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.

Community Cloud Conversations

<table>
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<tr>
<th>Conversation</th>
<th>Description</th>
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| EDUCAUSE Cloud Computing Community Group (CCCG) | 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. The Cloud Computing Community Group and Internet2 have long partnered to cultivate the cloud computing conversation in higher education. Beginning with the EDUCAUSE/Internet2 Joint Cloud Working Group, 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. Monthly meetings  
  - 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/1NuRkKADq5a7wududA7gwXiCnyiEkBwxtX/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.) | CCCG co-chairs: cccg-leads@lists.berkeley.edu (term ends)  
  - Jody Couch - UC Berkeley jody@berkeley.edu (2021)  
  - Damian Doyle - UMBC damian@umbc.edu (2022)  
  - James Monek - Lehigh U jmm616@lehigh.edu (2023) | Join the CCCG Slack Workspace  
  - Join the CCCG Mailing List |
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.

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.

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.

Cornell Cloud Forum (CF) | The Cloud Forum was all virtual in 2020. Links to those talks and select sessions from Cloud Forum 2021 are listed below.
---|---
**Speaker:** Sarah Christen – Chair sjc37 @cornell.edu  
**Bob Flynn** – Co-chair bflynn@internet2.edu

### Internet2 Online Events (I2O)

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.

**Speaker:** Oren Sreebny osreebny@internet2.edu  
**Bob Flynn** bflynn@internet2.edu

### Organic Community Topics (COMM)

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.

### Upcoming/Past Events

#### 2021

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<tr>
<th>Date</th>
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<td>11/16-18</td>
<td>Live from the Cloud Forum</td>
<td>While the Cornell Cloud Forum will return to an in-person event this year, each day there will be an hour of presentations and an hour of researcher talks. For details of the talks see, the Cloud Forum agenda.</td>
<td>Various</td>
<td>CF</td>
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| 10/29 | EDUCAUSE 2021 Face to Face meeting | 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. | Jody Couch, UC Berkeley  
Damian Doyle, UMBIC  
James Monek, Lehigh University | CCCG Running notes |
| 9/22/21 | Cloud FinOps | 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. In this session they will share those pearls of wisdom with you, their colleagues in higher ed cloud. We hope you’ll join us. | TBA | CCCG Running notes |
| 8/26/21 | Special Edition of Monthly CCCG Call | 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. 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. Please download and import the following iCalendar (.ics) files to your calendar system.
Monthly: https://edudcuse.zoom.us/meetings/3Ujk4-oTsTu/GNEQHMKlycD6gYj393BP1ri/ics?icsToken=98ByKgCppezsQfOV1BuCRowhyyqM_Twtn.1bY14milNhQt-exX1ElRbCShqNdVD
Join Zoom Meeting: https://edudcuse.zoom.us/j/91906070425?pwd=SHJzZUNYVnVWa3Z2aTJ3Tm45MUNVdz09
Meeting ID: 919 0607 0425  
Passcode: 243359 | TBA | CCCG Running notes |
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<tr>
<th>Date</th>
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<th>Panelists</th>
<th>Moderator</th>
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| 7/28/21 | NET+ GCP Summer Camp: Running the Institution on Cloud Power           | 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. | • Maneesha Aggarwal & Parviz Dave, Columbia University  
• John Bailey, Washington University in St. Louis  
• David Reid, University of Missouri |                                           | I2O   |
| 7/28/21 | Making better teams with diverse hiring and retention                  | Diverse teams are better teams! This month’s Cloud Computing Community Group is an opportunity to share principles of diverse hiring and retention. 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. |                                           |                                           | CCCG  |
|         |                                                                       | Please share this invitation with others who may be interested.                                                                                                                                      |                                           |                                           |       |
|         |                                                                       | **When:** Wednesday, July 28 2021 9am PST/12pm EST  
**Where:** [https://zoom.us/j/91519802344](https://zoom.us/j/91519802344)  
**Running Agenda/Notes:** [https://tinyurl.com/EDUCAUSE-CCCG](https://tinyurl.com/EDUCAUSE-CCCG)  
**Download the meeting invite** |                                           |                                           |       |
| 7/21/21 | NET+ GCP Summer Camp: The Power to Change Lives                       | 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. 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: | • Gilad Evrony, New York University, Grossman School of Medicine  
• Phillip Harris, Massachusetts Institute of Technology |                                           | I2O   |
|         |                                                                       | • New York University Pediatric Undiagnosed Diseases Program  
• Heterogeneous computing for the Large Hadron Collider                                                                                      |                                           |                                           |       |
| 7/15/21 | NET+ Palo Alto Networks: Cloud-native security for workloads and SaaS applications | 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. Peek (or jump) into the ongoing series of NET+ Palo Alto Networks community town hall meetings in July to learn about their security tools. |                                           |                                           | I2O   |
| 6/23/21 | NET+ GCP Summer Camp: Teach the Cloud, Teach Using the Cloud          | 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. Join the NET+ GCP Summer Camp session to hear three great stories of how GCP is being used in the classroom to teach: | • Wu-chang Feng, Portland State University  
• Geraldine Van der Auwera, Broad Institute of MIT and Harvard  
• Alan Walsh, Indiana University |                                           | I2O   |
|         |                                                                       | • Cybersecurity  
• Genomic research skills  
• Cloud computing                                                                                                                               |                                           |                                           |       |
<p>|         |                                                                       | <strong>Running notes</strong> |                                           |                                           |       |</p>
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| 6/23/21 | Open Discussion                                                      | • 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 |
| 6/10/21 | NET+ CloudCheckr Premium Webinar                                     | 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.  
See CloudCheckr in action and hear what your peers who evaluated the service think about it. |
|         |                                                                     | • David Kalish - CloudCheckr  
• Ethan Conner - Carnegie Mellon University  
• Shane Heivly - The Pennsylvania State University  
• Gerard Shockley - Boston University  
• Noah Abrahamson - Stanford University  
• Jennifer Tripplett - DLT |
| 6/2/21- 6/4/21 | Higher-Ed DevOps Conference                                         | 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!  
Check out the agenda. |
| 5/26/21 | New NET+ Services Introduced to Meet Higher Ed Community Needs      | 20 schools collaborate with Internet2 to vet and release four new NET+ services to the community.  
• CloudCheckr  
• Google Workspace of Education  
• Palo Alto Networks  
• signNow and airSlate |
|         |                                                                     | • Noah Abrahamson - Stanford University  
• Nick Young - University of North Carolina Greensboro  
• Rick Haugerud - University of Nebraska  
• Manoj Chitre - Claremont Graduate School |
| 5/26/21 | Higher Ed Case Studies of Power and Agility in the Public Cloud    | • University of California migrates PeopleSoft HR to AWS  
• University of creates powerful COVID-19 testing tracking tooling under constantly changing guidelines |
|         |                                                                     | • Karl Robertson - University of California Office of the President  
• Ken Taylor - University of Illinois, Office of the CIO |
| 5/14/20 | Unconference                                                         | Community-driven conversations on:  
• Security & Governance  
• Research & HPC  
• Cost Management & Billing  
• Service Delivery  
• Cloud Ops & Tactics  
• Getting Started & Evolving Cloud Strategy |
|         |                                                                     | • All of you! |
| 4/28/21 | Open Discussion                                                      | • 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 |
|         |                                                                     | • Jamie Sunderland - Internet2  
• Dana Brunson - Internet2  
• Kevin Murakoshi - AWS |
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<tr>
<td>4/9/21</td>
<td>Trust and Security</td>
<td>• The case for avoiding “networking” in your cloud adoption strategy.</td>
<td>John Bailey - Washington University in St. Louis</td>
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<td></td>
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<td>• Securing Security for your Cloud Strategy</td>
<td>Shelley Rossell and Cornelia Bailey - University of Chicago, Information Security</td>
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<td>• TLD TL;DR - Trust from on high</td>
<td>Sara Jeanes, Adair Thaxton, and Nick Lewis - Internet2</td>
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<td>• Panel: Protecting cloud hosted data sets</td>
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<td>3/24/21</td>
<td>Using Cloud for Research at Scale</td>
<td>• 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).</td>
<td>William O'Mullane, Igor Sfiligoi</td>
<td>CCG</td>
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| 3/12/21    | Google Team-selected Researcher Community Presentation | • 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 | Ben Rota – Harvard                                                    | CF         |
<p>| 3/5/21     | Jupyter on Google             | 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. | Marc Cohen - Google                                                   | I2O         |</p>
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| 2/24/21  | How Universities are Providing Self-Service Cloud Environments for Researchers    | Internet2 hosted webinar to help Higher Education researchers leverage new self-service, managed, cloud-based solutions.  
- 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.  
- 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 |
| 2/24/21  | Open Discussion                                                                    | 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  
- Ben Rota – Harvard |
| 2/12/21  | Amazon Team-selected Researcher + Community Presentation                          | Managing IaC Code Rot: Terratest in Action  
Using the cloud to support research access to confidential data: The Administrative Data Research Facility  
- 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 |
| 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? |
### 1/8/21 Cloud Strategy
- 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

### 2020

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| 12/11/20 | Microsoft Team-selected Researcher + Community Presentation            | • Patient-specific air flow modeling to support ventilator splitting under dire conditions  
• IAM in the cloud – architecture, cost and benefits                                                                          | 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) | Bill Thompson – Lafayette College                                                                                           | CCCG |
| 11/13/20 | Research Support                                                      | • 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 | Cornelia Bailey – University of Chicago – Moderator; Brian DeMeule – UC San Diego, Nick Weber – National Institutes of Health  
Joshua Kissee – 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. | Ben Rota and Richard Murillo – Harvard University  
Mathew Chess, Kenny Moore and Alok Vimawala – University of Michigan | CCCG |

### Notes
- **CF** indicates a Cloud Forum session.
- **CCCG** indicates a running notes session.
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<tr>
<td>10/9/20</td>
<td><strong>Cloud Community Governance</strong></td>
<td>• Bringing order to wild free range cloud through inclusive governance</td>
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<td>• Panel: Leveraging the Cloud Community</td>
<td>• Damian Doyle and Todd Haddaway – University of Maryland, Baltimore County</td>
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<td>• Oren Sreebny – Internet2 – Moderator; John Bailey – Washington University in St. Louis; Bob Flynn – Indiana University; Matthew Rich – Northwestern University; Alok Vimawala – University of Michigan</td>
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<td>9/23/20</td>
<td><strong>Open Discussion</strong></td>
<td>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.</td>
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<td>9/11/20</td>
<td><strong>Cloud Enablement Success Stories</strong></td>
<td>• Working with Cloud reserved instances to reduce costs</td>
<td>CF</td>
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<td></td>
<td>• Monitor AWS with Grafana 7</td>
<td>• Gerard Shockley – Boston University</td>
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<td>• Cloud Billing</td>
<td>• James Monek – Lehigh University</td>
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<td>• OTICA – Platform-on-a-Platform for GCP</td>
<td>• Jim Charters – University of Michigan</td>
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<td>• UCF’s Remote Learning Solution to the Pandemic</td>
<td>• Hans Jacobsen &amp; Alan Ge – Stanford Healthcare</td>
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<td>• Notre Dame’s Accelerated VDI Madness</td>
<td>• Jeff Samek, Robert Connors &amp; Bob Mello – University of Central Florida</td>
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<td></td>
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<td>• James Smith &amp; Brandon Rich – University of Notre Dame</td>
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<td>8/26/20</td>
<td><strong>From Zero To Secure Research Hero In Four Weeks!</strong></td>
<td>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.</td>
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<td>Brian Pasquini, Enterprise Architect - University of Pittsburgh</td>
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<td>8/5/20</td>
<td><strong>Q&amp;A with IU Box Migration team</strong></td>
<td>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 <a href="https://drive.google.com/drive/folders/1Z5YrND9KQ-MFrz2xSU4bd9IBSaSwS?usp=sharing">https://drive.google.com/drive/folders/1Z5YrND9KQ-MFrz2xSU4bd9IBSaSwS?usp=sharing</a>. 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&amp;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.</td>
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<td>• Adam Sweeny - Indiana University</td>
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<td>• Justin Zemlyak - Indiana University</td>
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<td>7/23/20</td>
<td>Higher Ed Cloud Networking &amp; Security Workshop - Workshop Capstone: Peer Architectures</td>
<td>Presentations from three peer institutions, each presenting their architectures and best practices on one of the three platforms. Panel discussion, Q &amp; A, Workshop wrap</td>
<td>CF</td>
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<td>7/22/20</td>
<td>Open Topic Discussion with a twist</td>
<td>Many in the community are taking part in the Higher Ed Cloud Networking &amp; 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.</td>
<td>CCCG</td>
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<td>7/9/20</td>
<td>Higher Ed Cloud Networking &amp; Security Workshop - Google Responses to Workshop Attendee Questions &amp; Challenges</td>
<td>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.</td>
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<td>7/7/20</td>
<td>Higher Ed Cloud Networking &amp; Security Workshop - GCP Security and Networking Training</td>
<td>This session of the Cloud Networking and Security workshops features Google's overview of GCP security and networking tools and best practices.</td>
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<td>6/25/20</td>
<td>Higher Ed Cloud Networking &amp; Security Workshop - Amazon Responses to Workshop Attendee Questions &amp; Challenges</td>
<td>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.</td>
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<td>6/24/20</td>
<td>Indiana University Box Migration Infoshare</td>
<td>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.</td>
<td>CCCG</td>
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<td>6/11/20</td>
<td>Higher Ed Cloud Networking &amp; Security Workshop - Microsoft Responses to Workshop Attendee Questions &amp; Challenges</td>
<td>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.</td>
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<td>This session of the Cloud Networking and Security workshops features Microsoft’s overview of Azure security and networking tools and best practices.</td>
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<td>5/28/20</td>
<td>Higher Ed Cloud Networking &amp; Security Workshop - Capturing the Questions, Listing the Challenges</td>
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<td>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.</td>
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<td>5/27/20</td>
<td>Open Topic Discussion</td>
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<td>4/23/20</td>
<td>Google Anthos presentation to Stanford cloud team</td>
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<td>4/22/20</td>
<td>UNCG Cloud Cyberinfrastructure Innovation Lab</td>
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<td>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.</td>
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<td>• Jeff Whitworth, the Associate Vice Chancellor of Enterprise Infrastructure – UNC Greensboro</td>
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<td>4/8/20</td>
<td>The Role of Cloud Computing in Higher Ed’s COVID-19 Response (Part 2)</td>
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<td>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.</td>
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<td>A lot has happened in the HED cloud world since our last open discussion. Add your topics to <a href="https://tinyurl.com/EDUCAUSE-CCCG">https://tinyurl.com/EDUCAUSE-CCCG</a>.</td>
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<td>• What are you doing to bring public cloud to the classroom?</td>
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<td>• Cloud-based VDI experiences</td>
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<td>2/26/20</td>
<td>Open Topic Discussion</td>
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<td>• A lot has happened in the HED cloud world since our last open discussion. Add your topics to <a href="https://tinyurl.com/EDUCAUSE-CCCG">https://tinyurl.com/EDUCAUSE-CCCG</a>.</td>
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<td>• Cloud-based VDI experiences</td>
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**Topic 1:** Whether Forecasting: Informing Migration Choices with Metrics  
**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:** From Operational to Predictive: Evolving from a Traditional Data Warehouse to an Analytics Hub  
**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.

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

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**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 (khallyazdi@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_bCyUsOkPsm3tAh](https://bostonu.qualtrics.com/jfe/form/SV_bCyUsOkPsm3tAh)
    - #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
  - IU GCP configuration document [https://iu.box.com/s/5h6z9f5dawie8cricg88m1v647kksw20](https://iu.box.com/s/5h6z9f5dawie8cricg88m1v647kksw20)
  - 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 28 - 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