done and the value to InCommon
 - Link to recording of webinar on Futures2 outcomes
- Next meeting
 - Normally scheduled for June 7, 11am-12:30pm ET
 - Conflicts with BaseCAMP
 - Move to Friday June 14?
 - No objections. MikeZ to update calendar invite
- AOB?

Friday, April 12, 11am-12:30pm ET

Attendees:

Kevin Hickey - University of Detroit Mercy
Saira Hasnain - UF
Derek Eiler - NSHE/SCS
Amel Caldwell – University of Washington/WA-K20
Brett Bieber - Nebraska
Rob Gorrell - UNCG
Mike Dickson - UMass Amherst
Jeff Egly - UETN
Nadim El-Khoury - Springfield College

With:

Nicole Roy
Romy Bolton
Kevin Morooney
Mike Zawacki
Steve Zoppi

Regrets:

Sara Jeanes

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Question around intake/uptake rate of eSOs - Derek
 - Brett: Curious if folks in other states will see the exponential adoption curve that we did in Nebraska, how that could scale up nationally
 - MikeZ: Good topic to discuss
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2024-3-15>
 - Saira moves to approve, Derek, Nadim second
 - Majority approve

- Updates on WGs
 - [Cloud working group](#) (MikeD, Amel)
 - MikeD: Mainly looked at options for differentiate users and institutions which come in on the same cloud provider. Dealing with some limitations vendors have described. Some possibilities would be VSAs (“vendor specific attribute” - esp operator_name attribute). Decided that it would be most useful to be able to identify user/institution *and* vendor.
 - Brett: Is the VSA attribute typically configured for the hardware manufacturer or is it set up by the deployer/SP?
 - MikeD: My understanding is that all vendors have a number of canned VSAs. Can be used for things like matching wireless controllers and RADIUS servers for greater compatibility/efficiencies.
 - Amel: VSAs are an IETF attribute. Use is supported but not required. They can be set up by anyone, deployer, hardware provider, etc. Vendors have a file that can be imported where VSAs are defined.
 - Brett: So VSAs have more flexibility WRT who can define and use them.
 - MikeD: Correct. Could go a long way toward the differentiation of users/institutions but we’d want to bake that into community’s requirements. They aren’t going to be globally available by default.
 - Amel: Could have an Internet2 or eduroam VSA (like operator_name) as part of a cloud requirement. Involves some changes to logging, possibly eFM. JoshH is going to look into that.
 - MikeD: Could also involve an additional TLRS (maybe just for testing, possibly long term)
 - Brett: Thinking this through, sounds like the above item would need to be factored into cost model
 - MikeD: Important to ensure this wouldn’t impact other RADIUS traffic. So if a vendor brings up SPs for a large customer (Walmart, etc) it wouldn’t impact the national
 - Derek: Any scalability issues, further discussion around IP address space requirements for vendors?
 - MikeD: Would be surprised if vendors couldn’t use a VIP or something else that would address that.
 - Derek: Thinking from eSO perspective if we needed multiple source IPs because VSAs or other options turn out to be unworkable we could look at a proxy dedicated to cloud providers which would handle the differentiation
 - MikeD: It’s a good idea. Maybe even a load balancer to handle some of that work. If we used a dedicated TLRS for a pilot it could make it easier to transition that setup to production rather than asking all participants to re-address on their end. Is that something I2 has looked at?

- Nicole: Yes, we currently use load balancing containers (up to 10) as part of the national infrastructure. Have been looking at options to simplify that part of operations but are in the early stages of scaling questions like that.
- MikeD: There was also the notion of using port assignments to differentiate between organizations and vendors. Again, would require negotiation ahead of time with vendors. Always the risk of inadvertent port assignment collisions
- Nicole: One aspect of our scaling discussions around multi-level routing topologies for RADIUS traffic. Could be a factor here
- Amel: Using routing tables would be much easier for participants at all levels
- MikeD: We also discussed possibilities around I2's existing routing agreements with NET+ vendors
- Brett: What are some next steps?
- MikeD: We'd look at involving some vendors who've expressed interest. SecureW2 was one (Tom Rixom could be a point of contact for that)
- Amel: We were also going to include Tim Capalli in upcoming meeting. I have a very drafty survey/topic summary to send out to industry folks like TimC and TomR.
- MikeD: TimC in particular could be a good source for incorporating multiple vendor perspectives. Also consider that SecureW2 could also provide PKI services as part of an offering
- Brett: Good discussion. I'm interested in what the requirements might be WRT changes to the national infrastructure. Should we involve SaraJ here for some scoping work? Or get vendors lined up to get a sense for their needs and limitations?
- Amel: I think we should survey vendors first. Would be helpful to scoping work if we had an idea of their limitations, any requirements or requests from their end.
- MikeD: Sounds like SecureW2, MIST, and Aruba are the three vendors we should approach to survey.
- Amel: Keep in mind that by the end of this year HP can't use Aruba gear.
- Derek: I have a contact that offers RADIUS as a service. Is there a point in this process to open up to other vendors?
- MikeD: Eventually we could open up to vendors outside that list of three. Before engaging with others we might want to consult with TimC.
- Amel: He's been involved with HE, then HP, then MS so he has a unique perspective
- Rob: Also consider his role as a former eAC member and current SME. If folks here have contacts with vendors we could consider designating them as additional SMEs.

- Brett: If we come up with a well defined survey/set of requests could be turned into an RFC/P
 - Additional participants for this working group? (add name here, MikeZ will add you) Next call is Monday April 22, 12pm-1pm ET
 - ...
- [From the Desk of the eAC](#)
 - Propose possible topics for next article (Saira, Brett, Nadim)
 - Brett: Had [first article published](#) (thank you, Saira!). Next topics?
 - Saira: There's a list of topics in the WG meeting minutes:
 - Preserving end-user privacy
 - eduroam Credentials in an MFA world
 - Deprecating insecure features of radius
 - Baseline Expectations for eduroam
 - eduroam to the home, partnerships with ISPs
 - Removing wireless in favor of 5G
 - End user education approaches for eduroam operators
 - Brett: Any additional topics the WG should consider? Possibly a writeup on the work of the Cloud Infrastructure Working group? Also, anyone willing to work on a draft for one of these? Finally, how do we prioritize these?
 - Amel: I'd be happy to author a summary of Cloud WG, but would like to get more work done
 - Derek: Scaling discussions could be a good topic as well.
 - Amel: I have an article I'm working on for my position at UW about dealing with edge concerns of 5G. Once I'm done with that I can share with the WG and see if there would be interest in adapting it.
 - Brett: Clearly lots of interest of cellular tie-ins
 - Jeff: Wonder if we want to put out anything else on OpenRoaming? Seems to be a topic of interest in the community.
 - Brett: Could be an expansion to Saira's article. John Simpkins (University of Michigan) could be a source for that
 - Saira: Could be written into a reply/update format to my original post.
 - Brett: Sounds like we have some additional topics. WRT prioritization maybe we look at end user privacy and other risk related topics. That has come up in many of my conversations in the community
 - Saira: So "how do we see who's using the network"?
 - Brett: That's part of it. Could also incorporate the importance of using the anonymous outer identity (as laid out in the Best Practices Guide) and other end user device configuration issues, how end points are named, etc

- Rob: Maybe an angle we could take would be how folks could engage within their own organization to help adopt better practices. Come up with scorecards, etc. Has some BE tie-ins as well.
 - Amel: Maybe also attribute release as a topic to consider WRT privacy preservation.
 - MikeD: Cloud vendor work also has privacy implications.
 - Brett: Like these suggestions, esp. around the scorecard concept. Sounds like that's the next article.
 - Next WG meeting is April 17, 1:30pm-2:30pm ET
 - Interest in others joining? Add name here, MikeZ will add you to invite
 - ...
- Support Organizations Update
 - CEN
 - Building onto eSO team, including more technical support personnel. Planning how to handle marketing and promotion with minimal staff, will be looking toward other eSO work
 - Link Oregon
 - Onboarding second ESD, which is located in same area as several community colleges and South Oregon University.
 - Network Nebraska
 - Bringing aboard the Diocese of Lincoln (covers Catholic schools in district) coming aboard. Recently presented with Becca Kingery at CENIC's member conference on eduroam in K12. Omaha Public Library now broadcasting at 13 branch locations. Becca also presented at Minnesota on behalf of The Learning Network (MN REN). Have had outreach from Michigan, Wisconsin.
 - NSHE
 - Have a new public information officer who's been meeting with us around our program. About to publish our updated eduroam landing page for our constituents. Looking at how to talk about eduroam in Nevada, vs eduroam in US vs eduroam globally.
 - The Sun Corridor Network
 - Working on adding staff to eduroam project, especially around community engagement. Working with Maricopa county on K12 and community hotspot deployment. Also looking at working with state athletic office as an additional inroad to K12 communities in the state.
 - UETN
 - Working with ISP Centracom on some possible public hotspots. Also working on transition from project to program in terms of staffing and

- processes. Just wrapped up a large education technology conference at a new venue (had eduroam deployed there)
- Washington K20 Network
 - Continuing to bring on pilot school districts, got go-ahead from their board of directors to continue program and expanding outreach
- Recap of report out, call for proposals
- Volunteers to join proposal meetings?
 - Available times
 - 4/23 12pm-1pm ET (no takers yet)
 - 4/24 3:30-4:30pm ET (no takers yet)
 - 4/25 1:30pm-2:30pm ET (no takers yet)
 - 4/26 2pm-3pm ET (no takers yet)
 - 4/29 3pm-4pm ET (no takers yet)
 - 4/30 11am-12pm ET, 2pm-3pm ET (both taken)
 - Nadim says yes
- Brett: Feedback on eSO update format?
 - Jeff: I like the approach
 - MikeD: Agree. Having extra time to tackle other agenda items is helpful
 - Brett: We'll likely continue to use this approach.
- Next meeting
 - May 10, 11am-12:30pm ET
- AOB?
 - None!

Friday, March 15, 11am-12:30pm ET

Attendees:

Brett Bieber - Nebraska
 Kevin Hickey - University of Detroit Mercy
 Rob Gorrell - UNCG
 Amel Caldwell – University of Washington/WA-K20
 Nadim El-Khoury - Springfield College
 Jeff Egly - UETN
 Josh Howlett - Independent
 Derek Eiler - NSHE
 Mike Dickson - UMass Amherst
 Saira Hasnain - UF (joined late 11:40 a.m.)

With:

Kevin Morooney

Nicole Roy

Sara Jeanes

Steve Zoppi

Mike Zawacki

Regrets:

Kendra Ard

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Intros for/to Kevin Hickey
 - Bashed!
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2024-2-16>
 - Jeff moves to approve, Amel seconds
 - Majority approve
- ComEx trip report (Jeff, Derek, Saira, Sara, MikeZ)
 - Jeff: Part of the eSO presentation panel. Good turnout, good questions and engagement. Link Oregon, CEN, Network Nebraska were co-panelists with Derek contributing from front row.
 - Brett: Heard Howard Pfeffer called out the eSO program
 - KevinM: Felt the panel went very well. The energy of the panelists was great, good enthusiasm and engagement with audience. Felt like this was the first Community Exchange that had "pre-pandemic" energy. Lots of newcomers at this year's exchange. eSO panel helped sell the service.
 - Sara: +1 to all of the above .
 - Derek: Agree with the above, looking forward to future meetings! This was my first ComEx. From an eSO experience hearing from program participants was key to Nevada's decision to join eSO
- Support Organizations Update
 - Brett: Wondering how we can get through this section more efficiently as we begin to bring on more eSOs.

- MikeZ: Could put together written summaries from eSOs ahead of time, treat as a pre-read
 - Jeff: To add on that, could limit this to items that explicitly concern the eAC and/or require our input
 - Brett: Agree with the above. Could also include link to other meetings like the bi-weekly eSO coordination calls, monthly Regional updates, etc.
 - Derek/Amel: Pre-read from eSO meetings sound good
- UETN: Continue to work on filling in last few education orgs. Focusing on hotspot deployments. Also want to call out Jen Leasure from the QUILT for giving eSO program multiple opportunities this year to present on the program.
- Network Nebraska: Brett - we presented on eduroam at state education conference. Seeing a shift in our state in conversations from “what is eduroam” to “how do we get eduroam in more schools and other places, how do we work together more effectively”. Also seeing more conversation of security topics in eduroam, discussions of cert based auth vs. username/password, etc.
- CEN- CEN is adding team members, including technical support team. We don’t have a marketing, promotion team. Mostly listening today on this call. Moving up to about 8-10 schools, largely due to word of mouth.
- Link Oregon: Thanks to Brett for sending over usage reports to assist in forming up a value proposition. Will help give people we’re engaging with a better understanding of what it looks like to operate an eSO
- The Sun Corridor Network: Building out team as well. Added two Engaging with Vale district and Maricopa county on next steps. We’re going to begin restarting conversations with previous sites of interest and hone our value prop.
- Washington K20 Network: Amel - got approval from our board to move ahead with program. Also seeing more interest in community colleges.
- NSHE: Derek - currently have two new rural school districts interested in joining. Also working with one of the two largest districts in the state, looking to deploy.
- Sara: Question for the group - what do you see as the timeline for adoption? What’s the timeframe to go from pilot to a majority of schools onboard?
 - Brett: Nebraska took 3 years to get to 70%. Our growth was aggressive and less dense in terms of population. Also, we had

existing connections and business relationships with most K12s in our state. I think the timeline for schools that are less connected, less aggressive would be more like 5 years. I feel like the linear growth curve for K12 adoption in the US is slow. I'd like to see every REN have the opportunity to On-Ramp

- Jeff: Agree with the points Brett raised about growth speed. Also less visibility where I sit as far as what the pipeline looks like
- Derek: From Nevada's experience, we started in March of 2023 when we submitted our proposal. We have less integration with the K12 community beyond providing them with a network connection. Each state/region will have their own challenges, etc. Our program was somewhat impeded initially by staffing changes, but on the program side we encountered some confusion on how long the On-Ramp was. More clarity around that would have helped. Jeff, Brett, MikeZ, others were helpful in getting a clear picture of how much work was needed. Would like to see a check-list/timeline for folks
 - AI: MikeZ and Sara - add topic to eSO coordination calls to develop
- MikeZ: Window for new eSO cohort proposals set for March 27. Still time for this committee to volunteer to participate in proposal review. Would join presentation calls with prospective eSOs, offer feedback and answer questions
- Working group updates (MikeD)
 - [Cloud infrastructure working group](#)
 - When to involve vendors in Cloud WG discussions?
 - MikeD: Met earlier this week, mainly discussed how to loop vendors into this work. Also thinking through how to work in non-R&E hotspot operators (e.g. what if Walmart wants to become a hotspot?). Also talking through how to differentiate different schools coming in on one vendor/aggregator of service. Asking Josh to join future call. Also working on clarifying ask of vendors in terms of what parts of the service they'd offer/support.
 - Josh: Current differentiation is based on IP address, port number, and shared secret. Identifying a single user in that flow may not matter to an extent. No practical difference in technical operations but will be important to service reporting
 - MikeZ: Can add Josh to next working group meeting

- Sara: Hearing a few of things at a higher level. One is user education. One is a security related context which is in the wheelhouse of this group. Could be a part of this committee's work. Third is more around scaling and how to incorporate large hotspot operators, which Josh and eduroam team are currently working on.
- Brett: Helpful context there. Thinking through what incorporation of commercial vendors into eduroam. Business operations implications here too - do we need to bake operational stuff like this into agreements? Also want to think about whether there is a way to continue to provide the service as it sits now (e.g. how do reports work for these sorts of hotspot operators?)
- Sara: This has largely to do with eduroam scaling, which does have folks other than Mike and I working on it, but we do need to be sure we're scaling at a sustainable way. May need to moderate engagement with some flavors of hotspot operation. Also want to be sure we aren't "picking winners" in terms of vendor. The Catalyst Program feels like it could be a better fit - good way to find commercial/private providers that are also tightly engaged with the community. Or we educate on best practices for deploying larger commercial providers.
- Amel: My goal is less to talk about scaling or expanding and more to provide a framework for an organization to engage with cloud providers.
- MikeD: Agree. We also discussed the need to separate requirements for an eSO from general community requirements. Initial focus will be on a framework for vendors who would engage with general community.
- Brett: Great conversations, glad to see this taking shape. Remind us what the cadence is for calls?
- Amel: Every two weeks on Monday from 12pm-1pm ET
 - MikeZ: Reach out to me if you'd like to be added to this working group
- GEANT considering disallowing self-signed CA+server certificates in CAT which do not have the CA:true basicConstraint set (MikeZ, Sara)
 - <https://pad.gwdg.de/O-4QxTnzSamVd4tKNW3s5g>
 - Impact on Best Practices Guide, other documentation?
 - Rob: Best way to join those calls?

- MikeZ: Let me know if you'd like to be added to meeting invite, but best way is to subscribe to the cat-dev mailing list:
<https://lists.geant.org/sympa/info/cat-devel>
 - MikeZ: The calls are irregular in cadence so your best bet is to watch that mailing list - the calls will be announced there as well as links to the meeting minutes
- Next meeting
 - Friday April 12th, 11am-12:30pm ET
- AOB?
 - MikeZ: Scheduling poll pending for "From the desk of the eAC" working group. If you would like to be added to that working group please add your email address here:
 - ...

Friday, February 16, 11:00am-12:30pm ET

Attendees:

Kendra Ard - CSU
 Brett Bieber - Nebraska
 Derek Eiler - NSHE/SCS
 Amel Caldwell University of Washington/WA-K20
 Saira Hasnain - UF
 Michael Dickson - UMass Amherst
 Rob Gorrell - UNCG
 Jeff Egly - UETN
 Nadim El-Khoury - Springfield College
 Dion Baird - OSU

With:

Sara Jeanes
 Nicole Roy
 Kevin Morooney
 Steve Zoppi

Regrets:

Michael Hacker
 Mike Zawacki

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
- Note taking volunteers?
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2024-1-19>
 - Motioned and seconded,
- Support Organizations Update
 - New process for submitting proposals
 - Proposals will be given as presentations by prospective eSO, immediate feedback and questions baked into the process
 - Will work off a [template presentation deck](#)
 - Volunteers to participate in proposal sessions?
 - Jeff Egly
 - Brett Bieber
 - Derek Eiler
 -
 - CEN
 - (No update)
 - Link Oregon
 - Training for potential new schools. Three new districts have signaled their interest.
 - Steve Corbato and Jim Stewart met with the Quilt board and discussed with other REN leaders.
 - Network Nebraska
 - In conversation with libraries, questions about if eduroam would solve bandwidth challenges. No, but it does drive additional conversations about fiber connectivity.
 - Becca and Brett prepping CENIC (CA) annual meeting presentation on eduroam
 - NSHE
 - Preparing for the eSO training and identifying how to engage the right staff.
 - Continuing to build up the team and strategize how to eat the elephant.
 - The Sun Corridor Network
 - Laura Etter to assist with work on this project again.
 - UETN

- Still getting eduroam into charter schools. Working with a consortium for the charter schools to assist with engaging schools and help speed up deployments.
 - Getting ready for the UCET conference. Amanda will participate in the conference and provide a presence on the tech floor for eduroam and the wireless network will be eduroam.
 - Working with Libraries and other SPs to review and elevate the use of their reports in demonstrating value.
 - Wireless Lan Pros (WLPC) conference in Phoenix, Luke Jenkins will present information on eduroam2go. These sessions are usually recorded and provided after the conference.
- Washington K20 Network
 - Four sites are broadcasting. One is using a legacy Cisco ISE instance and still working on configuration.
- Working group updates
 - [“Desk of eAC”](#) topics
 - [Cloud Infrastructure](#) - approaches for Cloud vendor requirements document
 - Review of [Amel’s Cloud Infrastructure Requirements outline](#)
 - Goal of this WG should be to establish a framework for an organization to deploy and support multiple orgs within a cloud-based radius infrastructure.
 - NSHE has been conversations with Okta about improving their RADIUS support
 - Next Steps:
 - Bi-weekly meetings going forward, next being Monday the 21st.
 - Continue identifying interested parties
 - Continue to outline expectations for vendors to interface successfully as an eduroam cloud-based radius provider
 - MOU and expectations of privacy for user with flow / auth traffic
 - Additional interested:
 - Amel Caldwell
 - Rob Gorrell
 - Brett Bieber
 - Derek Eiler
 - Nadim El-Khoury
 - Mike Dickson
- 2024 work priorities, esp communications to community
 - Discussion of Futures2 Report, contextualizing eduroam’s place in it (and the eAC’s relationship/placement with other Advisory Groups, how it might inform the eAC’s work in 2024
 -
 - RADIUS protocol update

- Evolving Best Practices
- Plans for gathering at CommEx
 - Dinner meeting? Days that work best for attendees?
 - If you will be there, please add your name here:
 - Derek Eiler
 - Saira Hasnsin
- Call for consultation - Next Generation Credentials Use Cases working group
 - Eduroam use cases?
 - Consultation wiki:
 - <https://spaces.at.internet2.edu/display/TI/Consultation+for+the+CACTI+Next-Generation+Credentials+Working+Group+Final+Report>
- Next meeting
 - Friday March 15th, 11am-12:30pm ET
- AOB?

From the Desk of the eAC

Attendees:

Saira Hasnain
 Nadim El-Khoury
 Apryl Motley
 Brett Bieber
 Mike Zawacki

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
- Review Internet2's proposed communications approach
 - Internally, our communications team would review any draft document the working group produced with an eye mostly toward SEO – for the most part they would leave the technical and community focused content as-is
 - For the first few articles Ann West would want a chance to review and offer suggestions. After that the articles would only be reviewed by the communications team as described above
 - The posts would be published on the incommon.org website and promoted via the InCommon newsletter, which goes out on the 4th Thursday of the month

- eAC meetings typically fall 2nd Friday of the month
- Things our communications team would like to understand from this group
 - What audiences do you want to reach with these articles?
 - How does the eAC imagine the review of I2's edits working? Would only this working group sign off, or would the additional members of the eAC need to approve them?
 - Saira: eAC could entrust this group to do the review of I2's edits rather than rely on the entire committee. This group would sign off on those changes (if any) and then okay them for release.
 - Brett: I agree with this approach. We could even say that after the first few articles the author would be solely responsible for okaying edits, but could solicit input from this group if they have questions
 - Nadim: Agree with this group
 - Apryl: If I understand correctly, I would send a note to the primary author with a set period of time for them to reply with edits. If none are given we'll move ahead with publishing
 - What are some additional topics that might be covered in 2024? (Note that this isn't a commitment, more for our own situational awareness)
 - Nadim: How long should these papers be, as a guideline? Do we have a hard requirement?
 - Saira: We may not need to limit article length, would just need to ensure we have a summary of 2-3 paragraphs to share in the newsletter. Longer papers could be housed on the eAC's wiki.
 - Nadim: Would it be appropriate to talk about implementations of eduroam on a given campus? Or more scholarly/research materials?
 - Brett: I imagined it as a thought piece, questions for the community, and to propose approaches, suggest practices around technology concepts.
 - Saira: Agree - these should be thought provoking articles, things on the horizon, issues that are being discussed in the community but might not have answers or clear approaches. My concern is that if we talk about the implementation of one particular school it might be seen as an endorsement of their methods. We're not proposing a "how-to" as much as asking questions, positing approaches
 -
- Any need to rework OpenRoaming paper?
 - Apryl to review current version, edit, share edits with
 - Mike to slack link to Saira's article to Apryl for her edits
 - Authors should also send a photo and bio as part of their article
- Brainstorm additional topics for 2024

- OpenRoaming paper (slated for March newsletter)
 - Apryl: It would also be great to have an opening comment from Brett for the first article, talk about the goals of the articles, introduce the series. Brett to write up a paragraph, share with Apryl and Mike
- Preserving end-user privacy
 - Margaret Cullen has raised this, esp in the area of K12 deployments
- eduroam Credentials in an MFA world
- Deprecating insecure features of radius
 - [IETF's RADEXT working group](#)
- Baseline Expectations for eduroam
- eduroam to the home, partnerships with ISPs
- Removing wireless in favor of 5G
 - Possible tie-in with University of Michigan cellular offload pilot?
- Note from eAC chair on this article series:
 - The following article is the first of a series from members of the eduroam-US Advisory Committee (eAC). The eAC discusses a wide range of topics within the wireless and mobility space, and many of these don't have clear answers, but rather pathways we need to explore or an uncertain future which will require community input to chart our path forward. This series "*From the Desk of the eAC*" highlights current topics within the wireless and mobility space, to share the current thoughts from eAC on a particular subject, or to provoke community discussion and input. Thank you for reading and we look forward to continuing to share these topics with the InCommon community. Brett Bieber, University of Nebraska and eAC Chair
- Meeting cadence, recurring time

Cloud Infrastructure working group

Attendees:

Amel Caldwell
 Mike Dickson
 Nadim El-Khoury
 Mike Zawacki

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)

- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed
- Reference: [InCommon IdPaaS working group report](#)
- Review Amel's writeup:
 - <https://docs.google.com/document/d/1hx3fQZP3kMzw2A-lhm76gpQogwJSyK5J5hnl6UYVqBE/edit>
 - High level, intended to inform structure and content
 - Only applies to vendors offering IdPaaS/SPaaS, excludes PKI, config assistance, and other aspects of service
 - Helpful to refine "How is end customer determined" section, identify additional delimiters
 - MikeD: Could also be good to include discussion of how I2's networking agreements like Express Route with Azure, Amazon, other possible service providers
- Additional expertise needed?
 - I2 would need to lend some cycles from its eduroam infrastructure team
 - Need to identify vendors to have engineers provide feedback to completed but early draft
 - MikeD: Would it makes sense to solicit vendor feedback earlier, let them know that this is something the eAC is working on? Limit flow of information to them but make them aware of the work we're doing. Point to discuss on Friday's eAC call. Thinking of Tom Rixom, Tim Capelli, Wes Purvis. Could also ask I2 to reach out to industry affiliates, Catalyst program participants, NET+ partners
- Meeting cadence, recurring time
 - Bi-weekly on Monday 12pm-1pm ET
 - Next call on 2-26-24

Friday, January 19, 11:00am-12:30pm ET

Attendees:

Saira Hasnain - UF

Jeff Egly - UETN

Rob Gorrell - UNCG

Kendra Ard - CSU

Brett Bieber - Nebraska

Derek Eiler - NSHE SCS

Nadim El-Khoury - Springfield College
Amel Caldwell – University of Washington/WA-K20
Dion Baird - Oregon State University
Mike Dickson - UMass Amherst

With:

Ann West
Kevin Morooney
Steve Zoppi
Sara Jeanes
Nicole Roy
Romy Bolton
Mike Zawacki

Regrets:

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Introductions all around
 - Note non-voting SMEs on the committee!
<https://incommon.org/community/leadership/>
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2023-12-15>
 - Saira moves to approve, Derek seconds
 - Majority approves!
- Support Organizations Update (Jeff, Brett, Derek, MikeZ)
 - Changes to eSO proposal process (MikeZ)
 - Move from paper to presentation
 - Derek: One suggestion is to make it clear ahead of time who the audience will be, if it will be recorded, etc.
 - Brett: Will the other proposers see the presentations?
 - MikeZ: Hadn't considered making them public or semi-public) but am open to the idea with

- Draft template deck
https://docs.google.com/presentation/d/1qw9efTit3mNXpWbF9X50_Jow686KRclJnw5fP656awA/edit#slide=id.p
 -
 - Link Oregon
 - Finalized work on contracting, intake process. Bringing on new districts in flagship ESD (Lane County). Figured out MFA issue, sticking with Google's MFA for now.
 - Network Nebraska
 - Brett: Just ended year 3, transitioning to sustaining/long term approach. Have signed group agreement for community colleges, other adjacent communities. Will engage in contracting (via addendum) with remaining schools. Up to 70% of the schools in Nebraska participating. Are working on pre-populating remaining schools in the eFM to ease deployment. Working on survey with schools, including eduroam topics. Will be presenting to Nebraska Library association to promote eduroam. Also going to present at CENIC's member conference on work
 - [Link to ChatGPT love poem to eduroam](#)
 - The Sun Corridor Network
 - Steady state since holiday break, spinning up ongoing work on grant disbursements
 - UETN
 - Working on public hotspots, esp in areas that serve student populations (private businesses and county provided facilities). UCET (state edu tech conference) coming up - will be promoting our work and have eduroam up there (looking to have it available as a permanent SSID at state's largest convention center as well). Also working on engagement with QUILT community - will look at presenting at in-person CEO meeting and virtual meetings. Link Oregon, Network Nebraska, and I2 team are meeting to plan on those engagements, consolidate messaging.
 - NSHE
 - Derek: Ramping up to deploy, have been getting good reception from many folks but working on building connections with K12 community. 7 out of 17 counties have expressed interest in participating. Will be bringing them to eduroam training. Have also identified candidates for public hotspots (libraries, airports)
- Working group updates
 - [Cloud working group](#) (MikeD, Amel, Nadim)
 - MikeD: At a high level just started to describe framework and components, as well as where components would reside (I2/subscriber/vendor). Looked at GEANT's managed IdP. Not a good fit for the US but concept is great, could be lessons there for our work.

Identified need to work through technical hurdles with vendors (e.g. logging being complicated by single IP address aggregating traffic from multiple realms/subscribers).

- Brett: What are the next steps? Or is there need for additional guidance/resources from eAC?
- MikeD: Nadim suggested getting in touch with GEANT's team that operates their managed IdP, having a discussion with them.
 - Sara: GEANT might have the code hosted on GitHub. Will see if I can get the link.
 - Brett: Stefan Winter presented on that, correct? Having another conversation with Stefan and others on that team would be great
 - Derek: We (NSHE) looked at their solution as well. Found a lot of the same limitations identified here. Our team also had questions about whether it met security standards/requirements of eduroam US.
 - MikeD: Also wondered about availability of logs, other system info. Would want at least as much data from this solution as we can get from the eFM, other cloud based solutions. We didn't want admins to have to sift through multiple info sources that should be centralized.
- Sara: Want to make sure we have some sort of charter or timeline, expected outcomes?
 - MikeD: Could be to create or identify hooks/integration points? Identify vendors?
 - Sara: Getting more specific, should I as the service owner expect a set of requirements? Or a scoping doc?
 - MikeD: At a high level this feels more vendor driven
 - Ann: This feels akin to InCommon TAC's IdPaaS requirements document
 - <https://spaces.at.internet2.edu/display/TI/TI.145.1>
 - Ann: We're looking more at interoperability, security, etc. More of a requirements paper, ideally that includes approaches included in the eduroam Best Practices Guide
 - Brett: Agree. Want to spell out what our community's needs are first, what would a service offering look like, what would have to be included.
 - Ann: I would advocate that the InCommon "seal of approval" wouldn't be put on solutions that aren't part of the Catalyst Program, which is a way to align community needs with services that vendors provide. Skipping that step would lack the community input that's critical to what we do.

- Derek: If the work of the group is to come up with technical requirements should we consider those Catalyst partners even if we're producing something internally or using something open source?
- Ann: Not at all - it's more about assessing commercial solutions. In-house/open source options are the domain of the organizations that choose to deploy them.
- Steve: There are different kinds of requirements we're listening for: Business Requirements; Product requirements; Technical Requirements - and WE (Internet2) will construct the solution - we're not expecting that from eAC. We don't expect you all to solve for everything. Just looking for those threads/themes of heavy lifting we can help with. Defining your requirements (business, technical and product) are helpful to us in that regard. We can take those and leverage our relationships with catalyst to meet some of those needs.
- Brett: Would like to produce a requirement doc that would be open for public comment, even present publicly on the paper. Lots of value to be had by the community
- MikeZ: Happy to set up meeting invite to start discussion on requirements document - are there others who would like to attend? AI MIKE: Send scheduling poll to attendees, set up recurring meeting
 - Brett
 - Derek
 - Rob
- ["Desk of the eAC"](#) working group (Saira, Nadim)
 - First topic would be the OpenRoaming
 - Saira: Would like to have an initial meeting with I2 communications team about writing up the OpenRoaming article. Also want to establish a publishing cadence, identify the ongoing team responsible for ongoing articles
 - Ann: Seems like it would be less a blog post and more of a summary blog with a link to the PDF of a more in depth paper that's geared towards community guidance. I like Saira's suggestion to have a more formal process and regular cadence. I think the community is hungry for this committee's thoughts on what's important and other guidance
 - Saira: We could identify topics, establish a cadence and deadlines. I'm happy to provide more and would like a process and schedule
 - Brett: I think there are a lots of topics just in the notes from these meetings.
 - Ann: Agree. We shouldn't shy away from longer documents
 - Brett: Next steps are to identify topics, look for authors on each

- OpenRoaming would be first
 - ...
- Jeff: Where would these be posted?
- Ann: Sara, Mike, and I would talk to our communications team on that. Longer articles could be hosted on the eAC wiki, summaries would be included in newsletters, etc.
- Saira: What is the ideal length?
 - Ann: We'll discuss internally with our communications team and get back to you on that.
- AI: Mike to coordinate with Ann, Sara, I2 communications team, form up process and publishing schedule
 - AI Mike: After internal meeting, schedule call with "Desk of eAC Team". Include review of process, timelines
 - Saira
 - Nadim
 - Brett
 - Others?
- AI: Brett to identify additional topics, discuss with this committee on our next call
 - Preserving end-user privacy
 - eduroam Credentials in an MFA world
 - Deprecating insecure features of radius
 - Baseline Expectations for eduroam
 - eduroam to the home, partnerships with ISPs
 - Removing wireless in favor of 5G
- Meeting at I2 [Community Exchange](#)
 - March 4-7, Chicago
 - Attendees
 - Saira
 - Derek
 - Jeff
 - MikeZ can schedule a meeting with attending members
- 2024 work priorities, communications needs
 - RADIUS protocol update
 - Evolving Best Practices
 - Additional topics?
 - Derek: WRT OpenRoaming, is this paper a "one and done" approach or will it be an ongoing topic of discussion? We've seen lots of commercial uptake of OpenRoaming in public spaces so it feels like a natural point of engagement
 - Rob: We have tended to divide topics into short term and long term. OpenRoaming has been looked at as long term, so it's not

“one and done” and might not be discussed regularly but is reviewed periodically or when there’s a major development. Something like service impacting changes (e.g. MSCHAPv2 deprecation) are more short term.

- Rob: Residential deployments of eduroam have been an increasing topic of discussion.
- Next meeting
 - Friday February 16th, 11am-12:30pm ET
- AOB?

Tuesday, Jan 16 - Cloud working group call

Attendees:

Nadim El-Khoury - Springfield College
Saira Hasnain - UF

Agenda

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- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Review of last discussion
 - Models
 - [GEANT's eduroam IdPaaS](#)
 - MikeD: Scoped to new/greenfield and smaller organizations. Feels like the sort of use case we'd need to address here.
 - MikeD: This is more of a “canned” solution managed by GEANT. We would probably want to think about how to integrate existing organization infrastructure like AzureAD, etc.
 - MikeD: Consider that some vendors like Juniper's MIST platform might want to send all traffic to an external identity store rather than authenticate locally. Needs addressing?
 - Amel: My take was to provide a vehicle for cloud based wifi vendors to integrate with national infrastructure. Add in hooks, avoid the need for on prem equipment. WRT PKI I think that might be considered less of an IdP element. Reference the work of eAC's last pass at

- Nadim: Also consider that GEANT's solution seems to rely on CAT. Also, an organization's users are batch uploaded via .csv file, changes aren't dynamic
- MikeD: Agree, that's not a good approach for proposed solution. Seems better to build in hooks for existing solutions. Abstract away elements of PKI, for example.
- Nadim: Other concern I have - issues where a vendor changes services details, maybe even stops being viable.
- MikeD: Agree - good point. Think about how portable subscriber infrastructure is, esp when they have to change vendors for some/all of their service. Is that managed by I2? Is it on the subscriber? Also, think about cost implications, potential for vendor lock in. In an ideal world there won't be
- Amel: Agree - also considerations with RADSec requirements from vendors. Can be a blocker for this work until RADSec is used nationally.
- Amel: Should address logging implications of local authentication and cloud solutions, esp if you're dealing with a vendor aggregating multiple orgs into one IP address.
- MikeD: Agree. Would need to figure out a way to differentiate organizations that sit behind a single IP address
- Amel: Could impose a lot of admin overhead on the vendor
- MikeD: Yes. Coming up with tags or other metadata to handle differentiation is important
- Amel: Agree. You'd need that for request routing as well. Need to look at RADIUS attributes that might provide some or all of that info.
- MikeD: Consolidating log viewing in eFM makes most sense - don't want to have to deal with log location, process changing when a subscriber changes vendors for some/all of their infrastructure.
- TAC's InCommon IdPaaS
- Next steps
 - Additional people needed for next call?
 - Nadim: Possibly someone familiar with GEANT's Managed IdP? I have some questions about their platform.
 - MikeZ to look for recorded presentations?

Tuesday, Jan 16 - OpenRoaming blog post call

Attendees:

Nadim El-Khoury - Springfield College

Saira Hasnain - University of Florida

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
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- Review of Saira's report to eAC and discussion
 - Saira: I turned over my paper to the eAC for fodder of the "from the desk of the eAC"
 - Saira: I would be game to write additional topics/articles as wel.
 - Nadim: Would be useful to get a list of existing vendors that use OpenRoaming in the US.
 - Saira: Want to be careful of making recommendations WRT OpenRoaming. There's a spectrum of positions to be taking
- Next steps
 - How to/whether to carry the "desk of eAC" articles
 - Cadence? Monthly? Quarterly?
 - Identify volunteer to write up one-ish page article on OpenRoaming
 - Develop process for I2 communications to review and edit

Friday, December 15, 11:00am-12:30pm ET

Attendees:

Brett Bieber - Nebraska

Jeff Egly - UETN

Amel Caldwell – University of Washington

Saira Hasnain - UF

Kendra Ard - CSU

Josh Howlett - Independent

Derek Eiler - NSHE

With:

Romy Bolton

Sara Jeanes

Ann West

Kevin Morooney

Mike Zawacki
Margaret Cullen
Mike Dickson

Regrets:

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed!
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2023-11-17>
 - Saira moves to approve, Jeff seconds.
 - Majority approve
- Support Organizations Update
 - Link Oregon
 - Working on adding new districts, 1-2 expected to join shortly. New program manager, has been meeting with internal and external folks. Still working through teething issues with MFA, but that's more an internal networking issue.
 - Network Nebraska
 - Brett: Becca Kingery and I met with Lincoln diocese on getting Lincoln Catholic K12s up and running, also discussing having them join Network Nebraska. Have also been engaging with Nebraska state libraries commission. Had reached out to them at the outset of our program, but with broader adoption we hope to gain more traction. Will present to their board in February.
 - The Sun Corridor Network
 - Still working hard on grant activity, funding disbursements, which is their current focus. Continuing to make eduroam a part of that work, but the emphasis is on grant administration. Also doing planning to renew their eSO agreement
 - UETN
 - Jeff: Had meeting with SLC downtown merchants association, looking at candidates for public hotspots, esp. those that serve student populations. SLC library canceled their eduroam service - seems like they had some technical issues, leadership pulled the plug. Looking at having a round table with libraries, hearing success stories, develop positioning and value prop for library audiences. We're also working with state library commission. Have had discussions with QUILT, Molly Thurston. Identified a few upcoming events. Virtual meeting, leadership meeting in-person in February, virtual meeting in March. Steve Corbato and Jim Stewart would

cover in-person leadership meeting, eSO participants and I2 would collaborate on virtual presentations.

- AI Jeff: Get dates for meetings
 - Brett: We (eSOs) should coordinate on presentation
 - MikeZ: AI - add topic to agenda of eSO coordination call next week.
 - Brett: Thinking about ways to engage with digital equity advocates who could find eduroam valuable. Iowa is one of those.
- Working group updates (MikeD, MikeZ, Brett)
 - OpenRoaming blog post/"From the Desk of the eAC"
 - AI Mike: Send scheduling poll for 2nd-3rd week of January
 - Brett: Any thoughts on recent activity on eduroam-admins mailing list WRT OpenRoaming?
 - Sara: Seems like other topics are of more interest to the community. Having this blog post should suffice.
 - Cloud/multi-tenant working group
 - AI Mike: Send scheduling poll for 2nd-3rd week of January
 - eduroam Transitional Technologies WG
 - MikeD: Possible new item for group - Windows 23H2 update (pushed out on 12/12) has been interfering with eduroam. 802.1x with 802.11 R (Fast Roaming) may be to blame. Not tied to any vendor - appears to be an issue with the protocol itself. Backing out of W23H2 update seems to fix it. There are other solutions that could work for some schools, but no one-size-fits all. Currently being discussed on [EDUCAUSE's Wireless-LAN mailing list](#) I could put together a draft of best practices, convene the transitional tech group again to review.
 - Amel: I haven't seen this where we've been running 802.11R.
 - MikeD to draft guidance doc, then check in with MikeZ to get WG convened again.
 - Derek: When there are info resources like the EDUCAUSE mailing list that are not publicly readable without federated credentials do we have a process for sharing with the eduroam community?
 - MikeD: Do we push notifications like the transitional tech WG output to the eduroam-admin list?
 - Sara: We don't currently but that could be a good thing for this group to do
 - MikeD: Worth considering that there are other forums that are heavily used by technologists (OS specific forums, other professional sites, etc) but there could be a role for us here
 - Brett: Like the idea of bringing up topics like this for eSOs given their role in supporting K12s.
 - IETF RADIUS Extensions (radext) WG Update (Margaret Cullen, SME guest)
 - [Overview slide deck for context](#)

- [Link to recording of Margaret's presentation today](#)
 - (Link to RADext WG charter)
 - [Deprecating Insecure Practices in RADIUS](#)
- Sara: We (eduroam US) have mitigated some of the weaknesses, for example increasing length of shared secret to offset shortcomings of MD5 encryption. But agree with overall push to update RADIUS.
- Margaret: Agree. Some of the issues can also be addressed by doing things like not naming APs after dorm halls, etc. Adjusting technical practices can help make the service more secure. This isn't a "house on fire" situation, but needs to be addressed.
- Derek: There's a balance to be struck - IT support folks would like to know which AP is acting up, where it is, etc, which is why APs contain dorm names, etc.
- Brett: Worth thinking about what we can do to educate our users and IT staff to make eduroam more secure
- MikeD: Is there a way to strip out things like building names or rooms from the calling-station-id? Other automated ways to scrub the data that leaves the local network?
- Kevin: Consider the upcoming growth curve of eduroam in the US. Increased adoption (esp in less technical communities) can increase urgency of this issue.
- Margaret: Agree - plus growing use in K12s can make people focus more on user privacy for kids.
- Steve: Yes. Increasing interest in public access points that ISPs manage and K12 adoption will change with how we scale and handle change management. Increases complexity, present challenges. Interested to hear Margaret's thoughts on that.
- Margaret: Issue with scaling these ISP hotspots is that all the traffic come to the two top level RADIUS servers, rather than being authenticated locally. Having large numbers of hotspots that don't authenticate locally means that there's considerable increase of load on national infrastructure. We need to consider updates to the national infrastructure ahead of this growth.
- MikeD: I do think that separating out RADIUS servers just for ISPs would insulate "traditional" standard IDPs from any blast radius if the ISP overload resources
- Sara: It's important to recognize that this scaling question also applies to eSOs as well. All of Michigan's K12 traffic coming to the national service would also impose scaling challenges. And there is the skill sets question. How many people in our community have the staff and expertise to build, maintain, and run proxies with this level of SLO, filtering, monitoring, coordination, and reporting?
- Derek: If the scaling can be done in such a way that additional proxies (ISP or regional or however you'd want to slice it) can take the form of a standard container, or an i2/painless-managed solution an ISP or eSO can host, we may have capacity to host such a thing. Thinking of it from sort of a "Linux repo mirror" perspective.

- Brett: Seeing a few items for this group.
 - Communicating best practices, ensuring the eAC provides guidance WRT security practices, attribute stripping, etc. Could have folks on this committee draft those.
 - Look at how we monitor and measure behavior, get some metrics around deployment practices and performance of national infrastructure. Could we have a monthly report on that, for example?
 - Margaret: Maybe the reporting engine I2 uses could create those reports. A good topic of could be I2 walking through current reporting methods with this committee and see if there are things we could do to address Brett's request WRT metrics
- GeGC updates (Sara)
 - Publishing advisory on general v specific service locations
 - ACTION231122-03: Secretariat to publish the advisory on eduroam service locations on the eduroam website.
 - The GeGC ACCEPTED both applications (Kosovo* and Jordan) and will continue working with KREN on the technical challenges and concerns around the TLD requirements.
 - ACTION231122-01: Secretariat and OT to propose a lightweight set of technical and management criteria to use before a region is proposed to the GeGC.
 - eduroam Compliance Statement 2.0
 - ACTION231122-02: Secretariat To share a communication that can be used regionally by all GeGC representatives to describe the re-signing process for the compliance statement.
 - Global Governance
 - The difference between the need for a legal entity and the ability of an entity to be neutral needs to be considered.
 - Currently, all top-level servers are in Europe, this presents a challenge for business continuity. This could be addressed in future iterations of the eduroam structure.
 - This needs discussing at future meetings and should be put on the agenda at the next meeting further up the agenda.
 - Meeting quarterly in 2024
- Many thanks to Brett and Mike for their work as Chair and Vice-Chair in 2023!
- Results of chair/vice-chair vote
 - 2024 Chair: Brett Bieber
 - 2024 Vice-Chair: Jeff Egly
- Welcome new member!
 - Derek Eiler - Nevada System of Higher Education SCS
- Next meeting
 - Friday Jan 19th, 11am-12:30pm ET

- AOB?

Friday, November 17, 11:00am-12:30pm ET

Attendees:

Brett Bieber - Nebraska
Jeff Egly - UETN
Amel Caldwell – University of Washington
Kendra Ard - CSU
Josh Howlett - Independent
Mike Dickson - UMass Amherst
Nadim El-Khoury - Springfield College
Saira Hasnain - UF

With:

Sara Jeanes
Mike Zawacki

Regrets:

John Buysse, Jeremy Livingston, Ann West

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- Agenda bash
 - Bashed!
 - (AI Mike: Need picture of eduroMEO added to minutes)
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2023-10-27>
 - Amel approves, MikeD seconds, all support
- Working group updates
 - Multi-tenant/cloud group update (MikeD, Amel)
 - MikeD's model for [cloud based IdPaaS](#) and [on-prem IdPaaS model](#)
 - MikeD: Interest in IdPaaS from both vendor and community side. Early stages of discussion. Most of us have on-prem RADIUS, ID store, etc. With increase of RADIUS in the cloud, hosted by 3rd party vendor. eAC seeks to develop best

practices, community requirements. Consider benefit of cloud model to smaller HEs, K12s

- Brett: Appreciate reference architecture to help folks orient themselves around the two different models. Note [link to meeting minutes](#) of last working group. Looking for
- Saira: Questions I'd have - is there a baseline cost for current implementations that we can compare to proposed solutions? Also wonder how vendors would charge - what is the fee structure? If we're going down the path of cloud RADIUS what happens when an institution loses connectivity to the outside world?
- MikeD: Good questions, also wondering if we can use RADSEC/RADIUS slice for services other than eduroam. Also, what are the implications if we chose a RADIUS variant other than what vendor offers
- Brett: So what are the things we're solving for? Use cases are needed. Spelling out cost, maintainability, other considerations and making sure those are enumerated for proposed solutions will be helpful. Also, think we should incorporate Best Practices Guide into the community requirements.
- Sara: I would also be interested to see how authentication links to federation. A number of eduroam US subscribers already use SAML credentials. Eduroam could be something that sits off those implementation - thinking about how to integrate those two systems. Increasing use of pseudo credentials for eduroam services could point to integration points.
- Brett: Like that idea. Could refocus discussions around the service to "where are you authenticating"? Thinking about how EU NROs are solving this as well - seems like there's precedent there, especially as we look at use cases for multi campus institutions, eSOs, etc.
- Rob: pseudo or secondary credential... many compliance docs will also use the term "token" as one credential used to get another. this can be important when talking about cyber liability insurance requirements that often apply to credentials, but not tokens.. since we don't want MFA involved directly in network auth.
- Jeff: Agree - good topic to discuss with eSO community. In Utah we have mostly private entities supporting charter schools - this could help them as well.
- Josh: One use case I think is important is the constituency of users who rely on NPS. Future of that platform is uncertain, could require new solutions if MS fully abandons it. Wonder if it's a way to frame out an off-ramp for those subscribers.
- Brett: Great point for another use case
- Amel: Also deprecation of MSCHAPv2. And consider impact of zero day exploits - easier to respond to those vulnerabilities for infrastructure elements in the cloud. Also way to make authentication more efficient for US organizations that are offshore.
- Volunteers to join regular working group calls? Looking to identify different perspectives as well as SMEs

■ Volunteers

- Brett
 - Nadim
 - Kendra can tap contacts in California He community
 - Rob
- Perspectives
 - K12s
 - Smaller HEs
- eduroam Support Organization Updates (Brett/Jeff/MikeZ)
 - Link Oregon
 - New program manager for the eSO. She has met with Mike Z for context setting.
 - Working to identify additional pilot schools, and continuing some tuning of MFA to separate authentication use cases by application.
 - Network Nebraska
 - Cox communication pilot - public hotspots in Lincoln area. Omaha public library system is also coming online (13 sites across Omaha metro area). Also re-engaging with state library system now that we're at 70% of districts deploying, will also leverage work with Omaha LS. Also talking to Lincoln Catholic schools about deploying. Had fall extension conference, which included eduroam. Organizers of conference were the ones who asked for that, seeing community advocating for eduroam! One of the hotels in Kearney also turned up eduroam.
 - The Sun Corridor Network
 - Working with Maricopa county on public deployments of eduroam and grant disbursements. Continuing to look for ways to incorporate eduroam into their broadband projects.
 - UETN
 - Jeff: Have a project coming up with Libraries to try and re-engage with that group. Recently received ARPA funding with focus on libraries and connectivity. Leveraging that to promote eduroam as well.
 - Brett: I should coordinate with NAEP representatives in NE. Good use case.
 - Amanda fielded interest form NAEP, national education assessment group. Their staff is looking at eduroam as a way to ease connectivity when they visit schools for assessment.
 - Held the user group meeting on November 16th, including geteduroam from I2.
 - Getting ready to present on troubleshooting & logging with state educational tech conference. Also finished up presenting at SAINTCon, state edu security conference. Amanda Molinari promoted eduroam as well.
 - Washington K20 network

- Bringing on 3 pilot schools. Currently working on library system - they're resistant, need help with value prop
 - Jeff: We've had some luck with a libraries in some districts. Weber county library was one standout - early adopter, have served well with community colleges and K12s
 - Brett: I'll be happy to share feedback from state library system meeting. Can also talk to Omaha library system, see if we could get some testimonials
 - Rob: In NC, convincing individual communities libraries has been easier than a top-down approach of getting our State Library system (NC Cardinal) to understand the value prop of eduroam
 - Note: CEN moving to full eSO-ness
- ISP update (Sara/Brett/Rob)
 - Cox - mentioned last month, led by Millard Public Schools in NE. Turning up 600 points of service.
 - Allo - pilot for Lincoln Public Schools in NE. Scoped to two neighborhoods centered around elementary schools
 - Guilford County NC - Rob leading that, Lumos is the ISP. Have undertaken campaign of outreach to residential customers - broadcasting of eduroam is explicitly opt-in. Schools system has deployed eduroam for staff and student populations. Intended to work hand in glove with public and residential hotspot efforts. Smarttown is Calix's Wifi Passpoint product... it has the added benefit of being able to manage any 802.1x deployment.
 - Brett: One possible feature of all of these pilots is the collection of data to demonstrate impact on educational outcomes. Guilford has included that in their pilot project.
 - Brett: Sara convened a meeting of eSO leadership around these efforts, ensure everyone is on the same page, provide context and spell out approaches for current and future pilots.
 - Sara: Pilot phase is important for expectations settings on roles everyone plays, how these partnerships are formed up. Need to be clear we're leading with education, making sure there's consistency of approach and goals. Also want to make sure we're recognizing eSO role in these pilots, ensuring they're actively involved and can communicate program goals and methods to the community at large. Strong value for K12s makes eSOs natural partners here. Also good for communicating value of eSO program to prospective participants.
 - Brett: Good points. Making sure initiatives are focused on educational missions, not financial benefit to private companies. Want to be sure our methods and approaches serve that end.
- OpenRoaming update
 - I2 meeting with Saira for blog post

- Share with members of community before publishing?
 - John Simpkins/University of Michigan
 - Reached out to us on topic. Could be tapped for quotes.
 - Members of international community
 - AI MikeZ: Set up call to coordinate on blog post
 - Participants
 - Saira
 - Sara
 - MikeZ
 - I2 comms team member
 - Others?
- Voting completed for new eAC member
 - CACTI to review new slate on December 6th call
 - Brett: Recommend inviting new member to next eAC call.
 - MikeZ: AI get new member added to next call
 - Brett: AI reach out to other nominees, inform them of eAC's decision
 - Brett: Next call with new member should include introductions
- Opening of votes for chair/vice-chair
 - Voting form to be distributed to eAC
 - AI Mike to send form, collect votes week of 27th
- Next meeting: December 22nd
 - Move meeting from December 22 to December 15?
 - AI: MikeZ to adjust calendar invite
- AOB?

Wednesday November 8, 2:30pm-3:30pm ET (eduroam cloud/multi-tenant IdPaaS call)

Attendees:

Mike Dickson
 Amel Caldwell
 Sara Jeanes
 Mike Zawacki

Agenda

- Recap of materials for group to review
 - InCommon IdPaaS: <https://spaces.at.internet2.edu/display/TI/TI.145.1>

- eAC User/Device Onboarding requirements:
 - <https://spaces.at.internet2.edu/pages/viewpage.action?pageId=243080614>
- Steps for this group
 - Identify additional perspectives, skillsets needed for this group
 - MikeD: Thinking about whether there's a way to do a focus group or survey to recruit working group members?
 - MikeZ: eSOs, RENs, eduroam admin mailing list could work
 - Sara: Also good to identify skillsets and tap them on the shoulder
 - MikeD: Appropriate to include industry folks who are non-voting eAC advisors?
 - Amel: Someone like Wade Gibson (Nebraska eduroam admin for ESU11) with good technical depth and front line experience would be good.
 - Sara: Should consider if we're solving for K12 or solving for HE. Each has unique requirements and capabilities.
 - Pose question of additional folks needed to eAC.
 - Identify use cases/user stories
 - Articulate needs for each use case
 - Discuss if solutioning is part of initial output or should be done separately
- [Link to MikeD's diagrams]
 - Come up with content sharing strategies
- Next steps?
 - Identify additional skillsets, perspectives needed for group
 - Front line K12 technology folks (ala Wade Gibson)
 - Amel: Tim Cappelli could be good, if available. Maybe prep him with context and ask him to speak at one or more of the meetings
 - MikeD: Thinking about PKI and onboarding tools like CAT. SecureW2 does that, MIST doesn't (they'd probably send folks to SecureW2).
 - Present discussion to eAC, ask for additional guidance and/or participation
- Discussion
 - MikeD: Could this be a modular offering? Soup to nuts, or are the individual components broken out? GEANT offering looks more greenfield/
 - MikeZ: Early task for this group would be to consider how best to approach that. Could suggest a phased approach, where you start with just RADIUS in the cloud, then add other components, then offer a complete solution. Or vice versa. Need to investigate the use/needs cases
 - Amel: Also consider if approaches could dovetail with existing offerings , e.g. MIST, SecureW2, etc.
 - MikeD: Is there a place for support services?
 - Amel: Would also be good to understand how I2 interacts with potential cloud providers.
 - MikeD: At some point a cost model will be needed

- MikeZ: Consider that the output of this group could also be a set of requirements (“good housekeeping seal”) that anyone who wants to offer services to this space would need to meet
- Sara: NET+ model is to negotiate a standard fee for participants, often with a small offset to maintain I2’s program. Catalysts don’t negotiate pricing, it’s more about coordinating outreach/marketing. Often requirements gathering is used more to craft offerings. This group could be more focused on that requirements gathering/use case analysis
- MikeD: Thinking through the extensibility of some of the services - for example if it’s a cloud based RADIUS offering could someone use that for other, non-eduroam related services? Or should it be focused on just eduroam? Depends on vendor, I guess.
- Sara: Seems like most/all offerings would be eduroam-only in nature. Purpose built instances for a narrow use case.
- Amel: Have been seeing this more as a relationship between vendors and I2 with a fully baked IdPaaS offering. Could end up as more a menu of services, or something similar. So newbies would need a fully featured, managed offering, while others might just want one or more components.
- Sara: Wondering if we need to consider different credentialing models that could shift complexity off, say, RADIUS and onto ID store
- Amel: Good question, I’m not sure right now. MIST allows for existing credential usage rather than creating new credentials.

Friday, October 27, 11:00am-12:30pm ET

Attendees:

Brett Bieber - Nebraska
 Saira Hasnain - UF
 Jeff Egly - UETN
 Amel Caldwell – University of Washington
 Mike Dickson- UMass Amherst
 Kendra Ard - CSU
 Josh Howlett - Independent
 Jeremy Livingston - Stevens

With:

Steve Zoppi
 Sara Jeanes

Mike Zawacki

Regrets:

Rob Gorrell may be late

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2023-9-29>
 - Saira moves to approve. Jeff seconds
 - Approved by committee
- eduroam Support Organization Updates
 - Link Oregon
 - Shuffling their roster and have brought on a couple new technical folks.
 - Looking for the next pilot schools.
 - Recently moved past the MFA/Google issues, now working through Duo deployments to get things working with eduroam
 - Network Nebraska
 - Moving toward greater maturity in program (no more pilot). Adjusting organizational terminology in our messaging - clarifying that Network Nebraska is the eSO, ConnectEd Nebraska is the initiative. Beginning to pre-enter our constituents in the eFM to allow for faster onboarding as they work through contracts. Sharing work of Wade Gibson on Google ID integration. Wade also created a process for simplifying Chromebook supplicant configuration, automating credential entry and other wireless profile setup. Lots of promise there for ChromeOS heavy environments.
 - The Sun Corridor Network
 - Working on dispersal of grant money. Still engaging with Maricopa county on eduroam and identifying pilot schools within that area.
 - UETN
 - This week our organization was focusing on supporting [SAINTCON](#) - statewide educational security conference. Seeing Utah schools beginning to take the lead on presenting, promoting eduroam. Neebo district presented, talked about the benefit to students (including BYOD). They've also been looking toward public deployments of hotspots in their

area. Amanda presented and promoted eduroam as well. Good for schools to see their neighbors and colleagues present. UETN has been continuing work with Salt Lake City downtown alliance and merchant's association on public hotspots. Work continues on eduroam2go as well.

- Brett: Working with Romy on engagement with Iowa
 - Romy: CIO at IU is very interested but cycle limited
- Working group updates
 - ConnectEd Nebraska - [Millard Public Schools/Cox Communications](#)
 - [Bridging the Digital Divide in Omaha: eduroam for All](#) (Internet2 post)
 - Sara: Network Nebraska, Millard Public Schools (PS), Cox led project. Cox announced yesterday that they'll be turning up 600+ municipal hotspots in support of Millard PS. Seen as a good opportunity to get eduroam out in the community, will also be a learning opportunity on scaling eduroam out to public and residential areas. On the technical side team is working with Cox on infrastructure and on location tagging. Will need to do a bulk import of locations, look toward automation for future phases
 - Brett: Of note for eAC - communication leads with public education organization. Having the community partner participate and be the driver is key for these sorts of projects. Also of note - the US will overtake Brazil as the #1 service location NRO. And Nebraska will have the most service locations of any state in the US :)
 - Jeff: Incredible work by all of you. We'll see ripple effects from this work. UETN will be sharing this out
 - Brett: Sara, any advice on how this could be messaged?
 - Sara: Might make more sense to send I2 post to other RENs and HE orgs. If you're pushing this to schools, other K12 focused organizations it might make sense to send the Millard PS link above. Content is largely the same, but the framing is different.
 - Jeff: UETN met with some of our rural ISPs and Calix - this work has really helped with our conversations in Utah
 - TDI Pilot - Lumos
 - Sara: Another scaling project. Worth noting that like Millard this is a community led effort. Lots of solid support from schools, city and county government. As we look at other ISP engagements it's worth noting the importance of those sorts of community champions. TDI has been working closely with Internet2 on messaging, communication. This project involves several schools in the Guilford County area. US Ignite is providing project management. Built around a federal digital equity grant - focused on broadband with eduroam folded in. Also a residential deployment component to the pilot - 900+ households will have the option

to become eduroam hotspots (opt-in model). Work is being done on ensuring bandwidth for eduroam initiated traffic is kept distinct from residential traffic to preserve those households' bandwidth. Also good opportunity to look at impact of eduroam to the home on student performance and outcomes.

- ConnectEd Nebraska - Allo
 - Brett: Allo is another Calix based ISP. Looking at another residential deployment, centered around a Lincoln school. Seems to lack that community champion - Lincoln schools haven't been engaged. I'm working to help them work more closely with Allo and other project staff to remedy that.
- [GeGC guidance on location services](#) (pre-read)
 - Brett: This was a non-negotiable item for the Allo project. Need to preserve privacy of residential customers. GeGC was supportive of our thinking, feels like we've arrived at a point of consensus.
 - Sara: Document provides good explainer on how our work WRT residential deployments slots into requirements for location marking on publicly available maps
- Voting for chair/vice chair, adding new members
 - Voting for 2024 chair/vice chair at end of this year
 - 3 nominations for 2 open seats
 - Names, bio included as pre-read (see below)
 - Need to have slate of new members finalized before CACTI's Dec 6th meeting
 - MikeZ: Will set up voting form for nominees, share with the committee.
 - Voting to conclude before November eAC call
 - Voting opens today, closes next Friday
 - MikeZ: Will send out vote form for Chair/Vice-Chair ahead of last 2023 meeting.
- Saira's OpenRoaming document
 - Provided as pre-read
 - Saira: Academic feeling, but intended to articulate community understanding and thinking around OpenRoaming. Boils down to identity portion and how that gets managed. Also need to keep in mind that this is essentially more of an IAM issue once the commercial carriers and service providers are involved. Need to navigate so many device flavors, vendors. For example, some phone/network vendors want hidden SSIDs only accessible for their customers. Presents scaling issues. We (educational community) tend to inherit technical load in those cases. Smaller institutions will be the ones who need the most help as they don't have the leverage of larger HEs. So the gist of the paper is that OpenRoaming is possible but may not be scalable as things stand now.
 - Brett: Feel like this puts into words some of the challenges mentioned conversationally by John Simpkins from University of Michigan. Believe we should make this available to the community.

- Saira: Sure, that makes sense. I'd avoided including University of Michigan's efforts because that's their story, and it was still in the pilot phase. Might not be put into production. Felt more comfortable providing UF's perspective.
- Brett: We should figure out channels to get this into the community. Blog post?
 - Ann: Do you see this as guidance for the community? How would you position it?
 - Brett: I think it's more a perspective / thought piece, not formal guidance. Could also provide some info to people just starting to look into OpenRoaming
 - Saira: Agree - this is more of a thought piece, more of a layperson perspective. Intended as a resource for those thinking about OpenRoaming and cellular offload. Could be helpful for the to understand the costs, technical, staffing, and potentially financially.
 - Jeff: I like this approach. Could be a good tool here to start conversations, could do similarly for other organizations. Appreciate you writing it up!
 - Ann: Thinking through communications, how to frame this? Thoughts from the desk of eAC rather than "required" or "endorsement of best practices"
 - Sara: Suggest MikeZ, myself, Apryl Motley, and Saira get together and discuss blog post
 - Al MikeZ: Get Gdoc set up, put together calendar invite
- Tangentially related - <https://internet2.edu/internet2-future-wireless-working-group-to-issue-rfp-for-cbrs-driven-neutral-host-network-solutions/>
- Upcoming IAMOnline
 - Using midPoint to manage access to eduroam logs via Grafana/Loki
 - <https://incommon.org/academy/iamonline/> (includes link to register for webinar)
 - November 15, 3pm-4pm ET
 - Sara: Great for identity people as well as eduroam support/tech, anyone interested in logging for administration and/or troubleshooting
- Scoping call for cloud multi-tenant services/catalysts
 - [Notes from conversation below](#)
 - Update from Brett, MikeD, Amel
 - Brett: Centered around identifying community needs and requirements for IdPaaS/managed eduroam infrastructure. Would also extend into identifying commercial partners. Looking for volunteers to join working group.
 - Amel: Looking for a way to allow vendors to provide service to customers in a more efficient manner. Want to ensure community needs are met by these solutions as well. For example, do they support needed protocols? Do they work well for smaller institutions as well as larger?
 - Brett: This represents a step toward maturity - start with best practices, rely on schools to meet many/all of those best practices. Then look at how

to influence vendors to meet those best practices and enable better experience for smaller institutions. Down the road we could even identify catalysts, partners. Steve, does this approach resonate, make sense?

- Steve: It's in a nascent stage. We rely on community groups to do this sort of articulation of needs. Initial conversations in the community, and even with vendors are great roles for community advisory bodies. So everything you're saying tracks.
- Brett: Great, thank you. For this committee, look at the [InCommon IdPaaS requirements document](#). We would want to create something similar for this group
- MikeD: I think there's a lot of good things that could come out of this working group before we even get to vendor engagement. Defining our needs, identifying community segments to be served and use cases, etc. Will help us
 - Volunteers
 - Amel
 - MikeD
 - Brett
 - Consider possible additional participants as well
 - Sara: Would be interested to understand and tease out a few pieces. You've identified several segments
 - Those who aren't part of the IAM world that need to manage RADIUS credentials
 - Those who manage credentials, but for identity federations
 - Those who need
 - Sara: How would the group scope these?
 - Amel: WRT questions about credentials - consider external auth sources like Google. Would end up being cloud to cloud at that point.
 - MikeD: Some vendors can serve all segments but many only serve one or two components (e.g. cloud RADIUS providers that have no identity store service, cloud authentication but no PKI, etc). Maybe offerings could integrate several providers. Would be attractive to small institutions that don't have any equipment on prem and no expertise to host their own components
 - Sara: That's helpful - would encourage the group to first identify what problems they're trying to solve and who they're solving for. Avoid specific technologies at this stage.
 - MikeZ: Could be useful for folks to review

- Call for working group
- Next Meeting: November 24th
 - Day after Thanksgiving - move to November 17th
- AOB?

eAC candidate overview:

Johan Reinalda

- Director of Network and Telecom
- Oregon State University/Link Oregon - Corvallis, OR

Johan Reinalda is the lead network engineer at OSU and a lead engineer in Oregon for LinkOregon. He has been instrumental in deploying and advocating for Eduroam across Oregon higher education and K12 organizations.

Bruce Sarte

- Director of Information Technology
- Cedar Crest College

I am interested in serving on the committee because we have been using InCommon services for approximately five years now, and I would like to give back to the community. We have found EduRoam services to be very useful when we need them both when traveling and when hosting colleagues.

Derek Eiler

- Principal Systems Engineer
- Nevada System of Higher Education - System Office

I would like to contribute to the eAC with a REN, eSO, and "small-ish system" perspective as we work to mature the eduroam service across our higher ed system. I'm also leading our on-ramping eSO's effort to expand the service to Nevada's K-12s, libraries, museums, and municipalities. My hope is that I'll be able to not just take, but also contribute something of value back to the community as Nevada is setting out on this K-20 eduroam journey.

Monday October 23, 1:30-2pm ET (eduroam cloud/multi-tenant scoping call)

Attendees:

Agenda

- [Agenda item from last eAC meeting](#)
- Ask from eAC - framework for community input?
 - Community guidance on best practices, processes for implementation
 - Need to address security, protect everyone's PII

- MikeD: Could end up looking like a managed IdP eventually, similar to GEANT's IdPaaS
- Working with solution providers
 - Amel: Having a set of requirements for vendors/service providers is a must.
 - Possible way to provide "seal of approval" for some solution providers
 - Brett put forward NET+ and catalyst program as possible models for engagement as well
 - Ann: This reminds me of the TAC's IdPaaS for InCommon. Broke it down into a bridge solution and then identified additional infrastructure options.
 - <https://spaces.at.internet2.edu/display/TI/TI.145.1>
 - Ann: Community could draw up a similar set of requirements and then take that to the catalyst program and see if there's one that is a good fit or would take on the work. Or could identify an existing company that has good solutions and could join the catalyst program
 - Brett: I like that, especially the modular nature and ability to add on enhancements over time. Could eventually include RADIUSaaS, etc
 - Ann: We could put together a working group that might include industry members/catalysts or vendors that already work with the community.
 - Amel: There are at least two vendors that come to mind - SecureW2, who already has representative on eAC, and Mist
 - MikeD: We've had discussions with Mist, could follow up with those contacts
 - Brett: Wonder if we already have the solution out there but it isn't a formal service offering. Thinking about the ESUs in NE that are already hosting RADIUS, integrating with external ID stores, etc. Could be
 - Amel: Are they doing it from a single IP address?
 - Brett: I believe it is, just differentiated by ports.
 - MikeD: In one case we had a UMass entity that had to be peeled away from us, but still wanted to share infrastructure, were really interested in GEANT's IdPaaS - do they work with 3rd party providers that we could leverage?
 - MikeZ: I believe it's owned and operated by GEANT - they offer it to NROs but there's a 50,000 user/NRO limit so it wasn't sustainable for us
 - ANn: What would be really helpful to us would be some thought around what are the categories of service and community needs around those services. But agree with Amel - someone like a SecureW2 could be a good partner but we need to have a community generated bench mark to measure their service against.
 - Brett: Sounds like we should relate the substance of this discussion to the eAC, share the IdPaaS doc, propose a working group to come with something similar, identify possible partners? Or do we need to do some

work beforehand? Put together a statement of purpose and then recruit WG members

- MikeD: Agree. Thinking through modularity aspects and get vendor input, but we (the eAC and community) might want to develop an understanding of what we need from them first (e.g. what components can you separate, what can you combine, etc)
- Next steps?

Friday September 29, 11am-12:30pm ET

Attendees:

Brett Bieber - Nebraska
Kendra Ard - Cal State State
Amel Caldwell - University of Washington
Dion Baird - Oregon State University
Josh Howlett - Federated Solutions
Mike Dickson - UMass Amherst

With:

Sara Jeanes - Internet2
Romy Bolton - Internet2
Mike Zawacki - Internet2

Regrets:

John Buysee, Jeremy Livingston

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.

- InCommon Futures Discovery project (Kevin Morooney/SecondMuse)
 - With special guests from the advisory community
- Agenda bash
 - Second Muse followup - Sara: Any items that came up during the exercise will be reviewed by InCommon steering committee. Feedback is considered actionable items, can drive decisions around services and governance. Response deadline to survey has been extended, shared with the eduroam-admins list.
 - Kevin: We are currently at 91 Futures2 responses. /Anything/ y'all can do to help get the word out (and participate if you haven't already) would be much appreciated. We are almost at the halfway mark for the whole project - this data is critical for next phases. In particular, the response from smaller institutions has been anemic.
 - Brett: Worth brainstorming on this, esp around getting more engagement from smaller institutions.
 - Sara: eduroam is the service that tends to reach into those smaller institution circles, so could be a good population to approach. Getting that input from this community is critical to getting good info to help drive these conversations. If members of this community
 - Don: One of our strategic initiatives is reaching out to rural, tribal, and frontier areas. Has eduroam looked at getting into those communities?
 - Sara: Yes. Had conversations with AIHEC and the Navajo Nation. Need to also consider that there's an underlying issue of lack of connectivity.
 - Kevin: The MS capitulation about multi-lateral and advice as to how to peacefully have AD and multi-lateral coexist /might/ change the long tail of InCommon game. Not a silver bullet but might help make some inroads. Msc.org
 - Don: I'll talk to our leadership, see if I can make introductions there. Agree with Sara's comments around connectivity challenges for these smaller institutions.
 - Sara: Also want to plug the open call for community advisory committees
 - Link to nominations: <https://incommon.org/community/leadership/join-incommon-advisory-committees/>
 - No additional items
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2023-9-1>
 - MikeD moves to approve, Amel seconds.
 - Approved by committee
- eduroam Support Organization Updates (Brett, MikeZ)
 - Link Oregon
 - Lane ESD (lead pilot) continuing to evaluate architecture requirements to integrated Google with ID. Giving the K12 community time to get started

with the academic year before approaching more school districts to deploy eduroam

- ConnectEd Nebraska
 - Brett: Holding steady at 70% of districts using eduroam. Focusing on transitioning from an initial 3 year pilot to more mature standardized service and sustained program. Have rolled eduroam into our standard agreement, will pre-populate accounts in the eduroam Federation Manager. Continuing work with ISPs Allo and Cox. Allo looking at pilot
- The Sun Corridor Network
 - Continued work on municipal deployments of hotspots, K12s in Maricopa county. Also working on grant tie-ins with eduroam
- UETN
 - Amanda Molinari presented on eduroam2go at TechEx23. Has also been working on procuring additional resources, hardware for that projects. Also continuing work on student deployments and broadening hotspot deployments. Have been focusing on conference venues for educators in general. Working with large conference site to have eduroam permanently rolled out.
- On-Rampers
 - CEN
 - Working on setting up their support structure for ongoing rollout and support of the program.
 - NSHE (Nevada)
 - Working through agreement with Internet2, also setting up an agreement structure for their pilot institutions.
 - Washington K20 Network
 - Amel: Working with our OSPI office to figure out best school districts to include in our On-Ramp pilot period. Also looking at hotspot opportunities to support the rollout, enhance the value of eduroam in the state.
 - Brett: Amel, Sara, MikeZ and myself were on the On-Ramp/Regional update call. Was good to see George Loftus and Linda Roos on the call as well. George attended Mobility Day at TechEx23 as well. Having attention and engagement of folks from the networking side who have strong ties to regional seems like a good sign.
 - Sara: Agree - we've seen interest and excitement across the board. Helps eSOs, their constituents, and RENs in general.
- Working group updates
 - K12 input on Best Practices Guide
 - Brett: Interested to see how Google integrations and tools like geteduroam will feature in the guide.

- MikeZ: The WG collected feedback from eSOs on current K12 best practices, will fold that into the revised guide.
 - [Google integration for eduroam](#) - include or reference in guide?
 - Brett: Wade Gibson from ESU11 in Nebraska put together process document, has deployed Google linked eduroam to 20 schools in ESU11. Between this and the work Mark Donnelly did on a containerized RADIUS with integration options with Google. Would like to see this sort of documentation derived from actual practitioners. Hopeful that we'll continue to build resources like this and share with the eSO community.
- TechEx report out
 - [TechEx23Mobility Day agenda, links to slides](#)
 - Brett: Members of this committee helped form up the program. Good update on industry standards updates. Amanda presented on eduroam2go project. Also had dual presentation on private LTE, CBRS, and 5G connectivity on campus and surrounding area. One thing to note WRT that presentation is some "why do we need eduroam" pushback we heard from schools which had implemented 1-to-1 cellular enabled programs. Ming Ho from Internet2 presented on their internal trial of geteduroam. Lots of potential there for lowering the barrier for adoption. Rob, myself presented on the work of this committee. So good cross section of work that's done
 - [eduroam Special Interest Group](#)
 - Sara: Largely a follow-up from Mobility Day, update on the service overall, also gave us a chance to coordinate on ACAMP topics. Also discussed the upcoming enhancements to logging interface.
 - eduroam related ACAMP session minutes
 - [Eduroam and timeouts](#)
 - [Does it have to be this hard? Eduroam, etc](#)
 - [Eduroam Advisory Committee Office Hours/Open Roaming](#)
 - [90 Day Certs](#)
 - Rob: Had more topics than time. First half of discussion was looking at future enhancements like RADSec, then talked with Tom Barton about how lessons from InCommon's Baseline Expectations could be applied to similar effort for eduroam. Lots of interest in ISP work like as well.
 - Sara: Were there carry forward topics for this group?
 - Rob: Baseline expectations metrics/indicators that could be included in monthly reports. That would help drive awareness of needs and gaps within the community. Having a dashboard of indicators and metrics will be important to that work.
 - Brett: Tom Barton's participation was really helpful, esp WRT to baseline expectations.
 - Working meeting of the eduroam team

- Sara: Was an internal meeting but good outcomes. Also spoke to CACTI's request of the eAC to come up with metrics on service health, looked at ways to address some of those needs. Will preview that work with this group late this year, early next.
- Cox update (Sara)
 - Sara: News upcoming on work. Will post links here when available.
- Cloud based multi tenant questions (Amel)
 - Amel: A few months ago we discussed the possibility of cloud based vendors like MIST being multi-tenant capable. Think there is a lot of potential here, especially for K12 communities and smaller institutions. Need to consider impacts of things like MSCHAPv2 deprecation making it harder for K12s. Cert management could also be simplified. Can make location updates easier and/or automated. If we look at Google or Azure as ID providers could make cloud deployments easier. I know there were concerns about logging multitenant implementations but feel there are solutions to that. Would ask this committee to discuss this further
 - Brett: Thinking about the catalyst program, having vendors that adhere to community best practices. Could be an initial engagement point on this work.
 - Amel: Agree.
 - MikeD: Do you think there will be privacy concerns if vendors have access to user roaming info, other potential PII?
 - Amel: They'll have a lot of that information anyway - they could put on-prem infrastructure out that would end up collecting that info.
 - Brett: I was thinking about the NET+ program and how they leverage community buying power to get unique contract or technical aspects. Could include an agreement to keep user data private.
 - MikeZ: Thinking through sequencing - initial conversation with Ann West, Sean O' Brien (AVP of NET+), Sara Jeanes, members from this committee on goals and scoping, then identify vendors to reach out to?
 - Romy: Sounds right to me.
 - Volunteers from this committee to set up initial scoping call with Internet2 staff?
 - Brett
 - Amel
 - MikeD
 - Al: MikeZ to work with Romy to set up call.
- Close out comment period on RADIUS attribute guide
 - Next step: Post to eduroam US Knowledge Base
 - Al Mike: Post to eduroam US knowledge base
 - Rob: Question back to this group, are there things for the Best Practices Guide around sending attributes? Are there attributes to be concerned about? Ones that might be desirable? Also consider implications for BE. VLAN tagging, location attributes are examples of items that could leak PII.

- Brett: Should fold that into ongoing work by Best Practices Guide working group. Maybe also send out note to community on availability of the document. Also IAMonline on this and/or BPG?
- Rob: Could consider formalizing a working group for BE? One deliverable would be a rubric for compliance, thresholds for metrics, and info around those points that could be added to monthly reports
- Brett: That sounds like a great idea. We should also think about folks outside this committee to join that BE Working Group. Do it now or defer to next meeting?
- Kendra: I think deferring to next call as we're light on participants
- Brett: Agree. Will add to next call.
- Next Meeting: October 27th, 11:00am - 12:30pm ET
- AOB?

Friday September 1, 11am-12:30pm ET

Attendees:

Sara Hasnain - UF
 Brett Bieber - Nebraska
 Kendra Ard - CSU
 Josh Howlett - Independent
 Mike Dickson - UMass Amherst
 Amel Caldwell – University of Washington
 Chris Phillips - CANARIE, CACTI member
 Jeff Egly - UETN
 Rob Gorrell - UNCG

With:

Ann West
 Sara Jeanes
 Romy Bolton
 Albert Wu

Regrets:

Tom Rixom

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- InCommon Futures Discovery project (Kevin Morooney/SecondMuse)
 - With special guests from the advisory community
- Agenda bash
 - Bashed!
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2023-8-4>
 - Jeff motions to approve, Kendra seconds
- Report out from CACTI's discussion on RADIUS/UDP issue (Rob)
 - Rob: I delivered the eAC response to CACTI at their last meeting. As reminder we suggested a two pronged approach
 - Work on Best Practices Guide update (already underway)
 - Develop a metric that could be included in something like the eduroam reports that shows eduroam subscribers how well they're complying with current best practices, identify gaps
 - Would work with Sara and eduroam team on that.
 - MikeD: Saw email around use of Radsec internationally - what's adoption like there?
 - Sara: Some adoption, especially in the EU. They have a roaming consortium
 - Josh: There is a GEANT policy that's binding on the NRENs but Radsec isn't a requirement. Adoption in EU is almost exclusively between NRENs and very little at the institutional level. Most of those institutions are in Germany.
- Feedback on draft [RADIUS attribute usage guide](#)
 - Sara: This would be treated as a Knowledge Base article. So we're looking for eAC feedback but won't be presenting to community for input.
 - MikeD: Is there a deadline to have feedback in?
 - Sara: We'd ask for feedback no later than 9/30
 - Rob: Would be interested in talking about whether we should consider stripping some of these attributes. Topic for Best Practices Guide, especially WRT privacy preservation?
 - MikeD: Agree - we can always initially err on the side of stripping more attributes and dial that back. Easier to give attributes than take them away.
 - MikeD: Would attribute stripping happen at top level RADIUS? Or at individual RADIUS?
 - Rob: Merits discussion. It's one consideration as we look at this document.

- Josh: The document does touch on this - there isn't anything in the set of attributes is the minimum needed to make the service work. Don't know that any of the attributes included as minimums has privacy implications but am open to thoughts from other. Consider loss of transparency if we strip attributes at the TLRS level.
- Rob: Think about responsibility that could add for individual institutions.
- MikeD: Josh mentioned compliance scores - seems like a good way to present compliance metrics.
- Rob: From a transparency perspective we've had the BPG out for a while now. CACTI asserts that eduroam community may not be following those practices, hence suggesting the metric as a way to move subscribers toward compliance. And would give us some data on compliance levels before we start making decisions, formulating policy, planning action.
- AI FOR COMMITTEE: Finish adding feedback to Josh's document by 9/30.
- Chris: WRT eduroam baseline and scorecard I'm happy to share perspective on work to date at the federation levels and with our work in CANARIE
- Next Meeting: September 29th, 11:00am - 12:30pm ET
- AOB?
 - Add "Cloud based multi tenant questions (Amel)" to next month's agenda.

Friday August 4, 11am-12:30pm ET

Attendees:

Brett Bieber - Nebraska
 Jeff Egly - UETN
 Kendra Ard - CSU
 Amel Caldwell - UW
 Rob Gorrell - UNC Greensboro
 Josh Howlett - Federated Solutions
 Saira Hasnain - University of Florida
 Dion Baird - Oregon State University

With:

Romy Bolton
 Sara Jeanes
 Ann West

Kevin Morooney
Mike Zawacki

Regrets:

Tom Rixom
Michael Dickson

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Amel: Revisit cloud based multi tenant topic. If we don't cover it today we can add it to next month's agenda
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2023-7-7>
 - Saira moves to approve, Amel seconds
 - Majority approves.
- Support Organizations Update (Mike)
 - Sun Corridor Network
 - Proof of concept for eduroam enabled mifi hotspots for students/staff. Gabriel Lopez has been engaged with Maricopa county on municipal eduroam covering schools as well.
 - Link Oregon
 - Working with a few pilot districts including google integration. There is a requirement for MFA use and they're trying to understand the relationship/impact to wifi.
 - UETN
 - Jeff: Amanda Molinari updated eSO community on new support for Wifi6 and WPA3 transitional mode for Cisco APs. Looking into working with the Salvation Army for hotspot deployments in support of afterschool programs. User Group meeting August 17th, 4:30-5:30pm ET
 - (link)
 - Nebraska
 - Brett: Have added 25 new schools over summer. Omaha public schools has signed up - largest district in the state, so big win. Working with parochial schools as well. Had annual administrator conference, enabled eduroam for conference venue, high usage during the conference. Have been working with municipal hotspots with Allo, work progressing with

residential deployments (more on that later). Working with our districts on understanding the eSO support model, encouraging more expertise building within our community. Full thanks to Josh for helping out with some of those issues!

- Working Group Updates
 - Transitional Technologies
 - Publish knowledge base articles, spin down group
 - Amel: Feel like we have the three articles finalized. No public comment received
 - Brett: Move to approve them to publishing those articles.
 - Amel motions to approve, Jeff seconds
 - Majority approves.
 - Brett: Next steps?
 - Mike: Close public comment page. Add to Knowledge Base
 - Rob: Would there be a blog post or something similar?
 - Sara: Could post to eduroam-admin list, also include in InCommon newsletter
 - Rob: I can draft a note.
 - AI Rob: draft and share with committee
 - Best Practices Update
 - Mike: Group met, assigned
 - AI: Mike will coordinate meeting with eSO volunteers. Will provide them with current section on K12 considerations from BPG, ask them to notate and come to a meeting ready to discuss
 - Rob: Could be useful to share some of the notes from Tom ROlfes on ERate concerns, also encourage additional discussion on topic of filtering
 - Brett: We could ask Tom to join us for discussions or input as well.
 - AI Brett: Contact Tom
 - Cert redesign
 - Sara: Cert Services currently has about 650 subscribers, mostly purchasing SSL certificates for websites. Have added additional services (code signing certs, user certs) but have increasingly heard from the community about needs to be updated. Shortening of cert lifetimes is one driver. Focus of group is on automation and delegation to reduce workload, increase flexibility. Also hearing that there are needs that aren't being met - devops lifecycles, private CAs, etc. Latter is especially valuable to eduroam as we move toward cert based authentication. Nadim and Josh have been attending the calls as well. Currently reviewing use cases, including eduroam use cases around private CAs, and will check in with committee on prioritization. That will help inform the group's direction of work.

- Josh: Issue that Sara laid out around credentialing devices and 90 day cert expiration are particularly important and will drive interest/need for private CAs. Good use case for eduroam. Issue hasn't gotten a lot of attention in the supplicant and RADIUS server vendor space yet. More focus on web based certs.
 - Brett: Thinking about current Best Practices Guide emphasis on cert based authentication. Good to have a way forward to balance the benefits of cert based auth and changing landscape in areas like cert lifecycle. Very important to eduroam community, particularly for newer adopters. Sara, any other requests for the eAC on this?
 - Sara: Continued participation by Nadim and Josh is great. Will likely be coming back to this group for focus groups, other community inputs.
 - TechEx 23 Mobility Day
 - Report out from program committee
 -  TechEx 2023 Mobility Day program committee calls
 - Page 2 has a rough agenda and presentations proposed to date
 - Brett: Thanks to Sara for securing a half day slot on Monday 18th. Currently soliciting proposals for presentations and panels. Main update is that we haven't had external submissions but have identified a number of speakers, one has confirmed (Nash Higgins from Texas A&M on 5G deployments).
 - Brett: Wanted to get input from this committee - any gaps? Additional topics that should be included?
 - Jeff: Good discussion at last meeting, lots of progress on firming up agenda. Still room for additional topics
 - Brett: Next steps for program committee is send another push for proposals. Then send note on agenda to community
 - Mike: Will also look at posting agenda on wiki, possibly in eAC's area, will include links to decks, etc. Similar to TNC's mobility day
 - Sara: Would encourage members of this committee to direct folks who are working on/have presented on mobility topics (eduroam, private LTE, IoT, etc) toward the intake form
 - https://www.google.com/url?q=https://forms.gle/MFhGj6WQKw66u3Vv8&sa=D&source=docs&ust=1691166601131819&usq=AOvWaw1djAj23W_LlohnWDW9ZZKE
 - Amel: Would be great to include WPA3/Wifi6E as a topic. I have one person who might be good to present on that
 - Brett: I can include that as a potential topic in my reminder to the eduroam-admin list. Program committee will meet one more time before August 18th, will publish agenda at that time.

- Brett expects any attendees of TechEx to join us for Mobility Day :)
- OpenRoaming paper/IAMOnline update (Saira)
 - Have an older draft that I'll base my article on. Have been dealing with a lot of fires in day to day and want to turn back to that soon
- Update on industry engagement (ISPs and hardware manufacturers)
 - [Draft ISP Guidance](#)
 - Brett: Being driven by work in Nebraska with Cox Communications in Omaha and Allo in Lincoln. We've found that we continue to revisit some of the same subjects, felt it would be helpful to have talking points/framework for how these partnerships could look. Important as more K12/eSO engagement happens in these spaces. Draft above is my attempt to articulate the challenges might be with these larger scale deployments and solicit feedback from the community. Shared with the eSO on our regular coordination call earlier this week, generated good discussion. Would welcome any thoughts, opinions, questions from this committee
 - Sara: Ann and I have officially engaged some folks who have expertise in wireless and cable industries to work out what it looks like to engage with this industry segment. Would value and appreciate feedback from this community - we're early in our engagement here, but this is an important segment of the service so want to be transparent and build things out sustainably.
 - Rob: Really excited about starting to explore this. Many thanks to Brett for this document. I read through it and think it's great.
 - Jeff: Agree with that. Good detail, thoughtfully addresses critical issues like dealing with balance of privacy when mapping residential hotspots, etc. Based on some of the activity we saw during pandemic we could really see the value of broader deployments in public spaces.
 - Brett: In the spirit of seeking out conflict wanted to gauge everyone's interest/thoughts about the opt in vs. opt out nature of ISP enabling eduroam for residential customers. So they're deploying a configuration for eduroam hotspots. Would be very helpful to articulate a position on opt in/out approach. Also feel it's important that whatever the approach is, it's important that both the ISP and any eSO involved in deployment are in agreement.
 - Saira: Do we spell out what data elements the ISP would have access to as part of their hotspot deployments? Think we need to clearly state that, both for residential customer information and for ISP.
 - Brett: Great point. For ConnectEd Nebraska we would want to hold ISPs to standard hotspot requirements around logging, etc. But you're speaking more to what the residential customers would hear?
 - Saira: Yes. Believe it's important to be transparent with them about who's involved in the transaction - ISP, eSO, others? And to help them

understand what participation entails. Also consider legal aspects/requirements.

- Brett: Great point. There's a section on communication where I tried to provide considerations of transparency and think your questions are good to include. Also, consider that we're expanding participation in the eduroam community to people who've never engaged with us (e.g. residential broadband customers) so it's important to be clear
- Rob: Agree - it's a new educational challenge in a new sector. Tenants and practices might be the same, but need to ensure they understand some basic and important concepts
- Ann: thinking about this in the corporate context - the compliance statement was written with R&E in mind, not private industry. Saira's point is important for that reason.
- Jeff: Want to think about who's providing that messaging. One thing we found when working with partners like transit authorities was that communication and clarity could be a challenge. Good to head off misunderstandings, miscommunications
- Ann: One thing I put in was scaling concerns. Lots of value for eSOs for the service, etc. Thing I'd look at is making sure that the right partners are involved and that roles are clearly defined. There could be a formal relationship that involves industry partners, eSOs, and I2. Brett did a great job identifying strategies that we need to think through. I propose that we use this as a pilot document, and that the explicit approach be opt-in. We can gauge in pilot how the opt-in and residential eduroam deployments are perceived before thinking about how to do it at state or national scale.
- Jeff: From an I2 perspective are there items that give you pause on the back end, once things start to scale up? What are you thinking about for that phase
- Sara: A big one is the perception of eduroam, quality of service, brand reputation. Users rarely differentiate between the service and the network it's been deployed on. Need to consider that as we look at broader deployments. Privacy is another one. User data tends to be approached differently in R&E vs. private sector. Need to avoid data mining (and concerns from R&E communities around privacy). Another is infrastructure impacts. Also think about the core value of eduroam. Originally imagined as a way for researchers to roam around the world. We've added students, staff of HE *and* K12. Want to make sure we're driving users making use of the service and number of places those service is used.
- Rob: Discussion parallels discussions we'll be having when OpenRoaming becomes more prevalent. Great to have these sorts of talks now.

- Ann: I'm wondering if Josh has thoughts here, as a long time provider and support/implementer.
- Josh: Have been public deployments in EU in partnership with commercial provider but it was always the municipality "owning" the hotspots. This is a different model, with industry being more explicitly forward. One thing I'm thinking about is the use of the eduroam trademark. GEANT owns trademark, and commercial providers don't seem to fall within the R&E requirements to participate in eduroam. Don't imagine there would be any major resistance to this but suggest reaching out to them
- Saira: From a lay perspective, when a user connects here on campus, they're behind our firewall. With this approach if I'm at home and participate in this pilot, I'm no longer inside UF's network. Is there a user perception issue there? Do they need to have the differences made clear/manage their expectations for security and access to resources that are only available to people connecting to UF's campus?
- Brett: Matter of user training. Drive home that when you roam you might need to use a VPN, as with any other time they access the internet from an off-campus location. So it's an existing issue but could drive a need for more education.
- Saira: Complicated by instances where users are visiting a business within or very close to UF's campus and end up connecting to our network. They will still have access to protected resources, etc. I think this is all good - just speaks to considerations around user education
- Brett: Note - I'll add preamble to this document making it clear that this is a draft doc. Sara, Ann, any updates on reaching out to GEANT on trademark?
 - Sara: We've engaged with GEANT on this, want to look at a way to streamline approvals and engagements with ISPs and other industry partners.
- Location data/Compliance Statement [letter from Brett](#)
 - Brett: Letter was sent to GEANT and other governing members of international eduroam community.
- Notice on change of committee nomination process, reminder of dates (Brett, Mike)
 - Process will be presented at next quarterly Chairs Committee meeting (later this afternoon)
 - Brett: Mike and I will attend that meeting and will report back to this committee.
- CACTI open letter to eAC on security of RADIUS (Rob)
 - AI For Rob to share out with committee, would like to check in with eAC once I have a draft reply
- Next Meeting: September 1st, 11:00am - 12:30pm ET

- AOB?

Friday July 7, 11am-12:30pm ET

Attendees:

Brett Bieber - Nebraska
Jeff Egly - UETN
Kendra Ard - CSU
Jeremy Livingston
Amel Caldwell – University of Washington
Mike Dickson - UMass Amherst
Tom Rixom - SecureW2
Dion Baird - Oregon State

With:

Ann West
Sara Jeanes
Mike Zawacki
Romy Bolton
Steve Zoppi

Regrets:

Nadim El-Khoury
Josh Howlett
Tania Mahood

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2023-6-16>
 - Motion to approve: Jeff, second from MikeD
 - Approved by consensus

- Administrivia
 - Update on conflict of interest discussion at chair level
 - Brett: At quarterly chair meeting topic of Col came up. eAC was mentioned, initially WRT non-voting subject matter experts. One of the outcomes was the idea of a list of all members and affiliations for each committee. Committee members could also discuss their affiliations in annual introductions
 - Membership of committees, affiliations: <https://incommon.org/community/leadership/>
 - Brett: Questions, discussion from the committee members?
 - Jeremy: Agree with idea, esp with periodic renewal/updates
 - Brett: FYI - Tania Mahood has transitioned to Deschutes county government position and has a standing conflict with this committee's meeting time. Has offered to step down. The committee can either refill position or leave the seat vacant
 - AnnW: The Committee Rollover Process will start in August. You could wait and include her seat in the rollover for 2024.
 - Jeremy: If we wait until year's end would they have a 3 year term at that point or would the seat end in 2025?
 - Brett: I would be in favor of having the seat be a full 3 year term. Could help with continuity, stagger membership rolloff
 - Jeff: I like that idea.
 - Brett: I would like to move to thank Tania for her participation in the group and her contributions to the committee.
 - Brett: Propose moving ahead with vacant seat until August rollover, then fill seat
- Support Organizations Update (Mike)
 - ConnectEd Nebraska
 - Brett: Have had one new district sign on, looking toward increased adoption in the panhandle area. Currently negotiating a contract Omaha school district. End date of the contract is 6 months from now. After that the service will fall under the general profile of offerings from Network Nebraska. Omaha PS lawyers seemed to struggle with how the service is delivered, role of NN. Will likely have to hold off on signing them for 6 months. Have also been working on residential eduroam deployments with Cox and Allo.
 - Link Oregon
 - Attended the eSO training last week, including configuration, troubleshooting, etc. Continuing to work on Google integration and working with InCommon staff to overcome some obstacles.
 - The Sun Corridor Network

- Continuing to work with pilot school districts. Working with the City of Phoenix for future hotspot locations across the city.
- UETN
 - Jeff: Have been working on service improvement. Have been working on providing eduroam for regular conferences and meetings for educational groups across the state. Amanda Molinari continues to work on eduroam2go project (community sourced “hotspot in a box”. Amanda also presented at Tech Summit on eduroam2go, with virtual attendance from other community members. Also working on promotional materials, including a run of Utah themed stickers. Met with local Comcast rep, looking at NN’s work with Allo and Cox as a template for public hotspot deployments. Worked with Rob Gorrell on BYOD questions he had as part of a PoC in North Carolina.
- Brett: WRT promotion, there’s a group of eSO team members that participate in a social media coordination, so expect more updates on the promotional front
- Brett: Wanted to talk through training for eSOs. Leverages expertise from Internet2 and community to train up eSO staff, constituents. Intended to better position eSO and their communities for success. Found it very comprehensive, wanted to make this committee aware of the training available to eSOs. Also wanted to highlight two new On-Rampers - Washington K20 Network and NSHE
 - MikeZ: I2 is currently drafting an announcement, will provide link to this committee when available
 - Jeff: Wanted to mention additional areas of collaboration in the K12 space, especially WRT IAM and related services.
 - Brett: Agree. As you expand into K12 you see that their community struggles with basic IAM. eduroam provides them an opportunity to see the potential for identity management.
 - MikeD: Could we see some of the course material?
 - MikeZ: I can post syllabus
 - Day 1:
 - eduroam Overview
 - Service Fundamentals
 - Wireless Access Points
 - Working with RADIUS
 - Dynamic VLAN assignment
 - Day 2:
 - Working with the eduroam Federation Manager (eFM)
 - Onboarding users with CAT
 - Supporting users and service
 - Certificate management
 - “eSO Training by eSOs” - lessons learned, best practices

- as an eSO
 - “eduroam2go” - an approach to community based hotspots
- Day 3:
 - Debugging and troubleshooting common eduroam Issues
 - Working with Google Identities and eduroam
 - Wrap up discussion, general Q&A
- Working group updates (MikeD, MikeZ)
 - Transitional Technologies
 - MikeD: Group has been finalizing write-ups on 3 areas of transitional tech. Are ready to share these publicly
 - AI MikeZ: post to Knowledge base after eAC review.
 - <https://spaces.at.internet2.edu/display/eduroam/eduroam+Transitional+Technologies+updates>
 - Brett: Very cool stuff - noticed that there was also mention of this group's work in the international eduroam community. What are next steps?
 - MikeD: Could solicit feedback from this committee before publishing
 - AI MikeZ: Set up feedback form, send to committee
 - MikeD: Also talked through possible impacts of OpenRoaming, Passpoint, other roaming federations and new auth types like EAP FIDO. Also briefly touched on commercial offerings to manage RADIUS and/or IdP offerings.
 - Brett: One thing I want to applaud this working group on is the formatting of the documents - intuitive, helpful. Increasingly important as school year ramps up
 - Best Practices Update
 - Brett: Any updates on this?
 - MikeZ: A few sections remaining. Next big task will be coming up with a way to facilitate consultations/collaboration with eSO volunteers on K12 section
- Mini-Mobility Day update (Brett)
 - [Draft announcement](#)
 - Brett: 3 hour event on the first day of TechEx (Sept 18th). Modeled on TNC's mobility day. Covers topics on wifi, 5G, other mobile connectivity. Group has met twice. Sara suggested modeling Cloud Forum approach to soliciting topics and presentations. Sara and I have drafted a call for participation to suggest topics and volunteer to present. Timing is tight - want to allow enough time for review of topics and presentations, and for presenters to plan travel.
 - Brett: Will set up Google form to collect topics and presentation proposals. Program committee will review, finalize program. Have a few topics in mind CBRS, 5G, municipal wifi, etc. Also wanted to ask this committee for thoughts on topics, how to promote event.

- Attendee Scholarship applications close July 14th, provides funds for travel, lodging, food, etc
 - <https://internet2.edu/community/internet2-inclusivity-initiative/>
- Brett: Should we mention this in our announcement?
 - Sara: I like that idea. Should get note out soon given July 14th deadline.
 - Brett: Think it'll help drive interest in Mini-Mobility Day and TechEx in general
 - Jeff: I'll share the scholarship info with our team, interested in ongoing work to promote.
- Brett: If others in this committee are interested in participating please raise your hand now and we'll add you to the meeting series.
 - Additional volunteers can register interest here
-
- OpenRoaming paper update (Saira)
 - Saira to update the committee on progress
 - Tom Rixom: Would love to share our knowledge on our openroaming experience with ppl in this group but might be easier to reach out to Sara and Mike separately. I'm on holiday atm but will reach out end of next week or 17th onward.
- Residential eduroam update (Brett/Ann/Sara)
 - Brett: Nebraska's rollout has garnered interest from broadband service providers. Both have expressed interest in public hotspots. One also has residential customers that might be included in offerings. Looking at localizing RADIUS traffic, hairpinning back to local IdPs without routing to TLRS1&2. Both are different scale deployments, one is more metro level of public hotspots. Working with Ann West and Sara Jeanes on technical, business, and legal aspects of project. Wanted to make eAC aware of interest from these commercial providers and the nature of their interests (as well as concerns from these ISPs that we're addressing). Sara and Ann have been leading discussion around business and legal models. Would like to hear thoughts, questions from this committee
 - Sara: Currently negotiating limited pilot agreement with one of the providers in Omaha metro area. Have had initial discussions around contract approaches with public and residential hotspots, also looking into technical side of managing those deployments. Have also been working with Rob Gorrell on residential deployments of hotspots. Would like to discuss a couple of governance issues with this group.
 - How do we handle mapping residential hotspots? There's a requirement from GeGC compliance statement to reflect service locations via eduroam map but need to be mindful of residential customer privacy. How to approach that?
 - How to handle opting in/out for residential customers? Does ISP have the ability/right to push eduroam on VLAN to residential customers? How do

residential customers signal their approval to participate? Opt in? Opt out?

- Sara: Also want to be mindful of service integrity and reputation.
- MikeD: I think there might be precedent on opt-in/out with Comcast/Xfinity. They broadcast public wifi accessible to their customers. Initially no opt-out but was challenged in court. Don't recall where that landed. Sounds like these providers are doing the right thing by considering opt in/out options.
- Brett: That was cited in discussions with these providers. Also some nuances around whether customers own the router. If the customer owns the equipment, need to explicitly opt-in. If ISP owns equipment they have more leeway in how to manage customer participation. Would also mention that one of the providers have been in contact with NTIA - good opportunity for Internet2 to meet with equipment manufacturers, other players in this space.
- Brett: Would like to have this committee discuss and recommend how to handle balancing customer privacy vs requirement to publish eduroam hotspot locations. Could craft some suggestions around mapping requirements, how to ensure that locations are represented, and provide that to the GeGC as an update to existing requirements for location mapping. Could also be a chance for us to update how numbers of APs are represented (e.g. do we say "there's an AP at this apartment complex"?). Feel we can provide some leadership in striking a balance providing service location data and preserving privacy
 - Ann: Like this idea, and suggest the first step would be to share it with Klaas Wierenga rather than take it directly to the GeGC. There's no real precedent for this internationally/ It's a "US only" variance. The other aspect we're discussing is US branding of the service and where that resides.
 - Brett: Appreciate that insight and guidance!
- Brett: Next steps? Draft some ideas and then meet with Klaas?
 - Ann: Drafting some language around what we want to see WRT eduroam to the home and logo considerations and then sharing that with Klaas
 - Brett: I'll commit to drafting some bullet points. Also, wanted to point out that one of the providers says there are limitations to publishing data on customer locations. Could be something to include in our thinking and communications.
 - Ann: Sara and I are happy to work with you on that.
 - Jeff: Location in particular is important to get right. UETN is looking at similar issues for an LTE, CBRS project we're working on. These kinds of things can have some impact on funding considerations. We'd love to contribute to this discussion as well.
 - Ann: Sounds like an eSO conversation

- Brett; Agree - it has implications on “homework gap” discussions that the eSO community is very involved with. Good alignment with that group. MikeZ - let’s include this in eSO coordination calls.
 - Al MikeZ: Ensure this is added to ongoing coordination calls with eSOs
- Ann: Be mindful that as we work with more providers that offer services across multiple states could introduce complexity. Also important to note that without eSOs like Network Nebraska none of this work would be possible. Want to be sure that you and other eSOs get some of the credit and “glow” for this
- Brett: Important to get the funding structure right, especially as we look at impacts to the national and regional infrastructure
 - Ann: Agree. Branding is another aspect - need to ensure that roaming users know that eduroam is eduroam. Maybe I2 has a fulfillment center for promotional materials and branding. eSOs and commercial partners could come to us to get logos, stickers, other branding elements. Also need to think through how to enable these commercial providers work with us on a technical level, including testing and APIs to enable, for example, automating service location updates to eFM.
 - Jeff: Like the idea of a fulfillment service. We have some ability to do that in UETN but it’s limited. And others do not have that capability. Having that solved would be helpful.
 - Ann: Also want to be sure we include room for appropriate customization, allow for communities to see branding that reflects them. And still ensure consistency of branding and message.
- Certificate Redesign group update (Sara)
 - <https://incommon.org/news/incommon-certificate-service-advisory-group-launch/>
 - Sara: InCommon cert service hasn’t had a technical refresh for a while, wanted to have a community input channel for that. Group includes two eAC members (Josh and Nadim). Where we see crossover with eduroam is around cert issuance. Cadence of every other week. Would like to look at a tiered model of capabilities and needs to support those tiers. What that looks like for this group is TBD, but expect ongoing updates as work progresses.
 - Brett: Are there any needs for support on this effort from this group?
 - Sara: There are other slots on the working group if folks from this committee feel they have a specific perspective to bring for the work.
- Next meeting - August 4th, 11:00am - 12:30pm ET
- AOB?
 -

Friday June 16, 11am-12:30pm ET

Attendees

Saira Hasnain - UF
Amel Caldwell – University of Washington
Brett Bieber - Nebraska
Jeremy Livingston - Stevens
Brett Bieber - University of Nebraska
Rob Gorrell - UNC Greensboro
Jeff Egly - UETN
Nadim El-Khoury - Springfield College
Mike Dickson - UMass Amherst

With

Mike Zawacki
Sara Jeanes
Romy Bolton
Kevin Morooney

Regrets

Dion Baird
Tom Rixom
Tania Mahood

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2023-5-19>

- Amel: Should we remove “do not share externally” comment on new On-Ramper announcement?
 - Consensus: Yes
 - Saira: Motions to approve, MikeD & Jeff Second.
 - Approved!
- Trip report from TNC23 and Mobility Day
 - Sara, Josh, Mike
 - Sara: A couple major highlights for eduroam. One was the eduroam track with Alan DeKok’s proposed updates to RADIUS standard. Paul Dekkers presentation on new features & functionality for geteduroam app, and MikeZ and I presented on eSO program. Biggest takeaway for me was that the way most NROs talk about eduroam is more network-centric, where in the US we look at it more as a gateway to connectivity. Also had a conversation with Klaas Wierenga (CTO for GEANT) about trademarks and branding for eduroam, esp with increase of eSO deployments.
 - Josh: Mobility Day included a presentation on a new EAP type - EAP-FIDO, which is similar to cert based authentication but few of the drawbacks. Still several years off, but promising. Also had a discussion at the end of Mobility Day regarding the CAB forum’s stance on many certificate lifecycles being reduced to 90 days. Questions from our community around how to deal with that - could push more automation of cert renewal or could push back on a policy level. Also looking into creating a CA to work around this
 - Sara: With regard to creation of a new CA, could be something for this committee to track.
 - Josh: If automation is pursued as a fix we’d need to consider vendor and infrastructure impacts.
 - Sara: There are changes incoming at the beginning of September, but the 90 day expiration is further out.
 - Brett: Really interested in EAP-FIDO. Could be transformative.
 - Josh: Agree. Being able to remove certs (partly or completely) would address a number of issues, particularly with the upcoming 90 day cert lifetime.
 - Brett: Looking at how EAP-FIDO and geteduroam could change the landscape,
 - Link to [Mobility Day wiki page](#) (includes slide decks from all presentations)
 - Link to [Alan DeKok’s presentation](#)
 - Recording of the eduroam sessions
<https://tnc23.geant.org/recordings/?session=s255>
 - Follow-up on [Josh’s EAP findings](#), input on next step
- Update on RADIUS 1.1 - Rob
 - Please see Brett Bieber’s email to the committee sent on Monday, June 12

- Rob: CACTI was looking for some guidance on how/if to respond to new standard. Questions and concerns around privacy and location sharing. Reflects ongoing conversations in this group WRT Best Practices Guide update, ensuring that users and infrastructure are configured to preserve privacy
- Josh: Margaret's email mentioned practices that could breach user privacy. Most of these are addressed as part of the eduroam Best Practices Guide. But those are just that - best practices. Absent requirements some community members will not adhere to these practices, especially if there are cost implications. Issue that Margaret raises that hasn't been discussed yet is the emission of the operator name attribute by SPs. Just their realm, but still potentially problematic. That attribute is needed to generate the CUI (chargeable user identity) attribute, though. If we stop using explicit user name and operator name then we lose all identification of users. We should be encouraging SPs to send operator name to preserve the ability to generate CUI.
- Rob: Also some discussion of moving away from RADIUS over UDP.
- Josh: Yes, there's a short term picture of the above issues around CUI/Operator name and the long term move toward using RADIUS over TLS. That will be a much longer term project that will take many years
- Brett: Margaret had asked if we should develop an informational document for the eduroam US community. Think that makes sense, especially as we look toward more K12 deployments. Could be an action item for this committee. The other part I was thinking about was states where there are additional student privacy requirements - should we be more proactive in addressing those concerns? Is there expertise in the community that could help with that?
- Rob: Agree. It's a two part discussion - make sure we have the right recommendations in the BPG and the second part is addressing the reluctance to adhere to those practices. Do we need to look at requirements? Is there a topic here that fits into Baseline Expectations (BE)?
- Sara: How much of the BPG could be enforced client side vs. enforcing via BE? Consider impacts if most of the devices being used are private devices vs managed devices
- MikeD: Our efforts to communicate with end users don't always work until we reach out personally to them. It would make sense to reach out to eduroam admins with info in reports on user behavior (e.g. who's releasing a username@realm outer identity, etc). Users often just see eduroam SSID, connect, and go about their business. Often find ourselves at the mercy of vulnerable, poorly configured user devices.
- Brett: Wonder if we could also monitor at the TLRS level. All of this speaks to the effort level of a BE initiative. Feel like we'd need to do a lot of education of our community before imposing requirements. Can we get detailed reports around the items Margaret and Josh have pointed out?

- Sara: That kind of what I was poking at. Community's approach to the technology in federation and eduroam are very different. In eduroam we're more talking through industry/tech standards that would be changed, less community driven. So there are parallels to the work of InCommon BE and eduroam BE (need for communication and education of community) but the driving force is different. In eduroam we're responding to changes in the technical environment.
- Rob: Consider that a lot of the changes discussed are years out. Different approach needed for issues that are shorter term, here and now. Thinking of lack of adoption of BPG, things that could be done today
- Brett: There's a requirement for engagement with the community - many set up eduroam and then forget about it. Need to generate the willingness to change approaches, comply more with BPG. Would like to have this committee respond to Margaret. What do folks think next steps would be?
 - Jeff: I'm thinking through how to educate community. We just held a technical summit with our community and topics along this line came up. So thinking about what the eAC can do to drive adoption of BPG. With my eSO hat on thinking through how we can do that for our constituent community.
 - Nadim: I would like to second the importance of user and admin education. Also thinking about having hands-on, office hour type sessions for the community demonstrating best practices, explaining the importance of them. BE efforts start with the admins and empowers them to reach out to their users.
 - Rob: Maybe the trick here is to align the monthly report better with best practice indicators as a means to communicate and inform site admins, not just of their stats, but their sites alignment to best practices. Pie chart to include in the report potentially... What percentage of an IDP's authentications are anonymized outer identity?
 - MikeD: Agree. This would be a start to documenting that institutions are making the effort.
 - Brett: Agree with Nadim's point - maybe look to existing "good practitioners" and ask them to help develop documentation, processes to move toward greater compliance. Rob, can you please reach out to Margaret and outline the above discussion? Also, would suggest we reach out to the eduroam-admin community and ask for their help -identify those who've already put BPG into practice, ask for them to help with community education. WRT Rob's point I'd ask Sara if we can adjust reporting to help with communication to eduroam US community?
 - Brett: Suggest we keep this as a standing agenda item.
 - Josh: Feel it's easy to slip into alarmism around privacy. We want to do good work, but there's a scenario that concerns me around outer identities. Not impossible to imagine that higher placed individuals -

politicians, researchers, etc - could be visiting countries, institutions that might not be "friendly". Wonder if we want to try and remedy situations like that, and how to approach the subject with community. Maybe use things like this scenario as an example in why this work is important, risks of doing nothing.

- Brett: We can look for partners within our communities (security professionals, etc) who can speak to these concerns.
- **AI: Rob to communicate with Margaret, sum up discussion here. Brett to draft some communications to community with MikeZ, present to this committee next month**

- WG updates

- Transitional Technologies

- MikeD: TLS1.2-1.3 done, ready to publish. WPA3 section nearly baked, some tweaks to make. MSCHAPv2 nearly done.
 - MikeD: For Amel, looking at the PMF section could we include alternatives to PMF mode for environments that don't offer that mode? Even a suggestion to work with your vendor could be helpful. Same with suggestion to avoid 192 bit encryption.
 - Amel: Agree with PMF/vendor statement. For 192 alternatives admins to fall back to 128
 - For group consideration: Issues with multi-tenancy in cloud offerings for eduroam (MikeD to lead discussion)
 - Potential points for discussion
 - What is the potential impact of accommodating multitenancy auth queries from vendors seeking to proxy auth queries to the TLRS servers on behalf of multiple customers?
 - What are the possible implications for the institution in this framework?
 - How would troubleshooting or forensics (user identification) be impacted? Who should the institution call?
 - Would the institution or the multitenant vendor be the "eduroam administrator" if RADIUS secrets, configuration, testing etc. is no longer managed by the institution?
 - Would the institution's ability to look at their own logs be maintained?
 - Are there any privacy or security implications?
 - Wireless vendors, wireless onboard services companies and cloud based authentication services may all have interest in doing this. Are there any distinctions?
 - How might this impact the financial model?
 - What if an institution wishes to switch wireless vendors if their vendor provides eduroam RADIUS proxy on their behalf?

■ Discussion from committee members...

- MikeD: So if an institution buys a cloud RADIUS product, that vendor would in theory talk to TLRS. Would we be the eduroam admin? Or would the vendor? Would we log into the eFM or the vendor portal?
 - Amel: I had it that the vendor would be the eduroam admin. You would log into vendor portal. That's been the approach that I've heard floated.
 - MikeD: One vendor we've spoken with had a workaround. Basically a proxy hairpin that re-routes visiting requests between TLRS1&2 and your IdP. Not ideal and only intended as a temporary workaround pending development.
 - Amel: I'd prefer to remind the eduroam admin, have access to local RADIUS logs. Haven't thought through it completely.
 - Sara: WRT scoping for this group, I think the broader question is a level up - what challenges are we looking to solve for eduroam subscribers. Vendors are trying to change some elements of traffic routing in response to user preferences. Would be more interested in thinking through what we're trying to solve and how best to solve them. If there's divergence between what we need and what vendors are offering we need to let them know and need to adjust our approach to service delivery/development accordingly
 - Amel: Feel like if we're going to move to the cloud we'd want more simplicity, more resilience
 - MikeD: Agree. "Putting things in the cloud" is a common approach for a lot of services. Federations complicate that. We'd want to simplify how these cloud services work with federations too.
 - Sara: I understand the attractiveness to cloud offerings, but want people to consider the 3-5 year timeline. If we want to endorse one or more vendors we'd want this committee to draw up requirements, help us understand what is needed from vendors AND what's needed from us in terms of existing architecture and eFM changes that would be needed.
 - Brett: There are some pages we could borrow from NET+ and HECVAT playbook around requirements for security and interoperability, as well as framework for engaging with

vendors. Maybe seek some guidance from Sean O'Brien, others in I2 T&I in how to handle engagement. Perhaps have them join us in future meetings to present on methodologies that I2 has used in the past.

- Update to Best Practices Guide
 - How to incorporate eSO volunteers for K12 feedback?
 - MikeZ: Link Oregon has volunteered to participate in this as well. Looking for a way to structure their participation.
 - Brett: On next eSO call could raise topic
- OR updates from Saira
 - Hold for next meeting
- Support Organizations Update
 - Link Oregon
 -
 - ConnectEd Nebraska
 - Brett: Ongoing engagements with commercial ISPs
 - The Sun Corridor Network
 -
 - UETN
 - Jeff: Had Tech Summit this week, presented on eduroam2go. Ironically had network issue during presentation will be holding another session to present to broader eduroam community
 - NSHE (Nevada) and Washington K20 as On-Rampers are confirmed
- Update on engagement with Cox Cable
 - Sara: Cox is reviewing a pilot agreement from I2 legal term. Time bound to 6 months from signature, will review work and lessons learned. Scoped to a few defined geographic areas. Negotiating fee structure, technical aspects, and branding.
- Mini-Mobility Day update (Brett, MikeD)
 - Report out from initial program committee meeting
 - Next steps for program committee, eAC
 - Brett to email update around this group
- Interest in a TechEx working meeting?
- Next meeting - July 7th, 11:00am - 12:30pm ET
- AOB?
 - ACAMP registration is open
 - Virtual gathering from July 10-14
 - Info on event, registration info:
<https://incommon.org/academy/camp-meetings/basecamp/>

Friday May 19, 11am-12:30pm ET

Attendees

Brett Bieber - Nebraska
Amel Caldwell – University of Washington
Josh Howlett - Independent
Jeff Egly - UETN
Tom Rixom - SecureW2
Mike Dickson - UMass Amherst
Rob Gorrell - UNCG
Nadim El-Khoury - Springfield College

With

Sara Jeanes
Mike Zawacki
Romy Bolton

Regrets

Kendra Ard
Saira Hasnain

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- Agenda bash
 - Bashed!
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2023-4-14>
 - MikeD motions to approve, Jeff seconds
 - Approved by consensus
- Mobility day for TechEx
 - Sara: Modeled on TNC's (GEANT networking conference - <https://wiki.geant.org/x/mwBplw>) Mobility Day event. Covers eduroam and other mobility technology (wifi, cellular, etc). Chris Philips (CANARIE) suggested we have something similar at TechEx.
 - <https://internet2.edu/2023-internet2-technology-exchange/>

- Scheduled for 1pm-4pm ET on Monday (Sept 18th - avoids conflicts with any of the other tracks)
- Interest for planning committee volunteers?
 - Chair (solicit talks, promote within the community)
 -
 - Program committee
 - Jeff Egly
 - Mike Dickson
 - Nadim El-Khoury
 - Brett Bieber
 - Possibly Chris Philips (advisor, other role?)
 - **AI Sara: Look into logistics, meal, etc**
 - **AI Mike: Set up initial meeting**
- Possible topics include 5G, cellular offload, Wifi 6e, and other emerging technologies
- Brett: Like this idea - lots of topics in the community that could be addressed. Chris signaled willingness to participate/lead?
 - Sara: He offered to participate but we'd like to see this group and others from the eduroam US community lead the charge. Want to ensure that conversation is lead by topics that are important/relevant to our community
- Brett: Thoughts from the committee? Good idea?
 - Josh: Yes
 - Jeff: I like this as well, think it's very timely. May or may not be able to attend but worth noting that we (UETN) are heavily engaged with CBRS/private LTE projects and eduroam comes up in those discussions. Also mentioned in connection with WiFi6. Jim Stewart (UETN CTO) has expressed interest along these lines as well.
- Questions of ssid name - followup to eduroam-admins list WRT adding a spectrum related suffix/prefix to eduroam SSID
 - Brett: Kicked off on list by Mary Bull. Thought it was great that she brought a topic to the community. Feel it's important to make newcomers feel welcome, engage in discussion. Topic of handling transition to newer tech is important, worth discussing. Thoughts from others
 - Josh: Could you provide a little more context of the initial message?
 - Brett: Question was around how to handle different spectrum on same network WRT eduroam? Is it worth denoting that there are different options via the eduroam SSID. Original message: <https://lists.internet2.edu/sympa/arc/eduroam-admins/2023-05/msg00002.html>
 - MikeD: Understand the desire from a technical perspective, but it can break the service when users travel. Can also put end users in the position of having to make decisions without fully understanding the context and in ways that can

cause them to fail when they roam. Lots of ways to address availability of multiple bands other than SSID names, most can be optimized without requiring user input. I think those are better ways to support our users.

- Josh: Generally speaking this seems like a terrible idea. Devices can be promiscuous with trust. Users tend to “click through” prompts without considering implications. Having a standard eduroam SSID is better for security. The objective has to be preventing the behavior of users to connect to SSIDs that look safe but might not be
- MikeD: Agree with this. Bad actors could set up an AP broadcasting “eduroam-slow”, for example, and harvest credentials.
- Sara: Thread started with a conversation at CommEx between Mary and myself - appreciate this group’s help in addressing points on the list. Worth noting that updates to eduroam compliance statement (see link below) forbids modifying eduroam SSID.
- Brett: Agree with concerns around security. As we expand into new segments of the community like K12 we’ll be increasing the number of eduroam admins. How do we facilitate conversations with these folks around best practices, common challenges, sharing expertise, etc? Don’t recall that security was mentioned as a concern on the mailing list but it’s worth including in discussion
- Rob: Another angle to consider is what are the impacts on eduroam from new tech like Passpoint, OpenRoaming, etc. SSIDs might become less important. How do we guide the community through those decision points.
- Nadim: Agree. Do we need to mention security concerns around SSID names in the Best Practices Guides? Could be worth including. Also, want to second the importance of creating a welcoming environment for newcomers.
- Rob: Also consider trust framework impacts of the SSID name being changed.
- Brett: Could we ask the BPG working group to include a mention of this in the update to the guide?
- Rob: I’m a little conflicted about this as the naming of SSID isn’t a recommendation but a requirement. But we can make that clear, explain a bit why that requirement exists
- OpenRoaming update - Stefan’s email
 - Response to Stefan from his Microsoft contact *“The NPS RADIUS server does not support the TLS 1.3 versions of the EAP methods and there is currently no concrete plan to add that functionality.”*
 - Stefan’s take: *“I had specifically asked about Server 2022. Since that is released and shipping, and their answer is fresh from this weekend, I would interpret that absolute statement as: no, not even Server 2022 supports TLS 1.3.”*
- Working Group updates
 - Best Practices Guide update
 - Brett: Include section around

- Rob: We've been doing a lot of asynchronous work over the last few weeks give multiple conferences and other travel
- Transitional Technologies
 - MikeD: We have three main topics that we've addressed:
 - <https://lists.internet2.edu/sympa/arc/eduroam-admins/2023-05/msg00002.html>
 - Looking for institutions using MSCHAPv2/PEAP to get their take on impacts of deprecation of protocol in Windows11
 - MikeD: Are there members of this committee that could assist with this?
 - Nadim has added material to flesh out this article
 - Josh: I've been very curious about this issue, have dug into some of the technical underpinnings. Can see that this is a real issue for machines that are machine joined, but less critical for those which aren't (credentials end up in the registry). Wonder if the issue in Springfield College is with machines that are domain joined.
 - Nadim: We've seen this with non-domain joined machines.
 - Josh: So this is more of an issue for managed/staff machines?
 - MikeD: Need to talk to a local college that reported this initially. They stated these were student machines. Suspect they weren't domain joined
 - Rob: We did get some conflicting info initially (Windows Home and Pro machines were both impacted). Could be a bigger issue than domain joining. Need to collect more data.
 - Nadim: We solved some of the issues by dropping TLS1.3 from our RADIUS config. We purchased a Dell Laptop running Windows 11 22H2 Home edition, which has worked without any issues. We needed to ensure that our FreeRadius Server was configured only to accept TLS 1.2.
 - MikeD: We feel we're nearing completion of these three articles. Want to be mindful of not stepping on topics that the BPG Update working group
 - What's next? Passpoint/Hotspot2.0/OpenRoaming considerations? Other topics?
 - Brett: Could we have all three of these articles complete by our next meeting?
 - MikeD: I think so. Amel is almost done with his article on WiFi6. I'll follow up with the local school reporting on MSCHAPv2 issue and fold that into the
- Support Organizations Update
 - ConnectEd Nebraska
 - One of our school districts just stood up 20 more sites. Otherwise, holding steady on deployments.

- Link Oregon
 - Working on initial pilot deployments (Lane ESD, Linn Benton Lincoln ESD)
 - Working on Google ID integrations
- The Sun Corridor Network
 - Engaging with two new districts (Yuma and Maricopa) and Maricopa county government for hotspots
 - Finalizing connector agreement
 - Interested in Google IDs as well
- UETN
 - Getting ready for our Tech Summit. Working on moving eduroam2go project forward, will be presenting on that at the Tech Summit. That presentation will be available virtually as well
 - [link, time]
 - Developed some additional marketing material, got okay from I2, GEANT
- New On-Rampers
 - NSHE (Nevada)
 - The Washington K20 Network
 - ***Please treat this as internal info, do not share externally***
- Compliance statement update (Sara)
 -  eduroam_Compliance_Statement_v2 DRAFT.pdf
 - In Final review, last comments due by May 31, 2023
 - Sara: Compliance statement is about 10 years old, hasn't been updated in that time. International community is working on final draft of updates to address changes in the eduroam landscape. Have been working comments through our legal team as well.
 - Sara: Some sections to call out
 - Sections on NRO now includes explicit requirements/responsibilities
 - Change in log retention period for IdPs. Was 6 months, being proposed to reduce that to 3. Partly in response to updated privacy regulations
 - Additional logging requirements (OperatorID, etc)
 - Administrative cleanup, updates to old or deprecated technology.
 - Rob: To go back to SSID name, the "eduroam-[whatever]" seems like it was intended to address saturation in urban areas, etc, especially in the international community. Are there other ways they plan to address this?
 - MikeD: If someone's going to use a new SSID, why even call it "eduroam"? It won't work for visiting users, your users can't roam using their profile
 - Brett: Feel like there are other ways to address bleedover than changing SSID name
 - Nadim: Should we direct feedback to the list or to you, Sara?
 - Sara: Directly to me please.

- Nadim: Do organizations that have technical issues which prevent log retention need to report that to I2?
- Sara: No, it's more a function of that institution's interactions with whomever requests log info (e.g. DMCA requests, requests from other institutions for one user's behavior, etc)
- Quarterly retrospective with eAC?
 - Structured discussion?
 - Report on accomplishments?
 - Brett: Wondering if there's a way we could develop a survey or other instrument to gauge from you all if we're focusing on the right areas, topics. Could we look at a report out to the community? Could also draw more attention to the meeting minutes, other artifacts of our work.
 - Jeff: Think it helps to share out our work with community. Has there been any discussion on the advisory chair meetings?
 - Brett: Yes - we do meet quarterly, discuss your work with that group. Thinking through a survey after hearing about other folks on advisory groups who did something similar.
- CommEx report out (Brett, Sara, Mike, other attendees?)
 - Mike: Presented with Brett on eSO program. Gave
 - Brett: Outlined ConnectEd work to date, talked through higher level items to reflect the REN/NREN audience. Met with NROs from Zimbabwe and Kenya afterwards who were in attendance
 - Sara: eduroam BoF had participants from school board in IL, discussed approaches to ensure organizations that say they'll deploy the service will actually stand up eduroam. Also talked about how logging updates could address that concern. That work is still pending.
- Next meeting - June 9th
 - Many I2 folks will be at TNC23
 - Reschedule for Friday, June 16th?
 - No objections to moving with that time
- AOB?

Friday April 14, 11am-12:30pm ET

Attendees

Rob Gorrell - UNCG

Brett Bieber - Nebraska
Josh Howlett - Federated Solutions
Mike Dickson - UMass Amherst
Jeff Egly - UETN
Kendra Ard - CSU
John Simpkins - University of Michigan
Amel Caldwell – University of Washington
Michael Hacker - Caldwell University
Dion Baird - OSU
Saira Hasnain - UF

With

Kevin Morooney
Ann West
Sara Jeanes
Mike Zawacki

Regrets

Nadim El-Khoury - Springfield College

Agenda:

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- Agenda bash
 - Future standing agenda item - trip reports on industry/technical conferences?
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2023-3-17>
 - Jeff approves
 - Kendra seconds
- OpenRoaming Update
 - Discussion with John Simpkins on University of Michigan's deployment
 - Link to John's slides:
https://docs.google.com/presentation/d/1y1ZFW_WKxcK8F5SRIYCikA40Eb0sYy8DXSfQhKEYc3k
 - Brett: Why do you think AT&T was interested in this? Did the folks you worked with there focused on Ann Arbor/Michigan area? Or were they interested in a broader scale deployments?

- John: IO think they were most willing to participate because they've been doing it longest (since 2010). They see the value of this sort of offload and are open to collaboration- bandwidth constrained. We have an MSA with them, amended agreement for this pilot. WRT scale of their interest, they were enthusiastic about the idea of expanding this out in R&E, were okay with this smaller scale pilot. They aren't in a position to enter into a bunch of bilateral agreements with individual schools/institutions
- Brett: What did other carriers say?
 - John: T-Mobile participates in OpenRoaming, also Airpass. They seem set up for something like this. VZ has shown no interest in this, at least not as of 18-24 months ago.
 - Brett; Maybe mention that you have some buildings with poor coverage
😊
- Brett: You mentioned hardware complexities - for this PoC in the 7 buildings, did those all have similar/same hardware?
 - John: Yes, all buildings are in Ann Arbor, same/similar hardware.
- MikeD: So you initially deployed with Aruba's Airpass feature, but moved to roll your own to work around different AP flavors?
 - John: We didn't even get that far. Had an initial, single deployment with Airpass but there were cloud architecture requirements that we don't have, don't plan on getting
 - MikeD: For users that blow away their wireless profile, connect via SIM is there a way to trace back to users for DCMA/CALEA/etc compliance
 - John: Passpoint authentications include information that we can provide to AT&T and they can give us user identities.
 - MikeD: If there's a failure will it fall back to SIM authentication? Or does it must die
 - John: We haven't tested that, but likely comes down to client behavior. We could test it thoug
 - John: WRT RADIUS traffic, we talk directly with SingleDigits
 - Sara: So they're serving as an aggregator? Sounded like you signed your agreements with AT&T.
 - John: Correct. SingleDigits sits behind that agreement
 - Brett: For scaling considerations, is the ideal outcome to sign with a "SingleDigits" like entity which then handles relationships/auth flow with cellular carriers
 - Sara: Looking at this diagram, wondering what role OpenRoaming/WBA plays. Whoever sits in the clearinghouse position might not need any intermediaries between themselves and cellular carriers correct?
 - John: Yes. That's the ideal set up from our point of view. It wasn't clear to me which carriers would be participating with

OpenRoaming/WBA. Getting various levels of readiness, interest from carriers. Removing the intermediary clearinghouse would reduce overall complexity (even though it would add complexity for whomever ends up acting as the clearinghouse)

- Sara: Sounds like it would just be 3 carriers to deal with, could tackle MVNOs later, or let the main 3 handle the downstream there
- John: One of the issues we had with Airpass is that the vendor is collecting money on both ends. Settlement free agreements seems like a better fit for the R&S space.
- Sara: Worth noting that this discussion is not explicitly OpenRoaming related. It would be a matter of eduroam US/Internet2 doing offload with carriers.
- Josh: Worth noting that we're already seeing instances of this traffic at the eduroam US proxies. They always fail, but moving in this direction wouldn't be inadvertently denied service. Question about MAC address - mostly seem to be randomized, so hard to capture actual usage data. WRT RadSec why did you use that?
 - John: It was a "nice to have" and turned out to be easy to configure, so we did it.
- Brett: How will you measure the success of this project?
 - John: We're seeing more usage at these sites that would otherwise not be able to auth, or that would have a worse experience. Strong incentive from our leadership to solve for poor coverage without using a bunch of DASes. The criteria our leadership has put in place is that emergency calls will always go through, will not get dropped on handoff, won't get lost in wifi vs. cellular decision logic, and will allow for reliable location info. We're working toward those goals and that will continue to be a priority for our team.
 - Michael: Was that the main project goal for your leadership?
 - John: Yes, that was the main driver
 - Michael: Have you started looking at how to inform your staff that an E911 call has been made?
 - John: I don't know that we will. There are regulatory considerations if the E911 call is made from a personal phone rather than a campus VOIP device.
- Brett: Some good benefits outlined here - reducing number of SSIDs, better user experience, safer for staff/students.
- Next steps?
 - Jeff: Wondering if there'd been any discussion about how this could fit into a private LTE deployment

- John: Big carriers provide us with a list of PLNNs for Passpoint authentication. Thinking ahead, if we include campus/private PLNNs it would be great if those were Passpoint enabled
 - Amel: Have seen other LTE deployments that have MOCNs that can point to commercial networks.
 - Amel: We've been doing a Passpoint deployment at one of our buildings and have seen much more traffic that ends up there as opposed to on our wifi. Have you looked at network/capacity implications?
 - John: We're monitoring impact over time. To Josh's point, device MACs aren't a good metric.
 - AMel: Do you put Passpoint users on a separate VLAN?
 - John: No, they go on the same VLAN as eduroam traffic, but have policy we apply to external eduroam users and use that for Passpoint connections.
 - Brett: Other institutions that might be interested in doing something similar? How could we get this opportunity in front of the community?
 - Sara: We can work on that. As John's framed this out it sounds like something that would be good for the eAC to look into. You all could put together a requirements document as you have for other services, and then present to Internet2.
 - Brett: Like the idea of sharing more of the architecture diagrams, sharing with the community, and look at further work by the eAC.
- Updates from around I2
 - CACTI - Rob
 - Rob: Joined March 29th meeting. Two points CACTI wanted to bring back here
 - IETF working on FIDO as a means for eduroam authentication.
 - Update to RADIUS protocol. Will impact routing approach.
 - MikeZ: IETF is forming up a working group, Margaret Cullen looking into that as well.
 - Sara: Could make request routing easier, faster, more reliable, particularly for international roaming.
- WG updates
 - [Best Practices Guide refresh](#)
 - Rob: Continuing to work on restructured guide (broken up into IdP and SP/hotspot sections)
 - [Transitional Technologies](#)
 - MikeD: Have been meeting weekly, discussing problems/issues in ancillary systems (TLS versions, etc) and new technologies (WPA3, Wifi6e, etc). Have set up a wiki page to track, provide updates for issues. Structured in a release notes like format. Each note includes description of issue, provides work arounds for short term and longer term fixes.

- <https://spaces.at.internet2.edu/display/eduroam/eduroam+Transitional+Technologies+updates>
 - In draft state, publicly viewable but not yet linked
 - Brett: This is great. What are next steps for communicating out to community.
 - MikeD: Have talked about including links to the space in monthly report.
 - Brett: Could send note to admins that this info is available, suggest they use “watch” function. Could you and MikeZ work on getting a note out to the admin list, start with TLS 1.2-3 Windows 22 issue?
 - Rob: We’re also going to invite Stefan Winter from GEANT eduroam-dev group
 - MikeZ: We’ll also post to the eduroam US knowledge base
 - Rob: Also discussed adding to upcoming draft of Best Practices Guide
 -
- [Service Level Requirements](#)
 - Brett: Kendra, Rob, and I met, discussed this and came up with some possible next steps for this committee. Recap - Looking at a set of baseline expectations for all eduroam participants. One question is how we can tell when a site is “working” (e.g. does the hotspot portion allow roamers to authenticate, does the IdP portion allow its users to authenticate, etc). Want to talk through methods to gather the data needed to inform work, define success.
 - Brett: Question for this committee - what sorts of requirements should we develop? What does baseline look like?
- Support Organizations Update (Brett, Jeff, MikeZ)
 - eSO summaries
 - Link Oregon
 - Firming up project team, bringing on additional expertise from OSU. Making good progress on first pilot districts. Looking at ways to leverage pending state broadband funding into eSO work, bringing on new districts as part of that effort.
 - ConnectEd Nebraska
 - Continuing to share expertise with new SO members. Discussing plans for this year and continuing to plan for transition from Project to Program and incorporate offering into Network Nebraska membership.
 - The Sun Corridor Network

- Shifting project personnel around, working with new candidate districts in Yuma. Recent progress on integrating with Google ID is making conversations easier with districts.
 - UETN
 - Jeff: Focus has been on hotspots. Amanda (PM for eduroam effort) has been approaching candidates for hotspots, looking for advocates within community to help those conversations as well. Have also been opening discussions with SLC city council on public deployments. Will be presenting on “eduroam2go” (turnkey eduroam hotspot devices) at Utah’s Tech Summit (virtual participation is an option)
 - Report out from CoSN23 presentation
 - Brett; Jeff, Amanda, and myself presented on eSO work. Good conversations, also met with commercial ISPs. New community for us, good to build connections.
 - Jeff: Agree. Had a neat conversation with Minnesota parochial school that had seen benefit of K12s and eduroam as their students move into HE. Also had some good engagement with TX schools as well.
 - Update on 2023 cohort
 - Now accepting proposals for 2023 cohort
- GeGC update (Sara)
 - Sara: Would like to make sure we capture Saira’s work on OpenRoaming, get a quick report out, and get her blog post published and promoted
 - Saira: Met with John Simpkins, reviewed WBA’s documentation. Working on a draft of blog post and will have it together within the next few days. Structured as a sort of “eduroam or OpenRoam”. Covers considerations around onboarding difficulties with OpenRoaming, etc.
 - Sara: We’re also working on an IAMonline presentation on OpenRoaming, will likely be tapping you on the shoulder for that.
 - Looking to update compliance statement
 - <https://eduroam.org/support/eduroam-documentation/>
 - Sara: Currently reviewing with I2 counsel. Open for comment until May 5th. Main bit that might interest this committee is change to log retention requirements. Will send draft out to this committee next week for comment.
 - Mobility day 2023
 - <https://events.geant.org/event/1391/>
 - Sara: Ann, MikeZ will be attending. Amanda’s eduroam2go presentation would probably be a good candidate for presenting there!
 - MikeZ: Sara and I will also be presenting on the work of the eSOs
- Campus Technology Interview with Brett and Saira

- <https://campustechnology.com/articles/2023/04/10/anywhere-learning-happens-th-e-eduroam-global-wifi-access-service.aspx>
- Proposals for new topics, standing agenda items (Brett)
 - More integration with eSO community
 - Brett feels that the eSOs represent the future of growth for eduroam. Interested in cultivating an understanding of what the eSOs do, what their challenges are. eAC is more technical minded, less involved in the K12 perspective.
 - Identify infrastructure, resources, skillsets that might be missing in the community to enable more integration, more adoption in smaller/less resourced organizations
 - Quarterly retrospective with eAC members
 - Goal: Check in on direction, make adjustments. See if members are getting what they expected.
- Next meeting time
 - Friday, May 19 , 11am-12:30pm ET
 - AOB?
- AOB?

Friday March 17, 11am-12:30pm ET

Attendees

Brett Bieber
 Rob Gorrell
 Amel Caldwell
 Jeff Egly
 Saira Hasnain
 Josh Howlett
 Mike Dickson
 Kendra Ard
 Nadim El-Khoury

With

Sara Jeanes
 Kevin Morooney
 Mike Zawacki
 Romy Bolton

Regrets

John Buysse

Agenda:

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed!
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2023-2-17>
 - Mike D. motions
 - Rob approves
 - Mike D approves
- Updates from around I2
 - CACTI - Rob
 - Rob: Need to get invites sorted out
 - Mike Z: Will coordinate with CACTI flywheel to get invite sent
- Solicit guest blog post - value of eduroam in relation to OpenRoaming
 - Some work in the community on Passpoint/wifi calling - John Simpkins' KB article: <https://its.umich.edu/communication/telephone/cellular/passpoint>
 - SecureW2 - OpenRoaming v PassPoint - <https://www.securew2.com/blog/difference-openroaming-passpoint>
 - <https://eduroam.org/eduroam-openroaming-end-user-information/>
 - <https://eduroam.org/openroaming-and-eduroam-useful-information-for-eduroam-identity-providers-and-service-providers/>
 - <https://wballiance.com/cityroam-is-part-of-the-wba-openroaming-now-as-an-implementer-for-providing-secure-public-wi-fi/>
 - Sara: This group has been aware of OpenRoaming since its inception. Have heard a few requests for clarity for the eAC, am lining up SME for April's meeting to provide briefing. Would like to ask for a member of this committee create a blog post on eduroam and the value of eduroam, perhaps with some words on differentiation between eduroam and OR and where each might be appropriate to use. Looking for a community voice to reference when the topic comes up. Article could be lightweight. Can develop more substantive stance in time if that feels appropriate.
 - Brett: With that ,does anyone have an immediate interest in this?
 - Saira: I do, especially interested from an institutional perspective. I'm happy to do some research and write up a post.
 - Brett: Also seeing that there are folks in the community who are working on this, could be worth checking out their work

- Nadim: Seeing there's a Cisco app that touches this service
- Brett: I propose we ask Saira to coordinate a post, investigate, share any resources you've found. Can present at next month's call along with briefing at next meeting
- Jeff: Sounds great. I'm eager to learn more about it. At recent WestNet meeting the topic came up as well. Have heard some debate in Utah's User Group meeting around merits of each, especially as we look at eduroam and SLC airport.
- Working group updates
 - Service Level - cost benefit rationalization (Brett)
 - Similar to InCommon Baseline Expectation project: <https://incommon.org/federation/baseline-expectations-for-trust-in-federation/>
 - Brett: May not have provided sufficient background on this at last meeting, so would like to provide that here. Looking at Baseline Expectations push with InCommon. May be reaching the point of eduroam US evolution to look at service maturity. InCommon is an identity federation, some analogies with eduroam - IdP, SP similarities. Some of the service aspects they looked at were
 - User Experience - Does the service act as expected all the time?
 - Security - Is access and info release being managed appropriately?
 - Brett: Began with a voluntary program where participants asserted compliance. Ended up creating a set up compliance requirements, asked all participants to meet those requirements. Program was several years in the making, but successful. Question for us is whether we're ready to take that sort of step?
 - Brett: Curious to hear others' thoughts on this. Does this make sense? Kevin, thoughts? Was that accurate?
 - Kevin: All sounds good
 - Rob: Wonder if one of those core elements doesn't apply - SIRTIFI (incident response framework). Could transfer almost directly to eduroam
 - Brett: Good point. Would be of particular interest to commercial providers. Heard concerns on that from Cox Communications on public hotspots for example. Right now the risk falls primarily on IdP. Could be useful in convincing partners like Cox. Need a way to connect reported issues for SPs to appropriate IdP. Also need to ensure accurate contact info
 - Rob: I'd also add maintaining the accuracy of service locations. Very important at the user level. So that could be an item to include in the requirements
 - MikeD: We process DMCA complaints. Requests come in, we have to trace IP address - if the user is from another college all we can do is

forward that information to that institution. We've also gotten those forwarded notices for our students from other schools. Often have an "abuse@school.edu" contact point. That's the end of the liability chain for us

- Brett: Not a new problem, there are processes in place for a lot of these issues already. Codifying those as part of eduroam service could be helpful for the community, make partnerships with commercial entities easier.
- Brett: On federation side, we formed up list of requirements, looked at ways to drive compliance. Ended up modifying InCommon participation agreement with requirements and any penalties for non-compliance. Held input sessions from the community to see if the requirements were realistic, achievable, contract changes made sense. Worked with community to drive adoption of those requirements. For eAC need to recognize that we're part of a global federation, so may be dealing with users and institutions that haven't taken on this level of compliance. Could be an opportunity to lead by example
- Kevin: One of the things I'm noodling about is selling this to the broader eduroam US community. Imagining telling them why we're doing this, why it's needed. In BE we sold the effort as making the service safer, more reliable
 - Security angle - Rob's example of SIRTIFI is a good example of this.
 - Variability of edge - there are more ways to access wifi than eduroam. Users may work around, use guest accounts, etc if eduroam is too hard to use. Want to be sensitive to that reality, consider impacts of a BE effort on usability
- Jeff: One thing we as an eSO get is feedback when people can't authenticate at eduroam locations. We take those seriously - good user experience is important for maintaining the value of eduroam. As we work with our stakeholders we find they want that too. So this is a conversation we're comfortable having.
- Brett: Good points, all. Think there's value in exploring this, possibly even have a webinar to discuss this with the community. If you're interested in joining this working group signal your interest here:
 - Kendra A
 - Rob
 - Nadim
 - Tania
 - Mike Z will add to calendar invite, set up next call for this WG
- Rob: Maybe the baseline expectation becomes a certain percentage of Access-Accepts as witnessed by TLRS1/2 for your site... drop below for a

long enough period of time and you're no longer "meeting expectations" as an eduroam site.

- MikeD: I'll add that it might be possible with Access/Rejects for simple fat fingering to skew metrics. If there was a way to do more comparative analysis could be a way to separate noise/signal.
- Brett: Good point. Speaks to possible inclusion of a requirement for alerting/monitoring features from the service (e.g. possible eFM feature requests).
- Rob: The primary issue I'm looking at is when a new school comes on, focuses on IdP side, ignores SP functionality. Would be a good first step for compliance.
- MikeD: Agree. If you're greenfield and aren't configured to handle other EAP types you could be failing other users 100%. Feedback loop for visiting users doesn't include a way to provide feedback to bad/misconfigured SP. The challenge is the demarc between schools. Are IdPs being too slow to dig into these sorts of issues? This represents some good low hanging fruit
- Brett: Think first chunk of work will be refining a possible list of requirements, value prop to this work.
- Technology Transitions (Mike D.)
 - Mike: Focusing on deprecation of MSCHAPv2 and Credential Guard moving from TLS 1.2 to 1.3. Group found that if you have a RADIUS server that's running TLS 1.3 that isn't fully IEEE compliant it won't negotiate down from 1.3 to 1.2. If Windows only sees 1.2 it will continue ahead with negotiation. Nadim found that with some implementations this negotiation is broken though. We're building a table to spell out interactions that can cause issues, workarounds. Also looking at positioning this not as a "you must do this thing" but a "be aware of this issue, here are some possible workarounds". Considers resource costs of approaches, as moving to EAP-TLS can be expensive, complex. For some schools we've found that the process of figuring out what's going on involves teasing out a number of variables (what OS, what OS version, what RADIUS type and version). Forming up an impact statement with some steps to work around that.
 - Sara: Seems like there's also a lot of chatter of Wifi6e. Is this in scope for this?
 - MikeD: Good question. There was a recent talk on several topics, including 6e. Amel posted something as a result of that
 - Amel: I did. Pointed them to the 6e guidelines from GEANT.
<https://eduroam.org/eduroam-deployment-considerations-on-wi-fi-certified-6e/> This morning saw that there was some confusion in responses to that info.

- MikeD: Good opportunity to provide some guidance to the community. Wondering if there's existing work we could point to to provide clarity
- Sara: Work from GEANT doesn't always get as much visibility. Could be an opportunity for this community to help guide the US community toward those resources.
- MikeD: A lot of these challenges are around emerging technologies and findings. Need to guide people to appropriate resources
- Brett: Grateful to folks like Mike and Nadim for staying on top of these. Mike, what are your next steps?
- MikeD: Group is plumbing institutional sources to figure out what the impacts are for interactions vis a vis RADIUS, OS, and versions of each. Want to build those into the table.
- Saira: I've sent out a note to my team with goal of understanding impact of disabling Credential Guard. We're moving MS licencing from A3 to A5, currently heavily invested in moving everything under Windows Defender (on prem and cloud). WRT disabling CredentialGuard we can do that automatically, but need to understand the impacts. We're working toward EAP-TLS for staff, but still find student deployment daunting. Need to form up plan around that. Will share our findings with this group.
- MikeD: As wireless engineers you can look at disabling CredentialGuard as the easiest way to fix, but need to be mindful of security implications. Also future Windows patches might break that as a workaround.
- Saira: A message from this body could be that "Here are some challenges on the horizon, and if you're not thinking about them you should, and here are some results of our testing." Include statement that they should also consider their own security posture, implications of turning off security services.
- MikeD: Spot on. Also consider that TLS1.2 will sunset. That's not an MS thing, it's a evolution of tech thing. We don't have a timetable for that, but it's a trend to keep in mind. Don't know if we'll go down this path, but BYOD could have one fix, managed devices could be another.
- [MSCHAPv2 issue table](#)
- Update of Best Practices Guide Working Group (Rob)
 - Rob: Talked through existing areas that are still applicable, which needed to be refreshed. About half of the content needs updates
 - MikeZ: Group decided to reformat guide into IdP and SP sections, address each section as a set of decision tree like structures. Next step will be to reformat guide, members will update the sections they've volunteered to draft language
- Pending work items
 - TAC is currently launching a Pilot for (InCommon) IdP as a service (Sara)

- Typically deployed by a close collaborator organization/company in the community, but with a 'good housekeeping seal' that it meets community requirements as validated by a designated working group
- Requested solutions
 - Guest Services report from 2021 - <https://spaces.at.internet2.edu/x/cICQD>)
 - 'Cloud Bridge' / hosted radius for K12/others
 - part of User/Device onboarding discussion in Summer 2022
 - Containerized solution demoed at TechEx 2022
 - User/Device Onboarding Requirements report - <https://spaces.at.internet2.edu/x/ph19Dg>
- Sara: These are all at the point where they're kind of looking for solutions. We'd likely look to partners within the community to build/run these. InCommon Catalyst Program could be a framework for that engagement. Catalysts are companies that participate in community discussions. Want to be sure that any solutions deployed come from these sorts of partners who are already working with we the eduroam US community.
 - <https://incommon.org/community/catalyst/>
- Sara: We're looking internally at work you've all done, will ask this group to prioritize work. Will need to be approached in sequence. When we're ready we'd ask to spin up a group to identify the ordering for development these services.
- Brett: Thanks Sara. As an eSO we see things like IdPaaS/RADIUSaaS as important, could be useful for any smaller organization. I'll be an advocate for that, happy to help.
- Support Organizations Update (Mike Z.)
 - FM updates
 - RP testing (aka eduroam hotspot testing) added
 - Release Notes: <https://spaces.at.internet2.edu/x/eAzABg>
 - Link Oregon
 - Working with Oregon State to set up support structures and processes, hiring a part time PM to assist. Standing up eduroam for a number of schools in the Linn Benton district.
 - ConnectEd Nebraska
 - Brett: Currently attending NTEA to present on eduroam. Looking at ways to engage remaining school districts. Have been working with Cox Communications on public deployments in Omaha. Agreement discussions moved over to Internet2, they're currently working with Cox on an agreement structure. Seemed like a good logical step, given Cox's national footprint.
 - The Sun Corridor Network

- Working with additional pilot school district (recently completed PoC on eduroam enabled Mifi hotspots). Talking to Arizona Department of Ed, looking at options for further funding, promoting eduroam statewide.
- UETN
 - Jeff: We're also in the midst of UCET, Utah edu tech conference. Presented to WestNet with Derek Masseth on our programs. Good discussion with participants. Also had interest from Airforce Academy. Presenting next week at CoSN with Brett and Amanda Molinari (UETN PM) on our work with eduroam. Looking at continuing to grow hotspot deployments
- Volunteers to review proposals for 2023 cohort?
 - Call for proposals went out Wednesday for 2023 cohort
 - ...
 - Rob Gorrell
 - BRETT!
 - Jeff
 - Nadim El-Khoury
 - **2022 year eduroam Support Organization year in review**
 - **When:** Tuesday, March 28 4-5pm ET
 - **Where:** <https://internet2.zoom.us/j/83400507560?pwd=bjNvbNJEZEpWU5Qdz09>
- Next meeting time
 - Friday, April 14, 11am-12:30pm ET
- Committee members attending Community Exchange? May 8-11, Atlanta
 - Sara will be holding a bird of a feather session (no eAC meeting)
 - Saira Hasain
 - Brett Bieber
 -
- AOB?
 -

Friday February 17, 11am-12:30pm ET

Attendees

Brett Bieber - Nebraska

Saira Hasnain - UF

Josh Howlett - Independent

Rob Gorrell - UNCG

Jeremy Livingston- Stevens

Nadim El-Khoury - Springfield College

Mike Dickson - UMass Amherst
Kendra Ard - California State University
Dion Baird - Oregon State University
Amel Caldwell – University of Washington

With

Kevin Morooney
Sara Jeanes
Mike Zawacki
Ann West
Romy Bolton

Regrets

Jeff Egly
Tom Rixom
John Buysse

Agenda:

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed!
- Introduction of Chair, Vice-Chair
 - Brett Bieber: Chair
 - Mike Dickson: Vice-Chair
 - Many thanks to Jeff Egly for his leadership of the committee in 2022!
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2023-1-20>
 - Saira motMiieions
 - Rob approves
 - Jeremy seconds
- Update on GEANT SP issue (Sara)
 - Sara: Have been working with our colleagues in GEANT on this. Core challenge around the way the US community signs in, IAM attributes which are used. GEANT's SAML SP stated that it accepts R&S set of attributes, but there's a mismatch between how GEANT and US community approach those attributes. Working toward a fix, could involve changes both on GEANT and US and other impacted NROs. US eduroam community is large, tends to adopt newer

standards more quickly, can cause these sorts of issues from time to time.

There's consensus on the cause, working toward common solution

- Rob: Is there a US best practice recommendations that could help provide guidance to SAML IdP integration to address this issue.
- Kevin: Here's a presentation from the South African colleague Sara just mentioned. Powerful stuff.
- <https://indico.geant.org/event/1/contributions/82/attachments/17/23/Halse%20CG%20-%20shouting%20across%20the%20chasm.pptx>
- Brett: So one of the approaches could involve an intermediary proxy? Sounds like the South African NRO is also engaged to address this, which is great.
- Sara: Yes - we've been having discussions with CANARIE staff on this as well. There are great examples internationally around this work. There's a GEANT led group that talks through CAT development work
- MikeZ: We could post link to mailing list archive and/or meeting notes for this committee to get acquainted with the work
- Brett: Sounds good. Sara and MikeZ can also provide updates to this committee.
 - MikeZ: I'll take an action item to post a link to the public meeting minutes of that group
 - Link to wiki page w/notes from previous meetings:
<https://wiki.geant.org/display/gn43wp5/Development+VC%2C+20230214>
- eduroam Support Organization update (MikeZ)
 - [Blog post and copy of eduroam Support Organization 2022 Annual Report](#)
 - MikeZ: eSOs and eduroam team collaborated on report of program activities, goals of the program participants, lessons learned, etc.
 - Brett: Encourage you all to look at the report, keep current on the work being done around this program and in the K12 space
 - Kevin: Speaking of growth and jic you didn't see it:
<https://connect.geant.org/2023/02/14/eduroam-reaches-new-heights-a-new-record-of-6-4-billion-authentications-in-2022>
- Representation on CACTI calls
 - Brett: The eAC is an advisory body reporting up to CACTI. On quarterly call for committee chairs the topic was brought up to have eAC representation on CACTI. Rob's name was put forward and he's willing to begin joining those calls. Good opportunity for cross pollination. Any concerns from committee?
 - None! Rob accepts.
 - Brett: We'll add a standing agenda item for report outs
 - Rob: Worth noting that we have some experience with interfacing with CACTI - Best Practices Guide and other work outputs were run past them.

- Review of work priorities
 - 2-5 minute overview of each item, including work done to date
 - Brett: Chairs and I2 staff met to discuss agenda, came up with the following list of work priorities. Want to provide overview, invite discussion around prioritization.
 - Windows TLS issue (MSCHAPv2 depreciation) / Transitional Technologies (MikeD)
 - Background material:
 - <https://lists.geant.org/sympa/arc/cat-users/2022-10/msg00040.html>
 - MikeD: Windows 11.22H2 was an update that included changes to 802.1x protocols. It disabled MSCHAPv2 by default, which caused auth failures for clients using that authentication method. Also enabled TLS1.3 over TLS1.2. EAP-TTLS still works (tunneled credential transfer seen as less of a risk). Caused support issues, users failing to authenticate. Additional wrinkle was that some versions of FreeRADIUS don't fully support TLS1.3. Will accept TLS 1.1 or 1.2 if asserted by client, but might refuse 1.3. Fixes could
 - Sara: I think there's an opportunity to generalize the conversation. Around conversations of TLS1.2 vs TLS1.3 there are similarities to move from WPA2 to WPA3.
 - MikeD: True. Depreciation of earlier TLS versions has been signaled but not announced, no timeline. Greenfield deployments easier, but could use best practices guidance.
 - Brett: This could be an item that warrants a working group that focuses on assessing impacts, best practices for configurations, how to communicate this out to the community. Thoughts from the committee?
 - MikeD: That makes sense. Having a matrix of solutions would be good - from least resource intensive/less complete to most resource intensive/most complete. Provide a range of options
 - Brett: Wonder if we could gather some names of folks here to spin up a group.
 - MikeD
 - Nadim
 - Amel :)
 - Rob - Also think that this dovetails into update of Best Practices Guide.
 - MikeD: Another work output of this group could be a blog post.

- Brett: Others interested add your name to this list above. Also want to think through timing
 - Al MikeZ: Send out scheduling poll for initial call, set up scribing docs
 - Saira: I think there's some urgency here - impacting institutions now
 - MikeD: I agree. We're seeing reports from our schools, hearing about it from others. Could even warrant a PSA type announcement.
- Update of Best Practices Guide (Rob)
 - Background material:
 - [eduroam Best Practices Guide](#)
 - Rob: One of the first tasks this committee took on. A couple of years old now. Some topics are still current but many could use an update. Intent of the guide isn't to provide a "cook book" but more intended to provide guideposts for new and current eduroam admins. We're seeing need for updates in conversations happening in the community around things like Wifi6e, other topics. Other things to consider
 - Updated EAP recommendations, more detail on different methods, changes to reflect the current landscape (e.g. MSCHAPv2)
 - Updates on CAT
 - Brett: Do you see a working group needing to meet more regularly?
 - Rob: I do. Also want to figure out how to coordinate work with the group mentioned above, think through how to coordinate on messaging.
 - Brett: Sounds like it would also be good to put out a call for participation from others outside this committee. Also want to provide opportunity for public comment period
 - Rob: Agree. Also a good thing to bring to CACTI.
 - Brett: Volunteers for this group?
 - Rob
 - Josh
 - Amel
 - Nadim
 - Al MikeZ: Send out scheduling poll for initial call, set up scribing docs
 - Brett: This feels like a much longer term project than the deprecation/changes group.
 - Rob: THink we'll need to also look ahead to the work of deprecation/changes group and incorporate that input into the BPG
 - MikeD: Agree with that. Also may want to include info on how to handle refreshes of infrastructure - more complex than greenfield implementations. Should reflect that in the guide

- Distributed eduroam testing (Rob)
 - TechEx session - Andrew Gallo, George Washington University/[CAAREN](#)
 - Presentation from University of Michigan team: <https://it.umich.edu/community/michigan-it-symposium/2020/presentations/introducing-pssid-wi-fi-monitoring-system>
 - Background material:
 - Writeup on proposal:
 - <https://docs.google.com/document/d/1ubu8VzeVJqPCg9f5UcYKfggNUI4InCIO/edit>
 - Rob: Especially interesting for eSOs but has value for the entire community. Having a perfSONAR implementation that monitors environment eduroam via rPI test node could provide valuable support info
 - Brett: Agree this might be a more appropriate work item for the eduroam Support Organizations. Could be a working group that they participate in/lead.
 - Rob: Agree with that approach.
 - Brett: Also could involve Sara, looking at ways to monitor infrastructure or takes recommendations from a working group
 - Josh: I think it's insufficient to look at monitoring a single site, consider how to monitor the service, end to end, as a whole. I was involved in a similar project in the past, found that the value of the solution was dependant on the integrity of the test/monitor infrastructure. Poor quality of components can drive false negatives, missed positives. TCO of entire solution could add up quickly. Suggest stepping back, understanding the problem in more detail. The document linked above focuses on a single institution. Also consider that if the network the SSID sits on isn't reliable the service isn't as useful. Probably worth testing the network to some extent as well. Need to have an understanding of the requirements. Suggest working on that first. Then look at solutions
 - AnnW: I agree - very useful to decouple those two things
 - Brett: Second that sentiment. Sounds like a good plan. To Josh's point we recently saw an issue where someone was testing, caused huge spike of failures, looked like a problem but actually wasn't. Wondering about next steps - need a group to come up with requirements document?
 - Saira: I hear both sides. Being able to monitor, increase service resilience makes it more valuable. But to Brett and Josh's point, this work has to be done mindfully, sanely. So is what's being proposed a national level monitoring? Are we talking about standardizing on tools? What's the scope of this monitoring
 - AnnW: If we're trying to solve the problem of users roaming and not connecting, giving organizations tools to monitor that's one thing. Other

approach is a Baseline Expectations like effort of standardizing like Saira was asking about. That's actually more of a communications project than technical

- Brett: Fully support Baseline Expectations for eduroam. Not sure what the community appetite is for different levels of compliance, but maybe we want to use this as a way to gauge community willingness? Consider how we handle out of compliance participants. Monitoring could be a way to get the community to start thinking along these lines.
- AnnW: Also consider effort for each step. Need to think through cost/benefit, scoping of work.
- Brett: So where are we with next steps. Josh?
- Josh: If the eSOs can articulate their requirements that's a good first step
- Brett: Include a breakdown of different pieces, consider
- Rob: To Ann's point of cost/benefit the eSOs would stand to benefit the most.
- Josh: Generally there's a tendency to monitor for the sake of it. Can end up with reams of stats that are never looked at. Want to get a concrete statement from eSOs on what they believe the benefit will be, incorporate that into the Cost/benefit discussion
- Brett: Volunteers?
 - Brett
 - Jeff
 - MikeZ
- OpenRoaming position paper (Sara)
 - Background material:
 - Summary on OpenRoaming by GEANT staff:
<https://eduroam.org/eduroam-openroaming-end-user-information/>
 - Notes from TechEX ACAMP session on OpenRoaming:
<https://docs.google.com/document/d/18rJ6A69p0UzI8FCdIKpsHcwYGKCBtpcOUGCvqHJkhjw/edit>
 - Sara: This comes up periodically. Basics of OpenRoaming - set of technologies and process arrangements that came out of Wireless Broadband Alliance. Similar to eduroam, wraps those in agreement structures, much more focused on commercial solutions as well. Intended to offer secure, seamless authentication, but includes options for commercial identity providers (Google, Apple, etc). Component of data sharing between corporate partners. Question that comes up for this community is mostly around differentiating OpenRoaming and eduroam. Notes from ACAMP session calls out the need for a document from the eduroam community that articulates the value and benefit of eduroam. Doesn't need to be an explicit rebuttal of

OpenRoaming, more focused on differentiation, spelling out explicit value prop of eduroam

- MikeD: What would be the use case on college campus? I see the use in conference centers, etc? Would it be deployed alongside eduroam on college campuses? I hear about OpenRoaming and it sounds like a good guest system for colleges. If I were a new student why would I choose one over the other?
 - Saira: Is there a similarity to ANYROAM guest accounts?
 - Rob: Conceptually but substantial differences in terms of scale and scope
 - Saira: In Gainesville, FL we've rolled out eduroam to public areas where our students frequent. City wants to provide ability for others to connect. I could see the value of OpenRoaming in this case. Could be useful in agreements with city/local governments. Issue with ANYROAM guest accounts is the lack of user vetting. OpenRoaming could address that.
 - Amel: We see need for something like OpenRoaming in visitors to colleges, especially for events on campus.
 - MikeD: What's the status of ANYROAM?
 - Amel: You have to reach out to them, make config changes on your network to enable it.
 - Rob: Feels like there's a lack of sustainability to the model.
 - Brett: It sounds like we could use some additional input from SMEs. We could then think about position paper draft. Is there another expert who could talk to the committee?
 - Josh: I think the danger of that is that the conversation will focus on the technology and less on the benefits of each. I haven't found an articulation of the comparison between eduroam and OpenRoaming from a benefit perspective. Getting someone who understands both would be good. Klaas Wierenga? Stefan Winter?
 - MikeZ: Stefan provided an overview for the committee a year or two ago
 - Sara: Agree with Josh's sentiment. Klass and Stefan come to mind.
 - Al MikeZ: Reach out to Klass, Stefan about presenting to this committee
- IdPaas, hosted RADIUS (adjacent to Guest Services report from 2021 - <https://spaces.at.internet2.edu/x/clCQD>)
 - ...
 - Vendor supplied IdP for radius - hosted radius for K12/others - also called a 'Cloud Bridge' in some of our conversations (Sara)

- Demo during eduroam in K12 session, TechEx 2022
 - (Not to forget next steps on the User/Device Onboarding Requirements report - <https://spaces.at.internet2.edu/x/ph19Dg>)
- Next meeting time
 - Friday, March 17, 11am-12:30pm ET
- Committee members attending Community Exchange? May 8-11, Atlanta
 - Mike can request a working meeting if enough folks will be attending
 - Saira
 -
- AOB?
 - Other items floating around
 - WPA2 to WPA3 transition
 - NPS PEAP vulnerability - <https://msrc.microsoft.com/update-guide/vulnerability/CVE-2023-21689>
 - 6.4 billion authentications! - <https://connect.geant.org/2023/02/14/eduroam-reaches-new-heights-a-new-record-of-6-4-billion-authentications-in-2022>

Work item	Your vote (1 per member)	Volunteers
Transitioning Technology Working Group		MikeD Nadim Amel :) Rob
Update of Best Practices Guide Working Group		Rob Josh Amel Nadim
eduroam Service Level Requirements - cost benefit rationalization		(eSOs) Brett Jeff
OpenRoaming position paper		
IdPaas, hosted RADIUS		
Vendor supplied IdP for radius - hosted radius for K12/others		

Friday January 20, 11am-12:30pm ET

Attendees

Brett Bieber - Nebraska
Rob Gorrell - UNCG
Nadim El-Khoury - Springfield College
Kendra Ard - CSU Chancellor's Office
Dion Baird - Oregon State University
Tom Rixom - SecureW2
Jeremy Livingston - Stevens College
Mike Dickson - UMass Amherst
Saira Hasnain - University of Florida
Jeff Egly - UETN

With

Nicole Roy
Sara Jeanes
Kevin Morooney
Ann West
Margaret Cullen (CACTI Chair)
Mike Zawacki

Regrets

John Buysse
Tania Mahood
Josh Howlett
Amel Caldwell

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed!
- Approval of last meeting's minutes
- <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2022-12-22>
 - Rob approves, Brett seconds

- Introduction of new members, next steps for committee (MikeZ)
 - Quick word from our chairs
 - Relatively new committee, lots to do!
 - Intro from Kevin
 - Introductions
 - Intro meeting for new committee members Thursday, Feb 3rd 4pm ET
 - Process for voting for chair, vice chair
- Update on GEANT SP issue (Nicole Roy)
 - Overview/refresher
 - [Letter from eAC to GEANT](#) on SP issue
 - Nicole: eduroam service depends on several applications external and internal. eFM is one, operated by Internet2. GEANT operates several more, many sitting behind a SAML Service Provider/SSO endpoint. SAML federations have a number of policy requirements, esp around user attributes (email address, other unique identifiers, membership in certain groups, etc). Privacy concerns mean that release and storage of these attributes need to be handled securely from both ends of the transaction. Attributes and release have national and local policy differences, need to be coordinated to ensure users have a smooth experience. Research and Scholarship attribute set provides interoperability between identity sources and service providers, tuned for the needs of the R&E community. The SP managing access to the eduroam Configuration Assistant Tool (CAT) uses the R&S attribute set. However, there are problems with user identifiers in the SAML space. One attribute in particular (eduPersonTargetedID) was found to have vulnerabilities around upper/lower case (aka case folding). The attribute has been deprecated, in the process of being replaced by other attributes. The CAT requires that if a user releases eduPersonTargetedID they MUST also release additional attributes. This is causing issues where users (in particular US institutions) that aren't releasing both attributes cannot access the CAT using their institutional/InCommon credentials. TL;DR version - users who should have access to the CAT cannot access it because there's a policy discrepancy between GEANT and InCommon participants.
 - Saira: Is there a diagram that lays out the structures you've covered?
 - Nicole: I'll share one with this group.
 - Sara: The eAC sent a letter to GEANT asking for their assistance resolving the issue. The ask now is for 1-2 volunteers from this group to join Mike Zawacki and myself to join a call with GEANT and talk through some possible approaches to resolving this problem. We can report back to the committee on the next call
 - Saira: What's the number of people who are impacted?

- Nicole: Hard to gauge impact because privacy requirements prevent us from seeing the authentication process and outputs. IdP and SP are communicating directly without sending any logs/results/etc to us. We'd have to survey InCommon participants or ask GEANT to share anonymized log data.
 - Sara: This issue was acute enough to raise to the level of the eAC's attention.
 - Brett: One higher level consideration - the confidence of our community in these tools is very important. Having membership from the eAC involved in the discussion is critical.
 - Next steps
 - Volunteers to join call?
 - Jeff Egly
 - Rob Gorrell
 - Nadim EL-Khoury
 - Saira Hasnain
 - (Contact MikeZ if you decide to join)
 - Thank you!
- Privacy Preserving KB article (Sara/Margaret)
 -  Preserving end user privacy in eduroam
 - Sara: Deeply tied into past activities by this committee, in particular the Best Practices Guide. This is not just a best practice document but also an articulation of the value in adoption of community standards and practices. Looking for feedback from this committee, especially as it relates to the [eduroam Best Practices Guide](#)
 - Jeff: Would you like us to add this to the agenda for the next call?
 - Sara: If the committee feels like it warrants further discussion then yes, otherwise likely not
- eSO Update
 - Jeff: Overview of the program - the eduroam Support Organizations are responsible for leading their states in driving K12 adoption of eduroam in their state. Also keep in mind that the 2023 eSO cohort will
 - Link Oregon
 - (Mike to add notes)
 - Network Nebraska
 - Brett: Gave presentation at TechEx22 on our eSO work. Up to 88% of our ESUs (educational support unit) are signed up, represents 54% of all Nebraska K12s. Have been working with Cox Communications and Allo Communications (commercial ISPs) on public deployments of eduroam. Have more presentations, including at CoSN, where we'll jointly present with UETN, and at Great Plains Network's annual conference
 - [Slides from TechEx22](#)

- The Sun Corridor Network
 - (Mike to add notes)
- UETN
 - Jeff: Similar efforts to Network Nebraska. Are also working with remaining charter schools (nearly all public schools are now using eduroam) on deployments. Have an eduroam User Group call coming up (tech staff from K12, HE, others from Utah and other states. Attendees from other orgs are welcome (contact Jeff for info). Have been developing additional promo materials, working on hotspots in cooperation with state agencies including Dept of Ed, UDOT, etc. Will be presenting at WestNet with Sun Corridor Network on work to date.
- Review of work priorities (standing item)
 - This item intended to be a standing check in on how the eAC can contribute
 - Windows TLS issue (MSCHAPv2 deprecation)
 - Rob: Brought to our attention by Chris Philips of CANARIE (Canadian NREN). Windows 11 updates around Credential Guard and how network authentications are handled. Could cause problems with Windows 11 users
 - Nadim: We've been dealing with this issue with our users. When forcing users to TLS1.2 it works. Using cert based authentication also fixes the issue. We were thinking of running FreeRADIUS on BSD to alleviate issues.
 - MikeD: Also heard of issues from our schools after Windows 11 rollout. We haven't had as much trouble with it as others. You can also tweak the reg file to disallow 1.3 but that comes with its own issues. Having RADIUS that supports TLS 1.3 also fixes, as Nadim mentioned. Some commercial products also have issues with this as well. Changes that offer long term fix will need to wait for holiday break. Some confusion around which version of Windows and associated components play nice with which versions of RADIUS. Bigger issue for BYOD environments.
 - Post on GEANT's mailing list: <https://lists.geant.org/sympa/arc/cat-users/2022-10/msg00040.html>
 - Some background info on why MSCHAPv2 was deprecated:
 - Article that explains the vulnerability: <https://www.securew2.com/blog/peap-mschapv2-vulnerability>
 - The issue occurs when clients do not check (or allow users to ignore invalid checks) of the server certificate.
 - Update of Best Practices Guide
 - Jeff: One of the first items the eAC worked on. Has been 2 years since created and vetted by community. Time to review and update.
 - Distributed eduroam testing/monitoring (update [from December eAC meeting](#))

- MikeZ: Internet2 will be taking in some of the proposals that grew out of the TechEx session, will likely be coming back to the committee with more specific asks
 - Sara: Mike and I take direction from the chair and vice-chair on activities and outputs like working groups, position papers, etc.
- Closeout of community consultation on user/device onboarding requirements
 - <https://spaces.at.internet2.edu/pages/viewpage.action?pageId=243080614>
 - No public comment given
 - Jeff: This is another area where the eAC has provided outputs and community facing documents.
 - Brett: Great document, and we were really happy to help provide community perspective. There's material in this document that will also inform future work especially around multi-factor auth, etc.
- Removal of BASNET and JSCC from eduroam (Belarusian and Russian NROs from eduroam)
 - Sara: GeGC was informed about the removal of these NRENs. Decision was made by GEANT, as they were sponsoring these NRENs in eduroam. No action needed, just wanted to make the committee aware of the decision in case it comes up in other contexts
- Next meeting time
 - Friday Feb 17th, 11am-12:30pm ET
 - New day/time needed?
 - Jeff: Comments from committee?
 - Consensus is that the time works for most/all on current call
- AOB?
 - Brett: Update on the 2022 eSO annual report?
 - Mike: It's been finalized, will be published shortly. I'll take an action item to share the link with this committee when available.

Thursday December 22nd, 11am-12:30pm ET

Attendees:

Brett Bieber
 Jeff Egly
 Jeremy Livingston
 Mike Dickson
 Neil Johnson
 Rob Gorrell

With:

Sara Jeanes
Ann West
Mike Zawacki

Regrets:

Kim Owen
John Buysse

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - TechEx Report out
 - Raspberry Pi monitoring/test nodes
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2022-12-2>
 - Jeremy approves
 - Brett seconds
- Introduction of new members
 - Waiting until January to introduce all members
 - Election of new chair & vice chair to be held after January meeting
 - Al Mike send out poll after Jan 20th meeting
 - Many thanks to Neil Johnson and Kim Owen for their years of service on the eAC!
 - The committee thanks you both!
- Follow up on GEANT SP issue
 - Paul Dekkers' reply (see email to committee members)
 - Paul unable to join us for TechEx, replied via email
 - Next steps
 - Sara: Will include Nicole Roy in next meeting to provide additional detail, lay out options. There is some interplay between this issue and User/Device Onboarding. Also has implications for K12s/eSO. Will need to scope future discussions carefully.
 - Brett: Looking at Paul's message I saw a recognition that changes would need to be coordinated internationally. We can let Paul

know that we'd be happy to help coordinate with user populations and eduroam operators in the US, esp. When we start talking about changes to metadata, other IAM operating practices

- SO Update
 - Link Oregon
 - Mike: Has moved to full eSO. Wrapping up 4 deployment of 4 pilot schools, getting ready to join the 2023 Cohort
 - Network Nebraska
 - Brett: Steady state lately. Have been working on awareness of security issues with dynamic VLAN assignment. Have been working with technical staff in our state. Some questions from our community on additional documentation and training around this for eSO staff. Looking at addressing knowledge gaps, continuing to grow documentation. Continuing to work on marketing materials, stickers, window clings. Also working on Allo (state ISP) and Cox on public deployments of eduroam.
 - The Sun Corridor Network
 - (Mike to add update)
 - UETN
 - Jeff: Also working on marketing materials. In discussion with state dept of education, transportation. Would like to present at Westnet along with SCN. Focusing on outreach, presentation to keep generating interest in the intermountain states. Have an internal meeting next month to plan out approach for eduroam work within Utah.
 - Sara: Great - let me know if you need anything for the WestNet
- Review of work priorities (standing item)
 - MSCHAPv2 issue
 - Mike D: Some of the schools in our area have updated their Windows 11 implementation. Will break MSCHAPv2 authentication over 802.1x. Requires TLSv3 and doesn't allow for integration with RADIUS as-is. Can be tweaked to work with TLS1 or 2, or can disable Credential Guard but no easy fix
 - Mike D: Good article describing the issue:
<https://lists.geant.org/sympa/arc/cat-users/2022-10/msg00040.html>
 - <https://learn.microsoft.com/en-us/windows/security/identity-protection/credential-guard/credential-guard-known-issues#known-issue-single-sign-on-ssso-for-network-services-breaks-after-upgrading-to-windows-11-version-22h2>

- <https://learn.microsoft.com/en-us/windows/security/identity-protection/credential-guard/credential-guard-manage>
- Jeremy: TLS1.2 and below have serious security issues to be aware of.
- Jeff: Is Internet2 planning an update/info campaign on this?
- MikeD: The 22H2 update isn't as widespread yet, so we aren't seeing issues yet, but is trending upward.
- Brett: Do we have a way to figure out which flavors of RADIUS, registry settings with W112, other factors that will cause problems, and communicate that out to our communities?
- MikeD: Clearpass doesn't reveal which version of FreeRADIUS it uses, so that's hampered some of the work on our end. Some confusion even among vendors which platforms are impacted. One thing I'm looking into is SecureW2's service to onboard users and whether it's impacted. Also need to consider impacts of disabling TLS3 for the sake of making eduroam work. Could be a bigger issue in the coming academic year.
- Amel: Upgrade to ClearPass 6.11 requires fresh install and restoring config and insight data afterward.
- MikeD: That's on the docket for us this summer.
- Sara: This seems like something we would want to alert the eduroam admins to, but need to be careful since some of the protocols/solutions needed to fix the issue are still in draft
- Mike Z: Does this rise to the level of needing a working group?
- MikeD: I'd welcome some help with messaging if nothing else, forming up of best practices. The real answer is to do EAP-TLS but needs to take the TLS version into account.
- Jeff: So is there an action item for this committee?
- Brett: I'd like to get some input from SMEs on this. An awareness campaign seems like the next logical step.
- MikeD: Do the TLRS run TLS1.3 or does it matter?
- Sara: I believe we function as a pure proxy, aren't looking at the inner layer of the request. We can just route requests.
- MikeD: Maybe it would make sense to create a matrix of factors that will play into breakage,
- Sara: I believe we don't specify the version of TLS in the best practices Guide
- Rob: I agree we (the eAC) has more to do with advising of the issue, less to do with coming up with an explicit fix
- MikeD: Often we see these issues treated as device level problems, then progress upward. Having messaging around what

the issue is would help staff fix the actual issue rather than chasing lots of device issues, then lots of AD issues, etc.

- Sara: I'm hearing a note that I should send to the eduroam admins, drafted by this group, alerting the community to the issue
- Brett: I like that idea. We could start by summarizing the discussion here. Awareness is key here
- MikeD: Feels like we're still getting our hands around the size and scope of this issue. Some confusion from others, even from Microsoft
- Jeff: Also sounds like we'd need to update best practices guide in addition to messaging campaign
- Brett: We (ConnectEd Nebraska) would benefit from this. Lots of NPS schools in Nebraska
- MikeD: Need to consider that the Windows registry fix inherently involves a reduction of security
- Rob: ANd that doesn't easily address BYOD for student populations.
- MikeD: Perhaps TLS 1.3 is finalized?
<https://datatracker.ietf.org/doc/rfc8446/>

- Stats and metrics for the service

- Brett: One of the things I was thinking about is a retrospective for the whole eduroam community, stats that would be helpful for that. So there are things like total number of service locations, etc. Building on Sara's presentation on the next 1,000 subscribers. These metrics could be good to educate the community, stakeholders, and help with narrative engagement/service storytelling
- Jeff: Agree with Brett's points. Maybe we should lay out what the metrics are that we're interested in hearing. Does Internet2 track stats internally
- Sara: Yes, two-fold. Publicly we have the info presented on monitor.eduroam.org. Internally we have access to a rollup report for all subscribers. We can also look at ways to capture additional info
- MikeZ: So we can look at the reports we all get and extrapolate what's possible from there
- Brett: The total number of service locations is a good one. We have several states coming onboard the eSO program - those will help drive that number. Seeing that number tracked over time would be great.
- Sara: We can add a standing item to each eAC planning call to track that.
- Brett: THinking about the collective sense of accomplishment around Baseline Expectations for the InCommon Federation. Great for building excitement.
- CURRENT, 2022-12-22: United States of America Internet2
Service Locations: 2959 IDPs: 942 SPs: 1021

- Sara: Brazilian NREN mentioned their SPs scaled massively with Raspberry Pi type SP-in-a-box
- Availability of 2022 SO Report
 - Draft report:
 - https://docs.google.com/document/d/1GYLZ9CbJC2srCTTWlwejlHcF4KC1W7WIWYr9_wbFiH4/edit
 - Next steps
 - Publish next month, promote in upcoming presentations
 - Brett: One thing I've been working on is a better way to explain Network Nebraska and ConnectEd Nebraska. Lots of effort to market the eduroam project, less so messaging the organization. Ongoing internal discussion on this point - how to differentiate eduroam from the network from the organization but make the connection clear
 - MikeD: One way to frame this - eduroam is the ROI, the fiber was the investment
 - Jeff: A great point - it's an important part of how to engage with stakeholders in your state, make the value clear
 - Brett: That's a great point, Mike. Could be a way to talk about eduroam and the value at all levels.
 - Jeff: Speaks to questions we're hearing from other RENs. It's a good way to frame those discussions.
- Next meeting
 - Friday January 20, 11am-12:30pm ET
- AOB?
 - TechEx Report out
 - [eduroam in k-12](#) slides, work with Mark from Painless Security
 - Brett: Presentation from myself, Neil Brown, Mark Donnelly from Painless. Got to engage with international community, including Klaas Wierenga (creator of eduroam). Good presentation from Mark as well (link to slides...). Talked about topics from programmatic/SO to technical items like Mark's segment on integrating Google IDs with eduroam. Lots of good discussion, engagement from North Carolina (thanks Rob!), Nevada, Washington DC, French NREN (RENATER).
 - Jeff: Will also be meeting next month with Nevada on wireless front
 - eduroam BoF
 - Overview of service updates for 2022, solicited feedback from audience. Lots of discussion around content filtering, implications of K12 traffic on eduroam. Good comments from Andrew Buker, Rob Gorrell on that front.

- Rob: Good summary there. Lots of interest in K12 and content filtering.
- OpenRoaming and eduroam / CACTI
 - Klaas Wierenga and Margaret Cullen (Painless, eduroam team, IETF) put session together. Main outcome was a need for whitepaper on positioning around OpenRoaming. Some interplay with CACTI as well. Could be a joint project between the two bodies.
 - <https://docs.google.com/document/d/18rJ6A69p0UzI8FCdIKpsHcwYGKCBtpcOUGCvqHJkhjw/edit>
- Raspberry Pi test nodes? (Outgrowth of session from TechEx)
 - Umich sent out devices, initially for perfsonar monitoring/etc. Could also be used for service modeling and more proactive monitoring of wireless/eduroam performance. This could possibly be an item that the eAC takes up next year or there may be some additional interest.
 - Sara: Worth noting that the topography of eduroam vs networks is different and likely won't yield as much detail as, say, perfSONAR.
- MS-CC - <https://www.ms-cc.org/>
 - NTIA program director - all hand meeting call
 -  MS-CC Meeting on October 27, 2022

Friday December 2nd, 11am-12:30pm ET

Attendees:

Jeff Egly
 Amel Caldwell
 Mike Dickson
 Michael Hacker
 Neil Johnson

With:

Sara Jeanes
 Romy Bolton
 Mike Zawacki
 Steve Zoppi

Regrets:

Kim Owen

Jeremy Livingston

Agenda

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- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Slope report as standing agenda item? :) +!
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2022-10-28>
 - Mike Dickson, Michael Hacker approve
- Review of new committee members (Mike)
 - Discuss next steps, timeline for CACTI's vote to accept
 - Chair and/or vice-chair email slate to CACTI Chair (Rob Carter) before next CACTI meeting (12/8)
 - AI: MikeZ to email slate to Rob Carter (DONE)
- Update on letter to GEANT re: problematic SP (Jeff, Brett, Mike)
 - Closing the loop - Rob helped craft language, Jeff sent to GEANT staff
 - Paul Dekkers replied, thanked Jeff for the input, will discuss with GEANT staff.
 - Paul will be at TechEx, may be opportunity to check in
- SO Update (Jeff, Brett, Mike)
 - Jeff: UETN has finished new marketing materials, GEANT has signed off on them. Will continue to focus on SP deployments. Retooling approach to student deployments, encouraging use
 - Mike: Network Nebraska is also focusing on marketing and promotional materials. Have been working on presentations for conferences as well - TechEx and CoSN. Continuing to work with local ISP Allo on public deployments. SCN has been
- Review of work priorities (Jeff)
 - Topics to present to new committee members as possible work priorities for 2023 (Jeff, Brett, Rob)
 - Refresh of the Best Practices Guide

- OpenRoaming update, discussion (Rob)
 - Include industry SME?
 - Have GEANT representation as well
 - Identify
 - [Radextra/RADIUS working group](#) (Margaret Cullen could present)
 - Consider hosted services, gauge community needs
 - IdPaaS
 - RADIUS as a service
 - Revisit Guest Access service
 - Further work on User/Device Onboarding
 - Others?
 - How to better serve the SOs
 - Brett: Within this list is enough to keep us busy for a year, but would encourage this committee to determine if there are gaps or if there are items in there which don't belong. Especially as we bring on new members
- Update on public comment for User/Device Onboarding requirements feedback
 - <https://spaces.at.internet2.edu/pages/viewpage.action?pageId=243080614>
 - Ready to make public?
 - Brett: In favor of making it available. Maybe present/mention at the BoF at TechEx?
 - MikeZ: Can share it out on the eduroam admin list and on next State/Regional eduroam call
- Remaining meetings
 - Friday, 12/23
 - Change to earlier in the week? Or is the 23rd good for the majority of committee?
 - MikeD: I could stand to have the meeting earlier
 - Jeff: Same here
 - MikeZ: I'll send out scheduling poll to select next time
- AOB?

Friday, October 28th, 11am-12:30pm ET

Attendees:

Jeff Egly - UETN

Rob Gorrell - UNCG

Amel Caldwell

Mike Dickson

Brett Bieber
Jeremy Livingston
Michael Hacker
Neil Johnson - IOWA

With:

Ann West
Mike Zawacki
Romy Bolton

Regrets:

John Buysse
Kim Owen

Agenda

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- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed! No additions
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2022-09-30>
 - Rob Gorrell approves
 - Jeremy Livingston approves
- Review eAC committee nominations, discussion of next steps
 - Rolling off at end of 2022:
 - Robert Gorrell
 - Jeff Egly
 - Kim Owen
 - Neil Johnson
 - Jeremy Livingston
 - Remaining through 2024:
 - John Buysse
 - Mike Dickson
 - Brett Bieber
 - Michael Hacker
 - New Nominees:

- Jeff Egly
- Robert Gorrell
- Amel Caldwell
- Nadim El-Khoury
- Kendra Ard
- Saira Hasnain
- Dion Baird
- Tania Mahood
- Jeremy Livingston
- Industry nominations
 - Tom Rixom - SecureW2
 - Secure W2 is new to the community
 - Just made a request to join the InCommon Catalyst program
 - Mike D: We're a customer of SecureW2, use them for eduroam onboarding. Could be interesting to have Tom on board, think through private industry angle. SecureW2 got started off making scripts to enable various flavors of authentication. Have branched out into cert management, other aspects of the service. Could bring interesting spin to committee.
 - Jeff: Would be interested to hear more about other experiences of industry members on committees. Tim (Aruba/MSN) was a valuable member of eAC for example. Consider upcoming work and how skillsets of candidates could serve that work. Do we have concerns around accepting all nominees?
 - Brett: The more hands the better, especially as we look ahead to our upcoming workload. Ann, do industry members on committees have to sign a Col agreement?
 - Ann: We do for steering committees because those set policy. Both industry candidates have business lines that could be impacted by decisions of this committee, could have them serve as SMEs.
 - Brett: Is SME the same role as Tim Cappalli's current role?
 - Rob: Wondering that as well. Was his participation typical?
 - Ann: Typically we don't have industry folks who aren't Catalyst members on committees. Tim was something of an exception
 - Jeff: Would there be a different role for industry folks if they were on the committee?
 - Ann: They would be non-voting members

- Rob: Tim's participation was along that line, was valuable to a lot of the work we do
- Ann: Consider that Painless Security is involved with eduroam service operation but aren't Catalyst members. Should ensure they're non-voting members
- Rob: I feel like they do have a role to play, just want to understand how they'd slot in
- Jeff: Would they be excused from some discussions/calls or just not allowed to vote?
- Ann: They'd need to disclose all relevant information about any conflicts, may need to recuse themselves from discussion, talk through their lines of business and how those might conflict. For Josh, consider that what the committee discusses would probably be discussed by Painless to some extent. Want to include relevant expertise as we develop new services and service aspects, just need to be careful WRT their ability to sway decisions toward their business interests. Sounds like both candidates have been vouched for by this body
- Mike D: I would vouch for SecureW2. Having SecureW2 take cues from our discussions might be helpful to the community, but get your concerns - we'd need to be mindful that, for example, they don't steer work away from CAT for example.
- Amel: I agree with that. We're also SecureW2 customer. We do cert based auth and they manage our certs. Also do MDM work for us. They've been responsive, careful, thorough. Good with offering support and knowledge
- Mike D: They do a good job of following trends in eduroam related services. For example, they tend to be on top of iOS changes that might break things
- Amel: Feel like they'd be valuable
-
- Josh Howlett - Painless Security/Federated Solutions Ltd.
 - Currently works for/owns Federated Solutions Ltd.
 - Consults for Painless Security
 - Consults for Internet2 on eduroam team
- Jeff: All good to know. At this stage I'm hearing support for their participation, no major concerns for either industry candidate
 - Brett: Would like to explore a conflict of interest form for these folks. Might want to think about having all members

sign that, actually. I move that we accept current nominees and take Josh and Tom on as SMEs.

- Votes
 - Michael Hacker seconds
 - No dissenting votes
 - Jeremy: I would be happy to stay on for another term
 - Jeff moves to approve
 - Mike D seconds
 - Jeremy will stay on for another 3 year term
- eAC charter states committee must maintain between 7-13 members
 - Will have full slate of 13 with 2 SMEs
- Next steps
 - Mike Z to work with T&I community team to reach out to nominees, ensure they're willing to serve
 - Mike Z will work with Service Management lead Angi Sizemore to see what gets sent out to steering candidates for Col
 - CACTI will review final slate, make recommendations
 - Kevin Morooney will review as well
- Jeff: Many thanks to all members current and future!
- Letter of community impact: eduroam.org/CAT SP not accepting R&S v1 attributes
 - Draft letter:
<https://docs.google.com/document/d/1Gv5WEvmSa2BhC1d5fXUA8-uJDHs55sIXvwAOilnLWos/edit>
 - Technical description has been created by I2 staff. Need volunteers to draft statement of community impact, especially the risks of limiting access to CAT for US community.
 - Rob volunteers
 - Jeff volunteers, will recruit people from
 - Rob: We could recycle some of the language around user onboarding summary, since CAT figures so heavily into that.
 - Mike Z to send scheduling poll, call to be held week of November 5
- Posting existing user/device onboarding draft on eAC's page
 - https://docs.google.com/document/d/10XnxXfiqOTOF0p4QgzePxAs-TeZXAS_LGNroE7T5LB0/edit#heading=h.vxstw7mc6283
 - Vote to post proposal for community information
 - Jeff: Additional concerns, questions?
 - Brett: No concerns with sharing it, I feel it would be good for the community to have access to this info
 - Rob: Agree - we worked

- Ann: Are we talking about a community consultation? Is everyone familiar with that concept?
- Rob: Haven't considered that, don't know that it needs to be done here. Wanted a broader set of eyes on this.
- Ann: Typically community consultations last 2-6 weeks, then gets approved by CACTI. Helpful to get community input and to encourage discussion and awareness
- Rob: One area where that would be important would be the prioritization of problem prioritization in section 3.3 - want to see if we hit the mark on that from community
- Brett: Just FYI, some previous consultations — <https://spaces.at.internet2.edu/display/TI/Trust+and+Identity+Consultations>
- Jeff: Do we want to have a consultation period?
- Michael H: Agree
- Brett: To Rob's point, we want to be sure we're clear with community that 3.3 is an area we're particularly interested in their feedback. Also want to set up feedback table. Would this be considered a working group report?
- Ann: It's a requirements document, similar to some work done by TAC. Should probably include "eduroam" in title to ensure clarity.
- Brett: Move that we post this for comment, draft community feedback page. Consider timeline for comment. 6 weeks average?
- Ann: 6 weeks is typical. Here's the page from Baseline expectations: <https://spaces.at.internet2.edu/display/InCAssurance/Consultation+for+Baseline+Expectations+Implementation+and+Maintenance+Plan>
- Rob: Might want to have additional time given approaching holiday time
- Brett: If we pushed out consultation period through January that would allow for some in person discussion at TechEx
- Jeff: So are we voting to post this for community comment?
- Ann: You could vote on it now, or put it out for community consultation page, then vote based on feedback. I would suggest that course of action
- Jeff: Makes sense. So we'll post for consultation and then convene in January to vote. Brett, what do you see as next steps?
- Brett: Draft page for consultation, share with this committee, then send note to eduroam-admin list
- Mike Z: I'll help Brett get the page set up, share with this committee for feedback. Then I will work with Apryl Motley on announcement.
- Time for a refresh of the Best Practices Guide
 - Proposal to spin up working group to review and update
 - Timing for a working group?
 - Jeff: We're coming up on holiday season, should consider that in our timing. Other thoughts?

- Rob: Good that we're getting back to this. Helpful to periodically review this sort of documentation. After New Year seems like the right time to address this
- Jeff: Agree. Any objections to picking this up after New Year? I'd be happy to help on work
 - No objections to timing
- Attendees at TechEx? Informal gathering?
 - Jeff, Brett, Rob attending
- AOB?
 - Brett: Some folks might be aware of conversations Support Orgs have been having with ISPs on public deployments. Calix, main equipment manufacturer for Allo (regional ISP) included eduroam in their annual presentation. Poses an opportunity to do large scale residential eduroam deployments. Wanted to make sure all are aware of that possibility
 - Jeff: We just wrapped up statewide cybersecurity conference in Utah. eduroam figures prominently in the conference network, part of a trend we're seeing in eduroam becoming standard part of conference experience especially for higher ed.

Friday, September 30th, 11am-12:30pm ET

Attendees:

Rob Gorrell (UNCG)

Jeremy Livingston (Stevens)

Mike Dickson (UMass Amherst)

Amel Caldwell (University of Washington)

John Buysse (Notre Dame)

Brett Bieber (University of Nebraska)

With:

Nicole Roy, Albert Wu, Ann West, Mike Zawacki, Margaret Cullen, Romy Bolton,

Regrets:

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)

- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed!
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2022-09-2>
 - Rob Gorrell, Jeremy Livingston approve
- SO Update (Jeff, Brett, Mike)
 - Network Nebraska: Funding was made available for broadband and connectivity, eduroam participation was tied to that. 130 request, \$866k distributed. Huge jump in adoption, from about 30% to over 60% of districts. Currently have funded eduroam fees for all Network Nebraska members - includes K12s, higher ed, tribal colleges, others. Jeff Egly and I submitted talk at COSN, they were accepted and will be merged into a K12 updates. Callix (network gear provider) and Allo (local ISP) have created platform to provide eduroam SSID to residential, public deployments. UETN has rural ISPs that also use Callix network gear, will be looking at working with those providers
 - The Sun Corridor Network:
 - (Mike to add)
 - UETN:
 - Shifting some focus towards SPs and other partners, and private schools/academies. Also working on eduroam2Go deployment package that can be deployed to interested businesses so they're an eduroam SP. Presented at CENIC's member meeting.
 - Brett: Interesting use case for CENIC - larger state, figuring out how to manage them coming aboard
 - Link Oregon: (Mike to add)
 - CEN: (Mike to add)
- Review of work priorities (Jeff, Brett)
 - Lots to cover in today's agenda - will circle back on this if the committee identifies additional items
- eduroam.org/CAT SP not accepting R&S v1 attributes (Brett/Albert/Mike)
 - Several US eduroam subscribers have reported issues with resources that sit behind GEANT's SP, more are likely impacted
 - R&S Schema <https://refeds.org/category/research-and-scholarship>
 - R&S FAQ: <https://spaces.at.internet2.edu/display/federation/Research+and+Scholarship+FAQ>
 - Brett: Point of R&S schema is to make it easier to federate web based resources. The SP that the CAT, other resources maintained by GEANT sit behind aren't consuming full attribute set. Currently impacting

members of the US eduroam community. Couple of ways to move forward - communication and promotion/informing. Very important as we begin to promote CAT in the US. Albert, additional color and detail?

- Albert: My understanding of the situation: CAT is relied on by users to configure eduroam, CAT admins rely on GEANT's SP to use this tool. Right now GEANT is asking for attributes outside of v1 R&S. The asks make technical sense but aren't common practice in identity federations, esp. InCommon. On one hand, need to understand the need for CAT to receive these additional attributes. On the other hand if we're going to ask IdPs for new/different attributes we'd need to work with the InCommon to meet those requirements. We're at the very beginning of that journey - it's a matter of years, not weeks. It's good that eduroam is asking for these, as it will drive need for better attributes and operating principles
- Nicole: Communication with the community is needed. Documentation on how to move to new attributes, justification etc, European community tends to move faster, US community is more deliberate, longer long tail. As it sits, GEANT's SP is violating R&S operating principles, so that needs to be communicated up to them as well.
- Mike D: How is this happening, what's the process that GEANT used to
- Nicole: In the US compliance with R&S is a check box, there's no technical audit
- Mike D: So US schools are just failing to authenticate?
- Nicole: Yes - we started getting requests from schools that were having trouble logging into CAT after being able to access the service previously. When working with GEANT they were told there was an additional attribute that they needed to provide (which is not included in the R&S schema)
- Mike Z: Worth
- Brett: Are we in communication with GEANT? Do we need to communicate with our community?
- Mike Z: Have only recently reached out to GEANT. Needed to get clear internally
- Nicole: We also wanted to get guidance from this committee
- Rob: We're an R&S school and a Google school, and have noticed that we can't access CAT via InCommon but can via Google
- Nicole: Rob, are you using Cirrus Identity's Google IdP proxy for your Google users? If so, they are probably acting based on the additional "RequestedAttribute"(s) in metadata, which is why it's working.
- Rob: no, our Google Workspace is federated directly with our SSO provider (which is Azure)
- Nicole: What is proxying Azure into InCommon for you?

- Rob: our Shibboleth IDP is actually SAML proxying to the same identity store that Google is directly peered with, Azure
- Albert: The request has good technical justification - the issue is that one of the R&S attributes is eduPersonTargetedID. But some implementations of that attribute don't work with GEANT's SP. Long term would be to drive compliance, short term would be to work with GEANT to come up with a fix to bring them back in compliance with v1 standards.
- Brett: Like this approach. Another piece that would be nice would be determining a more ideal attribute release practice that would work better long term. Need to have a communication plan to identify and reach out to impacted schools with recommendations to fix this. One thing to consider is whether fixing this will break other things.
- Albert: It shouldn't. From an InCommon federation side we like the requirements CAT is asking for but think their approach is too aggressive. Would like to work with GEANT to come up with a common solution. Could change R&S spec (not ideal). Or could leverage the weight of the eduroam community to get them to meet us in the middle
- Rob: CAT is a valuable tool to the community and to tools we're looking at building to serve our community.
- Albert: Agree - delicate balance to strike here. If CAT wants to support a wide user base it needs to accept legacy attributes AND communicate a clear transition timeline. Just requiring new attributes or dramatic changes doesn't work
- Brett: Agree. Also likes Rob's point about the need to drive more adoption of CAT. Albert, could we narrow down the questions that we'd want to provide to the international community? Could you assist the eAC in the outreach? Can we provide specifics
- Albert: There are multiple stakeholders and parties involved. We need to talk to the CAT team and ensure they can make changes to fully support the R&S schema. I understand their concerns around the eduPersonTargetedID but they need to communicate a timeline for changes/. If we need to work through the US IAM community we could cite CAT as the killer app to drive compliance from our end.
- Nicole: Would be good to get guidance and develop documentation with international community to make this change sanely
- Albert: US IdP community is one party to drive change. The eAC is a good face to those efforts. CAT is another. REFEDS and eduGAIN communities are the other two stakeholders here. If we go down the direction I was talking about we should reach out to those latter two stakeholders to start talking about how the R&S specs are used, where they need to be updated, how to go about that and communicate that

need. Having REFEDS, eduGAIN and the US eduroam community all aligned would be much more likely to succeed

- Brett: Like all of these points. We need to start looking at a communication plan to inform the US community. Also need to keep in communication with REFEDS, eduGAIN communities. If we see that the timeline for fixing this is going to drag on we need to make that clear to the US community.
- Nicole; Suggest ALberty and/or I reach out to the federation operators group detailing this issue, making it clear that it represents a challenge to eudoram, ask them what next steps should be. Then have private conversation with community members to gauge reception. Also need to reach out to REFEDS. And we need to identify who in the US is impacted, undertake communication campaign to reach out to them.
- Albert: What's the impact here? Do we know how many are impacted?
- Rob: We've had some discussions around metrics, how to gauge impacts./
- MikeD: Would the users trying to log into CAT be documented in logs?
- Nicole; That's challenging - the IdP thinks it did the right thing. The User just gets left at the SP with aa cryptic error message, is never reported back to the IdP.
- Rob: I'm happy for UNCG to be a guinea pig in whatever we come up with. We have CAT but also do eduroam onboarding through a commercial tool... we have an alternative way of accessing CAT (Google social) but also have an Incommon IdP to try out the fix on.
- Brett: The approach that Albert and Nicole put together sounds great. Also want to gauge urgency. From my perspective it's urgent - there's an operational and reputational risk here.
- Ann: Totally agree Brett. Secondly there's a federation risk/
- Nicole: I volunteer to lead outreach. My team has the ammunition needed to articulate a case for action. Want to be sure we communicate the need for an immediate fix. Will also check in with the federation operators group and report back to the eAC

- Brett; WOuld like a list of CAT users in the US to begin communication
- Nicole: WOuld be tricky to generate that from the federation side
- MikeZ: I can generate a list of current CAT subscribers
- Nicole: That would help/
- Albert: I'd like to bring the TAC into this conversation as they're well positioned to work with the US community on updating attribute practices. Would also be a good community touch point to keep us honest in our work. Would like to use CAT as a forcing function to drive positive change in the US, just want CAT to make allowances for existing

- Next steps: Albert will reach out to FOG. Nicole will set up doc to track impacted entities. MikeZ will generate list of current US CAT users, provide to Nicole and Albert
- Request from Internet2: Draft a letter from the community to provide to GEANT, REN-ISAC, other members of the international eduroam community
- Look at institutions asserting v1 R&S who are also using CAT and reach out to them
- Updating the eduroam Best Practices Guide (Brett/Mike)
 - Several items have fallen out of date - time to review and revise?
- RP Testing Design Proposal (Margaret)
 - https://docs.google.com/document/d/14z6sg91fJlc9IWw_YNMq2885oaPewzfaas0p60PT5Q/edit#
 - Review and comment
 - Brett: Appreciate this! Is there a timeline for the eAC to get in their feedback
 - Mike Z: Two weeks seems good, but will yield to Margaret, Ann, Romy
 - Romy: That makes sense from our end.
 - Brett: That was what I was thinking. Sounds good.
 - Margaret: Obviously if there are show stoppers or grave concerns we can adjust
 - Brett: Sounds great. Asking committee members to have their comments in within two weeks
- Reminder of InCommon committee nominations, discussion of next steps for eAC
 - (Jeff/Brett/Mike)
 - Link to nomination page: <https://incommon.org/news/bring-your-unique-expertise-to-incommon-advisory-committees/>
- AOB?

Friday, September 2nd, 11am-12:30pm ET

Attendees:

John Buysse
 Brett Bieber (Nebraska)
 Rob Gorrell (UNCG)
 Jeremy Livingston (Stevens)
 Amel Caldwell (University of Washington)
 Mike Dickson

With:

Romy Bolton
Mike Zawacki
Steve Zoppi

Regrets:

Kim Owen
Jeff Egly
Sara Jeanes
Ann West

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
- Approval of last meeting's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2022-07-29>
 - Rob Approves, Jeremy Seconds
- SO updates
 - Network Nebraska
 - Brett: Recent release of state funds for broadband expansion which was explicitly tied to our eduroam work. That linkage has driven adoption - we're at 52ish% of all districts in the state with eduroam. Have gotten our board to approve long term funding for the SO program, folding it into standing fees. Will be presenting at TechEx with Painless. We'll present on our SO work, Painless will present on integrating Google with eduroam. NETA (Nebraska Educational Technology Association) conference with a panel discussion
 - The Sun Corridor Network
 - Working for deployments within housing complexes. Engaging with Maricopa County and Maricopa Community College System as an eduroam partner within the community. Working through procurement and legal processes to get an agreement they can use with constituents. In the interim signing on participants as a pilot.

- UETN
 - Pivoted to work on SP-only. Working on eduroam-to-go! Repurposing old equipment to build a self-contained eduroam SP-only site to assist with deployment.
 - Mike D: Really interested in the SP-in-a-box offering. Seems like a great way to incentivize SPs, drive ubiquity
 - Brett: There was some discussion on the global eduroam Slack channel, possible collaboration with Japan's REN (Hedeaki Goto is leading that effort).
 - UETN's monthly https://docs.google.com/document/d/1VtBTYreyciTvbnIBI9QIATGwSCnfYNzY-y_vb0sTCyA/edit
 -
- Link Oregon
 - Identifying schools to participate in their pilot. Working to build a support network, including Higher-Ed participants, to support the eduroam rollout.
- CEN
 - Continue to work with pilot schools and plans for upscaling support and partnering with state-funded orgs.
- New Releases/service updates (Mike)
 - IdP testing
 - <https://spaces.at.internet2.edu/display/eduroam/eduroam+Admin+IdP+Realm+Testing>
 - Further improvements planned, soliciting feedback from the community. Rob Gorrell has provided some suggestions to the team
 - Brett: Great to see, would like to see
 - Best way to send feedback? Help@incommon for initial thoughts and feedback.
 - Steve: Is help@incommon.org sufficient? Is it responsive enough?
 - Rob: Fine for me personally. I've also reached out to Mike and Sara as well. Response time is always good.
 - Brett: Steve does that work for you as well?
 - Steve: Yes, but we're always open to adjusting methodologies. Every feature that we create we try to keep the documentation loose at first to avoid "leading the witness"
 - Rob: my two (minor) feedback points on self testing...

- 1. username needs to be entered without realm to be successful when we usually promote always authn w/ realm
 - 2. some of the info from logging is missing making the attempts difficult to locate in the log viewer (this I posted to the admins list about).
- Steve: WRT point #1 we struggle with that in other contexts. Trying to drive some consistency of design approaches.
- Mike D: Is this testing against all configured RADIUS servers?
- Rob: It does test against all configured servers.
- HECVAT release
 - https://docs.google.com/spreadsheets/d/1k8YRXXtPkLXTd1u_4l6NYKNbQzOq_J9P/edit#gid=579748633
 - IAM Online presentation on the HECVAT: <https://www.youtube.com/watch?v=S3-IlnuuSSE>
- Possible eAC work item: IdPaaS (IdP as a Service) (Brett/Mike)[InCommon Federation Identity Provider as a Service Working Group Final Report](#)
 - Managed IdP for eduroam
 - Similar work being done for the InCommon Federation
 - Final report: <https://spaces.at.internet2.edu/download/attachments/145064286/20200929-IdPaaS%20WG%20Final%20Report.pdf?version=2&modificationDate=1601401869523&api=v2>
 - Project page: <https://spaces.at.internet2.edu/display/IDPAAS/IdPaaS+Home>
 - Brett: Lots of similarities in methodology here with the work of the User/Device Onboarding working group. The dream is to be able to remove major barrier for adoption of eduroam (and InCommon!) by organizations of all technical skillsets. Recall the presentation by Stefan Winter for geteduroam, guest service, etc.
 - Rob: Having had some experience on both sides of community working groups, I see lots of potential for convergence of eduroam and InCommon. One gap to consider is how to handle different authentication methods - do you require certs? Prohibit them? Incorporate then in future state deployments? I'd like to talk about that before we really dug into this service for eduroam
 - Brett: Great point. Would be good to think through what Margaret, others have said about secondary credentials. One thing to think about is that those questions will drive complexity. One way to address this is to focus the service on the infrastructure that starts outside the organization's

credential store and focus on the rest of the plumbing. Margaret and Mark will address this in their presentation on Google integration

- Rob: With username/password authentication I'd agree that those credential stores usually already exist. Less so with cert based authentication. Do we still want to push for certs? Especially if we have EAP based auth that might be "secure enough" as a secondary credential?
- Mike D: Agree with that. Seeing lots of schools that lean heavily on Google, Microsoft, etc. Also, need to think about how to handle guest users. Is that included, or will it be? Want to think about how to handle that, as many schools might be reluctant to provision guest accounts on their ID store.
- Rob: There was a working group that looked at Guest Access. Ended up recommending deploying eVA or something like that service. So that would be different from IdPaaS
- Steve: The Venn diagrams of IdPaaS, IdP of last resort, and guest services lightly touch but overlap very little.
- Brett: Another reason I thought this would be a good topic for our group was to provide our perspective on what being a good eduroam/federation participant would look like. Think about how to square community requirements with commercial providers like Azure, etc. There may be vendors that could fulfill the need for that "adaptor". If we were continuing down the path laid out by User/Device WG, what would our expectations be? What are our requirements and expectations? Rob hinted at that with his question about credential store integration. Don't know that we've talked about that for eduroam the way InCommon has developed its Baseline Expectations program.
- Rob: For us, our BE is the best practices guide. Would like to see us continue to keep that current. Good point of engagement with 3rd party vendors.
- Brett: Like your idea to ensure BPG is up to date. Could use that as the basis of a BE like document.
- Rob: Agree.
- Brett: Would love to have a way to abstract away protocol level stuff and be left with a set of requirements for both identity and wireless auth federations. Recall the article where some security research group determines that "eduroam is insecure" when it's really one org's IdP that's insecure.
- Rob: For me, brings things back around to more guidance, requirements for auth methods. What's the security potential for both on paper? What is it in the field?

- Steve: This is really a problem for all federations, even though the resources they're protecting are different (e.g. network access risks are different than ability to configure the network, gain access to data, etc) Faced with the dichotomy between managing authentication and authorization. eduroam is a service AND a network layer so it occupies several spaces. Need this group's thoughts to ensure we're implementing in a way that makes sense, won't break things
- Brett: Question for Steve and Mike - the IdPaaS WG might be aware of this community, yes? Or no? And is there a way for us to engage with that group?
- Steve: Can't speak with certainty that they're aware of this group, and their work is along different lines, but do know that members of this WG reference eduroam in their discussions
- Rob: I'd hazard a guess that, for example, cert based auth doesn't factor into those discussions.
- Steve: Cert based auth isn't popular in the browser based authentication world but it does happen in some cases. For example CILogon leverages certs, though the contexts aren't 1-to-1.
- Brett: One other piece that's mind expanding to consider - the difference between CILogon for HPC vs. how the SOs scale their work. That abstraction of protocol I mentioned earlier and understanding the benefit federated authentication brings is a great conversation to drive more of in this community. Like the idea of evolving K12 from thinking about federation for wifi access to thinking about identity federation
- Steve; I always end up thinking about "what will this cost us". So if you work closely with, say, RADIUS it seems simple to talk about just the functionality. Making something elegant and simple for a broad swath of the population is hard, but valuable for serving smaller community segments, but also drives costs. There's a little bit of "the composition has too many notes vs it has just enough notes" that we need to strike. This group's insights for what the MVP is will be invaluable to us
- MikeD: Good/fast/cheap conundrum applies here.
- Steve: Faced this with Shib. It's too hard until people realize what they need to have if they don't have Shib. That drove development of the Shib UI, which doesn't do everything but it does enough to help less technical audiences.
- Rob: Good analogy. I feel like we are with eduroam where we were with Shib in 2008.
- Steve: Agree. Complexity is less with eduroam but many still need help.
- Rob: Yes - complexity is a barrier for adoption. It's been a challenge for us. How do we find the thing that will solve most of the problems for

smaller audiences? Fixing everything isn't possible, just want to help a majority of those who most need help.

- Steve: Need to be sure we address the 80/20 split. Not easy to do, need to be mindful that you don't try to fix everything for everyone. Separately, we're looking at sequences half a year out or more. Want all working groups to keep that in mind when they undertake their efforts
- Brett: Think it was great to put this idea in front of us. Want to keep us thinking about the work of the IdPaaS group and think about how that would inform both our work on a potential IdPaaS and think about the implications for the "Baseline Expectations" for eduroam.
- Steve: Keep in mind that we'll all place bad bets now and again, we just want to
- Rob: Coming back to BPG and ensuring they're current is key
- Link to the previous Guest Access Working group outcomes:
<https://spaces.at.internet2.edu/pages/viewpage.action?pageId=210796656>
- Items for discussion (Mike)
 - User/Device requirements doc
 - Appreciate all of the efforts and it's still under discussion and analysis. With Sara out and the end of the year push looming we will continue to assess.
 - Privacy KB article
- New membership, recruitment (Brett/Mike)
 - <https://docs.google.com/forms/d/e/1FAIpQLSdgB2gT4XQ5yjNUycVsqv-bVWE4Jdeag3N2LaFEOTTtOMynew/viewform>
 - Initial three year stint is coming to an end (6 potential seats). We are actively recruiting. Users rolling off can resubmit their names. Hint - Jeff Egly :-)
 - Please actively recruit/reach out to anyone you think of who might be a good fit for eAC.
- Congratulations to Sara and Emily Jeanes! Kara Alice Jeanes, born on Saturday 27th
 - Well wishes from the committee!
 - Rob says daycares make good SP locations
- AOB?

Friday July 29th, 11am-12:30pm ET

Attendees:

Jeff Egly - UETN

Rob Gorrell - UNC Greensboro

Kim Owen - NDSU
Jeremy Livingston - Stevens University
Brett Bieber - University of Nebraska

With:

Sara Jeanes - Internet2
Mike Zawacki - Internet2

Regrets:

Kevin Morooney
Amel Caldwell

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed! No additions
- Approval of last month's meeting minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2022-06-24>
 - Brett approves
 - Kim seconds
- SO update
 - Network Nebraska (Brett)
 - Presented at Admin Days (annual K12 superintendent meeting) on eduroam. Had eduroam available on site as well. Provided a 1 year retrospective, provided info on work being done this year.
 - Slides:
https://docs.google.com/presentation/d/1k-Cs6nKc-t0F9Bv8d_mp37YSThWt3tdHzusx1GkVx74/edit
 - Gets interesting around slide 10 :)
 - Bret: Nearly all of the ESUs have deployed, covering 44% of the state's K12 students. Got a testimonial from well known state k12 IT leader on benefits. 6 month report was a useful source for demonstrating value. Schools also gained access to \$1.4mil in

funding for wireless gear, some of which has gone into our eduroam deployments

- The Sun Corridor Network (Mike)
 - Signed up additional school district (Florence)
 - Working with an online K12 to become an SP. They have facilities nationally and internationally
 - Looking at funding options to insulate community from cost of program
 - Jeff: Having funding available to cover costs makes deployments and promotion of the service a lot easier.
- UETN (Jeff)
 - Jeff: Working on promotion and documentation for SP-Onlys. Held user group last week with state K12 and HE IT staff.
- On-Rampers (Mike)
 - CEN
 - Working on formalizing pilot schools
 - Reworking support for public SP-only deployments (state program shifted areas of responsibility/funding)
 - Link Oregon
 - Have identified pilot schools (initially 2-3, option to add up to 5)
 - Jeff: Are those schools or districts?
 - Mike: Mostly districts, though possibly at least one school
 - Working on firming up support structures, possible partnership with OSU
- Training update (Brett/Rob/Mike)
 - Brett: Had new staff attend (in preparation for moving support to a more distributed model) and found it very valuable. Having access to I2 staff was especially helpful. Having the course materials available after training has been valuable as well.
 - Jeff: Will you be transitioning to a new PM or with the work be spread across existing and new staff?
 - Brett: Remains to be seen. We still have Ben Nelson (current PM) from Dept of Education for the time being, but may transition to staff from another department or HE partner going forward.
 - Rob: From the instructor perspective it was successful
- Metrics for SOs (Mike/Brett)
 - Brett: This was a question I had for the eAC - one thing I thought would be really helpful would be to collect a set of metrics from SOs that could be used to provide measurable tracking of progress, both internally and externally and to tell a better story.

[Here's an example](#) from our presentation. For example - can we pull data from eFM (how many IdPs, how many SP-Onlys, etc).

- Jeff: Agree. Could also be helpful to provide some basic info on committee activity for some cross silo awareness.
- Rob: As an impartial party I would find this helpful. Having a clearcut comparison could be helpful for external audiences as well.
- Kim: Would this be yearly collection?
- Brett: Looking at the 18 month stats from our presentation we could look at working the semi-annual and annual reports into that story. Maybe look at breakout of what kind of entities were added per year.
- Rob: Consider SPs and how they're displayed.
- Brett: Wondering what we can pull out of the eFM without too much effort
- Jeff: Trendlines would be good to plot too
- Sara: The most useful info is probably on the SO reports. I have some "point in time" stats that I track but nothing for public consumption. Want to be mindful that we can disclose who's progressing and how that we share appropriately.
- Brett: Agree with that. K12 stats that we share could be aggregated.
- Sara: Anecdotally the growth from SOs has accounted for about 90%. Have seen hundreds of new locations
- Brett: Is that something you're tracking that could be shared?
- Sara: I could have the team pull some numbers, but the best site for real time is monitor.eduroam.org (<https://monitor.eduroam.org/> -> NOAM tab)

General information

EuropeAfricaAPANSOAMNOAM			
Country	NREN/NRO	Number of service locations	Number of IdPs
Canada	CANARIE	588	146
Mexico	CUDI	554	10
United States of America	Internet2	2855	912

- Jeff: Next steps here?
- Brett: We could ask the SOs what they would find valuable. I'm imagining something like a line or stacked bar graph showing growth by sector.
- Jeff: It would help us (UETN) to see how we're progressing year over year.

- Mike: The SO coordination calls would be a good place to surface this topic
- Standing check in on work priorities for the eAC in 2022 (Jeff/Brett)
 - Engaging SPs to register service locations on map, other “baseline” work
 - Jeff: On the map side, does that fall with Internet2?
 - Sara: I would be happy to include a blurb in my regular notes to admins to ensure all locations get added to the map. We have a knowledge base article on how to do that, could link to that.
 - Rob: There was some discussion on the eduroam-admin list about what to do if they find a location that isn’t reflected accurately on the map. Maybe something we can mention in the wiki
 - Sara: Good question. Easiest process would be to reach out to the local support and have the map updated. In some cases we’ve seen schools shuffle locations or spin off remote campuses, which is what prompted it to come up on the eduroam-admin list.
 - Rob: Wonder if an SO would want to be the point of contact for their constituents
 - Jeff: From UETN’s perspective we want to know that if we have something on the map that it’s operating properly, and pull down sites that are down or permanently
 - Rob: What’s the process for determining who owns an SP?
 - Sara: It’s available on the map - points toward the home institution’s webpage.
 - Brett: Wondering if we should work with the eduroam companion app? Could the app compare the location of the device and the location of the SP they’re connecting to?
 - Mike: Device GPS can be a little unreliable, but could always ask.
 - Brett: Wonder if we could get a report have some metrics of engagement after one of the messages?
 - Sara: You can reference the monitor.eduroam.org page. So right now we (the US) are at 2855. If that number goes up after the note it could be a measurement of engagement
 - Brett: Would be interesting to see what happens with, say, Allo’s public deployments, esp. If they do enable the service at the residential level. Would want a business SP to broadcast their location, not so sure about residential users. Could make that part of the onboarding process with commercial SP providers. Worth thinking about developing a set up best practices.
 - Jeff: Want to see if there are any other areas that we should be focusing on. Is OpenRoaming a priority for example? Other topics?

- Rob: I think we should keep current on OpenRoaming but am not aware of any work to be done in the US right now.
 - Rob: One area I'm interested in is the student use of K12, especially WRT content filtering concerns. That comes up in my work.
 - Jeff: Seems like there's a spectrum of approaches, from BYOD to locked down district issued devices. Looks like Nebraska has really good student usage, better than Utah.
 - Brett: We've had some discussion with our ERate coordinator. His determination was that eduroam and filtering didn't cause any issues with ERate requirements. If it's district issued equipment it's better to filter at the device level. If it's a district owned network you should filter that network.
 - Jeff: We've had some districts deploy to students but tend not to find out when they flip that switch.
 - Rob: Consider the implications of this on our work on things like the User/Device Onboarding WG. Want to be able to account for BYOD and district owned devices
- User/Device WG and service requirements next steps (Sara/Mike/Brett/Rob)
 - Sara: Mostly this is me pacing the document internally. It's in good shape and will be presented to this group in September or October (probably September). Have been working with Rob on some language including considering potential for MDM, how that might impact the work. We'll be doing internal review between now and next eAC meeting. We will be pivoting next to solutioning, looking at work packages
 - Rob: Agree we're in a good spot. What we've been doing is taking the original requirements doc and expanding on that. Have worked to refine the use cases, populations that would use the service, and how each could be dealt with.
 - Brett: I'll miss working with the working group :) But am excited to see the requirements doc nearing completion. Looking forward to seeing how to take that work and turn it into next steps
 - Sara: Just want to be sure that it makes sense to pursue this service and then turn toward guest access. Does that sound right?
 - Rob: Subscribers that are just getting started might be more interested in User/Device onboarding. More mature subscribers might be more interested in a guest service.
 - Brett: If most of the subscribers are coming from the SO sector then I think Onboarding is more important
 - Sara: Good feedback. Want to make sure that we're using our staff resources in a way that aligns with needs of community.
- Heads up/link to Passkey presentation (Mike/Sara)

- <https://youtu.be/wipdC4JQtr4>
 - Sara: Has some interesting implications which could be relevant. Mostly consumer focused, esp users of Apple and Google credentials.
- Sara's last eAC meeting until Dec
- Brett to move to new position (AVP of Client Services) at University of Nebraska
 - Will continue to serve on this committee
- Next meeting
 - Friday September 2nd, 11am-12:30pm ET

Friday June 24th, 11am-12:30pm ET

Attendees:

Mike Hacker
 Mike Dickson
 Amel Caldwell
 Brett Bieber
 Kim Owen

With:

Margaret Cullen
 Josh Howlett
 Sara Jeanes
 Kevin Morooney
 Steve Zoppi
 Mike Zawacki

Regrets:

Agenda

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- Agenda bash
 - Bashed
- Approval of last month's meeting minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2022-05-13>
 - Brett approves, Jeff seconds
- SO Update
 - Network Nebraska
 - Brett: Uptick in constituents signing on. Governor released funds for edu broadband/hardware. We focused on wireless and network gear. Came out to roughly \$10k per school. Half went to wireless infrastructure (esp for busses) and half to RADIUS services. At 36% of all school districts signed up. Will be presenting at statewide edu tech conference for superintendents of Nebraska schools. In discussions with Calix and Allo to deploy eduroam publicly and to residential end points.
 - Sara: Had good discussions with them this week. Some points for them to work through together (particularly around opt-in vs opt-out of eduroam SSID broadcast for residential customers). Looking at adding tens or hundreds of thousands of service locations. Need to sort out approach to bulk add those to eFM. They plan to route requests to centralized RADIUS architecture. Will be looping Brett and his team into
 - Brett: That's great news. Sounds like there's also work being done by Allo in Arizona
 - The Sun Corridor Network
 - 6/22 meeting with Florence USD, hope to bring them on
 - Trying to figure out how to provide eduroam for free within E-Rate guidelines
 - Summer push to bring on current SCN subscribers before fall semester
 - Still waiting on University to approve agreement but moving forward with lining up future users
 - UETN
 - Jeff: Attended SW regional research meeting in AZ. Allo was present, some good engagement with them. Eduroam was a topic that came up in several contexts, including discussion with Navajo Technical University. Calix is a service provider for rural service areas, so good precedent. We've had discussions along similar lines with [CentraCom](#) in Utah. Confirmed to present on eduroam in CENIC's conference in September. Amanda Molinari will be

presenting on our work in Utah. Also finished up promotional videos geared towards value prop for SP-only candidates that are less technical, outside of our immediate community.

- Link to video: <https://youtu.be/IWAOPli6ig>
- Brett: Wanted to mention a couple of things. A couple of weeks ago we had Great Plains Network meeting. James Deaton was open to further discussion around eduroam. I'll work on getting onto agenda for next gathering. Kim, can you help with that as well? Know there's interest from South Dakota as well. SD has a statewide AD identity store. Could be low hanging fruit?
- Kim: Would be happy to help, though James is already on the agenda for the next call. ND has a similar ID store, but tend to hit roadblocks around "why should we do eduroam".
- Brett: Particular interest around TCUs
- Kim: We and I2 have been in discussions with AIHEC. Big barrier is around limited staff cycles. Lots of 1 person shops.
- Brett: Particularly relevant to User/Device Onboarding working group's output. Reinforces the value of that work - lowering friction to adopt is key. WRT AIHEC, are there any next steps we can help with?
- Brett: Northern Tier conference is next week. Have a light BoF session that could be an opportunity to socialize this, discuss with that audience. I'll take point on that.
- Jeff: One thing that tends to follow eduroam is discussions around identity for K12 communities. Something to keep in mind going forward.
- Link Oregon
 - Review of SO proposal
 - Tour of eFM features for SOs
- CEN
 - Review of SO proposal
 - Tour of eFM features for SOs
- Standing check in on work priorities for the eAC in 2022
 - I2 holding internal discussions on User/Device Onboarding. Any implications for SO work?
 - Sara: Had some discussion with SOs about MDM and how that might slot into what the working group is developing. Outcomes are that there's a diversity of MDM platforms and approaches to student onboarding. Will likely push development toward more open ended, platform agnostic approaches (headless services, etc, for more flexible integrations). Lots more conversations to have around this, especially as more SOs come aboard. The work that each state is doing to support student populations

could help inform those discussions going forward. Tightened up the proposal document and will be reviewing internally ahead of next steps with working group. Need to tune language to ensure the context of the work and any next steps are set correctly. Want to be sure we aren't over or under promising.

- Brett: Thinking back, we started off with a sort of thought experiment on what the service might do and have been refining and expanding that. Props to Sara for driving that work on this latest draft. If we need to hone that and make sure it's clear this is a requirements doc and not a "bill of goods" then I support that. Is that your intention?
- Sara: Yes, more or less. We've already worked toward that structure, essentially splitting the doc into two. Also adding more detail on existing resources that would meet the needs identified by the group. We'll end up with something models more on the service proposals for IdP and SP testing.
- Brett: Do we expect we'll have a version of the document to review at our July meeting?
- Sara: Possibly, yes. We'll keep you all in the loop on that. Also continuing work on IdP testing and SP testing. IdP testing will be done first, then pivoting to SP testing. Several options for "what comes next" - we'll continue to work with you all on that!
- Next Meeting: July 8th 11:30am-1pm ET
 - Too close to June's meeting? Hold until later July?
 - Mike: Propose collapsing the July 8th and August 5th meetings into one.
- AOB?
 - eduroam retrospective webinar - join us!
 - June 28th, 2pm ET
 - <https://internet2.edu/retrospect-on-eduroams-migration-to-the-cloud/>
 - Jeff: Update from UETN Tech Summit.
 - Eduroam is now a standard part of our meeting plans. Good presentation and discussion

Friday May 13th, 11am-12:30pm ET

Attendees:

Jeff Egly - UETN
Rob Gorrell - UNCG
John Buysse - Notre Dame
Jeremy Livingston - Stephens
Brett Bieber - UofNebraska
Neil Johnson - IOWA
Mike Dickson - University of Massachusetts
Amel Caldwell - University of Washington

With:

Kevin Morooney
Sara Jeanes
Mike Zawacki

Regrets:

Kim Owen

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed
- Approval of last month's meeting minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2022-04-15>
 - Amel - approve contingent on removal of slide deck link
 - ..
- SO update (Jeff/Brett/Mike)
 - Report out from Jeff/Brett/Michael H on review of proposals
 - CEN - https://docs.google.com/document/d/1oBHg4q6ZwN7CIRS9po8EAQHQdGsZA_er/edit
 - Jeff: Feels like a solid proposal, similar approach to Network Nebraska and UETN
 - Brett: Agree. They've been engaged for some time and reached out a year ago to discuss strategies for us

- Jeff: Strong organizational ties to state government is a big plus for them
 - Mike; CEN had turned up 5-6 K12 districts already. Will be participating via the On-Ramp option
- Link Oregon -
 - <https://docs.google.com/document/d/1Co2xtK3NwrHWwza2zEcIdjIEvnzu-un2/edit#>
 - Jeff: Have been showing interest and participating in discussions around promotion of SP-Only/hotspots. Another good candidate. Lots of focus on building out fiber and increased connectivity for their schools. Have some strategic partnerships with OSU and PSU, will help with supporting On-Ramp efforts. Like the On-Ramp option - seems to have lowered barrier to adopt
 - Brett: Interesting candidate, newer organization. This could be an opportunity to capitalize on eduroam to demonstrate value to their community. The fact that they already have alignment with their higher ed partners is great
- Jeff; Any additional comments?
 - Sara: I think it's a good group. Have been working with them for some time. Should stress the importance of developing their support plan during the onramp. Great to highlight their work during the monthly state/Regional eduroam calls.
 - Jeff: Agree with the above. Interested in seeing how the pipeline shapes up with other regionals (Merit and work with Wayne State, tribal governments)
- Ann: Thanks to all of you for reviewing proposals and adding feedback. Always great to get another set of eyes
- Next steps/timeline
 - Inform CEN, Link Oregon
- UETN
 - Working on video for promotion of SPs/hotspots. Will also leverage the promotional material we've been developing in conjunction with Link Oregon, SCN, and Internet2. Got a good bit of feedback from users who've benefited from the public deployments in DMV, state buildings. Looking at project to make it easier for SP/hotposts to come up ("eduroam in a box").
 - Sara: We've been looking at calling SP-Onlys "hotspots". Would be interested to hear from this group on that. "SPS" is a technical/industry term. "Hotspot" feels more accessible, familiar.

- Mike D: I like that idea. Makes it more vernacular, familiar concept.
 - Jeff: I agree. In our experience when we're working with folks outside of the edu community it's helpful to use terms that are more familiar. How do you see this rework playing out
 - Sara: In marketing materials, like the SP-Only/Hotspot promo sheets we've been working with SOs. Also think about impact on eFM and other technical documentation and in legal agreements
 - Mike D: Good for SP/hotspot operators given increased security and community assurances
 - Brett: Wonder if that's something to consider including in future documentation and promo materials. eduroam 'secure hotspot' marketing label
 - Mike D: Yes. Can help give users a sense of familiarity and comfort with their devices connecting automatically
 - Ann: We'll be in touch with you to record a promo ;)
- Network Nebraska
 - Brett: Sara put together a summary for the PAG which covers stats for Nebraska. One thing that has big potential are the conversations we're having with Nebraska based fiber provider, which also serve CO and (especially interesting) with AZ. They're already making public wifi available in 10 cities. Want to have a conversation with their main equipment provider (fiber modem/wireless AP). Looking at how to allow customers to make eduroam available within their home. Need to make sure we're doing this in an architecturally sane and sustainable way. Potential to develop a strategy for engaging with ISPs on wider public/private deployments. Will be meeting with them on Monday.
 - Jeff; Eager to hear how that conversation shapes up. With all the work you've done on ISP partnerships we're rethinking our approach, looking to follow in your footsteps.
- Sun Corridor Network
 - Brett: Allo (ISP that NN has been partnering with on public deployments) reached out to SCN. Also potential to piggyback work NN is doing with Cox into AZ. Looking at how NN can support SCN in their engagement with Cox. Anything else from others?
 - Mike: Other main news is pivoting to new K12 districts for deployment
- Updates from advisory/community meetings

- InCommon Quarterly Advisory-Chairs call (Jeff/Brett)
 - Use of PM software (Monday.com) to coordinate across committees
 - Jeff: Interested to start working with Mike on getting our work reflected in Monday.
 - Ann: Some additional background - this is a quarterly call with our committee chairs to coordinate, foster better understanding of the work being done by you all and your counterparts in other areas of the community. Netta Caligari (I2 community lead) looking to provide a platform for greater transparency to community, provide opportunities for advisory groups to work cooperatively and stay in touch on activities “across silos”
 - Brett: Really excited about this. Coming into eduroam fairly new seeing lots of opportunities from this sort of cross pollination.
 - Jeff: Internet2 will be hosting meetings on IAM, users.
 - Ann: We do this every few years - looking at how we talk about ourselves, services, and the work we do. One example is the previous discussion of “hotspot” vs SP-Only. Developing a two page document on what InCommon does, how it offers services to meet community needs. Audience is those who have less familiarity with InCommon. Focus group will be convened to help tune this messaging. Advisory chairs will be able to sit in on some/all of this discussion
 - Kevin: The way we talk about what we do is always changing and evolving. Big changes are driven by need to adapt to community needs and conditions on the group. This is a chance to reboot how we talk about what we do.
 - Jeff: Think that does speak to earlier example of hot spot/SP. Can see this coming up as we look at things like OpenRoaming, other big changes in the eduroam community.
- PAG presentation (Sara)
 -  eduroam Updates for TI PAG - May 2022 *(please hold out of notes)*
 - Sara: The slide deck is largely a report out on what you’ve all been doing - nothing new content-wise, just presented for new eyes in community. Main thing to point out are the new features for eFM like ability for eduroam admins to add new admins, see existing admins for their organizations. Also be functionality for SO admins to add SO admins and constituent admins. Should make life easier for all - ability to self service help everyone. Also finishing up work on needs/solution documenting on IdP and SP testing. Those functions will come after “admin adding” functionality. Have

included deck for reference and happy to answer questions after the call.

- Standing check in on work priorities for the eAC in 2022
 - Jeff: Have had dialog in these meetings about areas to focus on. Have had input from GEANT giving global perspective. Next agenda item is probably next big priority for this group. Any items from others we should be paying attention to?
 - Rob: thoughts around external testing?
 - Sara: Two pieces - one easy, one less easy.
 - IdP testing easier - will leverage lots of existing tools
 - SP/RP testing - Less easy. Per requirements doc it requires short lived external credentials that test an org's SP/RP. We will need to create some additional infrastructure. Interestingly, it will leverage some of the work of the User/Device Onboarding solution.
- Guest Access follow-ups (Brett/Jeff/Sara)
 - Jeff: Sara, can you speak about the office hour sessions you hosted?
 - Sara: Yes. Also covered in the deck linked above. Prompted by questions and concerns in the community WRT the turning off of ANYROAM's guest access service. Some confusion about the timeline of change to that service and how the infrastructure migration figured into the turn down (also, thanks to those from this group who jumped into mailing list discussions, and to those who attended the office hours calls). Invited ANYROAM to attend but they opted not to participate. Some additional discussion with David Bantz on calls and on list. Feels like this particular topic has been resolved, though there's still the matter of the work that the Guest Access working group has done. Guest Access is very much on our (I2's) mind, though it's one of several competing priorities. My ask of this group is if development of Guest Access is worth taking cycles form work on eFM enhancements and User/Device Onboarding
 - Rob: Also feel it's largely resolved. But am wondering if there's a way to see if ANYROAM guest accounts are hitting our servers? If so, can we reach out to orgs who are routing requests to I2?
 - Sara: Interesting question. We can consider that
 - Brett; Agree it might be worthwhile to pursue. The risk is that someone is using an ANYROAM guest account and is trying to use it at site that isn't set up to route ANYROAM guest services.
 - Rob: Agree. It feels like we could fairly easily pull those metrics
 - Sara: Two fold considerations. First is that ANYROAM guest users have to affiliation with any institutions, so we can't see who we would need to follow up with. Could be more valuable to look for institutions that are routing ANYROAM guest traffic wrong.
 - Rob: You'd know what institution routed a user to TLRS1/2 right?

- Mike D: Agree. You'd see a failed request from an SP and could run a report to look for those requests. Feels like it's something that could be done fairly easily. Also, the thread on the mailing list did get contentious - Sara did a good job of responding. Before I joined this committee we were considering how else to handle guests - social credentials, something else? ANYROAM is still advocating the service, though it does require additional configs. Feels like there's some confusion around their ongoing role, especially as Philippe is on the mailing lists actively promoting the service.
- Rob: I think there's benefit in doing traffic analysis both to fix technical problems but also as a metric for community perception of the value of their service. Could also help if we need to have this conversation again with the community
- **Sara: I'll take a AI to follow up with the eduroam team and see about what we might do next.**
- Jeff: Interesting conversation on the second office hour call with Vantage TC. So is the sense from the group that we've addressed this topic?
- Rob: I think these prior conversations are more about making sure that nobody's "left out to dry" while the WG develops Guest Access solution, and to aim folks toward our work on a new service option.
- Brett: Also consider leveraging existing IAM teams to create identities/accounts for these guests. Only available to mature organizations, though
- Rob: Agree - not an option for everyone but available to some. In my experience where guest access comes up it's always wifi where you get the first requests.
- Mike D: Have also heard concerns about guests being created locally inflating user counts, skewing metrics. Big driver for guests in HE can be graduations. The notion of those users being enabled to roam doesn't seem like something we (HEs) would want to be responsible for. One nice thing about ANYROAM's offering was that it was more tightly scoped, didn't allow for system-wide roaming
- Ann: It's a good point. Rob, you treat ANYROAM guest users differently than IdP sponsored users, yes? Global eduroam policy is that users have to be associated with an R&E entity. Nice thing about the proposed Guest Access is that it's a complete solution that allows for management of users, tighter binding to R&E

entities, and is part of a broader offering with better support.
Understand the appeal of eVA.

- Mike D: So for the SOs deploying in gov. buildings, do those users need to be associated and R&E institution?
- Jeff: Yes
- Mike D: Loose affiliation also crops up in other contexts in the IAM world. Grow the community. Maybe look at ways to direct student adjacent populations (parents etc) toward the Guest Service
- Jeff: When we started bringing up gov buildings as SPs they often indicated desire to also join eduroam (or govroam)
- MikeD: Feels like a need/request that we'll continue to hear. Consider govt employee that's a hotspot - they'd want to be able to connect using it.
- Ann: WRT to govroam, there are countries in the EU that have it. Was developed by GEANT for reasons that Mike D stated above. It's very informal/not standardized like eduroam is. Have had discussions with GeGC where there's a concern about offering eduroam credentials to non R&E users. Issue always comes back to trust. If an NRO is too loose in its enforcement of user affiliation with R&E it could damage trust for that country, have an impact on functionality
- Rob: Highlights the value of OpenRoaming.
 - Impact analysis
 - Timeline analysis
 - Re-open requirements doc for comment?
- User/Device Onboarding working group (Brett/Rob)
 - Rob: QUick update - group has been meeting weekly, lots of new documentation, expansion of original requirements doc. Currently going over how to stage phases of service versions, other infrastructure requirements.
- Who's going to TechEx? Have a (mostly) in-person Dec meeting of the eAC? (Jeff/Brett)
 - Jeff: Those planning to attend TechEx? Could be an option to have a hybrid in-person meeting. UETN staff may be in attendance as well.
 - Rob, Brett
 - Brett: If others are interested in attending would be great to meet in person.
 - **MikeZ: Will take an action item to keep tabs on this, submit request for room at TechEx with gear to facilitate hybrid meeting.**
- Next meeting: June meeting falls on top of BaseCAMP. Move to Friday June 17th, same time?

- Seems to work for most.
 - **AI MikeZ: send out updated invite.**
- AOB?

Friday April 15th, 11am-12:30pm ET

Attendees:

Amel Caldwell - UW
 Brett Bieber - Nebraska
 Neil Johnosn - IOWA
 Kim Owen - NDSU
 Stefan Winter - RESTENA
 Michael Hacker - University Heights Charter School District

With:

Sara Jeanes
 Romy Bolton
 Ann West
 Steve Zoppi
 Mike Zawacki

Regrets:

John Buysse, Notre Dame
 Rob Gorrell, UNCG
 Jeremy Livingston, Stephens University
 Michael Dickson, University of Massachusetts

Agenda:

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash

- Bashed! No new items
- Approval of last month's meeting minutes
 - <https://spaces.at.internet2.edu/x/6qobDQ>
 - Kim has moved to approve
 - Jeff approves
- Update on working groups
 - Discussion on geteduroam (special guest Stefan Winter)
 - **Link to recording:**
<https://internet2.box.com/s/v430s18c60h8ndlnrjwcorv9cwndrlu>
[eu](https://internet2.box.com/s/v430s18c60h8ndlnrjwcorv9cwndrlu)
 - Geteduroam app info: <https://www.geteduroam.app/>
 - Brett: WRT the pseudo-IdP portion - SURFNet is running one instance that is backed by multiple IdP's or is it a one to one relationship?
 - Stefan: This is a multi tenant deployment, so it's one instance that talks to multiple IdPs.
 - Brett: Thanks. Point of confusion for me when I was trying out geteduroam was which institutional credentials I had to plug in
 - Stefan: There's documentation that can help with this (<https://www.geteduroam.app/idp/cat/>)
 - Brett: Regarding certs - they're generated on the geteduroam IdP and then installed via the app?
 - Stefan: Yes. We have a similar service (Managed IdP). In that service we found it easier to generate the cert on the server and then provide to the end user. Working on client side generate but
 - Brett: Is there a way to manage the certs which are installed via geteduroam? A revocation list, etc?
 - Stefan: Basic idea was that you wouldn't need revocation because the certs were shortlived (4ish weeks). Turns out that OSEs are bad at having to frequently load new certs. We extended the life of the certs and have not yet added in management functionality. It's on the roadmap but not
 - Brett: Is there any ability to manage other aspects of the cert? And is any of this visible to the user?
 - Stefan: Not right now. Users will get a notice that their cert is expiring.
 - Brett: Excited about this. One thing we've been working on is how to encourage orgs to follow Best Practices around relying on EAP-TLS if they're smaller, less technically capable. This could help solve for that. What we're missing

is that many of the institutions we would work with don't have a SAML IdP. Need to look at how to either work around that or provide SAML elsewhere. Maybe containerized SAML IdP to run locally? Maybe leverage external IdP (e.g. Azure AD)?

- Steve: Anything is "possible" in this way - but what is "probable and practical" is the biggest question due to the variability of combinations/permutations.
- Ann: Google would be in scope for that too, since it's OIDC
- Brett; True. Is that possible, Stefan?
- Stefan: Would be best to talk to Paul Dekkers about this. We've been talking about how to handle IdP requirements. No solution now.
- Brett: Not much experience with federation in K12 space. Eduroam is the first taste of that for them. Want to bring them into that space, show them what's possible.
- Ann: Agree. Baby steps - Google is common in K12, maybe work on that first
- Sara: We have a layer of capabilities (geteduroam, other services we're working on). As we push down to K12 there's another level of abilities, limitations, and there's the functionality of various eduroam and related services like geteduroam, CAT, etc. Need to work on linkages between all those portions. Challenge is identifying dependencies of linkages and putting those into place
- Brett: Where is the development occurring, what's the roadmap for those projects? Having a sense of that will help us sequence our work and figure out where we can contribute.
- **Stefan: I'll ask for the roadmap and share back with this group**
 - **UPDATE: At this time there's no publicly sharable roadmap for geteduroam**

- Solution reviews

- Note from Michael Dickson: Regarding the SP section of the "eAC review of eduroam services proposals" on April 6th, I agree that ensuring **validate server cert** is enabled in the OS to prevent MiTM attacks is critical to a safe connection. We use EAP-TTLS with a 3rd party onboarding service. Fac/staff devices that are managed can get a supplicant config pushed via GPO but because there are no client side certs needed students and unmanaged Win/Android devices simply see eduroam in the hunt list and click. They just enter their username and

their done, often without validate server cert being enabled. We strive to convince users to run the onboarding tool but it's just plain easier to click to connect.

- Sara: Context was proposal of functions to provide parity with legacy service.
- Brett: It's a good point. No objections to his statements.
- Amel: Agree. Don't think validating the server cert is enough.
- Brett: So are there suggestions for validation?
- Amel: Really difficult/impossible to enforce validations if it's a 'one and done' with just username/password
- Sara: Idea was to use short lived certs to address these challenges, require regular validation
- Brett: If username/password reliance is a problem/weakness then we need to consider how to move people off that model and onto methods like EAP-TLS. I feel like that's well understood, so we just need to continue to work on lowering the bar to move to cert based authentication (additional services, documentation, etc).
- Michael H: Coming from K12s, we see this problem. We're scattered between Google and 3rd party on prem solutions (Azure AD). Are looking toward the community to close those gaps.
- Ann: Also see that in HE. If we solve for K12 we also solve for HE. Solution may be a collection of partners who come together under community standards and policies. InCommon has started that sort of work (InCommon Catalyst program). First work there is a SAML IdPaaS. Could see that sort of work factoring into questions like the need for SAML in geteduroam. Trust is also backed up by legal agreements that "give the community teeth"
- Jeff: Next steps?
- Sara: It sounds like we're in good shape, that our recommendations are in line with community standards. Next steps would be to have the group dig into technical needs. For example, for monitoring piece we could just write up a knowledge base article. For IdP we need to write up technical description of how to make the various pieces interoperate. For SP side we'd want to figure out how to manage credential issuance and removal. We see IdP coming first, would want testing.
- Brett: I think to documents hit the mark for what's needed.

- Amel: Agree.
 - Sara: I'd encourage us to dig into the conversational fork Brett was taking us down. Want to continue discussion around end user onboarding.
- User/Device Onboarding working group (Brett)
 - [Version/MVP table](#)
 - Brett: With info Stefan provided this document will need some updating! Intent was to identify existing community tools that will meet the requirements of various components. I started off listing out features, what the MVP would be for initial version, and then looking ahead to v2, etc. Hearing Stefan's demo I'm seeing where those fit into this document. Next step would be to get the road map for geteduroam, identify where upcoming features slot into needs for our solution, and plan around gaps.
 - Jeff: I agree. Do you feel like we need to get some additional representation. Assistance from the WG to fill this in?
 - Brett: I like the idea of doing a technical pilot with Paul Dekkers. I could find a pilot K12 candidate that would benefit from this solution, esp. those with no RADIUS service/experience and then building a team from there.
 - Jeff: UETN would be interested in putting forward a pilot as well
 - Sara: I'd like to tease Brett's points apart and discuss what would be needed next. Not sure the pressing need exists between a SAML IdP and geteduroam. I felt like device provisioning was the greater need and am not sure scaling SAML IdPs is the next step
 - Brett: Wonder if there's a simple recipe for connecting an existing identity store with geteduroam's pseudo-IdP. We can set aside the SAML question for now. Michael, does that make sense to you?
 - Michael H: Yes. We deal with a lot of intricate problems (for example balancing the need for MFA with teacher's union). Need to think about how to work within our community to solve for these. That said, would like to move away from Google, but not a blocking point.
 - Brett: Maybe think about how to hook into on prem Azure AD, other IDPs.
 - Sara: Want to use next call to dig into technical needs, work on how to meet those needs.
 - Next call: Will include Michael Hacker
 - **AI Mike: Get roadmap for geteduroam then share out and schedule call with working group, add Michael H, Nicole Roy, Margaret Cullen. Move Tim to highly desired, but non blocking.**

- SO update (Jeff/Brett/Mike)
 - UETN
 - Jeff: Attended COSN. eduroam came up, including discussion with Kajeet (mobile wifi provider) about adding eduroam to metro busses, esp with availability of new federal funding. They will be attending our next User Group meeting. Working on new marketing and promotional campaign, new promotional collateral.
 - Network Nebraska
 - Brett: Bringing on 3 new ESUs. Up to about 75% of all ESUs having deployed eduroam. Next week we present at state edu conference on topics including eduroam. Working with Cox Communications on public wifi deployments, SP-Only opportunities
 - Sun Corridor Network
 - Ongoing work with pilot district. Working with state library consortium on adding SPs to their sites.
- SO Proposals
 - Proposal deadline is April 22nd
 - Committee members interested in helping review proposals
 - Jeff Egly
 - Brett Bieber
 - Michael Hacker
 - **AI Mike to set up scheduling poll for review meetings**
- Standing check in on work priorities for the eAC in 2022
 - Jeff: Discussed some activities today WRT solutions reviews, ongoing work on User/Device onboarding and upcoming work on Guest Access as well. Any other topics that others see as high priorities?
 - Brett: Work with SO proposals is important, good topic for this committee
 - Jeff: Spoke with Merit Network and there's some interest. Happy to set up a conversation.
 - Mike: That would be great. Please include Sara on the email thread.
- eduroam team believes the service is now in a 'good for now' resilience state. Do you agree? (Sara)
 -  eduroam-Proxy-Architecture.pptx (please leave link to deck out of minutes)
 - Jeff: I recall that there's a number of subscribers that point exclusively to one TLRS or another. Is that correct?
 - Sara: Yes, the failover between TLRS1 and 2 needs to be configured on subscriber end. The only way to address that is with communication, documentation. So on the most recent maint on TLRS2 there were a few (20ish) who appeared to only hit TLRS2, which would cause an outage.

Goal for us is to make sure that service failover can happen at infrastructure level rather than endpoint level.

- Next meeting - Friday May 13th, 11:00am-12:30pm ET
- AOB?
 - Approval of minutes - Jeff will review and second (email Romy)

eAC review of eduroam services proposals, Wed April 6th, 4pm-5pm ET

Attendees:

Brett Bieber
Amel Caldwell
Sara Jeanes
Mike Zawacki

Agenda:

- [SP testing](#)
 - Sara: Could also add a “should” that this should validate correct configuration of an org’s environment (e.g. would they be vulnerable to MitM attack)
 - <https://threatpost.com/misconfiguration-university-wifi-login-credentials/175157/>
 - <https://medium.com/@besimaltnok/eduroam-collect-track-hack-183e843f7efc>
 - Brett: Wondering about the gap between this (esp. the Managed IdP portion) and services like guest access and user/device onboarding.
 - Sara: Lots of potential here, especially if we can leverage some of the services GEANT has been developing, like the Managed IdP. There’s also a beta of a Managed SP service:
 - <https://wiki.geant.org/display/H2eduroam/A+guide+to+eduroam+Managed+SP+PILOT>
 - Sara: We’d need to rescope how we define “research and education” for some of this work.
 - Brett: Thinking through the localized nature of test credential.
 - Sara: Would need to build some intelligence into the US infrastructure to handle the linkage between a user, their home org, and the testing process.

- Brett: Would we need to have an expiration date for these accounts? If they're location bound isn't that enough?
- [IdP testing](#)
 - Brett: Would it be possible to include a portion to identify configuration or other issues that might be exposing sensitive info (esp. usernames/passwords) or with cert issues?
 - Sara: Like the idea. We could investigate that.
 - Brett: Also worth considering if people would be comfortable using their username and password in the interface.
 - Sara: The traffic would be encrypted, so should be considered safe
 - Brett: Wondering if this could be used to suss out bad configurations
 - Amel: Would also like to see the ability to identify issues with certificate mismatches, other TLS issues. Also ability to see if anonymous outer identities will work in their environment, esp for orgs using EAP-PEAP.
 -
- [System monitoring](#)
 - Question from Brett: Would standard monitoring software be able to use this (e.g. Solar Winds, Cacti, Zenoss, etc) be able to use this? If so, could be useful to include some info on common integrations.
 - Sara: I can check and report back.

Friday March 18th, 11am-12:30pm ET

Attendees:

Brett Bieber, Nebraska
 Jeff Egly, UETN
 Michael Dickson UMA
 Rob Gorrell - UNCG
 Neil Johnson - IOWA
 Amel Caldwell University of Washington
 Kim Owen, NDSU
 John Buysse, Notre Dame
 Jeremy Livingston, Stevens Institute of Technology

With:

Mike Zawacki
 Kevin Morooney
 Steve Zoppi
 Ann West

Regrets:

Michael Hacker

Sara Jeanes

Agenda:

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed! No additions
- Approval of last month's meeting minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2022-02-18>
 - Neil Johnson, Amel Caldwell approve
- SO update (Brett/Jeff/Mike)
 - Network Nebraska
 - Continuing to roll out to K12 districts, also with Cox on public wifi, transit companies for deployment on busses. Logging released, shared with our constituents. Tested it out, looks like it will be useful. Support org reports and logs = better support options. Next up is the NETA (state edu tech conference) will be presenting on eduroam.
 - The Sun Corridor Network
 - Nearly complete with their pilot school district, Pinal. Looking to work with next districts. Working on a contract vehicle for SP-only as well as IdP Constituents. Doing more promotion at state conferences and looking towards libraries next.
 - UETN
 - TCC (K12 tech director meeting) - presented on eduroam, engaged with community and followed up with last few districts that haven't made full deployments. Attended edu tech conference (UCET), had eduroam available on site. Eduroam user group for K12 tech staff. Reviewed reports, options for user onboarding (geteduroam was discussed). Working on updated promotional campaign
 - Brett: Nebraska is also looking at creating promotional materials. Need to coordinate with UETN on that.
 - Mike Dickson: Also good for SPs in the community, esp window clings, other highly visible materials. Fosters community awareness

- Jeff: Agree.
- Kim: Do you have yours branded with UETN?
- Jeff: Yes, although it's fairly well incorporated in the design.
- Brett: Would be great if we could get some standardized



materials and buy in bulk.

- Jeff: We've also had good results with book marks as a promo material.
- (Mike to add links to GEANT promo materials, branding guidelines)
 - <https://eduroam.org/eduroam-media-and-resources/>
- Updates to program, fees
 - Fees adjusted after analysis of staff hours, resources
 - On-ramp: Provides a "try it out" period where an organization can sign up to 5 IdP
 - Note that K12s would need to be
 - Mike Dickson: Could a larger school be a proxy for smaller K12s? Or could a HE become the On-Ramp?
 - Ann: Think it's awesome to have HEs involved, but it needs to be coordinated at the state level. That could be the state dept of education or a regional network
 - MikeD: That makes sense. Starting at the "top level" could simplify the process of joining for other folks downstream
 - Ann: Yes, we feels there's a lot of benefit to having a statewide
 - Rob: For a state that doesn't have an SO or SO of interest a K12 would need to work with a Regional?
 - Ann: Yes. We're happy to help facilitate those discussions and coordinate with regionals or state education departments
 - Rob: I wouldn't want to shut the door on K12s if there's nobody in their state who will step forward

- Ann: Agree, and we feel that the benefit to K12s is limited without coordination at the state level. For the long term sustainability of the service we feel this is a good approach
 - Jeff: We've seen some involvement from HE to help with the infrastructure
 - MikeD: My concern is that K12s could be stymied if they have to wait for state governments, but I do see the point you're making. The states regionals can really deploy at scale and may be able to leverage funding and grants more
 - Ann: Sure, the state dept of education could broker those relationships with HEs and other entities. We're happy to give states the leeway to organize themselves as they see fit.
- Announcement of March 22 SO webinar
 - Formal call for proposals to join 2022 SO cohort, overview from current SOs on what participation has been like, what their process was to form up their proposal, and what they're planning to do in 2022
 - Let Mike know if you want to attend
- Standing check in on work priorities for the eAC in 2022 (Jeff/Brett)
 - Global perspective - GÉANT paper, high level overview of trust and identity services. Excerpt covering eduroam to provide context on priorities, areas for improvement, threats to service
 - Service delivered:
 - Core services: European Top-level RADIUS
 - Supporting services: monitor.eduroam.org (metrics and diagnostics), CAT, eduroam Managed IdP, eduroam Managed SP, OpenRoaming, geteduroam
 - eduroam secretariat, eduroam support, business development, eduroam trainings, European membership management
 - Areas for improvement/new development and opportunities:
 - Reduce friction for users in deploying a safe configuration
 - Brett: Ties into the User/Device Onboarding group's work as well as some of the work the SOs are doing.
 - Improve visual representation of usage statistics
 - Threats:
 - Decreased incentive due to lowered cost of 4G/5G and roaming; eduroam will still be going for more "serious" (bulk download etc.) and indoor use of WiFi
 - Brett: I've experienced this within the largest K12 district in Nebraska. They have a 1-to-1 device program, each laptop

has 4G LTE connectivity. That's dented the standard value prop for eduroam in their minds. Interested in hearing from others on 4G/5G work

- Jeff: In some cases we've folded eduroam into our 4G/5G deployments. Using private LTE as backhaul for APs which then broadcast eduroam SSID. We're in the early phases of work. On the other side, our schools put a lot of mifi hotspots into their students' hands during lockdowns. Caused some congestion on local cellular providers' networks.
- Brett: Like you you can talk about cellular connectivity as complementary to eduroam. Helpful for us to anticipate more of these issues and plan for those conversations. Consider how this could be folded into this group's work.
- OpenRoaming — it provides an eduroam like experience for everyone on the planet, including but not limited to education which means it could subsume eduroam and there is no niche left for us
 - Brett: Another thing to consider is the notion of passwordless infrastructure. Certs feed into that well, PEAP and other username/password methods do not. Want to be mindful of reliance on usernames and passwords and how that could make eduroam appear as obsolete. Figuring out approaches to handle cert installation and management puts us in a better position and is also consistent with the guidelines we developed for the Best Practices Guide.
- Ann: We've had some discussions internally about working with Sectigo on offering certs and cert management for K12. If you're interested in that we can set up a conversation.
 - Brett: I could see K12s being interested in that. I'm also interested in it for my role in HE. Having a way to issue certs to users AND devices would be powerful for HEs, K12s, and others in the community. Password infrastructure feels "legacy".
 - Ann: I like it.
 - Mike D: As a school that still uses EAP-TTLS we're looking at moving toward a cert based environment. Recently attended a vendor webinar that dealt with cloud based auth. They offer a PKI solution but there are heavy limitations on OS and browser. They're partnering with Azure and other cloud providers to offer a PKI option. Right

now there's no ability to manage certs through their service. Consider the need for orgs to manage certs.

- Ann: Ideally you'd have a service that could apply not just to wireless for other identity services that rely on certs. We're working with Sectigo on integrations into services like Service Now, other applications. Also looking at cert management services via cloud providers.
- Full document: [GÉANT T&I Briefing Paper](#)
- Update on User/Device Onboarding group (Brett/Rob/Mike)
 - [Requirements document](#)
 - Brett: Group reviewed documents, met last week. User/Device Onboarding requirements are starting to feel like a thought experiment that could be handed to a development team. Fits in closely with our early discussion WRT moving away from username/password and into certs and other passwordless options.
 - Rob: We have a meeting this afternoon. Will have more to report to this committee after that call.
 - Jeff: Thoughts on who would handle PKI? Internet2? Someone else? Or have you gotten that far?
 - Rob: Looking at the three components, the PKI has been identified as the most complex and as such would be best shifted away from the peering organization. No firm recommendations on whether that would be I2 or another party. Also looking at the other two components (RADIUS, client configuration) to see what can be moved off peering organization
 - Brett: Maybe for community needs sections could expand the discussions to provide more clarity on our goals, thought processes. Also may need to identify available community services that could be leveraged, like geteduroam. It's like we're creating another spec for containers/infrastructure parts that could incorporate those existing elements.
 - Rob: Also considering which components could be shared, which would need to/could be per-subscriber.
- eduroam service, next up solution reviews (Sara)
 - [SP testing](#)
 - [IdP testing](#)
 - [System monitoring](#)
 - Mike: Could convene smaller team to talk through these documents. Broader group can make notation
 - Ann: Agree - there's some time sensitivity so we'd like your feedback before the next meeting
 - Jeff: Volunteers to join that call?

- Brett
 - Amel
- Ann: Thanks to all. Keep in mind that this is a first pass/entry level set of services.
- Brett: One thing we've been socializing to our constituents of is that this isn't just about feature parity, it's about feature parity at scale and *future* scale.
- AI Mike: Set up scheduling poll, send calendar invite for group to meet and review docs.
- AI Committee: Add notes/feedback/questions to the solution review docs
- Input/feedback/thoughts on applicability re: Stefan/GEANT's OpenRoaming summary for end users (Sara/Mike)
 - <https://eduroam.org/eduroam-openroaming-end-user-information/>
 - Jeff: Topic of OpenRoaming has come up in our community, so this is really helpful
 - Amel: Found it helpful to understand how OpenRoaming and eduroam overlap, compliment. Made me more eager to consider OpenRoaming.
- eduroam service updates (Sara)
 - Logging
 - Guide for Logging: <https://spaces.at.internet2.edu/display/eduroam/eduroam+log+viewer+Basics>
 - Rate limiting
 - Next up - self-serve admin signups
 - Collecting beta tester names
 - Brett: Beta testing concept is something new, signals increased openness to engagement and responsiveness to community. I hear that SOs have features they want and I'm hopeful that this sort of engagement will help
 - Ann: So there could be a way to signal readiness to test new features and let users "check that box"
 - Brett: Maybe nothing that technical, but I appreciate the opportunity that's being presented to eAC and SOs. Sara has been doing a good job of being open and available. I could see benefits for the developers as well.
 - Ann: Agree - eAC was intended as a way into the community for this sort of development/feedback but I like the idea of expanding that list of potential testers.
- AOB?
 - Jeff: Cool story from UETN - we had a staff member and their family travel to DC and had connectivity the whole time at places like the Smithsonian.

Friday February 18th 11am-12:30pm ET

Attendees:

Brett Bieber, Nebraska
Neil Johnson, Iowa
Rob Gorrell, UNCG
John Buysse, Notre Dame
Jeff Egly - UETN
Mike Dickson - UMA
Amel Caldwell -UW
Kim Owen -NDSU
Tim Cappalli - Microsoft

With:

Ann West
Kevin Morooney
Mike Zawacki
Sara Jeanes
Steve Zoppi

Regrets:

Jeremy Livingston
Michael Hacker

Agenda:

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- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed, no further items
- Approve previous month's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2021-02-18>
 - Rob approves, Jeff seconds
- SO update (Jeff, Brett, Mike)

- Jeff: Held technical retreat for Utah edu community. Provided workshops around eduroam (lead by Amanda Molinari). Focus continues to be on SP-Only deployments. Have been working with state/local stakeholders to identify candidates for SP-Only. Working with UDOT to deploy eduroam on public wifi along highway/roadway systems. Working on survey for community, forming up metrics, tracking costs of marketing/promotional efforts. Meeting with marketing team in SOs and monthly Regional calls to develop SP-Only “one sheet” for engaging with SP-Only candidates, esp commercial partners
 - Brett: Amanda also mentioned a report she and her team had formed up on marketing efforts
 - https://docs.google.com/document/d/1pq-H_2EYO0nhug-63Oc6gU55F4E5imlxuX34eti2YBA/edit
- Brett: Making headway on promoting at conferences. Getting eduroam set up in conference centers as well. Seeing traction WRT eduroam advocates that emerge from the community. Working with Allo, local ISP, on public deployments of eduroam. Also working with Cox on SP-Only deployments. They’ve gravitated toward signing I2’s agreement. Cox team to meet with I2 this afternoon. Have been appreciating the progress on eFM development
 - Allo blog post:
 - https://docs.google.com/document/d/1pq-H_2EYO0nhug-63Oc6gU55F4E5imlxuX34eti2YBA/edit
 - Jeff: Comcast is the main ISP in Utah, so we may engage with them based on the work being done by Network Nebraska
- Jeff: Working agreements - different SP agreements, refining standard IdP agreement. In discussions with state library organization, interested in becoming SP-Only sites. Continuing deployment with Pinal school district, have identified next round of pilot. Laura has also been working with the SO and Regional team on the aforementioned SP-Only “one sheet”.
 - Brett: Interested in circling back with libraries in our state. There’s a natural synergy between libraries and K12s.
- Jeff: Also thinking back to mapping discussion. Working with our higher eds to ensure they’re adding service locations to the eduroam map.
 - Sara: Great item to include on general punch list for SOs - make sure your HEs are mapping appropriately.
- Standing item: check in on work priorities for the eAC in 2022
 - Temperature taking of the eduroam community - any issues that have surfaced in your world that should be addressed by this committee?
 - None raised at this time.
- Recap of the Quarterly WG chair call (Jeff/Brett/Mike Z)
 - Jeff: Good dialogue. Some of the focus was on eduroam. Also dug into IAM and how to work with the community. One item that Brett surfaced was the role that eduroam could play in driving awareness WRT IAM

- Brett: Ann summarized the topline priorities for each group. Intention was also to foster awareness across the WG community on work being done, where work might intersect. One thing that came up was the work being done by orgs like Network Nebraska, UETN, etc and how network efforts tend to be less visible. By contrast, eduroam is much more visible. It has me thinking more about the role eduroam could play in getting the community involved and thinking about what federated identity means and what it can do. It's a good point to start engagements with audiences that are less familiar with IAM. From there you springboard into the concept of baseline partactices, other key IAM concepts. Starting to think about how the work we've done deploying eduroam can be leveraged into work deploying IAM across the edu space. /
- Jeff: We'd like to continue to bring items that come up at those quarterly meetings back to this group for discussion and/or situational awareness of this committee. We've seen the benefit/awareness that Brett highlighted in our state as well. Great for engaging with external stakeholders on the value of IAM.
- Ann: Agree with all of the above. Eduroam is access to wireless, InCommon is access to services. There's an opportunity we have to help with branding of InCommon, I know that's out of scope for this committee but
- Tim: Thinking more along lines of what Ann's talking about. There's been discussion in Apple, Google, others about how user authentication can be federated and cross federated. Could be interesting crossing points for eduroam, thinking about how eduroam could incorporate/benefit from that work. Useful to think about implications for the service. I'd be happy to set up a call with interested folks from this committee to talk more deeply about that.
- Mike D: Thinking about implications for student populations and needs of more transient users. Would there be implications for alumni users?
- Tim: Yes, also has some commonalities with OpenRoaming. More focused on user identities than authentication of individual services.
- Mike D: If we succeed in getting more SP-Only subscribers this could be a good value proposition for them, help make participation eduroam more valuable.
- **AI MIKE: Follow up with Tim, and Netta (I2 community engagement lead) on a presentation**
- Logging update
 - Sara: Posted notes from most recent release to eduroam-admin lists. On Logging, we're working on a prototype that might be ready to test within next 24 hours. Recent releases have put the backstage plumbing in place. Hope to announce date for logging release within the next few days.
- Proposed/recent changes
 - Suggestion to auto approve realms in eFM
 - A realm will be accepted if the name is unique and properly formatted
 - Pending realm approval section of SO dashboard to be removed

- Already a good process in place to ensure new subscribers are vetted and legitimate users. Additional, manual approval process was increasingly seen as unnecessary.
- Mike D: So automated approval process will check for realm uniqueness, yes? We had a situation at our organization some years ago where an individual department tried to sign up for eduroam even though we were already running eduroam at an institutional level. It sounds like your approach would address that sort of attempt to sign up?
 - Sara: Yes, definitely. We would catch that before the realm approval process. The contracting and initial service management would catch a duplication like you've identified.
- Brett: I've found that waiting for realm approval has been a bottleneck for Network Nebraska as an SO. Are you checking for realm uniqueness across InCommon and eduroam, or just eduroam?
 - Sara: They're separate services operating on separate infrastructures, so since there isn't a cross-service touch point we only check for uniqueness within eduroam
 - Brett: Great, thanks. Thinking about things longer term there might be some value in encouraging the community to think about the uniqueness requirement across both InCommon and eduroam, especially as we think about promoting IAM in K12 and other communities.
- Operator-name updates implemented (ie returned to prior behavior)
 - If SP doesn't pass operator-name attribute we will automatically inject it.
 - The operator-name is helpful in troubleshooting, identifying potential bad behavior
 - Legacy infrastructure also injected attribute if it was missing, there were some requests from the community to restore it so we included it in the most recent release.
- Included infrastructure needed for greater resilience, ability to remain available even through AWS outages.
 - One note - organizations which are closer to the west coast could see some benefit from optimizing
 - Tim: Is RadSec officially on the roadmap?
 - Sara: It's something we're looking towards, but are still in early stages of investigation. There are two pieces of implementing. Upstream is lighter lift and would probably come first. The more complex aspect is getting all of eduroam subscribers to deploy RadSec. Would require lots of coordination with the community, and likely this committee as well. Could warrant a working group if/when we approach it.
- Update on User/Device Onboarding group (Tim/Rob lead out)

- <https://docs.google.com/document/d/1bWYEvM1IRP18-iko1Sj1Uh9QdJcYfVp3SYSfQdf-HFA/edit>
- Internet2 seeks clarification on...
 - How RADIUS service, PKI service, and client provisioning service would interoperate
 - How configuration management portion would fit into a finished service
- Brett: Let's have an overview of the document and then dig into next steps, discuss soft points.
- Rob: During previous year we identified some authentication/onboarding requirements in the Best Practices Guide. TLS/cert authentication was put forward as the recommended auth method. Question arose on how to implement cert issuance/management, especially for smaller orgs (K12 and smaller HE in particular). Also wanted to think about how to use cloud architecture to offer some service to handle user and device onboarding. That lead us to form up the User/Device Onboarding working group and develop this document. Looked at how we could simplify onboarding for smaller orgs. Tim came up with some good models for approaching this work
- Tim: Where we ended up was that the work being done in GEANT is a great starting point, esp where balancing costs and value are concerned. Three service components were identified
 - RADIUS service
 - PKI Service
 - Client Provisioning
- Tim: Commercial solutions bundle all three. Idea was to have a hybrid model where an institution takes on some portion of those three components. Group settled on an approach where the institution owned the RADIUS service (didn't need to management - they could have it hosted elsewhere), and the User/Device service would host the client provisioning and PKI. Configuration management would be "headless" - clients would communicate with the service to pull down configurations. Centralizes client configuration/OS flavors.
 - Mike D: Is the suggestion to get all existing IdPs to use this service, or would it be aimed at smaller orgs?
 - Tim: It's intended for smaller orgs that can't afford ClearPass or other commercial solutions. Could be aimed at other audiences but more of a business discussion around who uses the service, who owns which portions of the service etc. Goal was that it could be deployed from an IaaS app store.
 - Rob: Most likely use case is for a smaller institution that has no better route toward onboarding.
 - Tim: It's possible that this could serve to get smaller, less technically capable orgs to get off AD, other less flexible identity stores, set them up for easier time integrating with IAM.

- Tim: Because PKI is infrequently invoked we feel that it will be easier for people to get comfortable with not having control of their PKI.
- Mike D: Can you say more about cert revocation? How would that be handled?
- Tim: Level of detail you could get would be the ability to block an individual cert or device. Want to avoid overly complex options, keep things simple.
- Steve: Very helpful context. Was there a set of requirements that drove you toward option C? Did you do any digging into use stories, other decision making?
- Tim: I feel like that's the next step - look at where cost, complexity are a problem. Maybe solution could end up being "offer all three". We felt Option C was the one which met the needs of those less technical and less resourced institution.
- Steve: Trying to back into requirements and understand the thinking that drove the group to choose option C.
- Tim: We have notes from previous meetings, but not formal artifacts. We considered community feedback that all pointed toward challenges around onboarding, difficulty of cert management.
- Rob: No formal surveying but lots of considering feedback from UETN's K12 population. For example, PKI management was prohibitively expensive from a staff expertise standpoint
- Steve: Consider upstream load shedding when you try to optimize like this. Trying to figure out how to share that load so that it doesn't all land on Internet2. This is helping color in some blank spots I had in understanding why option C was best.
- Rob: To your point, we tried to consider what the minimum we could put onto the school/institution. Considered a balance that would allow the service would work but not crush the schools with cost/staff expertise requirements.
- Steve: Thanks. I have more digesting to do. Thing I'm trying to understand is the sustainability of the model. Consider fiscal sustainability vs sustainability of adoption. I understand that you thought through that balance here - any thinking this group has already done would be helpful
- Brett: This is almost like an architectural thought piece that encourages consideration of what the service is composed of and how an entity like Network Nebraska could engage with its community, set up service for different segments of community. Eventually that set of practices could coalesce into a service.
- Steve: Agree. I'm interested in how we'd go from modeling solutions to execution of solutions.
- Rob: The working group believe that this is pretty high level, less about a rigidly defined set of functional requirements. We'd like to hear from this group, others adjacent to the eAC on what they feel those requirements would be so that we can incorporate them into a more detailed requirement set. We can think about what should be greenfield and what existing solutions could be adapted/integrated.

- Steve: Want to think about how these points can be incorporated into more fully defined requirements, next steps, and how we may need the ability to address needs of different audiences.
- **Next steps: Reconvene working group. Add Brett to group. Mike to discuss additional I2 or community staff with Sara. Mike to send scheduling poll**
- Best practices for managing users/esp. former students who have wireless profiles on their devices and cause authentication failure
- Next meeting: March 18th, 11am-12:30pm ET
- AOB?

Friday January 21st 11am-12:30pm ET

Attendees:

Brett Bieber, Nebraska
 Rob Gorrell, UNCG
 Jeff Egly - UETN
 Amel Caldwell – University of Washington
 Michael Hacker
 Jeremy Livingston - Stevens University
 Mike Dickson - UMA
 Neil Johnson - IOWA

With:

Mike Zawacki
 Kevin Morooney
 Sara Jeanes
 Ann West

Regrets:

Kim Owen - will miss first hour
 John Buysse

- Approve previous month's minutes at <https://spaces.at.internet2.edu/x/4ITbD>
 - Rob, Jeff approve
 - AI: Mike review/correct IAM access for new members
- Election results for chair/vice-chair
 - Jeff Egly - Chair
 - Brett Bieber - Vice-Chair
 - Congratulations and welcome!

- Request from Jeff: coordinate with this group on new agenda items, visiting SMEs
- SO update
 - Network Nebraska: Brett- At the end of 2021 we completed signup of 22% of K12s in Nebraska. IT support provided via ESUs (educational service units) for 2/3rds of the state. Plans to meet at upcoming conferences with K12 leadership. New reports in for SO, includes rollup of all constituents and SP-only sites.
 - UETN: Jeff - Have been learning a lot from Network Nebraska and Sun Corridor Network. Context for new members - SO effort represents drive to increase adoption, availability outside of higher ed. Have been focusing on driving adoption of SP-Only. Working with state government to provide SPs in DMVs, parks, etc. Developing promotional campaign for SP-Only, including working with ISPs. Have been working with other SOs and SO candidates on marketing materials geared towards SP-Only adoption. Monthly User group met yesterday, lots of good discussion around repurposing hardware to provide to SP-Only candidates. Working on rolling eduroam into our work with LTE and CBRS networks in Utah
 - SCN: Mike - Continuing work with pilot school district (Pinal). Identifying next round of early adopter schools. Working on promotional efforts for SP-Only with other SOs. Will be promoting, presenting at conferences in Arizona as well.
- Transition updates - what it will look like going forward
 - Focus on release notes, etc. No immediate plan for ongoing regular communication
 - Reports came out last week. Looking at reported issues and correcting for next round of reports
 - Working on adding logging functionality to eduroam Federation Manager, developing roadmap
 - Rob: Is the roadmap internal or sharable?
 - Sara: It's internal, being used to sequence work and coordinate staff resources and cycles. Likely to be coming to this group to get feedback on upcoming changes and updates, especially as we shift to a more operational footing
 - Rob: That was at the root of my question. Having that opportunity to provide feedback would be really helpful.
 - Sara: Sounds great. We could take feedback, guidance from this group and slot that into the larger workplan internally
 - Brett: Really enjoying the new interface and features, especially for SOs.
 - Sara: Glad to hear it! The last release set up hooks for future features like logging, etc and made mapping data more accurate, reflect points of service availability
- Vote to finalize requirements docs (no public feedback was offered)
 - [eduroam User/Device Onboarding requirements](#)
 - [eduroam Guest Access requirements](#)

- Sense of priority from eAC - which needs to be first?
- Request for additional feedback on Guest/Device onboarding.
 - Convene working group?
- Rob: Where we left things, the Guest Access requirements were the most polished and ready to go. User/Device Onboarding less polished. There were three solutions
- Mike: Do the new members want to join User/Device Onboarding group?
 - Brett, Mike Dickson are interested
 - Mike: Would proposed that we meet with Mike, Brett, Rob, maybe Tim ahead of the general
 - **AI: Mike - set up scheduling poll, do pre-meet. Then convene working group to review, revise**
- Service policy/change reviews (Sara)
 - Change to eduroam Federation Manager to disallow backslash in shared secrets (Sara)
 - Backslashes can cause database issues. Currently 10ish subscribers have them in their shared secret. Proposing that we disallow and work with those subscribers to correct. Any issues that this group sees with that?
 - Rob: Sounds like you've done the groundwork (identifying existing backslashes, etc) so this is more about changing eFM to disallow future inclusion of backslash in shared secret. I don't see any issue with this, especially as it helps the overall service.
 - Mike D: Agreed
 - Brett: Agree as well. So in the UI the eFM would just drop an error if a backslash was included in a shared secret?
 - Sara: Correct. Also, will host webinar about new infrastructure, including this info, and that we've moved to FreeRADIUS for our top level servers.
 - Mike D: So you'd just get a "this character not allowed" message?
 - Sara: Yes.
 - Mike D: Then I agree as well.
 - Reporting rules review request (Sara) - preview for future review
 - Sara: Refining rules, structures of reports and would value this group's input on those.
- Volunteers to assess Support Organization proposals (Mike)
 - Open for proposals mid-Feb through mid-March
 - March 15th - 30th
 - Rob: Is this the same process as last year? Will you be gating the number of new cohorts?
 - Mike: The process will be the same. The Support Organization program is now in production so we won't limit the number of orgs that can join
 - Volunteers

- Jeff Egly
 - Westnet conference is coming up. I can mention to Derek, ask about promoting this there.
 - Mike: I'm meeting with Laura Etter as well - we can each talk to SCN about promotion at that conference
 - Brett Bieber
 - Brett: Excited to see proposals, looking forward to having more
- Next meeting: February 18th, 11am-12:30pm ET
- AOB?
 - Rob: I would like to revisit the roadmap/getting up to feature parity with legacy interface. Have heard requests for logging and test accounts. Are those formally being worked on? If so, where do they fit into upcoming releases?
 - Sara: Log viewer is at the top of the list. Moving to stable, updated traffic architecture also high on the list (see recent AWS outage - didn't cause issues but want to build in enough resiliency to continue to work around platform and network outages). Testing ability is another high priority. Creating unaffiliated credentials will work differently because of the move to a federated admin interface. SO functionality like creating new admins for constituents, pulling constituents under their org. We will be coming to this committee to help sequence and coordinate features for mid and late this year (and going forward).
 - Rob: Makes sense - glad to hear that. Particularly thinking about what things will look like for SOs.
 - Sara: Also want to be clear that SOs are major drivers for many of the changes but also want to ensure that we're building in for broader community needs.
 - Brett: As you walked through that I appreciated the sense of where priorities are and how community need is driving those. Would love to see that articulated publicly.
 - Jeff: Want to stress again that members of this committee come to us with agenda items and topics. Have done lots of good work in the past (Best Practices Guide, requirements docs, etc) and want to ensure that continues!

Friday December 17th 11am-12:30pm ET

Attendees:

Jeremy Livingston - Stevens Institute of Technology

Stefan Winter - Restena/GEANT
Amel Caldwell – University of Washington
Jeff Egly - UETN
Michael Hacker
Mike Dickson
John Buysse
Kim Owen
Rob Gorrell
Neil Johnson - IOWA
Tim Cappalli

With:

Kevin Morooney
Ann West
Sara Jeanes
Romy Bolton
Steve Zoppi
Mike Zawacki

Regrets:

Brett Bieber
Andrew Buker

Agenda:

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed
- Approve previous month's meeting minutes: <https://spaces.at.internet2.edu/x/lgWzD>
 - Neil Johnson, Amel Caldwell approve
- Support Organization updates (Jeff/Mike)
 - Jeff: Issued annual report on all our projects, including eduroam. Work on SP-only and promotion of service. Superintendents presented at state conference. Closed out 2021 with other SOs. Our state eduroam User Group met this week. E-Rate coordinator for New Mexico attended - interest in that state in eduroam deployments.
 - Sun Corridor Network: Bringing up eduroam at pilot district, interest from other districts as a result

- Network Nebraska: Engaging with transit companies on municipal bus deployments, working with ISP on residential and public deployments. Presented at UETN's User Group meeting
- Transition update (Sara)
 - All moves complete. Let us know if you're hearing of any issues.
 - Feedback on Reports. Sample reports went out earlier this month. New backend, new visualization engine. Collecting feedback from the community - feel free to reach out to Sara and Mike with any you might have
 - Next up: Logging, mapping. Also looking toward including SO constituent organizations in the subscriber list in InCommon.
 - Kim: Our network team commented that it went very smoothly for them
 - Jeremy: Have been hearing that from our folks as well
 - Jeff: Many thanks to all involved.
- New member introduction, farewell to departing members
 - Outgoing
 - Andrew Buker
 - Theresa Semmens
 - Tim Cappalli (moving to Community SME position)
 - Stefan Winter (moving to Community SME position)
 - Our thanks to all of you!
 - Incoming
 - Brett Bieber
 - John Buysse
 - Michael Hacker
 - Mike Dickson
 - Welcome all!
- Close out of public comment on requirement docs. Next steps to finalize docs.
 - <https://spaces.at.internet2.edu/pages/viewpage.action?pageId=210796656>
 - No feedback from community
 - Meeting of working groups needed?
- Questions of resiliency expectations (Sara, Mike)
 - Internet2 will be looking to this group for an understanding of the community's expectations on resiliency - network diversity, diversity of provider, robustness of underlying technology, and how to balance that with cost and complexity.
 - Jeremy: Would this be served by a working group? Are you looking for SLAs?
 - Steve: More interested in developing a balance point that will meet the needs of the community but not over-engineer the service. Could be an ongoing check in
 - Rob: Might be helpful to have a design doc or statement of resiliency requirements. I'm not sure I have enough of an understanding of the current infrastructure to say if it's sufficient. An overview would be helpful
 - Steve: I can see the value of that. During migration we've made refinements to our original design. Would like to have a conversation about that

- Jeremy: Could we have a presentation about the infrastructure and architecture of the service?
- Steve: Yes, we can do that.
- **AI: Sara, Steve to put together a presentation for the next meeting**
- Mike D: Is there regional diversity in the AWS deployment?
- Steve: Yes, both in AWS regions and network
- Rob: Would be great to get an understanding of what that looks like
- Steve: We've made reasoned judgements around design and are happy to share those with this committee
- Kevin: Reticent to develop an SLA. Tend to be a thin replacement for trust. Want to make sure our resiliency posture is consistent with your local expectations. If the community articulates a need for an SLA then we can talk about it, but want to start with getting the community's sense for what resilience needs to look like
- Rob: Agree with that. There are multiple contingents within the service, from local to global, and that can complicate a simple SLA
- John: +1 - the "supply chain" of the service is unlike other services
- Mike D: For us notification is key
- Jeremy: Also want to consider the cost implications. Don't want to engineer eduroam to the point where it becomes cost prohibitive
- Steve: Agree with all points above. We're looking for that "Goldilocks" point between resilience and affordability
- Jeremy: When do we want to have this presentation?
- Steve: Next meeting is Jan 21st, so we could likely have something ready by then. Will confer with the team and get back to this group. Have been collecting questions and you can send me additional questions as well:
szoppi@internet2.edu
- Next meeting: January 21st, 11am-12:30pm ET
- AOB?
 - Nope! Happy Holidays!

Friday November 19th 11am-12:30pm ET

Attendees:

Amel Caldwell University of Washington

Andrew Buker - NU

Jeff Egly - UETN

Neil Johnson - UIOWA

Kim Owen - NDSU

With:

Sara Jeanes
Kevin Morooney
Ann West
Mike Zawacki

Regrets:

Tim Cappalli
Rob Gorrell (may join late)
Jeremy Livingston

Agenda:

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - From Kevin: i have a tiny information nugget - at the last internet2 board meeting (two weeks ago) i presented about eduroam. was well received. eAC always get a shout out in such presentations :-)
- Approve previous month's meeting minutes <https://spaces.at.internet2.edu/x/Y4NgD>
 - Kim approves, Jeff approves
- Support Organization update
 - Network Nebraska
 - Approximately 1/3rd of districts have signed (not all are setup yet)
 - Allo is starting their residential pilots in Lincoln - this sparked Lincoln Public Schools to join the program (2nd largest district in the state)
 - Kicking off pilot with metro bus system in Omaha soon
 - Jeff: We're interested in seeing how this progresses for you. We've gotten SPs set up for trains, still working to get headway with busses
 - The Sun Corridor Network
 - SO admins are up and running in the eduroam Federation Manager
 - Bringing on Pinal school district as first K12
 - Bringing additional staff on to project team
 - UETN
 - Getting school admins running on eFM
 - More interest in iBoss MDM for content filtering. Are working on getting K12s to cloud implementation of the platform
 - Seeing discussions, interest in international community re: filtering for students

- Stefan: The eduroam Slack space is a very informal hang around place for everyone concerned with eduroam - IdP/SP/National admins - certainly no „Europe only“ limits to it. There are also channels for geteduroam, questions about OpenRoaming, etc.
 - Working on campaign to promote eduroam for SP-only , esp commercial entities.
 - Adjusting program timeline for 2022 SO cohort
 - Early promotion of 2022 cohort, webinar in mid-December
 - Formal call for proposals in February
 - Collect, review proposals through March, announce cohort April 1.
- Transition update
 - Majority of moves complete (85% of all subscribers). Some database and traffic routing shakeout, overall move has been smooth for most subscribers
 - Last round of moves will be 11/30.
 - Targeting beta report delivery early-mid December.
 - Looking ahead on what to include in next update. Logs will likely be high on the list, but still listening to community on what they want.
 - <https://spaces.at.internet2.edu/display/eduroam/eduroam+Transition>
 - Kevin: Are committee members hearing feedback from your communities?
 - Amel: Nothing from our end
 - Jeff: Some challenges with some of our constituents, but overall good. Lots of subscribers moved at once. The communication from I2 and willingness of I2's staff to help out has been a big benefit.
 - Kevin: One reason I'm curious is that as big projects go, the amount of noise on this one is very low. Just want to check in with you all. Possible that the last moves may be more complex, more edge cases.
 - Kim: We're one of the 11/30 crowd, more because we had lots of other projects going in the front of the month. Hopefully that's more the comment
- Reminder of public comment on requirement docs
 - <https://spaces.at.internet2.edu/pages/viewpage.action?pageId=210796656>
 - Public comment open until December 14th. Working groups to convene after public comment period for any revisions.
- Results of voting for new members in 2022
 - Vacated seats
 - Miro Milinovic
 - Andrew Buker
 - Theresa Semmens
 - New members (will contact these candidates following this meeting :)
 - Michael Hacker (Chief Information Officer, University Heights Charter School District)

- Brett Bieber (Director, Identity & Access Management and IT Security Services, University of Nebraska)
 - John Buysse (Sr. Director, University Network & Telephony Services, University of Notre Dame)
- Stefan: Happy to vacate my seat and stay on as an SME
 - Mike: We would definitely appreciate your continued involvement in this committee!
 - Al Mike to include member of runner-up to take on Stefan's seat.
- Jeff: Thoughts of how we handle voting for 2022 committee chairs?
 - Kevin: We value refresh of voice and leadership in every committee. Consistent leadership updates are part of that. Some basic principles are to do things in the spirit of the community. If it makes sense to all of you then it probably makes sense to the rest of the community. Also consider the age of the committees - well established committees will have established processes, but newer committees are welcome to try new things. Just be comfortable explaining your choices to other committees, members of the community.
 - Jeff: Mike and I could discuss plans with Jeremy on how to move forward with new members. Happy to include thoughts and approaches from others
 - Kim: I'm comfortable having the chair and vice-chair propose something
 - Amel: I agree with Jeff on being inclusive. Would be nice to have new members vote.
 - Al: Mike to set up call for Jeff and Jeremy to decide whether to have new members vote on chairs in December meeting.
 - Jeff: Do we need to vote on taking this approach?
 - Kevin: For this is seems like there's broad consensus and it's captured in the notes then that's enough.
 - Mike: Do we want to vote via a form? Or live?
 - Kevin: Recommendation based on past experience would be to have a webform with a deadline 24-48 hours ahead of the next meeting.
 - Al Mike: Set up webform, send out to committee members.
- Next meeting: Shift December meeting to Friday 17th?
 - Works for everyone.
 - Mike will adjust calendar invite.
- AOB?

Friday October 29th 11am-12:30pm ET

Attendees:

Rob Gorrell - UNCG

Jeff Egly - UETN

Jeremy Livingston - Stevens Institute of Technology

Kim Owen - NDSU

Amel Caldwell - UW

With:

Sara Jeanes - Internet2

Steve Zoppi - Internet2

Mike Zawacki - Internet2

Regrets:

Stefan Winter

Andrew Buker

Neil Johnson

Tim Cappalli

Agenda:

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed - no changes/additions
- Approve previous month's meeting minutes
 - <https://spaces.at.internet2.edu/x/MpITD>
 - Kim, Jeremy vote to approve
- Support Organization update (Jeff/Mike)
 - Preparing report on 2021 Support Organization cohort
 - Will be finalizing report early November and presenting to this committee for feedback.
 - Network Nebraska Working with transit company in Omaha. Looking at addressing concerns from transit company WRT preserving bandwidth for critical service (geolocation, safety video) via dual SIM devices. Running internal training in mid-November
 - Sun Corridor Network - Getting set up in eduroam Federation Manager. Still working with pilot school district to get service stood up

- UETN - Project manager Amanada Molinari has been continuing comms campaign targeting K12 staff and students. Several eduroam presentations at UETN's statewide security conference (SAINTCon), mostly delivered by community members. Also ran training on eduroam for community. Continuing work on promoting use by K12 students. State eduroam user group heard concerns around best practices for MDM platforms to address content filtering issues, working to develop those best practices
- Transition updates (Sara)
 - eAC organizations moving to new infrastructure, eduroam Federation Manager on Nov. 1
 - Internet2 will host office hours on move day
 - Continuing to send weekly updates via email and eduroam-admins. Daily updates available on Transition Wiki (<https://spaces.at.internet2.edu/pages/viewpage.action?spaceKey=eduroam&title=eduroam+Transition>)
 - 75 organizations moved to new infrastructure and eduroam Federation Manager.
 - International users are now being handled on new infrastructure
 - Rob: When should your initial login to eFM occur? Pre-move, post-move?
 - Sara: It will be day of move date. We're notifying transitioning organizations via email with instructions on when and how to log into the eduroam Federation Manager.
 - Sara: Beta report from new infrastructure will be sent in December. Will match content of old reports and will build on functionality from there. We would like to send an advance copy to this group for feedback
 - Amel: I'd be happy to review a copy.
 - Working on finalizing documentation for eFM. Have also included documentation on setting up IAM profile.
 - Rob: Will the Federation Manager be in R&S? I.E. is it considered an SP in the R&S category
 - Ann: Not part of the plan - it will be used by communities outside of the traditional "R&S" profile, esp with K12 segments joining.
 - Jeff: Ongoing discussion around how much SOs will do to manage non-R&E SP-Only subscribers. Current thinking is to be minimally involved.
- Review of requirements docs
 - [User/Device Onboarding Requirements](#)
 - [Guest Access Requirements](#)
 - Move to open documents for community review?
 - No quorum in today's meeting. Will vote via email to post for review
 - Deadline to vote Tuesday, Nov 2nd EOD
- Committee nominations deadline extended to November 2nd - submissions to be [entered via nomination form](#)
- Next meeting: Friday, November 26th 11am-12:30pm ET

- AI Mike: Send updated invite for November 19th
- AOB?

Friday October 1st 11am-12:30pm ET

Attendees:

Theresa Semmens (NSHE)
Kim Owen - NDSU
Rob Gorrell - UNC - Greensboro
Stefan Winter - RESTENA
Amel Caldwell - UW
Jeff Egly - UETN
Tim Cappalli - MSN
Andrew Buker - UN

With:

John Krienke
Steve Zoppi
Romy Bolton
Mike Zawacki
Ann West
Sara Jeanes

Regrets:

Neil Johnson
Jeremy Livingston

Agenda:

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed
- Approve previous month's meeting minutes
 - <https://spaces.at.internet2.edu/pages/viewpage.action?pageId=202606420>
 - Rob Gorrell, Kim Owen approve
- In recognition of Miro
 - [SRCE's post](#)
 - [Remembrance book](#)
 - [Donations to Miro's family](#) - being managed by Klaas Wierenga
 - Our thanks to Miro for his wisdom, service, humor, and desire to make things better
 - Kim: Perhaps the eAC can do something to acknowledge his contributions. Something to keep in mind
- Review of Requirements Documents
 - [Guest Access Service](#)
 - Rob: High level points - Guest Access important to driving ubiquity, relevance of eduroam. Considered need for user self service and managed/batch registration . CANARIE demonstrated eVA, group found the features of that service mapped to many of the requirements.
 - Ann: Did you discuss longer term guest accounts? For example, visiting faculty members.
 - Rob: General sense is that a managed service could accommodate longer term use like that, but a maximum lifespan would need to be defined and suggest that different methods of account creation are associated with certain lifespans of account. So self service would be limited to 24-48 hours, but delegated provisioning would allow for weeks (possibly months)
 - Ann: Some concerns expressed early on about impacts of long term guest accounts WRT roaming, use of networks outside of those where the account was created.
 - Rob: Discussion of the working group was that lifetime of accounts could limit roaming issues.
 - Rob: Also worth noting that Best Practices Guide recommends cert based authentication but eVA is EAP-PEAP

- Stefan: SMS delivery of credentials means that EAP-TLS isn't an option. One thing we've worried about is the difficulty of handling server-side certificate confirmation. Believe we've fixed this issue but something to consider.
- Rob: Also felt that CAT could be leveraged to onboard guest accounts. Still some concerns with cert handling with that approach.
- Stefan: There are options to address those limitations but they're years out.
- Rob: Hotspot2.0 and/or OpenRoaming will likely play into the need for guest access, so the working group sees this as a 1-2 year need, to be evaluated once those technologies are more broadly available
- Tim: By the end of next year most OSes will have OpenRoaming capability, so consider that before investing time and money in another solution. Don't feel that it's appropriate to ask a guest user to install a cert profile. Feels too heavy handed.
- Rob: Understand that view, but sometimes tech takes longer to adopt, deploy. Orgs might not be ready
- Tim: That can be an opportunity to engage with them and understand why they're not ready.
- Rob: Agree, but also need to "keep the lights on" for those who haven't adopted
- Tim: Even without EAP-TLS requirement the user still has to configure a profile. And consider that Android no longer allows provisioning of wifi profiles with empty certs
- Stefan: Consider that there are infrastructure requirements for Passpoint, other technologies.
- Tim: Understand that, but in many places the gear is out there. Happy to add a blurb about what it would take to fold OpenRoaming into service, or use instead of. Suggest including recommendations to continue to re-evaluate technologies like OpenRoaming, Passpoint, etc.
- Jeff: Sounds like next step is to have Tim refine longer term recommendations WRT emerging technologies.
- Stefan: Android 11 does have some limitations WRT cert and server name which makes SMS delivery of credentials difficult/impossible in some cases. Need to keep that in mind. eVA does allow for distribution of server certs which address the Android 11 limitations
- Tim: Suggest steering people toward OpenRoaming or Passpoint if their institution is using it, and then looking at this service as a fallback for those which are not.
- Tim: Additional material -
https://www.arubanetworks.com/assets/so/SO_Air-Pass.pdf

- Next steps: Mike to send out Doodle poll, schedule out WG meeting and include Tim and Stefan
- [User/Device Onboarding Service](#)
 - Rob: This guide is a little rougher than Guest Access. Looking at three primary components to onboarding. Client provisioning, PKI infrastructure, RADIUS infrastructure. Looked at cost and complexity of each, formed recommendations on which to offload from eduroam subscriber and which to provide via some third party.
 - Rob: The group landed on having subscriber handle RADIUS and recommending that a User/Device onboarding service host and manage the other two elements
 - Stefan: We looked at this approach. One technical issue is that if a RADIUS server wants to validate the client device it can break the security model if an external PKI element is involved.
 - Tim: Model would support a common PKI (which helps address some of that concern). The definition of PKI isn't overly specific here to allow for that. Also, need to consider that offloading operational elements necessarily involves some flexibility of trust models. This is fairly lightweight. If we do get to a truly headless model we could inject more complexity to client provisioning (ala Clearpass) that would address some the trust
 - Jeff: Sounds like there's more work for this group?
 - Rob: Yes, there's at least one more meeting for refinement
- Review of updates to eduroam Terms of Service, SP-only agreement (John Krienke)
 - John: Major change is that the Terms of Service now includes SP-Only subscribers. Previously that contractual relationship fell to ANYROAM. As part of transition Internet2 is shifting that relationship to us.
 - John: Three major buckets of changes:
 - Acknowledge that ANYROAM will no longer handle operational duties
 - Includes SP-Only subscribers
 - Shifted language to allow for global campuses of US subscribers and Tribal Nations
 - Jeff: Will there be any technical actions needed from SP-Onlies?
 - John: Not as anything relates to this agreement. They'll need go through our new SP-only click through agreement. SOs don't need to have their SP-Only constituents sign agreement.
 - Sara: If there are SP-onlies that already signed an agreement with ANYROAM that would prefer to be rolled under an SO's agreement they don't need to sign the click through.
 - Stefan: One note on changes for international campuses - I don't think there's an issue with allowing for this new language but think we should put this in front of the GeGC for consideration and information.

- AI Ann: Present new ToS language with regard to international campuses in the next GeGC meeting
 - Ann: Would ask for formal approval of this group. We can do a consensus vote via email.
 - AI Mike: work with Jeremy and Jeff to get vote email sent to committee members.
- Nomination of new members (Mike)
 - [Nomination form](#) now open
 - Please have nominations in within the next 2-3 weeks
- Transition updates (Sara, Mike)
 - NAT/traffic router boxes installed during a maintenance window last Monday
 - Initial production workload expected to be deployed Oct 13, Internet2 Oct 15
 - eAC expected to be moved around Oct 27th
 - Sara: Its worth noting that reporting is going to be a bit wonky the next couple months. Might we worth waiting until Jan to base something on quantity of connections.
- SO update (Mike, Jeff)
 - Sun Corridor Network: Still working on pilot deployments, including larger school districts. Putting together
 - Jeff: Has been very valuable working with other SOs. Have been very focused on SP-only deployments. Have been doing more promotional work within our community, esp for teachers and students
 - Andrew: Working on getting districts signed on and stood up. Also doing lots of work on SP-Only deployments, both with local ISPs and on busses and other transit systems
 - Jeff:
 - Mike: Wrapping up 2021, preparing annual report. Will present that report to this committee. Beginning to announce opening for proposals for 2022 cohort. Would welcome volunteers from this committee to help assess proposals
- Update on eduroam-dev activities (Stefan)
 - Spent last call on OpenRoaming. Discussed how to present OpenRoaming to eduroam users on provisioning. Now have a managed SP service that is in the pilot phase. This also allows for the enabling of OpenRoaming. Always happy to have people from this group join our calls.
- Next meeting: October 29th, 11am-12:30pm ET
- AOB?

Friday September 10th 11am-12:30pm ET

Attendees:

Jeremy Livingston
Neil Johnson
Amel Caldwell
Rob Gorrell
Andrew Buker
Miroslav Milinovic
Stefan Winter
Tim Cappalli
Theresa Semmens
Kim Owen

With:

Sara Jeanes
Kevin Morooney
Steve Zoppi
Mike Zawacki

Regrets:

Jeff Egly
Ann West

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - (Bashed)
- Approve previous month's meeting minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2021-08-06>
 - Theresa and Rob approve
- SO update (Mike)
 - UETN
 - Andrew Buker: Recruiting additional pilot schools, presenting at edu
 - The Sun Corridor Network
 - Jeremy: Mike, are there outreach efforts to recruit
 - Mike: Currently handling that engag
- Update on eduroam-dev activities (Stefan, Miro)

- Less activity, many summer vacations
 - Next meeting will be Tuesday, Sept 14 at 9:30am ET
- Working group updates (WG members)
 - Guest Access working group (Rob)
 - [Review draft service requirements document](#)
 - Goal is to have draft ready for public comment by end of month
 - Rob: Have been refining requirements, categorizing requirements by priority. Had a demo of CANARIE's eVA (eduroam Visitor Access) service
 - Rob: One thing that was attractive about the eVA service was the visibility of guest account details and granular ability to control individual accounts.
 - Next steps: Continued refinement, particularly around requirements. That will inform the final recommendations of the group.
 - User/Device Onboarding working group (Tim)
 - [Review draft service requirements document](#)
 - Tim: Focusing on 3 components of an Onboarding solution: RADIUS, PKI, and client provisioning service. Potential solutions grouped and evaluated on who hosts and manages those components.
 - Tim: We are leaning toward an option where institution hosts their own RADIUS service and the provider hosts and manages the PKI infrastructure and client provisioning service. Looking at a "Headless" option to configure
- Transition updates (Sara, Mike)
 - Proposed staging for interface transition
 - Admin interface and infrastructure are feature locked. Extensible infrastructure will allow for integration with some of the sorts of recommendations that we're seeing out of the working groups. Very exciting!
 - Will be moving traffic (including global database feeds) to new infrastructure. Will be undergoing a series of maintenances for that
 - Have been regularly updating eduroam-admins lists
 - Will begin moving organizations to new admin interface starting next month. Alpha testing group is in place, will begin testing first
 - Goal is to have all current subscribers moved to new infrastructure by Thanksgiving
 - Seeking volunteers for beta group
 - eAC members who want to test out the interface for their institution should reach out to Sara. Happy to have calls with committee members and their teams to talk through the process
- Rolloff of members at the end of 2022 (Mike)
 - Sara: Would be interested in seeing someone from a wireless provider as well as a cloud/identity like Tim

- Tim: Would you like me to reach out to my contacts at Aruba or other wireless providers?
 - Mike: We'll be putting out the public call for candidates. I will update the committee and provide a link to the recruiting page once that's live.
- Theresa: I would be willing to bow out
- Andrew: I would be willing as well
- Stefan: I will be taking family leave beginning in November. RESTENA is restructuring as well, so that may impact my involvement/availability
- Kevin: There is also a space for advisors to the committee. Consider that as an option for those who are interested in participating but may have cycle limitations like Stefan's
- Additional information we could ask of candidates?
 - Jeremy: Do we want to look for candidates from K12 organizations?
 - Tim: I like that idea. Would be valuable to get their perspective and understanding of that space
 - Kevin: At minimum we may want someone from an ESO, if not district. Also, we could invite them on in an advisory capacity
 - Jeremy: Could reach out to some of my contacts and ask about the advisory role
 - Kevin: It can be valuable to have a "stable" of advisors from multiple backgrounds
 - Kim: It's been tough to get down to the "in the trenches" level and engage with people operating in that part of the K12 world, so this could be a good way to foster those connections
- Next meeting: October 1st, 11am-12:30pm ET
- AOB?

Friday August 6th 11am-12:30pm ET

Attendees:

Jeremy Livingston
 Andrew Buker
 Stefan Winter
 Rob Gorrell
 Neil Johnson
 Kim Owen
 Miroslav Milinovic
 Amel Caldwell
 Tim Cappalli

With:

Mike Zawacki
Kevin Morooney
Ann West
Sara Jeanes

Regrets:

Theresa Semmens

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
- Approve previous month's meeting minutes
 - <https://spaces.at.internet2.edu/pages/viewpage.action?pageId=190359006>
 - Approved by Kim and Rob
- SO update
 - Network Nebraska
 - Anderew: Formal launch of NN's eduroam program at Admin Days (conference for K12 superintendents). Signing up school districts now. Working with local ISP on SP-only deployments at not-for
 - The Sun Corridor Network
 - Mainly focused on developing contracts that will be signed by constituent schools/libraries/museums. Also looking at developing hardware solutions for constituents, esp smaller schools. Want to develop high/medium/low pricing. Focusing on identity store/directory services and RADIUS server.
 - UETN
 -
- Working group updates (Committee members to read minutes from previous meetings)
 - [User/Device Onboarding working group](#)
 - Rob: Main topic in last meeting was looking for demo of the eVA, CAT, geteduroam. Interested in leveraging cloud, esp for smaller schools
 - Miro: We see geteduroam as an add-on for managed IdP. Provisioning is based on SAML identity or other federated . Several institutions using it now.
 - Stefan: Could be useful to present on the various products, and drill in on a few that would be of interest to this group - eVA, geteduroam would be Paul. CAT, Managed IdP would be me.

- Miro: Another option could be managed IdP+. Good fit for cloud solutions.
 - **AI: Mike to coordinate with Paul, Miro, Stefan on day and time.**
 - Tim: As outcome of that meeting I created a [draft diagram of some options](#) of deployment models.
- [Guest Access working group](#)
 - Rob: Interest in eVA demo in that group as well. Focusing on created fully defined requirements document. We're aware that OpenRoaming will change the landscape but are focusing on near term solutions.
 - Ann: We're seeing the guest service as an addition to eduroam overall, but doesn't need to be baked into the admin portal. We're open to external solutions, if need be. Having needs for business processes and user flows is an important ask for this group, less about the technical details.
 - Rob: That's why we were interested in eVA. Being able to compare that with current system would be helpful. We know we want something from guest services - working on defining the "what"
 - Ann: Good examples. We're very open to working with third parties.
 - Tim: I feel like a line has to be drawn WRT who's responsible for what parts of the solution. Do we try to accommodate all comers (e.g. Google edu, etc)? Or do we focus just on guests of institutions?
 - Jeremy: So would this work on IoT?
 - Tim: Usually not "guests". Could be a better fit for the User/Device group. Depending on the platform you could still bind that device's identity (to IdP or OpenRoaming), though it wouldn't auto associate the way a laptop or phone would.
 - Jeremy: Great points. Feel like it's something for us to keep our eyes on
 - Stefan: WRT IoT it's possible/probable that OpenRoaming will address that. There's some discussion about that now. Limitation is mainly on the device front - how do you set them up to associate to a given SSID, etc.
- Next meeting: September 3rd, 11am-12:30pm ET
- AOB?
 - EDUCAUSE Security list email re: MiTM attacks and recommendations. BPG addresses the question of recommended practices. Looking for eAC volunteer to guide people back to BPG, get eduroam community accustomed to looking toward it
 - Stefan: I spoke with some of the researchers on a similar thread, had good conversations, and pushed those up to industry partners (Google, et al)
 - CAT Changes re:WPA1 and MacOS/iOS [CAT is enabled by 200+ organizations in the US]

- Sara: Message on this just came across as this group gathered. Can Stefan comment on this update?
 - Stefan: Fallout from the last eduroam development call. I noticed that minimum encryption setting was WPA1 or more. In the EU the minimum is WPA2. Just in case someone is operating a WPA1 hotspot out there we wanted to ensure our users weren't connecting to it
 - Miro: Stefan announced that as an update in CAT 2.1 (scheduled for Q4 of this year). We'll message the changes soon to ensure everyone has time to bring their systems in compliance with requirements. Just wanted the eAC to understand the sequence of events that will lead up to CAT 2.1
 - Stefan: Wondering how common WPA1 deployments are. Any anecdotal evidence?
 - Tim: Seems like they'd get a lot of complaints about speed. And the endpoints aren't even supported by vendors anymore.
 - Jeremy: Apple devices warn you if you attempt to connect to WPA1 that it's insecure. Users would see that and complain.
 - Miro: We were waiting for WPA3 to come out and solve all our problems :)

Friday July 9th 11am-12:30pm ET

Attendees:

Miro Milinovic
Stefan Winter
Jeff Egly
Amanda Molinari
Theresa Semmens
Kim Owen
Rob Gorrell
Neil Johnson
Amel Caldwell

With:

Mike Zawacki - Internet2

Sara Jeanes - Internet2
Romy Bolton - Internet2
Thomas Pratt - Internet2

Regrets:

Jeremy Livingston
Tim Cappalli
Andrew Buker

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Guests: Amanda Molinari (UETN), Thomas Pratt (Internet2)
- Approve previous month's meeting minutes
 - <https://spaces.at.internet2.edu/x/EJ9YCw>
 - Jeff approves
 - Kim seconds
- SO Update - AZ contract signing, [press release](#), Network Nebraska
 - Sun Corridor Network: Agreement signed, beginning pilot deployments
 - Network Nebraska: Beginning pilot deployments, partnered with local ISP (Allo Phone) on public SP-only deployments
 - UETN: 26 state parks, Half+ DMV locations set up as SP-only. Continuing work with H-wire sites around state (mainly charter K12 schools, most SP-only). This year's work will focus on more SP-only
- Recap of webinar - Thoughts, questions?
 - [Link to recording](#)
 - Sara: Amanda and I presented on June 30th. Focus on future of eduroam "The Next 1,000 Subscribers"
 - 96+ attendees
 - Will send out note later today/Monday including link to micro-page, recording
 - Follow-ups from KINBER, volunteers for eAC working groups
 - UETN to coordinate with Mike, Sara on engagement with KINBER
- Working groups
 - Non-eAC members to join each group
 - Pick day/time for standing meeting on both groups
 - User/Device Onboarding Group
 - Monday 19th, 1pm-2pm ET

- Guest Access Group
 - Wednesday 21st, 1pm-2pm ET
 - **AI: Mike to send out invites, update agendas**
- AI from June: eVA guest system demo will be scheduled as separate meeting
- Discussion of operational transition from ANYROAM to Internet2
 - Jeff: Just looking to raise awareness, have any questions answered by this committee. Have had strong working relationships with Internet2 and ANYROAM and appreciate the dialogue with Ann, Sara, and Mike on transition.
 - Sara: 3 points/needs: Operational, support/onboarding, engaging in mailing list. Internet2 is defining needs and planning for migration of duties. Same team that's building new architecture will continue to run it. We'll refine operating practices from there.
 - Rob: Was wondering if you envision the SP-only onboarding process to change as part of the transition.
 - Sara: Great question. Thinking through onboarding processes for all categories of subscribers. SP-only will be working with Internet2 directly. Part of the move will involve an updated agreement. Right now SOs can onboard SP-onlys directly.
 - Rob: Would it be expected that the ANYROAM guest access service be deprecated/replaced?
 - Sara: We would expect that any output of the Guest Access working group would develop a set of requirements that would inform work on future guest systems.
 - Jeff: Appreciate the discussion and visibility, esp. from the standpoint of our SO work.
 - Amanda: Agree with Jeff. Having a view of how the work is progressing is really helpful to SOs in adjusting process, updating documentation. Excited to see development of new/updated features
- Report improvements - group brainstorming/ideas (Sara, Amanda, Thomas)
 - [SO Asks List](#) *[link not for inclusion in public minutes]*
 - Sara: As part of service updates we're looking to collect feedback and feature requests for reports. Interested in hearing this group's thoughts.
 - Jeff: Do we want to share UETN's feedback as a starting point?
 - Amanda: Sure. Here it is...
 - Group reports that are provided to SOs were missing some constituents. Process for adding them is clunky, manual, requires explicit action from staff at constituent sites.
 - Looking at ways to highlight problem areas and group subscribers who are experiencing those problems
 - Better definitions of report language
 - Missing or out of date content in "how to read your report" documentation

- Longitudinal data on numbers of subscribers & dates of initial connection, other data categories that could be used to identify trends
 - Thomas: Would that be month over month, other time period?
 - Amanda: Year over year for sure. Possibly other time frames.
 - Jeff: We can discuss time frame of data and get back to Thomas and others at I2
 - Sara: Current reports are structured as monthly, semi-annual, and annual. Would make sense to start there
 - Thomas: Consider the differences in needs and presentation for trending data vs. operational/support data
 - Sara: Alerting isn't a function of reports at present but sounds like there could be a need for that
 - Amanda: Agree. I would see that data being presented differently but still very valuable.
- IdP issues
 - Empty realm errors
 - More detail on error categories, possibly with links to relevant troubleshooting documentation
- SP issues
 - Identification of which errors are caused by policy/configuration issues on device issues versus which are caused by SP or IdP infrastructure.
- Report on the number of administrators and peers per organization.
- Rob: Wanted to touch on UETN's Google map, showing IdPs/SPs in a single state. Obviously great for SOs, but could be valuable for other states as well. Presents a cleaner representation of where to find access
 - Amanda: Agree, and push people toward eduroam Companion app for the same reason.
- Rob: Also interested in APIs and other ways to integrate report data with existing logging/monitoring/reporting systems that individual subscribers might be running. Rob has been asked on occasion for this capability
 - Amanda: Like that idea. What would it interface with?
 - Rob: At our organization we're a Splunk shop. Could be pulled into our Splunk instance, incorporated in dashboards, reports, etc.
 - Amanda: UETN uses Splunk as well, so it would be of interest to us too.
- Semi-annual/annual reports duplicate monthly reports
- SO reports add a listing of constituent IDPs and SPs as well as a 'roaming within SO page'
- Sara: Happy to provide updates to this group ongoing. We have the core functionality of new infrastructure in place and are now plumbing those components together. As we continue work on reporting, logging, monitoring we're looking to this group and others like SOs to inform that work.

- Jeff: Sounds great. Looking forward to upcoming discussion here.
- Next meeting: August 6th, 11am-12:30pm ET

Friday June 11th, 11am-12:30pm ET

Attendees:

Andrew Buker
 Jeff Egly - UETN
 Amel Caldwell -- University of Washington
 Kim Owen, North Dakota State Univ
 Miroslav Milinovic, Srce
 Tim Cappalli
 Theresa Semmens, Nevada System of Higher Education
 Stefan Winter, Restena (20 min late, sorry)

With:

Sara Jeanes
 Kevin Morooney
 Mike Zawacki
 Romy Bolton

Regrets:

Jeremy Livingston

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
- Approve previous month's meeting minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2021-05-14>
 - Approved by Kim, Jeff
- Working group report outs
 - Guest Accounts (Amel)
 - [Working Group notes](#)
 - Identified high level topics
 - Managing guest access
 - Aim is to avoid provisioning full accounts for guests

- Enhanced access for vetted users
- Use cases for access
 - Short time guest user
 - Student move in
 - Sports events
 - Conference, classes
 - Campus tours
 - Generally harder “sell” for these users. More involved than using open wifi. Less a focus for this group, at least for now
 - Longer term repeat guest user
 - Multi day conferences, classes
 - Contractors, temp staff
- Impact of guest access on value prop of eduroam
 - Greater ease of use for guest users could encourage more SPs, increase reach of service
- Identifying near term & long term approaches
 - eVA or eVA-like solution likely the best near term option
 - Request from Stefan, Paul Dekkers to demo eVA
 - Consider role of OpenRoaming, Passpoint for longer term approach.
- Jeff: Seems like it would be necessary for institutions that have eduroam as only SSID. Option would make it easier to adopt that approach
 - Amel: Agree. We’re in the process of moving toward using eduroam as main/sole SSID and would find this useful
- User/Device Onboarding (Rob)
 - [Working Group notes](#)
 - Identified main topics
 - Defining what audience we’re addressing
 - Approaches/solutions for handling certificates and PKIs
 - Role of geteduroam and CAT, possibly managed IdP (further down the road)
 - Considerations for emerging technologies like Passpoint, OpenRoaming
 - Tim: Highly recommend folks test out Android 12 beta 2. There are some UI changes to Wi-Fi and Cellular areas. They've merged into one UI called "Internet"
 - **AI all members: Request for this group to read and add notes to meeting minutes.**
- Support Organisation report out (Jeff/Mike)
 - Summary of activities
 - Report on training

- Delivered to technical staff of Support Organizations
 - Two half-days, focused on eduroam global community, governance. Technical topics like configuration of wireless infrastructure, RADIUS. CAT and admin interface. General approaches to support of service and users. UETN delivered their training on Support Organization structures, processes, tools, troubleshooting
- AOB?
 - Jeff: UETN has been working with state of Utah on SP-only connections. Department of Natural Resources has been deploying eduroam enabled APs in state parks, recreation areas.
 -
- Next meeting
 - July 9th, 11am-12:30pm ET
 - **AI: Stefan, Mike: coordinate on eVA demo for next meeting**

Friday May 14th, 11am-12:30pm ET

Attendees:

Andrew Buker (NU/NN)
Stefan Winter (Restena)
Theresa Semmens
Tim Cappalli
Amel Caldwell
Jeff Egly
Rob Gorrell (UNCG)
Jeremy Livingston (Stevens)
Neil Johnson (UIOWA)

With:

Sara Jeanes
Ann West
Romy Bolton
Mike Zawacki

Regrets:

Miroslav Milinovic
Kim Owen

Agenda

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- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
- Approve notes from previous meeting
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2021-04-16>
 - Approvals: Jeremy, Rob
- Support Organization update (Jeff/Andrew/Mike)
 - Met last week for regular coordination call
 - Network Nebraska has completed its SO agreement
 - SOs are currently focused on onboarding for their pilot schools/district

- UETN working on SP-only deployments, coordinating with state agencies to deploy in public spaces, city and state parks, etc.
- Discussing certificates for authenticating end users/devices
- Nebraska's is working through legislative limbo to do a press release and formal announcement of their participation in the program
- Follow up on community feedback, development work to, and transition toward cloud infrastructure (Sara)
 - (Presentation "Enabling the Next 1,000 Subscribers")
 - Jeremy: Has anyone researched what the need for the next 1,000 subscribers looks like?
 - Sara: It's significant but fuzzy. We're projecting out on growth, usage, and resources based on our experience with K12 space to date (as that's where much of the growth will come from).
 - Jeremy: WRT mitigating disruption - how will that work? Also, what sort of promotional work is expected to grow the next 1,000?
 - Sara: We'll stand up the new infrastructure in parallel with current infrastructure. Specific cadence of moving from one stack to the other is still being worked out, but we'll shift RADIUS traffic incrementally
 - Tim: How do you see eduroam evolving in a world without SSIDs? It seems like it's moving toward being a trust framework?
 - Sara: That's correct. We can focus on identity, managing the trust fabric of our subscribers. We'll keep an eye on how wifi evolves, adjust our approaches and strategies around that (with help from this group!). Interested in hearing thoughts from others.
 - Tim: I'd like to see a discussion in depth of the value of a user identity and how it works in the service. Concerned with/thinking about competing business models. How do we approach the monetization of wifi? How do we make identities valuable to our community and commercial world?
 - These sound like great topics to keep in front of this group
 - Neil: Is there any consideration of eduroam in relationship to emerging non-Wi-Fi technologies (CBRS)?
 - Sara: Not something Internet2 is looking at but interested in hearing from others
 - Rob: It's a topic we've been interested in, will be digging into
 - Jeff: It's also something UETN is working on, still exploratory
 - Stefan: We don't see much movement internationally, just because it's hard to implement CBRS frameworks globally. Very interested in seeing how things develop and hearing about that work here
 - Tim: Interested in "what's left" - what technologies are out there that could be tied into identities and management.
 - Rob: WRT working groups for the eAC - I think k12 user/device onboarding would be a good candidate for a group. Chatted with Jeff

about that as well. Start with problem/needs statement and work forward from there?

- Sara: Agree. MDM, geteduroam, CAT, lots of options but we don't have a unified approach
- Rob: Also agree that guest access working group would be valuable. Guest access is a question that comes up across the board. Having an approach would be helpful
- Ann: Had a similar question come up for InCommon. We had the community write up a position statement/needs request and are now have working groups doing the work on a solution/approach, sometimes in concert with industry partners. Could use a similar approach here.
- Rob: I like that. Also makes it more than an "IdP of last resort" question
- Tim: Does this group feel that network authentication is the responsibility of an identity provider?
 - Jeremy: Not at Stevens
 - Ann: In IdPaaS working group they split apart SAML and RADIUS services. Sometimes those are managed by different people, different divisions within an organization
- Jeremy: Do we want to put forward a vote to form up working groups on Guest Access and User/Device Onboarding?
 - All: Yes
 - Guest Access
 - Theresa, Rob, Amel, Andrew
 - User/Device Onboarding
 - Tim, Neil, Rob
 - Ann: You can also do a call for participants from the community too!
 - Jeremy: Mike, can you help with that?
 - Mike: Yes - just need to decide who the leader (interim or otherwise) for each group. I'll work with them to form up charter and then assist with community outreach, formalize roster for each group
 - Ann: First step might be to form up a draft charter for each to help sharpen the community ask.
 - AI: Mike to contact initial members of each WG, coordinate on formation of draft charter, and then assist with community call for participation
- eduroam Development Group call reminder, OpenRoaming
 - Next meeting: June 8th, 9:30am - 10:30am ET
 - OpenRoaming integration into CAT 2.1
 - RADIUS/TLS certificate request optimizations
 - Mailing list: <https://lists.eduroam.org/sympa/info/development>
- AOB?
 - Nope!

- Next meeting: June 11th, 2021 11am-12:30pm ET

Friday April 16th, 11am-12:30pm ET

Attendees:

Jeff Egly - UETN
Andrew Buker - NU/NN
Rob Gorrell - UNCG
Jeremy Livingston - Stevens
Theresa Semmens
Stefan Winter
Miroslav Milinovic
Kim Owen
Amel Caldwell

With:

Kevin Morooney
Ann West
Romy Bolton
Sara Jeanes
Shannon Roddy
Mike Zawacki

Regrets:

Neil Johnson

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash

- Update on DNSSEC letter of support for Stefan Winter for WBA.
 - Stefan reports that the WBA has moved away from realm/certificate requirement
 - Would be good to use this group in the future for these kinds of issues so Stefan will alert this group when input is needed
- Approve notes from previous meeting
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2021-03-19>
 - Rob Gorrell and Neil indicated approval
- Update from Support Organisation program
 - Jeff/Andrew/Mike to report out
 - Jeff: Wanted to add this as standing agenda item. Work being done in that group could benefit this group.
 - Work on technical documentation, social media, and promotion along with developing pilot groups
 - Identified need for standardized deployment process - potentially a wizard type interface. Group has been meeting in off weeks. Settling on NPS for RADIUS and Ubiquiti AP.
 - Nebraska has been working on contract. Next up is the publicity campaign. Website ready and was shared with the SO group. Working with state government on rural broadband legislation
 - Jeff: Currently focused on SP-only deployments in Utah. Also working on getting charter schools signed up
 - Sara: We're looking at ways to make it easier for Support Organizations to scale support. Logging and alerting have been topics brought up. Will come back to this group as this develops.
- Best Practices Guide update
 - <https://docs.google.com/document/d/1EQWVcccdH2CdQTlgvj1L5vZHJ4DuGMT-/edit#heading=h.gjdgxs>
 - At final stages of incorporating CACTI requests before finalizing guide.
 - Adding glossary, references, and adding some edits to EAP-TLS recommendations (clarify requirements around cert management, making it clear that not all subscribers will have ability/resources to deploy), clarifications around K12 requirements.
 - Guide to be reviewed, assessed for revision needs in November
 - Rob: What's in front of the eAC is to accept changes and apply as new version
- Updates to Terms and SO agreement re: SP-only subscribers
 - Reminder that Internet2 adjusted Terms and Conditions for the Support Organizations regarding SP Only
 - Link to T&Cs can be found here: <https://incommon.org/about/policies/>

- Work priorities for 2021
 - Finalizing Best Practices Guide
 - Update/revisions to be considered in November
 - OpenRoaming
 - Test cases - recruit/identify additional candidates?
 - Volunteers from eAC to attend eduroam dev meetings?
 - Miro: The meetings are open, and the more the merrier. The dev staff is always glad to hear more from diverse participants.
 - Stefan: Agree with Miro. We've structured the development work to be transparent. It does mean that you can't discuss NDA materials on the mailing lists or calls.
 - Jeff: Are others who've been participating?
 - Rob: I have attended meetings in the past but haven't joined recent calls
 - Jeff: Do you publish an agenda and meeting times?
 - Stefan: It's usually shared out shortly before calls
 - Mike: Link to mailing list where meeting times and agenda are shared: <https://lists.eduroam.org/sympa/info/development>
 - Kim: Do we have an idea of the scope of this work?
 - Ann: Scoped to eduroam in the US, looking at longer term strategy on how it will be worked into service. We do have representatives from GEANT on the eAC who are also involved with the WBA
 - Ann: Analysis on opportunities and threats to the service. Consider implications for Support Organizations as well.
 - Possible working group to develop recommendations?
 - Rob: I'm curious about value prop for promoting OpenRoaming. Think about what problems it would solve, what it could add to service
 - Stefan: Good to understand the scoping for this group. It sounds like it will be more limited than some of the discussion at international level
 - Ann: Don't want to be too directive - like Rob's suggestions about how/should it help.
 - Miro: Wanted to support the idea of developing understanding of how OpenRoaming will fit at the US level. Lessons learned here could benefit the global community as well.
 - Stefan: There's a suburb of London (Cannery Row) that is engaging in a pilot effort for board deployment of OpenRoaming, but R&E IdP side is lagging. Consider implications there, how that disparity could manifest in the US
 - Additional topics?

- Miro: Also want to think about how work here could impact/tie into CAT. Would like group to identify use cases and challenges of supporting eduroam via CAT. Interested in hearing more about how to work with institutions with limited resources, esp WRT identity management.
- Limitations of CAT on cert based authentication (per Miro's request at last meeting)
 - There was a comment that others have experienced limitations on using certs with CAT. Would like to dig into that topic, explore limitations.
 - Miro: We have limitations for Managed IdP central service (related to number of users served by IdP/RO) but this does not impact CAT functionalities
 - Rob: Our experience in this area is more related to deployments requiring user/device certificates. Those have been cropping up more in the K12 space, as districts look to manage use, drive compliance for students connecting via eduroam
 - Stefan: When you use CAT you can select EAP-TLS. What we don't have is the client cert. We don't want to centralize storage for those, so getting the client certs installed still falls to the user or their home institution. We have other options with managed IdPs which do handle client cert installation. Other option is geteduroam, which also uses client certs but is tied to existing SAML identities. Once user is authenticated the client cert is installed. (Note: this geteduroam feature of GEANTs MIdP is in pilot state)
 - Rob: Agree with Stefan's statements. Major challenge we've heard about is the PKI management. It's a problem in K12 space in particular
 - Stefan: geteduroam is open source and has provisions to integrate PKI, but still requires
 - Ann: Could that be run at the NRO level?
 - Stefan: geteduroam is built for multi tenancy but would need to look into details on that. I'm not on the dev team for geteduroam
 - Miro: Consider that geteduroam is a pilot service (in GEANT). So while it's not production service we're happy to work with organizations which might want to try some of the things that have been discussed
 - Stefan: Currently it's being run by NorduNET. Paul Dekkers could tell you more
 - Jeff: Do we want to add this as a standing agenda item?
 - Rob: I'd suggest adding this as a work priority for this year, especially as we look at serving more K12s
 - Ann: This committee could also forward these requests to Internet2. We're looking at ways to scale support, so this could be a fit for that.

- Stefan: One of the drivers for geteduroam was organizations that used Azure AD to work around limitations of that platform. Some of those organizations have already deployed and tested geteduroam
- Miro: Any platform would work, though. There have been deployments that integrate with Google, for example
- Rob: Azure AD and Google are two popular IdPs for K12s
- Ann: Jeff, has that been Utah's experience as well?
- Jeff: Less so, but I can look into that and report back. Should we form up a working group on this topic?
- Ann: Just a proposal - could someone write a scoping/problem statement with outcomes as a starting point?
- Kim: I like that idea - could be a big part of our work this year. Consider what the value prop is and what the approaches could look like
- Rob: I'd be willing to write up a draft
- Jeff: That sounds great.
- Ann: Are folks thinking that this is all about onboarding users? Or something else?
- Rob: Onboarding is part of it. Could lower barriers for adoption
- Miro: Another value prop is that you'd have devices that are properly configured and that process would be partly/mostly automated.
- Rob: Agree - that's what K12s and smaller organizations want. Would also give schools the ability to decide which users can connect at what level of access
- AOB?
 - Jeff: Thoughts on including updates from Support Organization groups useful as standing agenda item?
 - Yes
- Next meeting: May 14th, 2021 11am-12:30pm ET
 - Kim: Will have to miss that meeting

Friday March 19th, 11am-12:30pm ET

Attendees:

Rob Gorrell (UNCG)
Andrew Buker (NU)
Jeff Egly (UETN)
Miroslav Mlinovic (SRCE/CARNET)
Amel Caldwell (University of Washington)
Neil Johnson (UIOWA)

With:

Mike Zawacki - Internet2
Kevin Morooney - Internet2
Sara Jeanes - Internet2

Regrets:

Jeremy Livingston
Kim Owen

Agenda

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- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
- Approve notes from previous meeting
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2021-02-18>
 - Approvals: Rob Gorrell, Jeff Egly
- Finalizing changes to the best practices guide
 - BPG working group met earlier this week. Decisions
 - Appendix/glossary to be filled out by authors of their respective sections
 - Rob to complete update to EAP-TLS language, acknowledgement that while it's the preferred method for authentication, not all members are set up for cert management and that CAT has limitations to management of certs.

- Miro: Could we elaborate on the limitations of CAT? We might be able to take that feedback to the dev team and look at changes
 - Rob: I was referring to provisioning certs on devices. We can dig into that now or table for later.
 - Miro: We see CAT as being equipped to support all auth methods, including EAP-TLS. If there's an issue with one of the methods we'd like to hear more. Maybe put it in as an agenda item on next month's agenda. The dev team is examining ways to provide eduroam IdP functionality to IdPs that use (commercial) IdP-in-the-cloud solutions. Would be great to get info on limitations that this groups sees related to CAT tool.
 - Rob: Why don't we take that as a future topic?
 - Miro: Agree with that idea
 - **AI: Add to agenda for April**
- Andrew: In conversations with K12s in our state the question of guest networks came up. Do we want to mention ANYROAM's guest service in the BPG? We use it at UofNebraska
 - Rob: We use it here
 - Jeff: We haven't seen wide adoption in Utah. Have been focused on rolling out eduroam to K12s, libraries, and SP-only
 - Neil: we have it enabled, but don't advertise it
 - Amel: we have it enabled, but don't advertise it
 - Rob: I'd like to work out a position on handling guest access. We've been careful about promoting it as a solution because there are concerns with the lack of formal .edu ties. But it's come up enough as we engage with the community that we feel like there's a need to offer something. UNC has been offering vanilla guest access but doesn't scale once we start talking to organizations off campus.
 - Jeff: I guess I do have an example for interest in Utah. We have cities looking at SP-Only deployments and have been curious how they can participate
 - Sara: We're interested in thoughts from this group. We haven't had a request at any scale, but I hear the need being articulated here. There are some constraints around adhering to the edu mission and international compliance. The eAC's thoughts would be much appreciated.
 - Kevin: I+1 to the above. It mirrors the challenges of IdP of last resort - getting the business model right, getting the tech right. There would be

a big investment of technical capital and lots of cat herding. Need input from the eAC WRT what's an acceptable risk profile,

- Andrew; Maybe this is a “phase two of BPG” discussion
- Miro: In the EU there are different approaches being taken, with an eye toward caution when it comes to guest users roaming with their guest credentials. We've tried to enable localized solutions - tying use of a school's guests to that school's facilities. Propose that we get an understanding of how ANYROAM's service works, then consider if that use case fits the mission of eduroam, then form position.
 - Jeff: Is this something that we could pull Philippe into?
 - Mike: COuld have those on the committee who use the service provide an overview and ensure a certain baseline of understanding within the committee, then contemplate next steps.
 - Miro: We should discuss with Philippe at some point, as nobody knows the service better than him.
 - Sara: Consider that the ANYROAM guest IdP isn't formally part of eduroam, but rather a service that ANYROAM offers. Should be mindful of conflating the two in service documentation
 - Andrew: Suggest that we discuss in the BPG working group first and then report back to the full committee & decide how to engage from there.
 - Jeff: That makes sense. **AI - include topic of guest IdPs in next BPG meeting**
- 2021 work priorities
 - OpenRoaming
 - Look for additional test candidates?
 - Miro: Suggest additional members of this committee join the eduroam dev calls. <https://lists.eduroam.org/sympa/info/development>
 - Jeff: Miro, do you see a good understanding of how OpenRoaming and eduroam will interact?
 - Miro: We expect commercial vendors preconfiguring their APs and managers with OpenRoaming capabilities. In the EU the landscape is a little different - in some cases there are limitations on who can use a university's network, for example. So it's probable that OpenRoaming will fit differently in each country. But my crystal ball is broken - lots of uncertainty out there. Eduroam will continue to be involved on the IdP side, the area of greatest play is the SP side. Need to consider compliance with OR regulations, other factors outside of our immediate community. Suggest keeping this as a standing agenda item.

- Rob: Agree with Miro sentiments. Early days but definitely warrants our full attention
 -
- Overview of the changes to the SO agreement WRT SP-only subscribers
 - AI: Mike to provide new language to eAC before end of day, March 19th.
- Future community events involving eduroam?
 - CAMP and ACAMP
 - Mike: Typically held in summer and fall.
 - CAMP - July 12-16:
<https://incommon.org/academy/camp-meetings/basecamp/>
 - ACAMP - October 4-8:
<https://incommon.org/academy/camp-meetings/incommon-camp-and-advance-camp/>
 - TNC
 - CAP meetings
- Letter of support for Stefan/GEANT approach to dealing with realm/certificate issue
 - AI: Include in April agenda
- AOB?
 - Rob: Do we have the link to the containerized RADIUS container?
 - Link to startup doc and container:
<https://docs.google.com/document/d/11-BJPaNrONWU6mYerYcWFxXCozOqwkVzxswTka3qBJo/edit>
 - Sara: There are a couple of areas where you might run into issues - versioning issue in command line, pointers to repo may be out of date. Reach out to myself and/or Mike if you
- Next meeting: April 16th, 2021
 - Mike: Per previous email, the original calendar invite showing up every four Thursdays may be persisting on some members' calendars. Please decline/delete that invitation and stick to the current invite for every 4th Friday from 11am-12:30pm ET

Thursday, February 18th, 1pm ET

Attendees:

Jeremy Livingston - Stevens Institute of Technology
 Amel Caldwell -- University of Washington
 Miroslav Milinovic - (SRCE/CARNET)
 Neil Johnson - University of Iowa

Jeff Egly - UETN
Kim Owen - NDSU

With:

Mike Zawacki - Internet2
S. Roddy - Internet2
Romy Bolton - Internet2
Sara Jeanes - Internet2
Steve Zoppi - Internet2
Kevin Morooney - Internet2

Regrets:

Agenda

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- Agenda bash
 - A thank you to Kim and Rob for their leadership in 2020!
- Approval of last month's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2021-01-21>
 - So approved
- Welcome Amel! - Committee Introductions
- Term roll off (volunteers first?)
 - Idea is to invite volunteers to roll off committee early to ensure continuity of expertise/experience
 - Jeff: I can be flexible - love participating but am open to roll off early
 - Kim: I agree with above
 - Jeremy: Same as Jeff and Kim.
 - Jeremy: Mike, would that be enough?
 - AI MIKE: Confer with T&I staff, see if 3 rolling off would be enough
- Report on CACTI feedback of the BPG
 - CACTI provides conditional approval to the eduroam Best Practices Guide with note of recommendation to add appendix to the guide, as well as coverage of stronger authentication within RADIUS, and discussion of ETLS without PKI per the discussion above (*see link below*).

- Thanks to the eAC for the excellent work
- Notes from discussion:
 - <https://docs.google.com/document/d/1qWtnRKjfoS8oV2ldE8GqVqdES-578JmMBRyaTD3Lgls/edit#>
- Kim: Meeting of BPG working group to review requested changes, make adjustments, eAC reviews and notifies CACTI of final changes.
- AI MIKE: Set up BPG working group meeting, send scheduling poll
- IAM Online session on the Best Practices Guide (BPG) - March 10th
 - Jeff: Want to make sure we have the right representatives from the working group to present. Kim, would you be willing to join us? Rob Gorrell as well? Let's have the BPG discuss.
 - Kim: Agree with that plan.
- Work plan/priority topics for eAC in 2021
 - OpenRoaming test working group
 - Miro: I advise to check with the [eduroam development group](#). OpenRoaming is a frequent topic of discussion and work. Message Stefan and I for more info. Two areas of potential engagement - testing IdP and strategy for testing SPs.
 - Next meeting is March 2nd.
 - Jeff: Perhaps identifying additional folks from this group to join the discussion
 - Miro: Fragmentation of user communities between eduroam, OpenRoaming, and varying degrees of adoption is a real risk. Coordination will help!
- Update on Support Organization work
 - Jeremy: What's been going on since December?
 - Mike: Network Nebraska and the Sun Corridor Network have joined UETN as new additions to the Support Organization community. Currently holding regular coordination call, developing work plans, will present those work plans. Staff training to be held in March (date TBD)
 - Jeremy: Having more success stories at the state level will help bring other organizations into the fold
- Letter of support for Stefan/GEANT approach to dealing with realm/certificate issue
 - Miro: Agree with idea of asking Stefan to help draft that letter. Also related to the need to implement DNSSEC, Radsec, other security approaches. I can ping Stefan on this.
 - Jeremy: Sounds good. Reach out to the group when ready.
- Doodle poll for new call time?
 - Jeff: Open to the idea.
 - AI MIKE: Put together a doodle poll, include current time as one option

Thursday, January 21st, 1pm ET

Attendees:

David Morton
Andrew Buker
Rob Gorrell
Kim Owen
Andrew Buker
Stefan Winter
Neil Johnson
Theresa Semmens
Jeremy Livingston
Jeff Egly
Tim Cappalli
Miro Milinovic

With:

Nicole Roy
Mike Zawacki
Steve Zoppi
Romy Bolton

Regrets:

Agenda

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- Agenda bash
- Approval of last month's minutes
 - <https://spaces.at.internet2.edu/display/eduroam/eAC+Meeting+2020-12-17>
 - Rob signs off
 - Theresa seconds sign off
- Announcement of this year's chair and vice-chair
 - Jeremy Livingston - Chair
 - Jeff Egly - Vice-Chair

- (Thanks and congratulations all around!)
- David Morton's seat
 - In process of retiring, will need to give up seat. David recommends Amel Caldwell from UW for replacement, but respects wishes of the committee on filling the seat
 - Rob: We can wait on selection, leave seat open, or vote on replacing with David's nominee
 - David: Would be interested in providing comments or joining work in an SME, non-voting capacity if it suits the committee
 - Potentially accept David's replacement recommendation and David would continue to participate in an advisory role (non-voting).
 - Tim: Is it appropriate to invite "alumni" to join calls at their discretion?
 - Nicole: Generally don't encourage, as over time committees can end up with large number of alumni
 - Kim: In favor of voting on Amel to replace David?
 - All: Yes
 - Al: Mike will set up a poll with Yes/No/Abstain options on Amel Caldwell to complete David's term.
 - Is it possible to look for new meeting times? Al Mike will create new doodle to evaluate meeting times for 2021 in conjunction with the new eAC leadership
- OpenRoaming update: Data flows in OpenRoaming (Stefan)
 - Nicole: Is DNSSEC a fundamental part of the model?
 - Stefan: OpenRoaming has chosen a different method - server certificate contains all realms the RO is responsible for
 - Nicole: That's not scalable.
 - Stefan: Agreed. We've explained the challenges to the WBA and are lobbying for DNSSEC.
 - Nicole: Parallels here with SAML federation engaging with large vendors like Google and Microsoft on Federation front
 - Stefan: Discussions with WBA have been good, but it's early days on our work to convince them. Unfortunately DNSSEC would be difficult to deploy across eduroam ecosystem. We're also trying to convince people that we could leverage the eduroam database for NAPTR lookups. Would require code change on OpenRoaming ANPs, which is its own challenge. We are also looking at relying on vendor/third party to take on portions of the authentication aspects
 - Nicole: I would suggest that this committee may want to consider writing a letter of support for the DNSSec approach if it feels that's needed, to be sent to the WBA. Possibly one on behalf of the GEGC as well if the GEGC supports that approach.
 - David, Theresa agree
 - Nicole: If you look at how OAuth 2.0 dynamic client registration works, it's basically directly analogous to the process you'd use for OpenRoaming client lookup and verification of proxy info via the DNSSec/NAPTR record in OpenRoaming. Probably makes sense to use a pattern that is known to work

and be scalable rather than doing what multilateral SAML was forced to do before DNSSEC existed (a truth oracle)

- David: Agree the more that we can support known used and scaleable structures, the better for both uses
- Stefan: What is the state of DNSSEC deployments in the US?
 - Rob: Less common.
 - Neil: We've implemented it at U of Iowa. It can be complicated to support, onboard.
 - Stefan: Makes sense - it doesn't fix complexity problem, just moves the burden of complexity from the ROs to the IdPs. If a vendor included DNSSEC as an option on hosted infrastructure it would fix the problem for some. But Azure doesn't support NAPTR lookups, so that leaves us down a major vendor. Would be good to get Tim's thoughts on that.
- David: How does WBA see us (eduroam) in all of this?
 - Stefan: They see us more as a source of identity, less so as SPs/wifi access providers.
- Stefan: DNSSEC would be my preferred solution, but getting it universally adopted in eduroam community is a major challenge. Using the eduroam database as a lookup source is probably the next best solution. Will report back if we make headway on that approach
- Rob: So as an IdP who wants to get ready should we get DNSSEC and NAPTR records set up in our zone files?
 - Stefan: Yes, and adding CUI (chargeable user identity) to your deployment is also important.
- David: This body could write a letter of support for Stefan's approach for dealing with realm/certificate issue.
- Stefan: The work on OpenRoaming is still early on - these updates will continue to be in a certain amount of flux, so please bear that in mind when thinking about these issues.
- Ann: A few thoughts from me - GEANT is working with WBA, sees OpenRoaming as both a threat and a benefit. I would welcome eAC's thoughts on how we might talk to schools about OpenRoaming. Also, how do we differentiate eduroam from OpenRoaming. I think there are answers (some have been discussed on these calls) but think this committee could be incredibly helpful as we move forward. Need to be clear with organizations how OpenRoaming fits into eduroam's strategy.
- David: Agree. Could ease concerns around guest access for edu space.
- Ann: Agree. Coordinating with GEANT will be important (thanks in advance to Miro and Stefan ;). The eAC can also play a helpful role in forming a strategy and communicating that strategy out
- Stefan: OpenRoaming is working on Settlement Free (e.g. free) deployment now. They won't begin work on Settled Access (e.g. pay to connect) until later down the road. That's when things will get "interesting"

- Miro: In EU there are some campuses that cannot accept “common internet” traffic. So using OpenRoaming for guest access would be forbidden. Something to keep in mind as we look at broader deployments of OpenRoaming.
 - Stefan: By contrast, US schools might be more interested in Settled Access and monetize access to their internet
 - Miro: For SPs there could be a number of approaches, while IdPs would seem to be bound more tightly to the NRO
 - Ann: Further discussions on what messaging to IdPs would be helpful, and understand that messaging would be different for SPs.
 - Jeff: I agree, and see similar needs on UETN’s side of things. Understanding how it will apply here will be very helpful, both in Higher Ed and K12 spaces.
- Best Practices Guide update, next steps
 - Rob and Kim to present guide to CACTI for review and approval (scheduled for Feb 2)
 - One final chance to review and approve
 - Will bring back here if anything comes up
 - Living document and will continue to evolve
- Support Organization update
 - Have met with all organizations
 - Meeting biweekly with selected SOs, monthly with proof of concept groups
- AOB?
 - Huge thanks to Kim and Rob again for helming during year 1
- Next meeting
 - Feb 18th, 1pm ET

Thursday, December 17th, 1pm ET

Attendees:

Rob Gorrell
Kim Owen
Neil Johnson
Theresa Semmens
Tim Cappalli
Stefan Winter
Miroslav Milinovic
Jeff Egly (will be joining late)
Andrew Buker
David Morton

With:

Romy Bolton
Mike Zawacki
Sara Jeanes
Ann West (will be joining late)

Kevin Morooney

Regrets:

Jeremy Livingston

Agenda

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- Agenda bash
- Approval of last month's minutes
 - Rob Gorrell
 - Theresa Semmens
- Update on support organizations
 - High level next steps
 - This week
 - Send legal agreements to next SO cohort for review
 - Blog post announcing next cohort
 - Next month
 - Set up regular calls with SO cohort
 - Set up regular calls with "proof of concept" group
 - Review proposals with all respondents, begin work plans
 - Note from Kevin Morooney: I reviewed the proposals and provided my sign-off on the final decision
- Best Practices Guide next steps
 - Review any feedback from community (none given)
 - Move to approve and send to CACTI for final approval
 - Committee moves to approve the guide and present
 - Working group volunteer to present guide at next meeting?
 - Next CACTI meeting Jan 5, 2021 at 11 ET
 - Presenters from working group - Rob, Andrew, and Kim
 - ~~AI - Mike reach out to Nic Roy to add to the Jan 5 CACTI agenda~~
 - **Follow up: The BPG will likely be added as an agenda item to the Jan 19th CACTI meeting**
 - Process if we determine more requirements after the SO program gets underway.
 - Can add to the BPG as new needs come to light.
- [White paper](#) next steps
 - A few remaining comments to review/revise internally but effectively ready for dissemination in January

- Removed three paragraphs that of a more speculative nature from the last review by this body
 - Revised language:

“eduroam subscribers currently make only limited use of the Configuration Assistance Tool (CAT) where access is currently granted manually, and instead have chosen to use a variety of commercial solutions. A plurality of subscribers are currently relying on manual configuration of OS native setup mechanisms. This complexity is compounded as eduroam subscribers migrate from a username and password based authentication methodology to a device certificate based model, as recommended in the eduroam-US Best Practices Guide.”
 - Finalized version will be sent to eduroam-advisory@internet2.edu
- Open for community content early Jan 2021
 -
-
- Membership for 2021 -
 - Year 1 of 3 complete
 - [Per eAC charter](#) new chair needs to be selected in January 2021
 - Attendance of CACTI meetings?
 - Frequently cross-committee representation. Could take that approach here
 - Could be beneficial to this group to see how other, more established committees in the community conduct business
 - Kim: Items for next year?\
 - Rob: OpenRoaming, and what part we would play. Also cloud deployments of infrastructure.
 - Stefan: A number of countries employ that. GEANT is currently developing IdP as a service (geteduroam)
 - Miro: geteduroam is being spun up, can also be stood up by larger, more resourced NROs.
 - Stefan: We can certainly discuss this next year. It's very popular with users so far, but there are scaling concerns

Thursday, November 19th, 3pm ET

Attendees:

Neil Johnson (UIOWA)
Rob Gorrell (UNCG)
Andrew Buker (NU)
Miroslav Milinovic (Srce)
Kim Owen, NDSU
Jeff Egly, UETN
Tim Cappalli
Stefan Winter, Restena
Theresa Semmens (NSHE)

With:

Mike Zawacki
Steve Zoppi
Ann West
Romy Bolton
Sara Jeans

Regrets:

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- Agenda bash
 - Approval of last month's minutes
- Requirements gathering update
 - ["Requirements for eduroam Growth" Whitepaper](#)
 - Sara: Culmination of requirements gathering work, a reflection of the community looking at future needs for the service, challenges, and needs. Less focused on specific solutions.
 - Next step will be to take the feedback, notes from focus groups, and use that to form up plans to adjust service, make updates, etc.
 - Rob: Was this inclusive of the focus group sessions?

- Sara: Correct. Also includes survey feedback and speculation on future developments
- Rob: Went through document previously. Easy, clear read.
- Miro: I concur. Do have some feedback WRT CAT. Looks like Stefan added his thoughts as well (notes below). Unsure if it's a good way to track end user implementations. CAT allows institution admins to download installers and host those locally - interferes with that sort of stat capture. Also, having two instances of CAT requires tight compliance with original/top level instance, ensure updates are quickly applied, etc. Germany tried to run its own instance and ran into issues with this, ended up shutting it down.
- Stefan: Consider that Android installers require a system call to CAT server, can cause issues when roaming, esp between NROs. We saw this with the German instance of CAT as well.
- Miro: We can try to find a way around this, but would add complexity.
- Rob: I found that paragraph a little confusing, too. Wondering if there might be too much "solutioning" going on there. *Maybe just spell out the requirement, could help lend some clarity to the document. Maybe focus on ease of onboarding an IdP admin into an end user configuration tool.*
- Stefan: Some NROs use the API to *automate portions of the delivery via CAT*, so could address this without adding the complexity of having multiple instances.
- Miro: Think that if we stick to stating needs then the community can come up with solutions.
- Stefan: Thought the rest of the document was clear so I didn't comment.
- Kim: How/how much do we do to incorporate this feedback?
 - **AI Sara:** I'll add a few sentences to clarify the language around CAT, make more needs based. We'll share those with this committee
 - Rob: Could be good to get some clarification from the authors, too.
 - Sara: We collectively have a solution oriented approach to documentation, and managed to remove that sort of language from the rest of the doc. Seems we just missed it here :)
 - Rob: From the US perspective adding an institution to CAT has some "extra steps" (e.g. working with I2 to turn up service, then ANYROAM to join CAT, etc) so maybe some automation would help. The tool itself works great once your institution is in there.
 - Miro: If there's a need for metrics, stats, etc. we can work with you on that. Stefan would love more work to improve CAT!
 - Stefan: Yep - we're always willing to take feature requests, work with NROs and institutions
 - Rob: If there's anywhere I could see improvement it would be enhancements to lean CAT toward certificate handling.
 - Stefan: We're working on that now, funnily enough - geteduroam. Still a bit away from deployment but it's on the horizon.
 - Rob: Could be a feature to admin interface - ability to request addition to CAT.

- Stefan: That's what most NROs do - it's easy to manage.
- Rob: Also think paragraph about identity stores was important and was overshadowed. *We have a lot of people asking about Google and Azure about IDstores and how that fits into eduroam in the future. Very important for smaller subscribers.*
 - Stefan: Azure is hard because it doesn't handle LDAP integration.
 - Miro: I think geteduroam could fit there. Helps institutions that want to run their IdP in the cloud.
 - Rob: Think that will be very important for the K12 segment.
 - Tim: That's by design - most cloud solutions don't support legacy solutions like LDAP. Certificates are the way forward.
 - Rob: Totally understand, though users and non-technical stakeholders don't get that.
 - Tim: Often questions around where demarcs between service components are. Network authentication is expensive, can be hard to scale. That's why we have companies like Jump Cloud, etc. Serve small instances, bad at scaling up to university/large institution level.
 - Stefan: Speaking of K12, you have to work with brief periods of very high utilization followed by little use. Start and end of school days can be very taxing!
 - Kim: From a non-technical perspective how soon will our new users in K12 space need a solution?
 - Rob: Guess we'll know when the SOs begin to come on line.
 - Sara: Definitely points to work that we'd want this committee's input/thoughts on.
- Comments:
- "CAT was developed by GÉANT®, and they operate a service instance intended primarily (but not exclusively) for their EU constituency." - This is incorrect. CAT is intended for true world-wide use. EU users do not get any benefit or any other service level than any other. Organisations across all continents with eduroam coverage are using the portal.
- "While the same instance could also be used by US eduroam subscribers, it might be more appropriate for Internet2 to offer its own US instance, because it is important for organizations and end users to have a high-level of trust in the source of these security-sensitive configurations." - It is of course technically possible to run an own instance. However, the one instance that is operated on cat.eduroam.org is widely known as the go-to place. Establishing a very similar service for the U.S. only (vs. one for the rest of the world) can easily create confusion among users. In fact, we have an example of that; the German NRO deployed their own copy on cat.eduroam.de many years ago and it was all but clear to end users. It was eventually discontinued in favour of migration to the cat.eduroam.org instance. Furthermore, important third parties reference cat.eduroam.org as the go-to place already, and can't typically be bothered to understand the nuances of multiple deployments. <https://login.microsoftonline.com/>

- “CAT could be operated as a service provider within InCommon®, giving InCommon member organizations the option to log end-user access.” - CAT is listed in eduGAIN and with that available in InCommon today. Can you expand on what “option to log end-user access” means? Note: CAT does not authN end users
- Next steps for requirements white paper
 - Open up for broader public comment/review ala the Best Practices Guide
 - Finalize, add to Internet2’s document repository
- Update on SO program
 - Internet2 seeking volunteers to review proposals
 - Neil, Theresa, Jeremy confirmed
 - Anyone else?
- Next meeting
 - Currently set for Thursday, Dec 24th.
 - Change to Thursday, Dec 17th at 1pm-2pm ET
- AOB?

Thursday, October 29th, 1pm ET

Attendees:

Rob Gorrell (UNCG)
Kim Owen (NDSU)
Theresa Semmens (NSHE)
Jeremy Livingston (Edge)
Andrew Buker (NU)
Neil Johnson (UIOWA)
Jeff Egly (UETN)
Miroslav Milinovic (Srce)

With:

Ann West
Kevin Morooney
Mike Zawacki
Romy Bolton

Regrets:

Stefan Winter

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Approval of last month's minutes
- [Support Organization](#) launch (Ann, Mike, Sara)
 - https://docs.google.com/presentation/d/1LYENP5glGmZRP_AxhtW7-FA6LwnISmUHS_dxAhu4vd0/
 - Request from I2: Working group to assist evaluation of applicant plans
 - EAC notes/questions/comments
 - How many bodies did UETN use for the hours? 6 essential people - 3 heavy lifters, 3 more coordinating, directing and participating in specific areas

- UETN probably used more hours than program followers would due to program design activities. This would not be necessary going forward.
- Is this based on a medium implementation? Uses the congressional representatives to approximate size
- Training activity involves who? Sites, end users, SO?
 - Initial round is for SO staff in a “train the trainer” mode and technical training on how to run the service in aggregate.
 - One training available for the SO community as well after the initial SO
- How many SO will be admitted?
 - Really depends on the readiness of the applicants. Being flexible with it, not tied to a specific number.
- How diverse will the organizations be in now and in the future -
 - Will consider anyone who wants to submit a proposal. Just asking for some level of coordination within the state. Would like the org to support the entire state but InCommon realizes that isn't always possible. Definitely want to see what's out there so we can react and see variation.
- Regular meetings for participants to get together and talk about challenges, use case etc are very helpful
- Update on requirements gathering (Sara)
- Best Practices Guide working group (Rob, Kim)
 - Status of meetings before close of public comment period?
 - Comment period ends Dec 1
 - Will come back to eAC for review prior to CACTI for final approval
 - Time to speak up if you have anything to add
 - Could continue to inform/assist Support Organization pilot, eduroam training into 2021
 - Suggestion: Keep standing meeting invites and determine if needed for that week
- Next meeting November 26th, 1pm-2:30pm ET, collides with Thanksgiving
 - Move to December 3rd?
 - Follows BPG public comment and Support Organization proposal deadline.
 - Will propose via email, listen for
- AOB?
 - Ann: Consider how this year went. Does the meeting cadence, length of call work? Not urgent, but something to think about over the coming weeks

Thursday, October 1st, 1pm ET

Attendees:

Rob Gorrell - UNCG

Stefan Winter - Restena
Kim Owen - NDSU
Theresa Semmens - NSHE
Andrew Buker - NU
Miroslav Mllinovic - SRCE
Jeremy Livingston - Edge
Jeff Egly - UETN

With:

Steve Zoppi
Sara Jeanes
Mike Zawacki
Jessica Fink
Romy Bolton
Shannon Roddy
Margaret Cullen
Nic Roy

Regrets:

Neil Johnson - UIOWA

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - No additional items
- Requirements gathering (Sara Jeanes)
 - Overview and key concepts
 - I2 will spend next 1-2 months gathering service requirements from community
 - Looking for feedback from this committee on format, framing, and delivery
 - eAC will “bookend” requirements gathering process - present today, summarize findings upon completion
 -
 - Key points
 - 2020 is about looking toward future growth, greater growth in new community segments (k12s, libraries, etc)

- Significant growth of scope and scale expected in 2020 and onward
- Service improvements could help growth occur more smoothly
- Not locked in on many of these concepts, essentially a beginning point for this conversation
- Multi-tier deployment models
 - NRO - national roaming operator
 - SO - support organizations (Regional networks, state edu departments, etc). Take on portions of service delivery and provide eduroam across state/region for K12s, libraries, museums
 - CROs - community roaming operators. Could provide regional RADIUS proxying. Can be SOs or could focus mainly on proxying
 - eduroam subscriber - institutions using the service
 - Rob indicated that the audiences represented in the presentation dovetails nicely with the anticipated audience for the BPG
- Current deployment model won't scale, hence need to look toward SOs, CROs to assist
 - Sara: Question for committee - are there organizations that would be a good fit for CROs? Does this approach make sense?
 - Miro: I think you should decouple the organizational model from the technical model. Sooner or later the RADIUS approach could be eclipsed by RADSEC, other solutions with smarter routing. Traditional RADIUS could be a backup. Open roaming consortium will force us to think discovery service. This would work in the US.
 - Stefan: Agree with the above. Also RADIUS routing may not work as diagrammed. We've heard complaints from countries that have tried similar approaches. NRO still ends up needing to maintain infrastructure to route all requests and needs all realm information.
 - Sara: Good points, interested in hearing about alternatives
 - Stefan: Happy to discuss offline. DNS-like approaches can work, need additional, more careful architecting and still require NRO to have "master record" of all IdPs, SPs
- Ongoing NRO requirements
 - "Keep doing what we do today"
 - Enable multi-tier architecture
- Project Methodology
 - Move to align with current Internet2 Trust & Identity development practices
 - Open source
 - Containerization
 - Updated, distributed rev control system on publicly accessible platform
 - Avoiding bespoke development, scalable replicable
 - Strong preference for open source
- CRO (or similar role) requirements

- Support for different CRO business models, roles
 - Could be SOs
 - Consider various options for RADIUS
- Eduroam subscriber requirements
 - Continue to maintain full compatibility with existing service
 - Compatibility with existing range of deployments
 - Compatibility with future deployment options/models
 - Integrations with existing identity stores
 - Possible inclusion of social IDs?
 - Stefan: The above is something that OpenRoaming could do. Both a benefit and a danger!
 - Considerations around MDM for managing user & institutional needs
 - Sara: Would like to circle back with this committee in November about OpenRoaming and potential opportunities/impacts on the service.
- Deployment models
 - Current standard is locally installed and managed
 - Could be simplified by providing standard sets of service elements (e.g. containerized RADIUS)
 - Potential future state:
 - Flavors of Docker
 - Install with Northbound Configuration
 - Install with full Configuration
 - Self managed cloud service
 - Hosted cloud service
- Next Steps
 - October - Community Requirements Gathering
 - Review with eAC (today)
 - Service survey
 - Blog post
 - Focus groups
 - Summary paper
 - November
 - CAMP sessions
 - Review with eAC
 - December
 - Complete the final requirements for a new infrastructure and deployment model
- Discussion, questions
 - Kim - A lot to take in after having so much attention on BPG
 - Jeremy - Does this proposed new model have the same security requirements and benefits as before?
 - Sara: Yes, and we're going to seek input from I2 security SMEs. Will include their consideration in future state items as well.

- Rob: To Miro & Stefan's point re: looking at impact of different technologies could lead to adjustments around requirements
 - Sara: Agree. Also consider that this community can generate new technologies to address needs/gaps
 - Stefan: There have been efforts in other countries along these lines. Some work, some didn't. We can look to those efforts as we consider these requirements
 - Rob: Consider that as we look at the possibility of needing to find solutions other than RADIUS we could end up raising barriers for adoption from smaller institutions
 - Kim: Should we be reflecting these requirements in the Best Practices Guide?
 - Rob: Also think about impacts of cloud vs local on future
 - Jeff: Thinking about CRO candidates
 - BOCES (Boards of Cooperative Educational Services) or regional service center that provide support to multiple schools/districts.
 - Could be something analogous for libraries
 - Ann: We'd love to hear more from UETN about the above, given your experience with statewide K12 deployments! Note to Sara/Mike - follow up with Jeff E and UETN
 - Kim: Please continue to reach out to this group if there are additional ways we can help.
 - Jeff: One other community to consider is technical colleges. In Utah we only saw them getting involved once K12 began to come aboard. Lots of shared students & curriculum in those two spaces.
- Best Practices Guide (Rob & Kim, Working Group members)
 - https://docs.google.com/document/d/1urZpoOnGwfSHVeeUh6F-0AlOhzpnrmBACm_LeXCJMw/edit#heading=h.o1olq8uhuwpe
 - Regional/state review complete
 - Next steps
 - Committee votes to complete draft and move to community feedback (today)
 - Consent
 - Everybody
 - Objections
 - Nobody
 - Community comment period (Jessica to assist)
 - Jessica to work with Rob, Kim, and Mike to move community review forward
 - Create wiki page for review of guide, document repository metadata
 - Announce review period
 - Close comment period, collect feedback
 - Consider feedback, add or adjust guide if needed
 - Notify CACTI of completion of community comment

- (link to consensus process)
- Present to CACTI
 - Nic, as the flywheel for CACTI, recommends that the co-chairs of the eAC send the approval and request for formal approval to CACTI Chair and Vice Chair after the community feedback is complete.
- Ann: Question of impact on best practices guide on eduroam training?
 - Rob: Current approach is to include material from BPG into training modules. As guide is reviewed and updated we'll update training material where needed.
- Jessica: Consultation for Baseline ends on 10/19. Something to consider for this process.
- Next meeting, Thursday October 29th 1pm-2:30pm ET
- AOB?
 - None

Thursday, September 3rd, 1pm ET

Attendees:

Rob Gorrell (UNCG)
 Andrew Buker (NU)
 Stefan Winter (RESTENA)
 Jeremy Livingston (Edge)
 Kim Owen (NDSU)
 Neil Johnson (UIOWA)
 Miro Milinovic (SRCE)
 Tim Cappalli (Microsoft)
 Jeff Egly (UETN)
 Theresa Semmens (NSHE)

With:

Ann West
 Mike Zawacki
 Jessica Fink
 Kevin Morooney
 Romy Bolton

Regrets:

Nick Roy

Agenda

- **Intellectual Property Reminder** - All Internet2 activities are governed by the [Internet2 Intellectual Property Framework](#)
- **Public Content Notice** - eAC minutes are public documents. Please let the eAC and note taker know if you plan to discuss something of a sensitive nature.
- Agenda bash
 - Bashed!
- Best Practices Guide (Rob & Kim, Working Group members)
 - https://docs.google.com/document/d/1urZpoOnGwfSHVeeUh6F-0AI0hzpnrmBACm_LeXCJMw/edit#heading=h.o1olq8uhuwpe
 - Added items around infrastructure and support based on feedback from this group
 - Stefan: Mainly reviewed commented section, added feedback and input. Looking good overall
 - Using comment function to solicit thoughts on individual sections
 - Addressing questions from working group - looking for feedback from this group
 - Section 1: Using eduroam as main SSID.
 - Wanted to capture situations where this might not be feasible/best
 - Section 2: Managing access levels for visitors vs. eduroamers vs. staff/students using eduroam
 - Want to promote openness and provide common experience
 - Section 3: K12 considerations
 - Heavily informed by UETN's experience
 - Includes discussion on content filtering, increase emphasis on device based use rather than user based
 - Section 4: Privacy
 - Recommendation toward EAP-TLS
 - Section 5: Infrastructure Tuning (new section)
 - Intended to call out "Golden Rules" of eduroam (test before roaming, contact your home institution first if there are issues)
 - Section 6: Support
 - Performance tuning - what have you done at your institution that might be useful or should be shared
 - Kim: Also note section at end - "parking lot". As we deliberate feel free to use that.
 - Stefan, Miro: Re "GEANT eduroam" we should refer other NROs generically as "global eduroam". Encourage thinking of eduroam as a global service rather than specific countries/regions.

- Stefan: GDPR and other national/international privacy policies come into play when roaming outside home country but should be referred to generically.
 - Rob: Possibly move up to the privacy section, refer to it as “global compliance”
 - Neil: Summary of policies here - could be useful
<https://www.privacypolicies.com/blog/privacy-law-by-country/>
 - Stefan: Could be best to recommend doing releasing/exposing bare minimum of information to stay compliant across multiple international contexts
 - Neil: Should Internet2 run language around privacy past its internal counsel?
 - Ann: We could. Might be mostly to make sure what eAC is proposing is in line with Internet2’s existing policy
 - Neil: Maybe also “refer to your agreement” statement. Provides flexibility to make changes to agreement, keeps language lighter and less legal
- Review of introduction: Tuning of language, more inclusion of segments outside of K12?
- Next steps for sharing externally?
 - Ann: Great work on this. Will provide valuable guidance for community
 - Proposal: Once eAC decides guide is “good enough” we do a period of community review and comment (include CACTI). Committee could then adjust, vote on finalization
 - Pass on to CACTI once vote is complete and approved
 - Jessica Fink will assist in setting up community review/comment process
 - Jeff: Only concern I’d have would be areas where the guide addresses issues/practices that are unique to the US, esp K12. Thoughts?
 - Stefan: Makes sense to be a US document. International community can read with that in mind
 - Miro: I dislike the notion of “flavors” of eduroam. There will always be small variations from country to country but want to ensure that the service continues to be consistent globally.
 - Stefan: User experience will vary slightly globally. There is a statement to that effect in the guide, which would cover K12 differences. Maybe add some language recommending making that clear to users
 - Tim: Also want to be clear that filtering is part of the “user experience”
 - Miro: Agree - we want to keep the experience of eduroam as consistent as possible. Acknowledge that filtering may happen. Can also happen at a national level depending on NRO
 - Tim: Agree. Could put a statement that local laws apply.

- Kim: Thinking about museums, libraries, colleges - those aren't explicitly mentioned. Is there a need to do so?
 - Rob: Thinking back to point about "local laws". Can apply when crossing boundaries from higher ed to K12 as well as crossing international borders.
 - Tim: Wonder if there's some language from industry we could use as a template for that
 - Stefan: Could also look at commercial federations for language.
 - Tim: I'll look for something we might be able to use.
- Ann could make some final edits, give eAC deadline to respond before voting. Could use "silence is assent" approach.
 - Jessica: Could use a form to vote or handle it via email. Either works.
 - Rob: I think we should look at doing revisions before this group meets again.
 - Kim: So get approval at next meeting, share with CACTI, then vote and present to CACTI, then share out for consultation
 - Jessica: Happy to lead process of setting up consultation.
 - Ann: We also have a virtual CAMP coming up. This guide could be basis for a presentation. It would be well received. Information for session and proposals.
 - CAMP/ACAMP: Call for Proposals:
<https://www.incommon.org/academy/camp-meetings/camp-call-for-participation/>
 - Info page with registration link:
[https://www.incommon.org/academy/camp-meetings/2020-virtual-camp-and-advance-camp/Trust & Identity](https://www.incommon.org/academy/camp-meetings/2020-virtual-camp-and-advance-camp/Trust%20&%20Identity)
 - Consultations:
<https://spaces.at.internet2.edu/display/TL/Trust+and+Identity+Consultations>
 - Kim - On the last BPG meeting, we talked about the fact that Mike is scheduled for a CAP meeting on September 17
 - Ann: Consultation period is usually 4-6 weeks so that will include many of the above conferences/webinars. Not CAMP?
 - Jessica: Could be extended as well.
 - Ann: Also consider development of training for community. Could include material from this guide in that training
 - Rob: We'll include material or concepts from this guide in the training but there isn't a strong dependency/linkage between the two. Can be developed in parallel
- Kim: Next steps then?
 - Ann: Make changes to guide? Then run past committee?
 - Rob: We can take changes back to working group and then share out to the committee for voting and sharing with CACTI
 - Ann: Should add a cover page?

- Jessica: That, and will eventually have wiki page, some metadata for document repo.
 - Decision: Working group will work through edits/feedback suggested here and then email this group to read through
- Next meeting, Thursday October 1st 1pm-2:30pm ET
- AOB?
 - None put forward