InCommon®
Forward together.

Crea... ...20 years

I will continue to help build InCommon

20TH BIRTHDAY
InCommon® 2024

2024 YEAR IN REVIEW

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ABOUT INCOMMON

InCommon is a community that provides integrated service and software solutions to address identity and access management (IAM), single sign-on, access to the cloud and local services, and seamless global collaboration for students, faculty, staff, and researchers.

1000+ InCommon participating organizations. These are your people. They share your experience and challenges in making access to services easier.

Members of our community benefit from specialized resources tailored to help facilitate their entire organizations' access to:

- **IAM Solutions and Toolkits:** Secure, scalable tools like eduroam, the Trusted Access Platform, and certificate services streamline identity management and support seamless collaboration.
- **Clear Guidance and Support:** Expert strategies, training, and compliance resources help institutions confidently tackle evolving IAM challenges.
- **An Innovation Hub for Collaboration:** Community-driven partnerships and initiatives foster creative solutions, advancing secure access and digital innovation across research and education.

Organized around these three pillars, this Year in Review showcases the progress, impact, and collaborative efforts that define InCommon's leadership in advancing secure and innovative IAM solutions for research and education.

20+
Years of helping organizations futurize their access management strategies

3,000+
Volunteer hours contributed annually to drive the work

3,400+
Eduroam hotspots across the US

I will continue to help build InCommon®

LETTER FROM LEADERSHIP

Learning from the past while looking to the future

Dear InCommon Community,

Thanks for taking a peek at what the InCommon community was up to in 2024. The year was memorable for many reasons but was prominently impacted by celebrating our past while simultaneously and boldly stepping into a new future.

We've been thoughtful about how to capture the year and have (also boldly) changed how we share our successes. We hope this new format makes it easier to keep track of what's happened and will be happening in the coming year.

Pulling this "report" together is a fascinating exercise. Reflection often arrives unannounced, a warm visitor with the promise of clarity, perspective. In creating this document, dozens of thoughtful, caring people have no choice but to submit to reflection almost by force. Regardless of the very different arrival, the reflection is nonetheless warm.

What strikes us the most is how, despite all of the change initiated by taking our strategic planning seriously, the engine of accomplishment remains community, the connections between people, organizations, ideas, and passion.

With the new projects and activity areas we've discovered more horsepower in our engine of accomplishment. The InCommon community has always cared deeply about the work to be done and now we're emphasizing caring richly about one another. Advancing ideas and capabilities have always been a target, now we add as a target the helping of one another with greater intention and increased energy.

We hope you enjoy leafing through what this community has accomplished. If it inspires ideas about our collective future, we invite you to join us in any one of the number of ways you can connect, contribute.

Sincerely,

Kevin Morooney, Vice President of Trust and Identity and NET+, Internet2

Ann West, Associate Vice President for Trust and Identity, Internet2

Steven Zoppi, Associate Vice President, Services Integration and Architecture, Internet2

"Great opportunities to help others seldom come, but small ones surround us every day."

– Sally Koch

Attendees from TechEx 2024 write about and draw their favorite moments from the conference.

2024 AT A GLANCE

Q1

JANUARY

Jan 17 – IAM Online: Multilateral Federation Guidance from Microsoft and Its Potential Impact on the R&E Community

Jan 17 – New InCommon Steering and Advisory Committees for 2024

FEBRUARY

February 12 – InCommon Catalysts: Insights about The Year Ahead in IAM

February 12 - 16 – Shibboleth Software Training

MARCH

March 4 - 7 – Internet2 Community Exchange 2024

Q2

APRIL

April 17 – University of Texas at Austin Builds Lasting Relationships During InCommon's Collaboration Success Program

April 25 – University of Washington Gets Upgraded During InCommon's Collaboration Success Program

MAY

May 1-3 – 2024 Cybersecurity and Privacy Professionals Conference (CPPC)

May 7 – InCommon's 20th birthday

JUNE

June 3-7 – InCommon BaseCamp

Q3

JULY

July 11 – InCommon Catalyst and UPenn Tackle Complex Identity Matching

AUGUST

Aug 14 – CACTI and next-gen credentials

Aug 19 – Kevin Morooney on InCommon Futures2

Aug 23 – Implementation at an Intersection: InCommon Catalyst West Arete and Penn State Develop Open Access Workflow

SEPTEMBER

Sept 17 – Certificate Discovery, Management, and Renewal

Sept 18 – Passkeys: What You Should Know and UMBC's Implementation Journey

Q4

OCTOBER

Oct 10 – Minnesota and Michigan Nonprofits Collaborate with Internet2 to Advance Digital Inclusion with eduroam

NOVEMBER

Nov 18-22 – Third Annual Cybersecurity Cooperation Exercise

Nov 20 – One Federation, Many Agencies: How InCommon Simplifies Federal Compliance Requirements

DECEMBER

Dec 6 – InCommon and NJEdge: Strengthening Higher Education Collaboration Together

Dec 6 – Expanding Academic Horizons: How Federated Identity Can Transform Cross-Institutional Learning

Dec 9-13 – TechEx, Boston, MA

Dec 12 – Celebration event of Incommon's 20th year!

TOOLS THAT POWER ACCESS & TRUST

An overview of the technologies advancing access and identity management in the InCommon community. *Pillar: IAM Solutions and Toolkits*

SPOTLIGHTS

Advancing Standards in 2024

InCommon's 20-Year Milestone: Connecting and Supporting Researchers with Rachana Ananthakrishnan

InCommon Federation Service Enhancements: Metadata Query Service and Federated Access to Federation Manager

Minnesota and Michigan Nonprofits Collaborate with Internet2 to Advance Digital Inclusion with eduroam

BY THE NUMBERS

InCommon Federation: Key Accomplishments & Metrics

785
Participant organizations

6318
Service providers

609
Identity providers

"eduroam was started to enable roaming access for researchers. It has since evolved to serve as a standard configuration approach for wireless access in education and research (as) network trust and privacy have become paramount."

– Jean Chorazyczewski, InCommon Academy Director

National Institutes of Health (NIH)

InCommon continued supporting NIH's multi-factor authentication and identity-proofing requirements for selected services. This included publishing TI.177.1, a detailed analysis showing how the REFEDS Assurance Framework aligns with U.S. Federal standards (NIST), helping NIH justify accepting this form of identity proofing.

National Science Foundation (NSF)

InCommon continued work to help NSF implement and communicate about a new multi-factor authentication requirement for research.gov.

Federated Identity Management for Research (FIM4R)

The InCommon Federation provides the U.S. international infrastructure for secure single sign-on access to cloud and local services and global collaboration tools for the higher education and research community. The Federation connects millions of users and hundreds of educational institutions, research organizations, and commercial resource providers in the U.S. with even more millions of users and thousands of organizations internationally.

There were 21 FM code releases in 2024. In July 2024, Federation Manager, InCommon's metadata registration tool, turned on federated access for Site Admins, bringing Federation Manager's migration to 100% federated access. Additionally, all InCommon-registered services were set to transition to the new InCommon MDQ Service, or Metadata Service, by January 2025.

InCommon also continued its support for the FIM4R community (https://fim4r.org) by helping to plan and underwrite their meeting at TechEX 24.

Shibboleth

2024 Milestones for SAML MCM:

- Adopted a multi-year project roadmap, with forward-looking budget planning to support long-term development.
- Released native support for WebAuthn, passwordless login, and passkeys, featuring the world's most advanced policy engine for managing token usage.
- Introduced several enhancements to OpenID and OAuth capabilities, including support for proof-of-possession tokens and logout functionality.
- Began the redesign and replacement of the current SP codebase, with major development efforts planned for 2025 and 2026.
- Officially retired the V4 Identity Provider and Java 11-based code branch for streamlined code maintenance and support.

Security Assertion Markup Language - Metadata Configuration Manager (SAML MCM)

Formerly known as the Shibboleth IdP User Interface, the SAML MCM was originally designed and developed to provide a graphical user interface (GUI) to simplify integrating a new Service Provider (SP, also called a relying party) to your existing Shibboleth Identity Provider (IDP). By providing the GUI functionality, SAML MCM also enables less experienced administrative staff to create new SPs as the GUI walks the users through the SP configuration and the application then creates the SAML metadata for the SP.

2024 Milestones for SAML MCM:

- **Demos:** Began providing a demo for SAML MCM during Shibboleth trainings.
- **Documentation Upgrade:** Completed a full review of the SAML MCM Documentation including the User Guide and Deployment Instructions.
- **Adopters:** As a co-investor and supporter of SAML MCM, Unicon has been working with a number of universities to complete adoption for SAML MCM as well as promote adoption for newly interested universities.

The InCommon Trusted Access Platform is an identity and access management suite of software designed to integrate with existing systems. The software is packaged to simplify installation and configuration so it's easy to get started.

Grouper

2024 Milestones (Attribute Based Access Control):

- **Dynamic Group Creation:** Users can now define groups based on specific data attributes in real time without relying on manual loader jobs.
- **Real-Time Data Feeds:** Attribute-based data flows to Grouper in real time, reducing the need for hourly syncs and improving efficiency.
- **Advanced Security & Delegation:** Column-level security policies let power users manage their own groups securely.
- **Dynamic Data Dictionary:** Users can easily find available attributes, understand values, and configure groups with guided insights.
- **Efficient Troubleshooting & Documentation:** Real-time analysis tools simplify troubleshooting, and a volunteer-driven documentation effort has improved user support.

COmanage

2024 Milestones:

- **Registry v5.0.0 Release:** The first stable release of Registry v5.0.0 launched in December 2024, featuring a modernized code structure, an improved user interface, and enhanced functionality for early adopters.
- **Milestone Releases (MRs):** 13 milestone releases built the foundation for Registry v5.0.0, including core person models, external identities, groups, global search, provisioning, and plugins.
- **Registry v4 Updates:** Continued improvements for Registry v4 included three maintenance releases, an accessibility audit, and a new ORCID API integration.
- **Expanded User Resources:** New documentation includes Recipes for feature combinations, Case Studies showcasing real-world use, and a comprehensive Registry 5.0.0 Technical Manual.
- **Collaborative Funding:** Registry v5.0.0 development was supported by CILogon, the University of Illinois, Internet2, Southern Methodist University, SUNET, and the SCG Collaboration Group.

midPoint

2024 Milestones:

- **User-Friendly Configuration:** Enhanced user interface and streamlined wizards simplify complex setups for both novice and expert IAM professionals.

- **Expanded Training Programs:** Redesigned training now supports both beginner and advanced users, with a new course focused on academic IAM scenarios.

- **Safe Deployment with Simulation:** The new simulation feature allows testing configuration changes on production data without risk, ensuring smooth, stress-free rollouts.

- **Simplified Deployment:** New midPoint containers, academic configuration presets, and improved documentation make integration easier with common systems like LDAP, Shibboleth, and Grouper.

- **Enhanced Connectors:** The new Grouper connector, co-developed with Evolveum, and the SCIM2 connector from Provision IAM improve provisioning speed, throughput, and interoperability.

InCommon Certificate Service: Key Accomplishments & Metrics

The InCommon Certificate Service provides unlimited certificates (SSL, EV, client, and others) for one annual fee. The work is driven, in part, by a biannual survey of Certificate Service subscribers. As of the end of 2024, there were approximately 250,000 active certificates across 600 organizations.

Engagement with Subscribers

This year we sharpened our focus on our engagement with InCommon Certificate Service subscribers. We continue to distribute a monthly communication called Latest from the List, enabling us to leverage the active exchanges taking place between the 1,800 subscribers to the InCommon Certificate Service discussion list.

Webinars

Redesigning the InCommon Certificate Service, Community Survey Results & Use Cases | April 2

As the InCommon Certificate Service Team continued conversations to explore additional features, members of the InCommon Certificate Service Redesign Group offered their insights. Participants learned more and heard from some members of the group during the webinar sessions, with a notable increase in first-time participants engaging in peer learning and solution sharing at this event.

Certificate Service Webinar: Certificate Discovery, Management, and Renewal | September 17, 2024

Attendees learned how colleagues manage and update hundreds or thousands of certificates on a regular basis. They learned about connecting Certificate Manager (SCM) to servers and services to automate certificate renewal, as well as using ACME to build a hub-and-spoke framework for scaling certificate management.

EDUROAM: KEY ACCOMPLISHMENTS & METRICS

Internet2 operates the U.S. node for the global eduroam roaming Wi-Fi network for R&E. eduroam is available in more than 100 countries, including more than 1,000 universities and non-profits in the U.S. Individuals use their campus credentials to log in to the service. In 2024 the U.S. eduroam community grew the number of service locations in the U.S. to more than 3,400.

Seven states deploy eduroam to their K12, museum, and library communities, and have organizations officially designated as statewide eduroam Support Organization. Those states include:

- Utah (Utah Telehealth and Education Network)
- Nebraska (Network Nebraska)
- Arizona (The Sun Corridor Network)
- Oregon (Link Oregon)
- Nevada (Nevada System of Higher Education)
- Connecticut (Connecticut Education Network)
- Washington (Washington K20 Network)

Two eduroam Support Organizations were on-ramping their states in 2024 for a limited pilot, and will begin full participation beginning in 2025:

- Michigan (Merit Network)
- Minnesota (The Learning Network of Minnesota)

In 2024, we saw an increase in the number of devices being deployed, with eduroam Support Organizations driving the largest increases in traffic. Improvements this past year focused on scaling network capabilities through community consultations, infrastructure improvements, a scalability testbed, and enhancing capabilities related to logging and reporting.

100+
Countries where eduroam is available

1,000+
Universities and non-profits in the U.S where eduroam is available

STRATEGIES, TRAINING & SUPPORT FOR IAM LEADERS

Resources and best practices to help institutions manage IAM more effectively. *Pillar: Clear Guidance and Support*

SPOTLIGHTS

[InCommon and NJEdge: Strengthening Higher Education Collaboration Together](#)

[Let's Check Our Credentials](#)

[CACTI Working Group Identifies Four Key Characteristics of a Next-Generation Credential Ecosystem (and 30+ Use Cases)](#)

"2024 has been a pivotal year for InCommon, fueled by our Futures2 Strategy pushing new explorations and investments across the community."

– Ann West, Executive Director, InCommon and AVP, Trust & Identity, Internet2

InCommon Steering Committee

Chair: Chris Misra, University of Massachusetts Amherst
Vice-Chair: Kim Milford, University of Illinois Urbana-Champaign
Secretary: Dave Robinson, Baylor School

Committee roster:
- Marc Wallman, North Dakota State University
- Ashrab Ahmed, National Institutes of Health
- Brad Christ, Eastern Washington University
- Bernie Gulachek, University of Minnesota
- Kristi Holmes, Northwestern University
- Dedra Chamberlin, Cirrus Identity
- Jim Stewart, UETN
- Ann West, Internet2
- David Bantz, University of Alaska – Liaison from CTAB
- Brett Bieber, University of Nebraska – Liaison from the eduroam Advisory Committee
- Margaret Cullen, Painless Security – Liaison from CACTI
- Keith Wessel, University of Illinois at Urbana-Champaign — Liaison from TAC
- Kevin Morooney, Internet2 – Advisor
- Steve Zoppi, Internet2 – Advisor
- Klaas Wierenga, GÉANT – Advisor
- Elaine Alejo, Internet2 – Flywheel
- Rachana Ananthakrishnan, University of Chicago

Key topics discussed or activities completed in 2024 included:

- Futures2 project
- Certificate fee increase approval
- Input on Theory of Change and Performance Measurement Framework for InCommon
- Worked with Second muse to build a roadmap towards achieving our strategic objectives

Hours of effort group members collectively contributed in 2024: 216

InCommon Futures2:
Key Accomplishments & Metrics

Areas of interest: Sketcher, IDEA, website, and federal agencies

In 2024, InCommon released Promoting Digital Collaboration: Futures2 Strategy, which emerged in response to critical changes in the identity and access management (IAM) landscape.

Through extensive community consultation, InCommon recognized the need to evolve beyond its traditional role to become a trusted advisor for IAM best practices in research and education. The strategy focuses on several key initiatives for 2025, including enhanced community communications, expanded knowledge sharing through InCommon Academy, improved data management systems, and support for federal compliance and secure course sharing. The development of initial focus areas—including a teaching and learning toolkit, federal compliance standards, and IAM architecture sharing—was guided by careful data gathering and community collaboration. Throughout the text, there's an emphasis on InCommon's growing recognition of its infrastructure's broader potential value beyond its traditional applications, with a vision extending through 2028 and beyond.

In 2024 foundational work began through several core projects designed to be the scaffolding for the new direction outlined in Futures2. Specifically, work was initiated through the following projects:

1. **InCommon Branding and Messaging** - A review of the positioning, core audiences, and messaging was conducted with an external agency to determine a new direction and focus for InCommon. This effort will be introduced to the broader community throughout 2025 culminating in a new website coming in fall 2025!

2. **InCommon Website** - Based on the work in the InCommon Branding and Messaging project, in late 2024, InCommon contracted with an external agency to create a new website in line with the outcomes from the extensive Branding and Messaging effort.

3. **Course sharing and Single Sign on with IDEA** - InCommon, in collaboration with IDEA and SecondMuse, completed a deep study of campuses currently participating in course sharing through IDEA to understand pain points and opportunities to facilitate and broaden interest in single sign both for courses sharing and access to other campus resources. The final report is complete and will be available soon. IAM Online in April will offer a first opportunity to dig into the details.

4. **Refreshed Architecture Diagramming** - Those of you at Tech EX in 2024 got an early unveiling of a new tool known as Sketcher to replace the much loved (and rather dated) reference diagrams. Feedback has been overwhelmingly positive and InCommon plans to release V1 at Community Exchange in April;

5. **Service Provider Readiness Testing** - Another exciting innovation initially revealed at Technology Exchange in Boston is a new testing application to allow Service Providers to generate login transactions to verify their systems' integrations with InCommon IdPs. Work continues on the new application which is scoped to federal agencies. Look for this at Community Exchange!

Stay tuned as InCommon brings many of these efforts to fruition and launches new and exciting Futures2 aligned work in 2025!

Community Architecture Committee for Trust and Identity (CACTI)

In 2024, the Internet2 Community Architecture Committee for Trust and Identity (CACTI) continued leading efforts to explore next-generation credentials—a new, user-centric approach to digital identity that empowers individuals to manage and share their credentials securely.

The Next-Generation Credentials Use Cases Working Group, chartered by CACTI, identified 33 use cases spanning authentication, authorization, and identity verification in research and education. The group also outlined four key characteristics essential for a next-generation credential ecosystem:

- **Interoperability** – Credentials must function across institutions, sectors, and globally.
- **Trust Model** – A new framework is needed to ensure secure and privacy-preserving transactions.
- **Revocability** – Credentials should be able to expire or be reissued when needed.
- **User Experience** – Users must easily understand what they are sharing, with whom, and why.

Building on these findings, CACTI chartered a new working group focused on Trust Frameworks for Next-Generation Credentials, aiming to define technical and policy requirements for real-world implementation. This work aligns with global efforts, including collaborations with GÉANT and eduGAIN, and reflects a shift toward wallet-based identity solutions that put users in control.

InCommon Academy: Key Accomplishments & Metrics

InCommon Academy empowers research & education IT professionals through dynamic, interconnected learning and engagement experiences.

Our cornerstone programs build foundational IAM knowledge and community connections (InCommon BaseCAMP), facilitate peer learning and solution sharing (CAMP Week), advance infrastructure operations through technical skill development (InCommon Trusted Access Platform), accelerate IAM planning through collaborative learning (Accelerator Programs/CSP), and deliver thought leadership and insights via community-driven webinars (IAM Online).

Together, these programs create a continuous learning journey that strengthens both individual expertise and community-wide IAM capabilities.
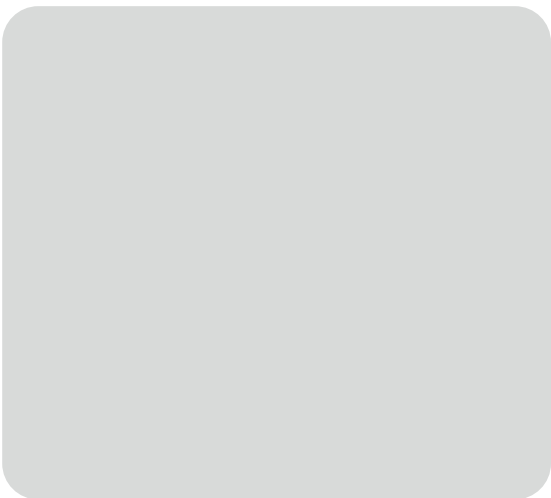
BY THE NUMBERS

201
InCommon BaseCAMPers exploring IAM fundamentals

149
Learners mastering Trusted Access Platform software across 8 training courses

1,162
Attendees engaged through IAM Online webinar series

47
CSP and InCommon BaseCAMP alumni connected at the "What's Cooking" reunion lunch

38
Participants from 8 organizations taking part in the InCommon | NJ Edge Federation program

6
New Jersey regional institutions building Federation readiness

107
Alumni and I2 staff collaborating in CSP Meet Ups, representing 23 distinct organizations

COMMUNITY INNOVATION & COLLABORATION

Projects and partnerships from across the community that shaped IAM work in 2024. *Pillar: Innovation Hub for Collaboration*

SPOTLIGHTS

Expanding Academic Horizons: How Federated Identity Can Transform Cross-Institutional Learning

One Federation, Many Agencies: How InCommon Simplifies Federal Compliance Requirements

Implementation at an Intersection: InCommon Catalyst West Arete and Penn State Develop Open Access Workflow

> **"When we started as tiny piglets at the turn of the century, we never saw the wings that are now lifting InCommon and our community."**
>
> – Kenneth "Ken" Klingenstein, Internet2 Evangelist for Trust and Identity in When Pigs Fly: On Impossible Ambitions, Reaching New Heights, and Celebrating InCommon's 20th Birthday

InCommon BaseCAMP (June 3-7, 2024)

The 2024 InCommon BaseCAMP grew again this year, drawing 201 attendees from 79 distinct organizations. Attendees were immersed in 23 hours of IAM programming through 28 sessions led by 44 speakers, earning a 4 out of 5-star event rating.

Committee Members:

- Dameion Brown - Jackson State University
- Grady Bailey - University of Texas at Austin
- Jessica Fink - Cirrus Identity
- Richard Frovarp - North Dakota State
- Stacey Poertner - Virginia Polytechnic Institute and State University
- Tom Jordan - University of Wisconsin – Madison
- Yuko Kuo - George Mason University

CAMP Week (December 9-12, 2024)

CAMP Week's IAM track showcased forward-looking sessions on federation evolution, authentication modernization, identity governance, research and education solutions, security and trust frameworks, and open-source software innovations. The week culminated in 1.5 days of dynamic, community-generated ACAMP sessions, with a notable increase in first-time participants engaging in peer learning and solution sharing at this event.

Committee Members:

- Chris Phillips - CANARIE
- Ethan Kromhout - University of North Carolina at Chapel Hill
- Grady Bailey - University of Texas at Austin
- Joanne Boomer - University of Missouri
- Jim VanLandeghem - Moran Technology
- Kyle Lewis - Research Data & Communication Technologies
- Jon Miner - University of Wisconsin - Madison
- Marina Adomeit - SUNET
- Mike Mays - University of Delaware

Trusted Access Platform Software Training

In 2024, InCommon Academy delivered 8 comprehensive training sessions for the Trusted Access Platform software components, equipping 149 participants with hands-on technical skills through immersive exercises and real-world scenarios. Looking ahead, the Academy began expanding its training portfolio, with new Grouper software courses in development for 2025 to meet growing community demand.

IAM Online

IAM Online grew significantly in 2024, with 1,162 participants attending our 10 webinars covering crucial topics from zero trust architecture and multilateral federation to passkeys implementation and identity-based security innovations. The series continues to serve as a vital platform for thought leadership, emerging trends, and practical implementation expertise from across the IAM community. See IAM Online Rewind for the topics and speakers for the year.

Convenings

Collaboration Success Program Meet-ups – Fostering Continued Collaborative Learning

April:
- Grouper Architecture in Hybrid Identity Environments
- Moving to Containerized IdP with Shib 5.0

July:
- Grouper Implementations & Challenges
- Future IAM Trends & Technologies

October:
- COmanage Implementation Journey
- SCIM Usage in Grouper & midPoint

Community Impact:
- Strong attendance across all sessions (25+ participants per meetup)
- Rich peer learning through alumni-led technical deep dives
- Emerging themes informing future Academy program design
- Active engagement in shaping the community's future through open discussions

What's Cooking Lunch @ TechEx: Community Engagement

InCommon Academy hosted a vibrant lunch gathering designed to be more than just a typical meet-and-greet. The event brought together 47 CSP and InCommon BaseCAMP alumni to swap stories from the trenches, share insights, and help shape future programming. Through a mix of casual discussions and interactive activities, attendees connected with fellow practitioners while learning about upcoming Academy initiatives and accelerator programs.

GOVERNANCE AND ADVISORY GROUPS

"**The InCommon Steering Committee, all of the technical advisory committees, and InCommon staff have moved forward with a sense of purpose and urgency that takes my breath away. There was no pause to figure out what is needed, instead confidence that we have what we need to get started and passion for the co-created future vision.**"

– Kevin Morooney, Vice President of Trust & Identity and NET+, Internet2

ADVISORY COMMITTEES

Through its advisory committees and working groups, InCommon convenes the community to develop requirements, specifications, and program activities. Collectively, engaged participants contributed 3100+ hours to help move the IAM community forward.

See the full list of committees and members: incommon.org/community/leadership

Community Architecture Committee for Trust and Identity

Chair: Margaret Cullen, Painless Security
Vice-Chair: Kevin Hickey, University of Detroit Mercy

Committee roster:
- John Bradley, Independent
- Judith Bush, OCLC
- Robert Carter, Duke University
- Gabor Eszes, University of Virginia
- Tom Jordan, University of Wisconsin – Madison
- Les LaCroix, Carleton College
- Kevin Mackie, Oregon Health & Science University
- Dmitri Zagidulin, MIT
- Derek Owens, University of Notre Dame
- Christopher Phillips, Independent
- Gareth Wood, University of Otago (NZ)
- Steve Zoppi, Internet2 – Advisor
- Nicole Roy, Internet2 – Flywheel

Key topics discussed or activities completed in 2024 included:
- Post-quantum cryptographic security of InCommon services and components
- Trust services for verifiable credentials and OpenID
- eduroam routing and security

Hours of effort group members collectively contributed in 2024: 288

SIRTFI Exercise Working Group

Plans progressed for the SIRTFI Exercise Planning Working Group in 2024, aiming to improve security incident response within the federation.

Assured Access Working Group v2

CTAB charted the Assured Access Working Group v2 to analyze the REFEDS Assurance Framework (RAF) 2.0 to develop deployment guidelines and best practices for InCommon participants.

InCommon Community Trust and Assurance Board

Chair: David Bantz, University of Alaska
Vice-Chair: Jon Miner, University of Wisconsin-Madison

Committee roster:
- Warren Anderson, Laser Interferometer Gravitational-Wave Observatory
- Pål Axelsson, SUNET
- Matthew Eisenberg, National Institutes of Health
- Richard Frovarp, North Dakota State University
- Michael Grady, Unicon
- Scott Green, Eastern Washington University
- Christopher Keith, Brown University
- Kyle Lewis, Research Data and Communications Technologies
- Ryan McDaniel, University of Alaska Anchorage
- Rick Wagner, University of California San Diego
- Kathy E. Wright, Clemson University – Liaison from TAC
- Gabor Eszes, University of Virginia – Liaison from CACTI
- Albert Wu, Internet2 – Flywheel
- Tom Barton, Internet2 – Ex-Officio

In 2024, the Community Trust Assurance Board (CTAB) focused on several key initiatives to enhance trust and assurance within the InCommon Federation, which readers can view in the 2024 CTAB Work Plan: https://spaces.at.internet2.edu/display/ctab/ctab-2024-work-plan

InCommon Interoperability Expectations Planning Working Group:

The InCommon Interoperability Expectations Planning Working Group was formed to establish a long-term process for managing the creation, evolution, and modification of interoperability expectations. Its goal is to ensure a sustainable framework for maintaining trust and consistency across the federation.

https://spaces.at.internet2.edu/display/ctab/iiepwg-charter

Hours of effort group members collectively contributed in 2024: 540+

InCommon Technical Advisory Committee

Chair: Keith Wessel, University of Illinois Urbana-Champaign
Vice-Chair: Joanne Boomer, University of Missouri

Committee roster:
- Jeffrey Crawford, University of California, San Francisco
- Matthew Economou, Independent
- Derek Eiler, University of Nevada System
- Björn Mattsson, Sunet
- Andrew Morgan, Oregon State University
- Steven Premeau, Independent
- Mark Rank, Cirrus Identity
- Jim VanLandeghem, Moran Technology
- Kathy E. Wright, Clemson University
- John Bradley, Independent – Liaison from CACTI
- Judith Bush, OCLC – Liaison from CACTI
- David Bantz, University of Alaska – Liaison from CTAB
- Marina Krenz, REN-ISAC – Subject Matter Expert
- David Walker, Independent – Subject Matter Expert
- Eric Goodman, Independent – Subject Matter Expert
- Grady Bailey, Internet2 – Subject Matter Expert
- Albert Wu, Internet2 – Flywheel

The InCommon Technical Advisory Committee (TAC) in 2024 continued its efforts to improve interoperability and standards adoption among federation participants and refine technical guidance for federation operations.

> **"I volunteered for the InCommon Technical Advisory Committee because of its mission-critical tasks in developing new paradigms in federated identity management. I want to be a part of the committee to assist in this effort and bring this information back to my institution."**
>
> – Kathy E. Wright

Key Highlights:

- Productive Year for TAC: 2024 focused on solidifying past efforts, launching three community working groups, and making significant progress on long-standing projects.
- Federation Readiness Success: The Federation Readiness Working Group, which faced past challenges, made strong progress and will continue into 2025.
- Continued Focus on Future-Proofing: TAC monitored potential browser changes impacting federated authentication and contributed to InCommon's Futures 2 initiative.
- Stronger Collaboration with CTAB: TAC held its first joint face-to-face meeting with CTAB at the Internet2 Tech Exchange, strengthening policy-technology coordination.

Work Items in 2024:

1. Federation Proxies Working Group (TAC24-1):
   - Drafted a report on proxy roles, responsibilities, trust impact, and guidance for operators.
   - Shared findings at CAMP and ACAMP, with positive community feedback.
   - Work continues in 2025.

2. Access Entity Category + SAML2Int Deployment (TAC24-2):
   - Drafted guidance on deploying SAML Subject Identifiers (subject-id & pairwise-id) for identity and service providers.
   - Feedback gathered at TechEx 2024, refining recommendations.
   - Finalizing in 2025.

3. Federation Readiness Check Working Group (TAC24-3):
   - Defined what it means for IdPs and SPs to "work properly."
   - Identified 36 relevant standards and focused on seven key deployer/integrator-centered practices.
   - Developed a federation readiness questionnaire inspired by HECVAT.
   - Explored automated checks for metadata, IdP testing, and the challenges of SP validation.
   - Work continues into 2025.

TAC's 2024 efforts reinforced federation best practices and set the stage for continued progress in 2025.

eduroam–US Advisory Committee

Chair: Brett Bieber, University of Nebraska
Vice-Chair: Jeff Egly, Utah Telehealth and Education Network

Committee roster:
- Kendra Ard, California State University Office of the Chancellor
- Dion Baird, Oregon State University
- John Buysse, University of Notre Dame
- Amel Caldwell, University of Washington
- Mike Dickson, University of Massachusetts Amherst
- Derek Eiler, Nevada System of Higher Education – System Office
- Nadim El-Khoury, Springfield College
- Rob Gorrell, University of North Carolina – Greensboro
- Michael Hacker, University Heights Charter School District
- Saira Hasnain, University of Florida
- Jeremy Livingston, Stevens Institute of Technology
- Tim Cappalli, Microsoft – Subject Matter Expert
- Josh Howlett, Federated Solutions – Subject Matter Expert
- Tom Rixom, SecureW2 – Subject Matter Expert
- Stefan Winter, Restena and Network Security Proliferation UG – Subject Matter Expert
- Mike Zawacki, Internet2 – Flywheel

Key topics discussed or activities completed in 2024 included:
- eduroam Baseline Expectations
- Community requirements for eduroam cloud infrastructure
- eduroam US Mobility Day program committee
- "From the Desk of the eAC" informational articles

Hours of effort group members collectively contributed in 2024: 180

WORKING GROUPS

InCommon midPoint User's Group

Chair: Slavek Licehammer, Evolveum

Key topics discussed or activities completed in 2024 included:
- Optimizing performance
- Using Identity Matching with midPoint
- Collaboration on planning for an upcoming class on academic solutions using midPoint
- Use of SQL and SCIM connectors to provision applications
- Using the new graphical user interface for easier administration
- Improving documentation
- General support for community implementations of midPoint

Hours of effort group members collectively contributed in 2024: 360

InCommon Trusted Access Platform Software Integration Working Group (SIWG)

Chair: Keith Hazelton
Vice-Chair: Ethan Kromhout, UNC Chapel Hill

SIWG is the primary open-membership working group bringing together technical staff from member institutions and Internet2 Trusted Access Platform developers. The primary goal is to share and document good practices in incorporating TAP components into the typical hybrid IAM infrastructures found on campuses.

Key work areas and deliverables in 2024 included:

- **Establish the InCommon IAM Community Contributions Wiki:** A new collaborative space was created to collect community-developed how-tos and tutorials inspired by active discussions on email lists and Slack channels.

- **Documented Common IAM Architecture Patterns:** Input from campuses was synthesized and incorporated into the System Sketcher project, supporting InCommon Futures2.

- **Explored Integration of Commercial IAM Platforms:** The group examined increased adoption of commercial IAM tools, with a focus on integrating InCommon Trusted Access Platform (TAP) components with Microsoft Entra ID (formerly Azure AD). The University of Virginia led a Shibboleth–Entra ID integration project and is contributing their process and deliverables to the community via the Software Integration Working Group (SIWG).

- **Developed ERP Integration Guidance:** Work progressed on providing guidance for integrating ERP systems—specifically Banner—with Grouper and other TAP components. InCommon Catalysts contributed valuable real-world experience to this effort. This work also sparked an ongoing project to refine a base SCIM 2 connector for midPoint, alongside efforts to document SaaS-specific variations in SCIM implementations. The resulting documentation is intended to support SCIM integration projects across a range of technologies.

Hours of effort group members collectively contributed in 2024: 520

Component Architecture Working Group

Chair: Steve Zoppi, Internet2

Key topics discussed or activities completed in 2024 included:
- A key activity during 2024 was to invite and more fully integrate Catalyst partners into the team of Component Architect development leaders (for the InCommon Trusted Access Platform software) to better understand Community challenges and needs when implementing Identity and Access Management at their institutions.

Hours of effort group members collectively contributed in 2024: 400

InCommon PeopleSoft Integration Working Group

This working group was integrated into the Software Integration WG on a monthly basis with an emphasis on integrating many popular Enterprise Resource Planning (ERP) and Campus Solution applications with Identity and Access Management (IAM) using InCommon Trusted Access Platform software components.
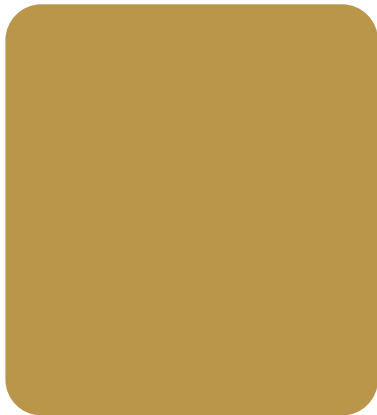
INCOMMON CATALYST PROGRAM

In 2021, Internet2 announced the successful launch of the InCommon Catalyst Program, aimed at supporting higher education institutions, research organizations, and sponsored partners with better security, access to services, and user experience.

As of December 2024, the program consisted of 12 organizations: CILogon, Cirrus Identity, Evolveum, Instrumental Identity, Moran Technology, Omnibond, Provision IAM, RDCT, SCG Collaboration Group, Unicon, Vantage Technology, and West Arete.

Catalyst Areas of Expertise

Catalysts form a wide array of subject area expertise:

- Authentication
- Federation
- IT Services
- Compliance
- Hosted Solutions
- Research Support
- Federal Agency Support
- IAM Consulting
- TAP Software

Community Contributions

InCommon Catalysts are Internet2 industry members knowledgeable about the InCommon Federation and Trusted Access Platform. Individually and collectively, they understand the specific challenges and requirements of R&E and give back in the form of case studies, contributed code, and other services.

InCommon Catalysts also support the community by actively participating in advisory committees and working groups, and they contribute code to open-source projects like InCommon's Trusted Access Platform. In this way, they stay in tune with community needs and also contribute expertise from their respective specializations.

In addition, catalysts actively participate in conferences and training programs hosted by InCommon and Internet2. Last year, the InCommon Catalysts:

- Participated in sessions at InCommon BaseCAMP as well as Internet2's Community Exchange (ComEX), and Technology Exchange (TechEX) conferences.

- Five catalysts also sponsored InCommon BaseCAMP: Cirrus, Omnibond, Provision IAM, Unicon, and West Arete.

- For the first time, five catalysts were supporting sponsors for TechEX and exhibited at the event: Cirrus, Moran Technology, Omnibond, SCG Consulting Group, and Unicon.

- The group also presented for IAM Online
  See The Year Ahead in IAM, the 2024 Edition: Ideas & Insights from InCommon Catalysts – February 2024 (recording) (slides).

As part of our ongoing commitment to providing the community with additional opportunities to benefit from the insights and expertise of InCommon Catalysts, we continued a quarterly Q&A column, Catalyst to Catalyst, that we feature in our e-newsletter InCommon News. Catalyst to Catalyst provides perspectives on key IAM topics for the InCommon community.

The InCommon Catalysts spend many hours assisting members of the community through the InCommon Collaboration Success Program and other initiatives.

Learn more

Catalyst to Catalyst (Winter 2024): Ideas and Insights from InCommon Catalysts

Catalyst to Catalyst (Fall 2024): Ideas and Insights from InCommon Catalysts

Catalyst case studies

Catalysts work with community members to publish case studies that highlight their work finding solutions to difficult IAM challenges in research and higher education. Topics range widely, but here are some highlights:

- Instrumental Identity & University of Pennsylvania's Information Computing & Services Dept
  Complex Identity Matching with a Commercial IAM Product
- West Arete and Penn State University
  Penn State Open Access Workflow

JOIN INCOMMON!

Become part of a trusted IAM community dedicated to secure, collaborative innovation. Learn more: incommon.org/join-incommon

Connect with us on Facebook and LinkedIn.