

Higher Ed Cloud Community

The higher education cloud computing community is an active, thriving, sharing conversation between schools, community partners and individuals. This community focuses on the infrastructure (IaaS) and platform as a service (PaaS) ecosystems. It is built for higher ed, by higher ed. We welcome all to participate with an understanding that the goal is to promote the most secure and efficient use of cloud computing in support of the mission of our institutions. While we welcome the cloud vendors to participate in the debate and sharing of information it is *never* to be used for sales.

As the use of hyper-scale computing at community colleges, colleges and universities grows, so do the questions, challenges and lessons learned by each of us. Efforts to share those challenges and lessons and to ask those questions are also growing. This site attempts to bring together those conversations and the resources they produce in the hope that you will engage and encourage your colleagues to engage. Together we will raise our institutions' collective CloudIQ.

Resources

- [Higher Ed Cloud Community Events Calendar](#)
- [Higher Ed Cloud Computing Scholarship](#)
- [Higher Ed and General AWS Resources](#)
- [Higher Ed and General GCP Resources](#)
- [Higher Ed and General MS Azure Resources \(planned\)](#)

Community Cloud Conversations

Conversation	Description	Contacts	Notes
EDUCAUSE Cloud Computing Community Group (CCCG)	<p>The Cloud Computing Community Group provides participants with the opportunity to learn about and discuss the challenges and opportunities associated with the adoption of cloud computing in colleges and universities. Examples of discussion topics include cloud contract negotiation and management, cloud vendor relationship management, IT service management practices, compliance and legal issues, data privacy and security considerations, cloud identity and access management, cloud service integration (cloud to cloud and cloud to on-premise), skills and staffing implications, and cloud use cases to enable institutional agility, efficiency, and innovation. This group meets virtually every month, in person at the EDUCAUSE Annual Conference and uses its list and Slack workspace to discuss issues throughout the year.</p> <p>The Cloud Computing Community Group and Internet2 have long partnered to cultivate the cloud computing conversation in higher education. Beginning with the <i>EDUCAUSE/Internet2 Joint Cloud Working Group</i>, Internet2 has provided infrastructure and logistical support to the CCCG. Internet2 hosts the CCCG monthly calls and their meeting artifacts as well as the Higher Ed Cloud Wiki.</p> <p>Monthly meetings</p> <ul style="list-style-type: none"> • Format: Alternate between presentations one month to open discussion the next • When: Occurs the fourth Wednesday of the month at 9am PT/12pm ET. • Where: https://internet2.zoom.us/j/91519802344 • Running Agenda/Notes: https://tinyurl.com/EDUCAUSE-CCCG • Download calendar invitation: https://drive.google.com/file/d/1NuRKDAq5a7wdudAzTgwXkCnyikEbTxwG/view?usp=sharing (Note for Google Calendar Users: Download the .ics file. Go into the Settings inside Google Calendar. Select Import and navigate to the downloaded .ics file. It should import it into your calendar.) 	<p>CCCG co-chairs: cccg-leads@lists.berkeley.edu (term ends)</p> <ul style="list-style-type: none"> • Damia n Doyle - UMBC damian@umbc.edu (2022) • James Monck - Lehigh U jmm616@lehigh.edu (2023) • Kari Robertson - UCOP kari.robertson@ucop.edu (2024) <p>Internet2 staff support:</p> <ul style="list-style-type: none"> • Bob Flynn bflynn@internet2.edu • Sean O'Brien obrien@internet2.edu 	<p>Join the CCCG Slack Workspace</p> <p>Join the CCCG Mailing List</p>

<p>Cornell Cloud Forum (CF)</p>	<p>The Cloud Forum is an annual gathering hosted by the cloud crowd at Cornell University. Beginning in 2015 this event brought together the IT professionals who manage cloud computing at many of the top research institutions around the country. Attendance is limited to 90 people because we gather in a small auditorium on the Cornell campus. Thanks to the intimate setting and higher education IT's history of sharing, the conversations are candid, productive and often quite entertaining. We share successes, failures and lessons. We challenge our peers with the problems we are facing in hopes of tapping the wisdom of the crowd.</p> <p>The event is for higher education, by higher education. We invite each of the main cloud computing vendors to send representatives, but they are not allowed to present or engage in the debate. They are there to listen and learn about higher ed's cloud challenges.</p> <p>Naturally COVID-19 has turned everything on its head, including the Cloud Forum. We really wish we could welcome you in person to the Cornell campus. Who doesn't want to visit Ithaca, NY in the winter? Instead, the 2020 Cloud Forum has been reformulated to take place in monthly segments throughout the school year. There is no cost to attend. Sessions are held on the second Friday of each month through May, at 9am PT/12pm ET, each running for 90 minutes.</p>	<ul style="list-style-type: none"> Sarah Christen – Chair sjc37@cornell.edu Bob Flynn – Co-chair bflynn@internet2.edu 	<p>The Cloud Forum w as all virtual in 2020. Links to those talks and select sessions from Cloud Forum 2021 are listed below.</p>
<p>Internet2 Online Events (I2O)</p>	<p>Webinars, workshops, training sessions, and community gatherings all fit within our mission of supporting and expanding the community. I2 Online serves as the virtual gathering spot for programs that help members and colleagues share solutions and best practices.</p>	<ul style="list-style-type: none"> Oren Sreerby osreerby@internet2.edu Bob Flynn bflynn@internet2.edu 	<p>View upcoming or suggest event topics</p>
<p>Organic Community Topics (COMM)</p>	<p>Anytime a conversation is taking place that would benefit from the involvement of that organization's peers in the higher ed cloud community, we will try to share it here. That could be a request from a number of schools to have another school share what they are doing or one school might have invited a cloud provider in for a demonstration. Whatever the case, if it is information sharing and collaboration at its core (rather than sales) we welcome its inclusion here.</p>		

Upcoming/Past Events



Click  in the right column for meeting assets (slides, recordings, etc.)

2022				
Date	Title	Description	Speaker	Meeting Assets
10/27 /2022	CCCG October Meeting to be held at EDUCAUSE Annual Conference 2022	<p>CCCG October Meeting to be held at EDUCAUSE Annual Conference 2022</p> <p>Cloud Computing Community Group (CG) Meeting (Open to All) Thursday, October 27 10:15AM–11:00AM MT Meeting Room 610/612</p> <p>Join this discussion on the challenges and opportunities associated with cloud computing. Topics will include contract negotiations, vendor relationship management, compliance and legal issues, data privacy and security considerations, identity and access management, service integration, skills and staffing implications, and cloud use cases that enable institutional agility, efficiency, and innovation.</p> <p>https://events.educause.edu/annual-conference/2022/agenda/cloud-computing-community-group-cg-meeting-open-to-all</p>	<ul style="list-style-type: none"> Damian Doyle Kari Robertson 	<p>CCCG</p>  <p>Running notes</p>
9/28/2022	CCCG Monthly Call - Revisiting our failures.	<p>Discussing how we faltered, then picked ourselves up, dusted ourselves off and came back better than ever!</p> <p>NOTE: No Zoom recording so attendees can feel safe to have open discussions.</p>	<ul style="list-style-type: none"> Facilitated by Damian Doyle 	<p>CCCG</p>  <p>Running notes</p>

8/24/22	CCCG Monthly Call - Cloud Standards Panel	<p>Panelists discuss the following questions followed by Q&A with the larger group:</p> <ul style="list-style-type: none"> • What systems/tools do you have in place to maintain/monitor cloud standards? • How do you decide on the list of cloud standards (and when new standards should be added)? 	<ul style="list-style-type: none"> • Matt Stout, University of California • Ben Rota, Harvard University • Wes Emerson, University of North Carolina • Lucrecia Kim-Boswell, Stanford • Laura Hugill Belken, Mayo Clinic 	<p>CCCG</p>  <p>Running notes</p>
7/27/22	CCCG Monthly Call - Sharing Stanford's best practices for building out a centralized GCP offering	<p>How do you enable researchers or data analysts across disparate schools or agencies to take advantage of GCP, while providing central oversight, budgeting and governance? See how Stanford addressed this challenge, after various schools across the university started using GCP independently and requested help from Central IT to get billing and oversight under control.</p> <p>Lucrecia Kim-Boswell, IT Director of Stanford University, will walk through the best practice structure their partner setup to manage billing and operations, so that an entire campus can easily access GCP with the help from a small University IT Team.</p>	<ul style="list-style-type: none"> • Lucrecia Kim-Boswell, Stanford 	<p>CCCG</p>  <p>Running notes</p>
6/22/22	CCCG Monthly Call - Open Discussion	<p>This month's open mic discussion started with some questions EDUCAUSE asked the CG's to post to the community. Those questions, and some of the responses, can be found in the running notes. There was then some discussion about the role of EDUCAUSE in the past and how that has changed and brief mention of Internet2's role supporting the community. Suggestions were made on additional ways to get engaged in the community.</p>	<ul style="list-style-type: none"> • Damian Doyle, UMBC • James Monek, Lehigh University • Kari Robertson, University of California 	<p>CCCG</p>  <p>Running notes</p>
5/25/22	CCCG Monthly Call - Secure research enclaves and compliance	<p>This month is all about security and compliance. All of us are responsible for security but bring your security team along today for the presentations and conversations.</p> <p>First will be a presentation from John Bailey at Wash U discussing How to Create Secure Research Enclaves and everything involved in that.</p> <p>James Monek from Lehigh University will also be giving an update on the Health Data Warehouse Pilot he previously discussed, since it has now finished a HIPAA audit and he can discuss how that went.</p>	<ul style="list-style-type: none"> • John Bailey, Washington University in St. Louis • James Monek, Lehigh University 	<p>CCCG</p>  <p>Running notes</p>
4/27/22	CCCG Monthly Call - Open Discussion	<p>This month is our open mic discussion meeting for CCCG, and we wanted to make sure we curating the finest possible discussion for all of you. To assist, we would ask you to fill out this very, very brief single question poll to let us know how to advertise and focus next week's meeting. I promise, its super quick. If you could fill it out by the end of the day Thursday we would appreciate it. You can select up to 4 topics, and write in your own as needed.</p> <p>CCCG April Meeting Discussion Topics</p>	<ul style="list-style-type: none"> • Damian Doyle, UMBC • James Monek, Lehigh University • Kari Robertson, University of California 	<p>CCCG</p>  <p>Running notes</p>

<p>4/20/22</p>	<p>Internet2 NET+ Special Event - Sustainability and AWS: Insights for Higher Education - A NET+ AWS Town Hall</p>	<p>This month, in honor of Earth Day, we turn our attention to the environment. We welcome Hahnara Hyun, Partner Solution Architect, Amazon Web Services to present a session called Sustainability and AWS: Insights for Higher Education. In general, NET+ program events are only open to subscribers, but due to the importance of this work and this message, we are opening this session to the entire research and education community.</p> <ul style="list-style-type: none"> • Title: Sustainability and AWS: Insights for Higher Education • Session Description: Digital Transformation can drive improved student outcomes, speed time to science, and increase agility within higher education institutions. Higher education leadership, responding to student and faculty demands, look to incorporate sustainability goals and practices into the university experience. In this session, we'll talk about sustainability transformation, how we've been approaching it at Amazon and AWS, and actions higher education customers can take to incorporate sustainability into their digital transformation efforts. • Speaker Bio: Hahnara Hyun is a Partner Solution Architect for Amazon Web Services. Hahnara has a background in software engineering. She began her journey in tech at Fullerton College and received her Computer Science B.S. from the University of California, Irvine where she was an undergraduate machine learning researcher. She found her passion in enablement, sustainability, and cloud architecture. As a result, in her day-to-day role, she develops AWS GameDays to enable partners and customers to build on AWS. Hahnara is also a public speaker for AWS and ran sustainability enablement sessions at re: Invent 2021. In her free time, Hahnara plays volleyball though she's not very good yet and loves to cook, losing most of her free time making multiple trips to the grocery store grabbing forgotten items. 	<ul style="list-style-type: none"> • Hahnara Hyun, Partner Solution Architect for Amazon Web Services 	<p>I2</p> 
<p>3/23/22</p>	<p>CCCG Monthly Call - Data Lakes</p>	<p>Data Lake in the Cloud - March CCCG Meeting</p> <p>Does your institution have a cloud data lake strategy? Does it look more like a data puddle? Interested in learning how you can deploy a data lake in the cloud to handle and analyze data at scale?</p> <p>As with last month, we encourage you to bring along a buddy. This time bring along your favorite data analysts, scientists, or data architects to share important tips to get a data lake working at your institution.</p> <p>There will be two presentations along with questions, answers, and discussions.</p> <p>"Lessons Learned from AWS Student Data Lake POC", by James Monek from Lehigh University</p> <p>"A Cloud Data Lake Approach to COVID Recovery" by Aswan Movva from University of California, Berkeley</p> <ul style="list-style-type: none"> • When: 9am PT/12pm ET • Where: https://internet2.zoom.us/j/91519802344 • Running Agenda/Notes: https://tinyurl.com/EDUCAUSE-CCCG 	<ul style="list-style-type: none"> • James Monek, Lehigh University • Aswan Movva, University of California, Berkeley 	<p>CCCG</p>  <p>Running notes</p>

3/21/22	Internet2 Networking Team - Multi-Cloud Networking Community Discussion	<p>On February 23, 2022, Internet2 attended the CCCG call to talk about their Networking for Cloud services and to query the group about how the future Cloud Connect console will look, feel and work. During the discussion, attendees asked about the multi-cloud environment and asked for additional discussion on multi-cloud. They also touched on how a layer3 "virtual cloud router" solution that doesn't require hair pinning traffic between clouds through your campus or data center could reduce complexity, improve latency, increase performance, and reduce cost. The I2 networking team believes that together we can develop a solution that that meets these goals, supporting your critical cloud workloads.</p> <p>To continue the discussion, we have scheduled an open discussion session on multi-cloud networking hosted by Internet 2. Please invite all interested colleagues. We will also record the session for those unable to attend.</p> <p>Topic: Multi-Cloud Community Discussion Time: 11:00 AM Pacific Time / 2:00 PM Eastern Time</p> <p>Location: https://internet2.zoom.us/j/95984070917?pwd=ZVl5NjNKZk1E2aDE2Q2RLUWhrZz09</p> <p>Meeting ID: 959 8407 0917 Passcode: 112044</p>	<ul style="list-style-type: none"> • George Loftus, Internet2 • Christopher Green, Internet2 • Scott Taylor, Internet2 • Linda Roos, Internet2 	I2 
2/23/22	CCCG Monthly Call - Internet2 Cloud Networking Tools and open Discussion	<p>Asks: Invite your networking colleagues to the meeting for the presentation/discussion. Put some networking questions/topics in the agenda for the open discussion portion following the presentation.</p> <p>Guest Presenters: We are going to have Internet 2 discuss some plans and ideas they have for how to better allow cloud administrators/architects/etc to be able to manage /adjust/leverage the advanced Internet 2 network features and connections, as well as some opportunities to provide some input into the user design and shaping of these initiatives.</p> <p>We will also have time for some open discussion, and I'd like to encourage folks to bring along one of their network colleagues if they are available to help us have a broader, well informed discussion since both the I2 presentation and the open discussion will benefit from everyone different perspective.</p> <ul style="list-style-type: none"> • Running Agenda/Notes: https://tinyurl.com/EDUCAUSE-CCCG • Session recording and Zoom chat: https://drive.google.com/drive/folders/1KXglGpxBe5GsxgiQdav28muoZRIYCipM?usp=sharing 	<ul style="list-style-type: none"> • George Loftus, Internet2 • Christopher Green, Internet2 • Scott Taylor, Internet2 	CCCG  Running notes
1/26/22	CCCG Monthly Call – "IT'S A PILOT! Legitimizing experimental work in your cloud"	<p>Has this happened to you? You have a cloud that's not ready to take payments, or not ready to be used by the masses, or you don't know how to do things right — but something comes through that you shouldn't say no to. UChicago has handled these situations with a lightweight pilot framework. Both the cloud people and the user agree in advance, in writing, on what both parties will get from the situation. It has helped to set expectations about the unexpected and ultimately get unstuck.</p> <p>The 2nd part of Wednesday's meeting be open discussion (so put those topics in the running agenda or bring them with you Wednesday). We look forward to seeing everyone, and I've included all the meeting info below again as a reminder.</p> <ul style="list-style-type: none"> • When: 9am PT/12pm ET • Where: https://internet2.zoom.us/j/91519802344 • Running Agenda/Notes: https://tinyurl.com/EDUCAUSE-CCCG 	<ul style="list-style-type: none"> • Comelia Bailey, U Chicago • Damian Doyle, UMBC • James Monek, Lehigh University • Kari Robertson, University of California 	CCCG  Running notes

1/11/22	Internet2 Infrastructure & Platform Services – Search for Good Tooling – Kion.io	<p>Last summer Internet2 NET+ Infrastructure & Platform Services program manager Bob Flynn put out a call to the community to identify the greatest areas of need for tooling to help them run the major cloud platforms at scale at their institutions. That call included a survey and that survey produced some decent results.</p> <p>In a three-way tie for the top survey response were:</p> <ol style="list-style-type: none"> 1. Account automation and maintenance 2. Security monitoring and remediation 3. Cost tracking management and savings. <p>The solutions had to be multi-cloud and pass muster with institutional security and compliance. One tool that was specifically suggested by multiple respondents in these areas was cloudtamer.io.</p> <p>Cloudtamer.io has since changed its name to Kion, but we are still interested to see if their tools will meet these needs. It appears to tick all those boxes from the survey, but will it work for higher ed? Join us to find out.</p>	<ul style="list-style-type: none"> • Bob Flynn, Internet2 • Tim Hazard, Kion • Tyler Long, Kion • Randy Shrore, Kion 	I2O 
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2021

Date	Title	Description	Speaker	Meeting Assets
12/8/21	Special Edition Monthly Call - The Big Lie: Cloud Computing - Bill Wrobleski, Penn State EDUCAUSE 2021 and Cloud Forum 2021 Wrap-ups. What are we planning for 2022?	<p>The Big Lie: Cloud Computing - Bill Wrobleski, Penn State 12:00pm ET - 12:45pm ET</p> <p>In 2011, I started evangelizing for the Cloud. It's been 10 years, so the future I promoted has come true, right? I'll revisit the vision we imagined, what actually happened, and explore the question "Is cloud computing the biggest disappointment for higher education this century?"</p> <p>EDUCAUSE 2021 and Cloud Forum 2021 Wrap-ups. What are we planning for 2022? 12:45pm ET - 1:00pm ET</p> <p>Co-chairs will provide a brief wrap up of the recent conferences and feedback we received for what the CG should be focusing on in 2022. And yes, we want your feedback before you leave for the holidays, so there will be homework.</p> <ul style="list-style-type: none"> • When: Wednesday, December 8 2021 9am PDT /12pm EDT • Where: https://internet2.zoom.us/j/91519802344 • Running Agenda/Notes: https://tinyurl.com/EDUCAUSE-CCCG 	<ul style="list-style-type: none"> • Bill Wrobleski, Penn State • Damian Doyle, UMBC • James Monek, Lehigh University • Kari Robertson, University of California 	CCCG  Running notes
11/18/21	Live from Cloud Forum 21 - Presentations	<p>Cost is always a concern when moving from the traditional capex model on prem to the opex model in the cloud. Declan Fleming and Jessica Respicio from UC San Diego will share what they learned about cost (and business) optimization from their experience with cloud at UCSD and CloudBank.</p> <p>In our final presentation, Penn State's Rick Rhoades will share how pandemic hiring challenges and an innovative talent-sharing program led to surprising success and unexpected outcomes.</p> <p>See the Cloud Forum Agenda for descriptions, slides and recordings.</p>	<ul style="list-style-type: none"> • Declan Fleming - UC San Diego • Jessica Respicio - UC San Diego • Rick Rhoades - Penn State University 	CF & I2 TechEXtra21 
11/18/21	Live from Cloud Forum 21 - Researcher (Amazon)	<p>Researcher presentations are a highlight for Cloud Forum attendees each year. The researchers are asked to focus on their research, not the underlying cloud technology, though that does sometimes poke through. These talks are meant to remind us cloud professionals of the importance of the work we do each day.</p> <p>This year's researcher nominated by Amazon is Professor Eric Venner, Associate Professor, Division Director for Bioinformatics from the Human Genome Sequencing Center – Clinical Lab at the Baylor College of Medicine with a talk titled "Implementing Genomic Medicine at the HGSC."</p>	<ul style="list-style-type: none"> • Eric Venner, Associate Professor, Division Director for Bioinformatics from the Human Genome Sequencing Center – Clinical Lab at the Baylor College of Medicine 	CF & I2 TechEXtra21 

11/17/21	Live from Cloud Forum 21 - Researcher (Microsoft)	<p>Researcher presentations are a highlight for Cloud Forum attendees each year. The researchers are asked to focus on their research, not the underlying cloud technology, though that does sometimes poke through. These talks are meant to remind us cloud professionals of the importance of the work we do each day.</p> <p>This year's researcher nominated by Microsoft is Dr. Travis Osterman of Vanderbilt University Medical Center with a talk titled "Lessons Learned from VUMC's First End-to-End Cloud Project."</p>	<ul style="list-style-type: none"> • Dr. Travis Osterman of Vanderbilt University Medical Center 	<p>CF & I2 TechEXtra21</p> 
11/17/21	Live from Cloud Forum 21 - Presentations	<p>The maintenance and lifecycle of data is a never-ending challenge. In our first presentation we'll hear about research into how schools are dealing with the seeming end to unlimited cloud storage being done by Internet2's Oren Sreebny. Oren will be joined by Helen Hockx-Yu who will share how Notre Dame is approaching the problem.</p> <p>In our second presentation, Ken Bigelow and Venkat Mahadevan from the University of British Columbia will explain their efforts to make use of cloud computing easier for their research community.</p> <p>See the Cloud Forum Agenda for descriptions, slides and recordings.</p>	<ul style="list-style-type: none"> • Oren Sreebny - Internet2 • Helen Hockx-Yu - Notre Dame • Ken Bigelow - University of British Columbia • Venkat Mahadevan - University of British Columbia 	<p>CF & I2 TechEXtra21</p> 
11/16/21	Live from Cloud Forum 21 - Researcher (Google)	<p>Researcher presentations are a highlight for Cloud Forum attendees each year. The researchers are asked to focus on their research, not the underlying cloud technology, though that does sometimes poke through. These talks are meant to remind us cloud professionals of the importance of the work we do each day.</p> <p>This year's researcher nominated by Google is Luigi Marchionni, Associate Professor of Pathology at Weil-Cornell Medicine. Professor Marchionni's talk is titled "A Hitchhiker's Guide to Big Data Based Biomarkers."</p>	<ul style="list-style-type: none"> • Luigi Marchionni - Associate Professor of Pathology at Weil-Cornell Medicine 	<p>CF & I2 TechEXtra21</p> 
11/16/21	Live from Cloud Forum 21 - Lightning Talks	<p>The first day of the 2021 Cloud Forum's online content kicked off with nine (9!) lightning talks from the National Institutes of Health, University of Chicago, CloudBank and Internet2. For details, slides and a recoring of the talks see, the Cloud Forum agenda.</p>	<ul style="list-style-type: none"> • Philip Meacham - NIH • Yanik Wynter – NIH • Carlo Espiritu - NIH • Joel Peterson - NIH • Rob Fatland - UW, CloudBank • Shelley Rossell - Univ Chicago • Cornelia Bailey - Univ Chicago • Ananya Ravipati - Internet2 • Bob Flynn - Internet2 	<p>CF & I2 TechEXtra21</p> 
10/29/21	EDUCAUSE 2021 Face to Face meeting	<p>Join this discussion on the challenges and opportunities associated with cloud computing. Topics will include contract negotiations, vendor relationship management, compliance and legal issues, data privacy and security considerations, identity and access management, service integration, skills and staffing implications, and cloud use cases that enable institutional agility, efficiency, and innovation.</p>	<ul style="list-style-type: none"> • Jody Couch, UC Berkeley • Damian Doyle, UMBC • James Monek, Lehigh University 	<p>CCCG</p>  <p>Running notes</p>
9/22/21	Cloud FinOps	<p>Cloud costs keeping you up at night? Are you wondering how to keep costs from running out of control? What practices should you put in place now to stay on top of the cloud spending game?</p> <p>A group of higher education cloud professionals with expertise in cost optimization and cloud financial best practices met regularly through the spring and summer pooling their expertise in an effort to create a list of tips and techniques for making the most of your cloud dollars.</p> <p>In this session they shared those pearls of wisdom with you, their colleagues in higher ed cloud.</p> <p>Find their slides, full tip sheet, presentation recording and more on the session resource page.</p>	<ul style="list-style-type: none"> • Matthew Chess - University of Michigan • John Finigan - University of Colorado Anschutz Medical Campus • Mike Florian - University of Arizona • Bob Flynn - Internet2 (staff support) • Erik Lundberg - University of Washington • Sara Jeanes - Internet2 • Timothy Middelkoop - internet2 • Richard Murillo - Harvard University • Kari Robertson - University of California Office of the President • Ben Rota - Harvard University • Nick Young - University of North Carolina Greensboro • Jonathan White - University of Central Florida 	<p>CCCG</p>  <p>Running notes</p>

8/26/21	Special Edition of Monthly CCCG Call -	<p>We are excited to announce that for this month's call, the Research Computing and Data CG will be partnering with the Cloud CG! The call will be held on Thursday, August 26th from 1-2 pm ET. In this call, we will discuss top use cases for cloud for research.</p> <p>We will first hear from you on what your top use cases are, and what services you are keeping on-premise. We will then explore how to manage distributed costs associated with cloud usage. We will discuss models and resources used to support researchers using the cloud, as well as the level of support provided at different institutions.</p> <p>Please download and import the following iCalendar (.ics) files to your calendar system. Monthly: https://educause.zoom.us/meeting/tJUkd--oqTsuGNEfXHMkL-ycD6yYJuG03tBR/ics?icsToken=98tyKuCppzssGtOVfBuCRowcHYigM_TwtmJbY14mifNLgt_exX1ErRbC5hqN4ID</p> <p>Join Zoom Meeting https://educause.zoom.us/j/91906070425?pwd=SHJnZUNYVnVWa3Z2aTJ3Tm45MUNVdz09</p> <p>Meeting ID: 919 0607 0425 Passcode: 243359</p>		<p>CCCG</p> <p>Running notes</p>
7/28/21	NET+ GCP Summer Camp: Running the Institution on Cloud Power	<p>IT professionals are always looking for the best tools for the job. An ever-increasing number of those jobs can be done more efficiently or effectively with cloud tools. In the final NET+ GCP Summer Camp session of 2021 we will hear about a range of uses, from the operational, to the strategic, to the meta.</p> <ul style="list-style-type: none"> • Cloud enablement automation • VMWare in GCP Proof of Concept • GCP and the Unizin Data Platform for Learning Analytics 	<ul style="list-style-type: none"> • Maneesha Aggarwal & Parixit Dave, Columbia University • John Bailey, Washington University in St. Louis • David Reid, University of Missouri 	<p>I2O</p> 
7/28/21	Making better teams with diverse hiring and retention	<p>Diverse teams are better teams! This month's Cloud Computing Community Group is an opportunity to share principles of diverse hiring and retention.</p> <p>This session will be a moderated panel discussion about what everyone, from leadership to established IT professionals, can do to be supportive of new and diverse professionals entering the workforce, but also to actively seek them out. After our panelists share their stories, we will have time to discuss audience member's ideas.</p> <p>Please share this invitation with others who may be interested.</p> <p>When: Wednesday, July 28 2021 9am PDT /12pm EDT Where: https://internet2.zoom.us/j/91519802344 Running Agenda/Notes: https://tinyurl.com/EDUCAUSE-CCCG Download the meeting invite</p>	<p>Panelists</p> <ul style="list-style-type: none"> • Amanda Caton (She/Her/Hers) – System Engineering Team Manager, Lehigh University • Bobby Cox – ServiceNow Developer, UC Berkeley • Tre Von McKay • Sowmya Shankar – Applications Programmer, University of Delaware • Sherika Wynter – Senior Product Manager & Contract Lead, Cloud Services, NIH Center for Information Technology <p>Moderator</p> <ul style="list-style-type: none"> • Sara Jeanes – Product Manager, eduroam, Internet2 	<p>CCCG</p>  <p>Running notes</p>
7/21/21	NET+ GCP Summer Camp: The Power to Change Lives	<p>The uses of hyper-scale computing power are limited only to the imaginations of those leveraging it. Nowhere is this more evident than in the work of our researchers.</p> <p>This NET+ GCP Summer Camp session will showcase two very different but undeniably impactful research projects made possible with the hyper-scale compute power and tools of GCP. Join us to learn about:</p> <ul style="list-style-type: none"> • New York University Pediatric Undiagnosed Diseases Program • Heterogeneous computing for the Large Hadron Collider 	<ul style="list-style-type: none"> • Gilad Evrony, New York University, Grossman School of Medicine • Phillip Harris, Massachusetts Institute of Technology 	<p>I2O</p> 

7/15/21	NET+ Palo Alto Networks: Cloud-native security for workloads and SaaS applications	<p>Another great community effort has led to the evaluation and release of a higher-ed negotiated service agreement for a toolset widely-popular across higher ed. In this case it's the NET+ Palo Alto Networks "Cloud-powered security for .edu" offering.</p> <p>Peek (or jump) into the ongoing series of NET+ Palo Alto Networks community town hall meetings in July to learn about their security tools.</p>		I2O 
6/23/21	NET+ GCP Summer Camp: Teach the Cloud, Teach Using the Cloud	<p>There are all kinds of reasons we strive to provide safe, powerful and easy-to-use cloud computing environments for our institutions. Few are more important or have broader impact than teaching and learning.</p> <p>Join the NET+ GCP Summer Camp session to hear three great stories of how GCP is being used in the classroom to teach:</p> <ul style="list-style-type: none"> • Cybersecurity • Genomic research skills • Cloud computing 	<ul style="list-style-type: none"> • Wu-chang Feng, Portland State University • Geraldine Van der Auwera, Broad Institute of MIT and Harvard • Alan Walsh, Indiana University 	I2O 
6/23/21	Open Discussion	<ul style="list-style-type: none"> • New co-chair announced. Congratulations to James Monek from Lehigh University! • Third-party tool ecosystem for cost visibility, monitoring, security optimization • Security monitoring tools and strategies to deal with hybrid environments • Tools and strategies to protect against ransomware 		CCCG  Running notes
6/10/21	NET+ CloudCheckr Premium Webinar	<p>Whether you are multi-cloud or focusing your efforts on one, support tooling for cost and security tracking are increasing helpful and increasingly important. CloudCheckr provides cost management, asset inventory, security & compliance monitoring, and resource utilization tracking across your multi-cloud environments, giving not only centralized visibility into your cloud at the enterprise level, but also putting tools in the hands of individual researchers, departments and developers.</p> <p>See CloudCheckr in action and hear what your peers who evaluated the service think about it.</p>	<ul style="list-style-type: none"> • David Kalish - CloudCheckr • Ethan Conner - Carnegie Mellon University • Shane Heivly - The Pennsylvania State University • Gerard Shockley - Boston University • Noah Abrahamson - Stanford University • Jennifer Triplett - DLT 	I2O 
6/2/21-6/4/21	Higher-Ed DevOps Conference	<p>On the afternoons (1-5 EDT) of June 2-4, the Higher-Ed DevOps Conference will be meeting to share training, best practices, and more. If you are faculty /staff of any InCommon institution, you are welcome to join us... for free!</p> <p>Check out the agenda.</p>		COMM 
5/26/21	New NET+ Services Introduced to Meet Higher Ed Community Needs	<p>20 schools collaborate with Internet2 to vet and release four new NET+ services to the community.</p> <ul style="list-style-type: none"> • CloudCheckr • Google Workspace of Education • Palo Alto Networks • signNow and airSlate 	<ul style="list-style-type: none"> • Noah Abrahamson - Stanford University • Nick Young - University of North Carolina Greensboro • Rick Haugerud - University of Nebraska • Manoj Chitre - Claremont Graduate School 	I2O 
5/26/21	Higher Ed Case Studies of Power and Agility in the Public Cloud	<ul style="list-style-type: none"> • University of California migrates PeopleSoft HR to AWS • University of creates powerful COVID-19 testing tracking tooling under constantly changing guidelines 	<ul style="list-style-type: none"> • Kari Robertson - University of California Office of the President • Ken Taylor - University of Illinois, Office of the CIO 	CCCG  Running notes
5/14/21	Unconference	<p>Community-driven conversations on:</p> <ul style="list-style-type: none"> • Security & Governance • Research & HPC • Cost Management & Billing • Service Delivery • Cloud Ops & Tactics • Getting Started & Evolving Cloud Strategy 	<ul style="list-style-type: none"> • All of you! 	CF 

4/28/21	Open Discussion	<ul style="list-style-type: none"> • Presentation Internet2's Jamie Sunderland about the results of a recent Research Computing in the Cloud survey he ran for the NSF. • Discussion of the Internet2 CLASS training program for those who support researchers' move to the cloud. • An update on the discussion in the February meeting on the costs associated with AWS Transit Gateway and the types of behaviors and services it enables (or not) at Higher Ed institutions 	<ul style="list-style-type: none"> • Jamie Sunderland - Internet2 • Dana Brunson - Internet2 • Kevin Murakoshi - AWS 	<p>CCCG</p>  <p>Running notes</p>
4/9/21	Trust and Security	<ul style="list-style-type: none"> • The case for avoiding "networking" in your cloud adoption strategy. • Securing Security for your Cloud Strategy • TLD TL;DR - Trust from on high • Panel: Protecting cloud hosted data sets 	<ul style="list-style-type: none"> • John Bailey - Washington University in St. Louis • Shelley Rossell and Cornelia Bailey - University of Chicago, Information Security • Sara Jeanes, Adair Thaxton, and Nick Lewis - Internet2 	<p>CF</p> 
3/24/21	<p>Using Cloud for Research at Scale</p> <ul style="list-style-type: none"> • Use of GCP by Rubin Observatory • Using commercial clouds to process IceCube jobs 	<ul style="list-style-type: none"> • The Vera C. Rubin observatory will conduct an 10 year astronomical survey of the southern sky, the Legacy Survey of Space and Time (LSST). This will produce 20TB of data nightly. In the run up to operations, which should start late 2023, we have started a large scale three year experiment with Google. This talk will introduce Rubin Observatory, the data processing and access and a little of what we are doing with Google Cloud Platform(GCP). 	<ul style="list-style-type: none"> • William O'Mullane • Igor Sfiligoi 	<p>CCCG</p>  <p>Running notes</p>
3/12/21	Google Team-selected Researcher + Community Presentation	<ul style="list-style-type: none"> • Disorganized Organizations: Balancing the need for control with distributed IT • Leveraging VirtualFlow to harness the power of cloud computing to target COVID-19 proteins via ultra-large virtual screens 	<ul style="list-style-type: none"> • Ben Rota – Harvard 	<p>CF</p> 
3/5/21	Jupyter on Google	<p>We'll have Marc Cohen from Google leading us through the managed offerings from Google, plus folks from UMBC and NYU talking about their Jupyter Hub deployments on GCP, and Burwood talking about how partners can help with Jupyter.</p>	<ul style="list-style-type: none"> • Marc Cohen - Google 	<p>I2O</p> 
2/24/21	How Universities are Providing Self-Service Cloud Environments for Researchers	<p>Internet2 hosted webinar to help Higher Education researchers leverage new self-service, managed, cloud-based solutions.</p> <ul style="list-style-type: none"> • RONIN gives researchers explicit budget control and forecasting so they can use their research budgets effectively • RONIN also provides research IT with administrative oversight into researcher spend and control over the security policies enforced across all RONIN users • Service Workbench promotes collaboration around data, by enabling researchers to upload and share data sets, and also allows quick access to public research data sets hosted by AWS • Service Workbench provides researchers with spend transparency and control by enabling them to see individual workspace costs, as well as spend across projects and organizational units. 	<ul style="list-style-type: none"> • Parice Brandies, PhD Candidate, University of Sydney School of Life and Environmental Sciences • Paul Avillach, Assistant Professor in Pediatrics & Biomedical Informatics, Harvard Medical School and Boston Children's Hospital • Nathan Albrighton, CEO and Founder of RONIN • Madhu Bussa, Sr. Solutions Architect, AWS • Oren Sreebny, Consultant Internet2 Cloud Programs, Internet2 	<p>I2O</p>  <p>Blog Post</p>
2/24/21	Open Discussion	<ul style="list-style-type: none"> • Presentation and discussion by Ben Rota from Harvard summarizing results of a recent Research Computing in the Cloud survey. • Discussion on how to fund ongoing cloud costs (storage and compute) for research projects once the grant expires • Discussion on the costs associated with AWS Transit Gateway and the types of behaviors and services it enables (or not) at Higher Ed institutions 	<p>Ben Rota – Harvard</p>	<p>CCCG</p>  <p>Running notes</p>

2/12/21	Amazon Team-selected Researcher + Community Presentation	<ul style="list-style-type: none"> Managing IaC Code Rot: Terratest in Action Using the cloud to support research access to confidential data: The Administrative Data Research Facility 	<ul style="list-style-type: none"> Jason Armbruster, Cloud Architect/Engineer & Wylie Butler, Cloud Engineer – University of Colorado Dr. Julia Lane, Professor at the NYU Wagner Graduate School of Public Service, at the NYU Center for Urban Science and Progress, and a NYU Provostial Fellow for Innovation Analytics 	CF 
1/27/21	Cloud Challenges Facing Smaller Institutions	What are the different challenges that are faced by smaller institutions, how do strategic/operational motives differ, how are school designating their staff since they are already wearing so many different hats in many cases. How do we better connect with this community to make sure they are represented in our community?		CCCG  Running notes
1/8/21	Cloud Strategy	<ul style="list-style-type: none"> What's your deal: provider, consumer, or broker? Self Managed vs. Managed Service Provider The Power of Free: A Crisis of Opportunity and how the Cloud Saved Us Infrastructure Analytics at UNCG Panel: Strategic Cloud Decision Making 	<ul style="list-style-type: none"> Comelia Bailey – University of Chicago Kari Robertson – University of California, Office of the President Ryan Frazier – Harvard Business School Nick Young – UNC Greensboro Erik Lundberg – University of Washington – Moderator; Brian James – University of Idaho; James Monek – Lehigh University; Bill Thompson – Lafayette 	CF 

2020

Date	Title	Description	Speaker	Key
12/11/20	Microsoft Team-selected Researcher + Community Presentation	<ul style="list-style-type: none"> Patient-specific air flow modeling to support ventilator splitting under dire conditions IAM in the cloud – architecture, cost and benefits 	<ul style="list-style-type: none"> Amanda Randles – Alfred Winborne and Victoria Stover Mordecai Assistant Professor of Biomedical Sciences – Duke University Bill Thompson – Lafayette College 	CF 
12/2/20	Open Discussion	Discussion around Re-Invent and recent Cloud Forum sessions. Updates on what is happening on campuses around COVID recovery and cloud use to support those efforts. Discussion on cost management and remote training. (No recording this month)		CCCG Running notes
11/13/20	Research Support	<ul style="list-style-type: none"> Panel: Getting the Most out of your Public Cloud Research Dollars – An overview of the NSF-funded CloudBank project and the NIH STRIDES Initiative, how they benefit academic researchers and how best to support them. Cloud Research Resources to Simplify the Research Lifecycle Automating the provisioning of HIPAA allied instances with Ansible and Step Functions 	<ul style="list-style-type: none"> Comelia Bailey – University of Chicago – Moderator; Brian DeMeulle – UC San Diego, Nick Weber – National Institutes of Health Joshua Kisse – Texas A&M University Matthew Chess – University of Michigan; Brandon Swickerath – University of Michigan 	CF 
10/28/20	Strategies for Controlling Costs in the Cloud	Teams from Harvard and University of Michigan will talk about ways to save money on cloud computing and their approaches to helping their campuses realize those savings.	<ul style="list-style-type: none"> Ben Rota and Richard Murillo – Harvard University Mathew Chess, Kenny Moore and Alok Vimawala – University of Michigan 	CCCG  Running notes
10/9/20	Cloud Community Governance	<ul style="list-style-type: none"> Bringing order to wild free range cloud through inclusive governance Panel: Leveraging the Cloud Community 	<ul style="list-style-type: none"> Damian Doyle and Todd Haddaway – University of Maryland Baltimore County Oren Sreebny – Internet2 – Moderator; John Bailey – Washington University in St. Louis; Bob Flynn – Indiana University; Matthew Rich – Northwestern University; Alok Vimawala – University of Michigan 	CF 

9/23/20	Open Discussion	Lots of community announcements. A pitch for people to join the DevSecOps conversation. Brief mention of the FinOps discussion. What role is cloud playing in back to school and COVID-related work, including storage of testing/tracing data. Short rant about Box security. Discussion of how schools are taking requests for cloud accounts and how they keep track of inventory and what people are doing in their accounts. Lessons and resources shared.		CCCG  Running notes
9/11/20	Cloud Enablement Success Stories	<ul style="list-style-type: none"> Working with Cloud reserved instances to reduce costs Monitor AWS with Grafana 7 Cloud Billing OTICA – Platform-on-a-Platform for GCP UCF's Remote Learning Solution to the Pandemic Notre Dame's Accelerated VDI Madness 	<ul style="list-style-type: none"> Gerard Shockley – Boston University James Monek – Lehigh University Jim Charters – University of Michigan Hans Jacobsen & Alan Ge – Stanford Healthcare Jeff Samek, Robert Connors & Bob Mello – University of Central Florida James Smith & Brandon Rich – University of Notre Dame 	CF 
8/26/20	From Zero To Secure Research Hero In Four Weeks!	University of Pittsburgh IT was approached by one of its leading researchers with a challenge: provide for a secure environment in which research could be conducted on a controlled HIPAA dataset. Oh, by the way, enable access from the internet AND allow people only take specific pieces of data out of the environment AND we need it in a month.	Brian Pasquini, Enterprise Architect - University of Pittsburgh	CCCG  Running notes
8/5/20	Q&A with IU Box Migration team	<p>As a number of schools review their storage and collaboration strategies, Indiana University can provide insights from its experience. Indiana University was the first high-profile higher education customer to announce it was moving to Microsoft and Google and away from Box. IU's early start resulted in many schools looking to learn from their research, successes and failures. IU has received several inquiries from other higher ed schools and is offering to discuss its experience and considerations. As a result, the IU Box migration team put on an infoshare in June covering their process, communications, technical decisions and lessons. The recording of that infoshare, as well as slides and detailed communication plan, can be found at https://drive.google.com/drive/folders/1zZ5YnND9tO-MFreZxsMU4bdq9D6aBw5S?usp=sharing.</p> <p>It's one thing to listen to the story, it's another to chat with the story tellers. In the wake of the infoshare the calls for meetings with the migration team have continued to come. In order to allow this hardworking team to focus on their hard work, we have arranged a dedicated Q&A session for any and all to bring their questions about tools and timing, dependencies and decisions, method and messaging, and so much more. NOTE: We learned our lesson last time and we have a larger-capacity Zoom roof for this call.</p>	<ul style="list-style-type: none"> Adam Sweeny - Indiana University Justin Zemlyak - Indiana University 	COMM  Chat transcript
7/23/20	Higher Ed Cloud Networking & Security Workshop - Workshop Capstone: Peer Architectures	Presentations from three peer institutions, each presenting their architectures and best practices on one of the three platforms. Panel discussion, Q & A, Workshop wrap	<ul style="list-style-type: none"> Ken Hoover – Yales University Jason Sullivan – University of Arizona Alok Vimawala – University of Michigan 	CF 
7/22/20	Open Topic Discussion with a twist	Many in the community are taking part in the Higher Ed Cloud Networking & Security Workshop series. At the start of that series, attendees brainstormed a number of questions for the cloud vendors. Among those questions were many that were better suited as a discussion between members of the community. July would normally be an open topic discussion. We are keeping with that in spirit, but we are going to seed the conversation with a selection of questions from the list.		CCCG  Running notes

7/9/20	Higher Ed Cloud Networking & Security Workshop - Google Responses to Workshop Attendee Questions & Challenges	This session of the Cloud Networking and Security workshops features Google's team answering the questions and challenges compiled by community participants during the May 28 session .		CF 
7/7/20	Higher Ed Cloud Networking & Security Workshop - GCP Security and Networking Training	This session of the Cloud Networking and Security workshops features Google's overview of GCP security and networking tools and best practices.		CF 
6/25/20	Higher Ed Cloud Networking & Security Workshop - Amazon Responses to Workshop Attendee Questions & Challenges	This session of the Cloud Networking and Security workshops features Amazon's team answering the questions and challenges compiled by community participants during the May 28 session .		CF 
6/24/20	Indiana University Box Migration Infoshare	Switching cloud storage platforms can be challenging, especially when petabytes of data are involved. Indiana University has begun the process of switching from Box to Microsoft and Google for end-user cloud storage and is looking to share its experience and learn from the community. Topics will include IU's motivations for a move, selecting a migration vendor, when to leave the legacy storage up or take it down during a migration, how to handle loss of features when changing platforms, what communications challenges universities will face, and how COVID19 complicates a storage migration.		CCCG  Running notes
6/23/20	Higher Ed Cloud Networking & Security Workshop - AWS Security and Networking Training	This session of the Cloud Networking and Security workshops features Amazon's overview of AWS security and networking tools and best practices.		CF 
6/11/20	Higher Ed Cloud Networking & Security Workshop - Microsoft Responses to Workshop Attendee Questions & Challenges	This session of the Cloud Networking and Security workshops features Microsoft's team answering the questions and challenges compiled by community participants during the May 28 session .		CF 
6/9/20	Higher Ed Cloud Networking & Security Workshop - Azure Security and Networking Training	This session of the Cloud Networking and Security workshops features Microsoft's overview of Azure security and networking tools and best practices.		CF 
5/28/20	Higher Ed Cloud Networking & Security Workshop - Capturing the Questions, Listing the Challenges	Structured discussions to articulate the challenges faced by IT Pros when configuring, securing and managing enterprise cloud environments trying to meet the diverse demands of a higher education institution.		CF 
5/27/20	Open Topic Discussion			CCCG  Running notes
4/23/20	Google Anthos presentation to Stanford cloud team			COMM 

4/22/20	UNCG Cloud Cyberinfrastructure Innovation Lab	UNC Greensboro is exploring an idea to help catalyze adoption of cloud infrastructure for research and in the classroom across the entire university by creating a Cloud Cyberinfrastructure Innovation Lab. The lab is focused on institutional adoption of cloud infrastructure - something that can be challenging for a R2 and traditionally liberal arts institution.	<ul style="list-style-type: none"> • Jeff Whitworth, the Associate Vice Chancellor of Enterprise Infrastructure – UNC Greensboro 	<p>CCCG</p> 
4/8/20	<i>The Role of Cloud Computing in Higher Ed's COVID-19 Response (Part 2)</i>			<p>CCCG</p>  <p>Running Notes</p>
3/25/20	<i>The Role of Cloud Computing in Higher Ed's COVID-19 Response (Part 1)</i>	We had over 100 people on the call. The conversation was great. Many schools shared their experiences of transitioning to online teaching, WFH and general community support and several provided helpful resources.		<p>CCCG</p>  <p>Running Notes</p>
2/26/20	Open Topic Discussion	<ul style="list-style-type: none"> • A lot has happened in the HED cloud world since our last open discussion. Add your topics to https://tinyurl.com/EDUCAUSE-CCCG. • Topics covered: <ul style="list-style-type: none"> • Community event updates • RFPs for hosting ERP in the cloud • How to address negative attitudes about using public cloud • What are you doing to bring public cloud to the classroom? • Cloud-based VDI experiences 		<p>CCCG</p>  <p>Running Notes</p>
1/22/20	Data-driven Cloud Planning	<ul style="list-style-type: none"> • Topic 1: <i>Whether Forecasting: Informing Migration Choices with Metrics</i> <ul style="list-style-type: none"> • Description: Migration of applications to the Cloud is now a foregone conclusion for many institutions in Higher Ed. The first applications to leave the ground may be obvious or pre-determined, but after that initial rush of success of the few, what can be used to inform the bulk of the daunting effort that remains? Faced with a commitment to migrate 40% of the workload of over 400 applications within a 12 month period, UCLA developed a metrics based scoring and benefits spreadsheet tool to help inform and support the prioritization of application migrations. This presentation explains those metrics, the controls for scoring, and demonstrates the functioning of the tool. • Topic 2: <i>From Operational to Predictive: Evolving from a Traditional Data Warehouse to an Analytics Hub</i> <ul style="list-style-type: none"> • Description: In 2018, UMBC embarked on creating a new analytics-focused data warehouse with highly-performant real-time data ingestion pipelines using primarily native AWS tools. This session will outline the progress made leveraging AWS tools as well as open sourced products to establish the event-based ecosystem. We hope these methods can be used as a model for other campuses, as well as highlight the long-term benefits of re-architecting critical systems and processes in the cloud to accelerate innovation. 	<ul style="list-style-type: none"> • Brendan Bellina, Lead IT Architect, UCLA IT Services, Systems Services 	<p>CCCG</p>  <p>Running Notes</p>

Special thanks for the *presentation materials* icon by Krish from the Noun Project

- 2019
 - December 16 (combined Nov/Dec event) - Fall Cloud Conference Round-Up
 - [Cornell Cloud Forum](#)

- [Microsoft Ignite](#)
- [AWS re:Invent](#)
- [Internet2 Technology Exchange](#)
- [Notes, recording and links](#)
- October 23 - Federated Access to Research Data
 - Dr. Craig A. Lee, Chair, NIST Public Working Group on Federated Cloud (lee@aero.org)
 - Khalil Yazdi, Chair, Open Research Cloud Alliance (khalilyazdi@outlook.com)
 - [Slides, notes and recording](#)
- EDUCAUSE 2019 Face to Face meeting (Chicago, October 16, 2019)
 - [Slides, notes and photo](#)
- September 25 - Open Discussion
 - Early survey results
 - EDUCAUSE F2F
 - CCCG Leadership transition
- August 28 - Supporting Research in the Cloud - Round 1: The Human Bridge
 - Derek Morr (Cloud Solutions Architect) and Greg Madden (Associate CIO for Research) - Penn State University
 - Rob Fathland (Research Computing Director) - University of Washington
 - Marty Sullivan (Cloud Systems Engineer) - Cornell University
 - [\(notes and recording\)](#)
- July 24 - Open Discussion
 - Funding for OS teams in the cloud
 - AWS Multi-Tenant vs Multi Account Strategy
 - Creating and tracking a 'cloud innovation' fund through optimization
 - How are you supporting researchers in the cloud?
 - Integration Tools
 - [\(notes and recording\)](#)
- June 26 - Cloud Community Events and Activity
 - Recap of Cloud Networking Workshop put on by U Michigan, U Minnesota and Internet2 (Alok Vimawala - UMich)
 - Update on [Cornell Cloud Forum 2019](#) (Sarah Christen - Cornell)
 - CCCG Engagement Channels (Bob Flynn - IU)
 - CCCG Engagement Team (Jody Couch - UCSC)
 - [\(recording and slides\)](#)
- May 22 - Open Discussion
 - Announcements
 - Cloud Forum dates: November 6-8, 2019
 - Reminder: CFP for 2019 Cornell Cloud Forum closes June 1 https://bostonu.qualtrics.com/jfe/form/SV_bCyJsiOkPsm3tAh
 - #cloud_jobs channel added to CCCG Slack Team - post your cloud jobs there!
 - Firewalling in AWS: Paul Peterson from Emory talked about networking strategies for their non-research AWS environment. [\(slides\)](#)
- April 24 - Google Cloud Platform
 - Evolution of GCP at an Office 365 University – presentation by John Bailey, WUSTL
 - With Great Integration Comes Great Responsibility (a.k.a. GCP at a G Suite School) – presentation by Bob Flynn, IU
 - Google CAB GCP Track
 - News from Google Cloud Next
 - Tech bulletin: Don't fear the mystery folder. Unexpected visitor due to Google change <https://developers.google.com/apps-script/guides/cloud-platform-projects>. - Ananya Ravipati, IU
 - IU GCP configuration document <https://iu.box.com/s/5h6zj9l5dawie8crigc8m1v647kksw20>
 - Internet2 NET+ GCP contract - Sara Jeanes, Internet2
 - [\(notes | slides & recording\)](#)
- Mar 27 - Open Discussion
 - Performance testing of moving data from one cloud provider to another
 - SSO with AWS and how to federate external users
 - Upcoming AWS webinar series
 - Options for handling cloud training needs
 - Call for (self-)nominations for CCCG co-chairs
 - [\(notes | recording\)](#)
- Feb 27 - Open Discussion [\(notes\)](#)
- Jan 23 - Cloud Q & A for Small Schools [\(recording and resources\)](#)
- 2018
 - Dec 5 - Excerpts from the 2018 Cornell Cloud Forum [\(recording and resources\)](#)
 1. **Title:** Ouch! Commonly Overlooked (or Surprising) Cloud Costs
Description: "Wait ... that costs how much?" How do you prepare stakeholders for cloud-related charges that were provided 'for free' while on-premise? What new charges exist in the Cloud? What are the associated costs? Most importantly, who is going to pay them?
Presenters: Kari Robertson and Glenn Blackler - UC Santa Cruz
 2. **Title:** Using AWS CLI with Shibboleth and Duo <https://github.com/techservicesillinois/awscli-login>
Description: How can higher education give our faculty and staff convenient access to AWS tools without leaving behind a mess of long-lived secret keys? We'll demonstrate a University of Illinois plugin to the AWS CLI which authenticates against Shibboleth with Duo and manages short-lived credentials, making it easy to be secure.
Presenter: Chris Kuehn - University of Illinois
 3. **Title:** Kubernetes: Container Orchestration at Scale
Description: Kubernetes is a resource scheduler that started as a Google project. Now it is the primary container scheduler being adopted across the spectrum of both cloud and on-prem based deployments. With an extensible scale-first architecture it's easy to see why its adoption has outpaced other solutions such as Docker Swarm and Mesos. The goal is to present on the architecture of Kubernetes and basics of running Kubernetes at scale.
Presenter: Jeff Sica - University of Michigan
Resources: "Introduction to Kubernetes" open-source eight-hour 100-level labs: <https://goo.gl/uHq6T4> and presentation: <https://goo.gl/Yb6Hfr>

4. Time Permitting: AWS re:Invent recap

- Nov 1 - Open discussion at in-person meeting at EDUCAUSE Annual Meeting
- Oct 24 - Open discussion (see [notes](#))
- Sep 26 - Funding models for new cloud paradigms (speakers: David Seidl- Notre Dame, Ben Rota - Harvard)
- Aug 22 - Notre Dame and the Cloud - Over the past three years, Notre Dame University has moved more than 80% of their IT infrastructure and services to Amazon Web Services (AWS). On this month's Higher Education Cloud Collaboration conference call, leaders from Notre Dame University will provide an overview of their move to AWS, and will share their lessons learned and advice for other institutions.
- *Limit of recorded history*