

INTERNET2



May 8-11, 2023

Atlanta, GA



# BUILDING A COHESIVE CLOUD COMMUNITY

Sarah Christen, Cornell University

Damian Doyle, UMBC

Bob Flynn, Internet2

# Agenda

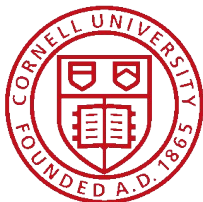
- Higher education's superpower
- Identify a need
- Building the community
- Keeping it together
- Healthy growth

# Introductions



**Sarah Christen**

**Director of IT Infrastructure  
Cornell University**



**INTERNET2 2023 COMMUNITY EXCHANGE**



**Damian Doyle**

**Deputy CIO and Interim CISO  
University of Maryland –  
Baltimore County**



**UMBC**



**Bob Flynn**

**PM, Cloud Infrastructure  
and Platform Services  
Internet2**



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**What would you like to get out of this conversation**

① Start presenting to display the poll results on this slide.



## What would you like to get out of this conversation

9



Anonymous

Better understanding of the cloud practice in Higher Education



Anonymous

Learn about and share cloud migration strategies



Anonymous

Collaboration to push vendors for solutions for higher Ed.



Anonymous

Multicloud challenges



Anonymous

I want to know where Damian spends all his time



Anonymous

Ming



Anonymous

How to add a better in person experience to the vibrant virtual communities I help with.



Anonymous

As a part of the community I'd like to know how we got to where we are today.



Anonymous

Better understanding

Edit

# Community and collaboration are our superpowers

- ★ It sets the higher ed IT community apart
- ★ It is in our DNA
- ★ Build on our common goals
- ★ Do together what can't be done individually



# Identify a Need



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# 2010 - 2014

- Hyper-scale computing was just emerging
- Disparate conversations started as people recognized the need
- Small working groups sprung up – collaborating on product implementation, evaluation of services, white papers
- Narrowly focussed conversations on specific products (i.e. Box) or product areas (i.e. Collaboration Tools)

2010	2011	2012	2013	2014
Educause Cloud Computing Constituency Group (CCCG)				
	Common Solutions Group Cloud Conversations			
		Internet2 NET+ Program		
			Internet2 CloudProud Program	
			Monthly Cloud Calls	
				CSG Cloud Architecture Summit



# 2010 - 2014

EDUCAUSE | CENTER FOR APPLIED RESEARCH

## Structuring the IT Organization for Cloud Services

Beth Schaefer, University of Wisconsin–Milwaukee  
Melissa Woo, University of Wisconsin–Milwaukee

EDUCAUSE

## What Campus Leaders Need to Know About Cloud Computing

An EDUCAUSE Executive Briefing



**CLOUDPROUD**

EDUCAUSE

LEARNING INITIATIVE

## THINGS YOU SHOULD KNOW ABOUT...™ ORGANIZING FILES IN THE CLOUD

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CloudProud CIOs

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**Where would you like to  
build community?**

① Start presenting to display the poll results on this slide.



Where would you like to build community?

8 A small grey icon of a person, representing the number of users or participants.



Secure research using cloud

With regional networks

Young professionals

Virtualization

Research compute nodes

**Building the community**

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# Cloud Forum 2015

## Why did we start the Cloud Forum?

Making the case for cloud requires a shift from opex to capex. Most cloud discussions were technical discussions. There needed to be a higher level, how to make the case for cloud discussion.

## Who did we reach out to?

RUCC, CSG, other known cloud groups

## Guiding Principles

- small enough to have open discussions
- vendors are there to learn not sell
- opportunity to showcase cool cloud research

# 2015 - 2019

- Increasing collaboration on white papers and working groups
- Small workshops focussed on architecture and technology
- Beginnings of larger efforts and events as individuals begin to address gaps and broaden the reach of existing conversations
- Leveraging existing venues and creating new ones

	2015	2016	2017	2018	2019
Educause Cloud Computing Constituency Group (CCCG)					
Common Solutions Group Cloud Conversations					
Internet2 NET+ Program					
Internet2 CloudProud Program					Internet2 Tech Exchange ad hoc Cloud track
Monthly Cloud Calls					
CSG Cloud Architecture Summit				Cloud Network Connectivity and Network Automation Workshop	
Cloud Wiki					
Cornell Cloud Forum					
EDUCAUSE Pre-conference Cloud Workshop					
					Internet2 Global Summit Pre-conference Cloud Workshop



2015 - 2019

TCO for Cloud Services

A Framework

ECAR Working

ECAR

Preparing the IT Organization for the Cloud

An Introduction

ECAR Working

ECAR

Research Computing in the Cloud

Functional Considerations for Research

ECAR Working Group Paper | July 15, 2015

ECAR

Cloud  
Networking  
Workshop



Cloud 101 Workshop at  
Internet2 Global Summit



CLOUD STRATEGY FOR  
HIGHER EDUCATION

Building a Common Solution

November 2014

Cornell Cloud Forum



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**What conversations are taking place, and who is active in them?**

① Start presenting to display the poll results on this slide.





## What conversations are taking place, and who is active in them?

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Anonymous

Conversations like how machine learning and AI bots can be implemented for a university use case, few management positions and students primarily.



Anonymous

AWS Higher Ed CIO group



Anonymous

Monthly virtual call for the commtech group, every other month call jointly between netman and wireless. Also mailing list and slacks for each. Plus a session at EDUCAUSE and, historically a preconference day jointly.



Anonymous

List serv

Established professionals

Keeping it together

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# 2020 to Present (and Future)

- So many things happening... Then... The Pandemic
- Started converting events from immersive in person to spread out focused workshops.
- First test: Networking Workshops
- The result: It was a huge success!

But....

Now everything looks the same, virtual this, monthly that.....

How do we make ----->  
all this make sense

	2020	2021	2022	2023	20xx
Educause Cloud Computing Constituency Group (CCCG)					
Common Solutions Group Cloud Conversations					
Internet2 NET+ Program					
Monthly Cloud Calls					
Cloud Networking & Security Workshop	Higher Ed DevOps Conference		CLAC Mindshare - Cloud Computing		
Cloud Wiki					
Cloud Forum Online	Cornell Cloud Forum	Higher Education Cloud Forum			
EDUCAUSE Pre-conference Cloud Workshop					
		Internet2 Tech Exchange Cloud track			
	Cloud FinOps Working Group		Cloud Best Practices Working Group		



# Building a cohesive experience

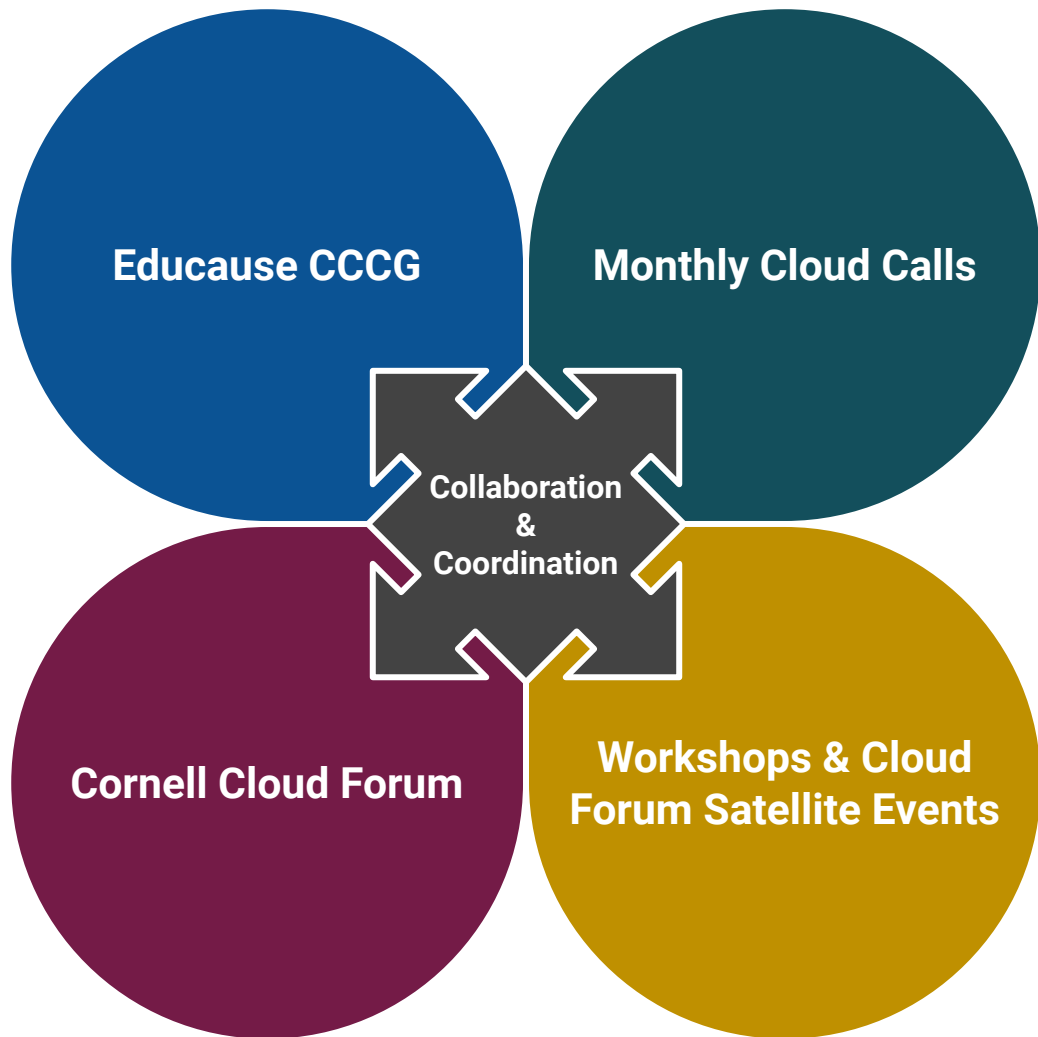
Re-imaged Cloud Forum as year long event.

- CCCG role:
  - Umbrella for communications
  - Advertisement/amplification
- Internet2:
  - Calendar of Cloud events
  - Wiki/landing page
  - Zoom rooms/support

Result:

- Brought in new voices
- Attendance tripled, no physical limits on space/travel
- Put conversations and topics into a broader context

**Most importantly - making it all work as one big community effort**



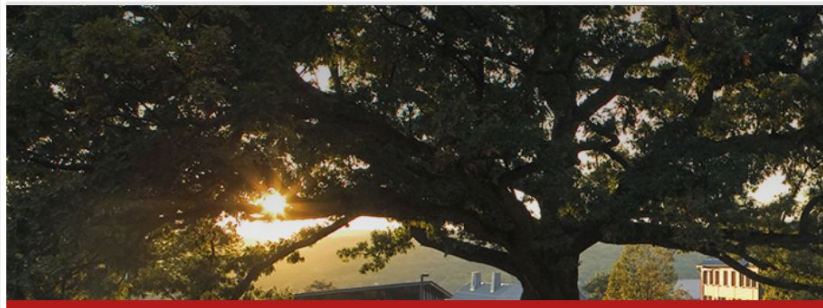
# 2020 to Present

## Cloud FinOps Top Tips

A Higher Ed Community Discussion



Cornell University



## Cloud Forum 2020 – reformulated

Network Automation and Cloud Networking & Security Workshops  
presented by Indiana University, the University of Michigan, Internet2, and the Cloud Forum

INTERNET2 I Want To... Network Security Cloud Community  
2022 Internet2 Technology Exchange | Dec. 5-9, Denver, Colo.  
**Cloud Sessions**  
Cloud Track Sessions Home / Monday / Tuesday / Wednesday / Thursday / Back to Program  
Emerging Cloud Technologies for Your Institution

Home Schedule Travel Resources  
**CLOUD COMPUTING**  
A CLAC Mindshare Event - Davidson College - April 24-26, 2023  
**THAT'S A WRAP!**  
Thank you to all of you! The [resources page](#) is updated with many links to resources developed and mentioned during the mindshare event.  
Please keep the conversations going with the folks you met! See you next time.  
~Nick

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**What can you do and who can you recruit to join you in building your community?**

① Start presenting to display the poll results on this slide.



What specific steps are you going to take going forward to build your community?

2 



Anonymous

<https://tinyurl.com/edu-cloud-community>



Anonymous

Nag Bob for an I2 contact to figure an in person option at techex

Healthy growth

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# Evaluating post-pandemic community and events

- Being intentional about finding and cultivating new voices
- Turnover in both people and schools - healthy and natural
- All new planning committees but with role consistency
  - e.g. Internet 2 Cloud Track, CCCG Co-chairs managed first one, using similar roles as with cloud forum
- Cross CG talks
  - Research CG, Small School CG, DevOps CG



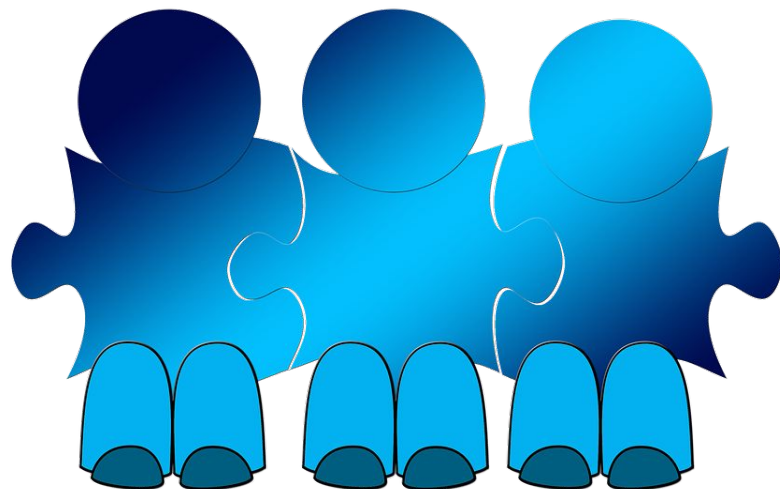
# Narrowing and expanding conversations

Critical mass allows you to address specific issues:

- FinOps working group
- Best practices working group

A strong base allows you to expand the tent:

- Networking workshop at '21 Cloud Forum brought the vendors into the conversation on our terms
- CLAC Mindshare on Cloud



# Community and collaboration are our superpowers

- ★ The power is there to use to benefit your colleagues and institution
- ★ It only takes one person to step up and get things going
- ★ With great power comes great responsibility (and great things will follow)



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**What specific steps are you going to take going forward to build your community?**

① Start presenting to display the poll results on this slide.



## What can you do and who can you recruit to join you in building your community?

6



Anonymous

Offer to be a co presenter to help those uncomfortable with presenting to get them on the stage



Anonymous

Connect with Cloud users and operators around campuses, learn about what they are interested in and doing with cloud.



Anonymous

Getting leadership to Cloud Forum including research IT, and getting technical folk to TechEx.



Anonymous

Encourage additions to the budget for learning opportunities framed around building the next generation of professionals. Allocate team time to present and engage in communities.



Anonymous

Better organize internally to help build out community



Anonymous

Leveraging our vendor friends for who they think we should reach out to to talk. Sometimes they know about something interesting another institution is doing that the community facilitators don't.



Anonymous

Need to get the security team better involved.



Anonymous

Share event info with my network

Edit

# Thank you

Sarah Christen, [sjc37@cornell.edu](mailto:sjc37@cornell.edu)  
Damian Doyle, [damian@umbc.edu](mailto:damian@umbc.edu)  
Bob Flynn, [bflynn@internet2.edu](mailto:bflynn@internet2.edu)



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