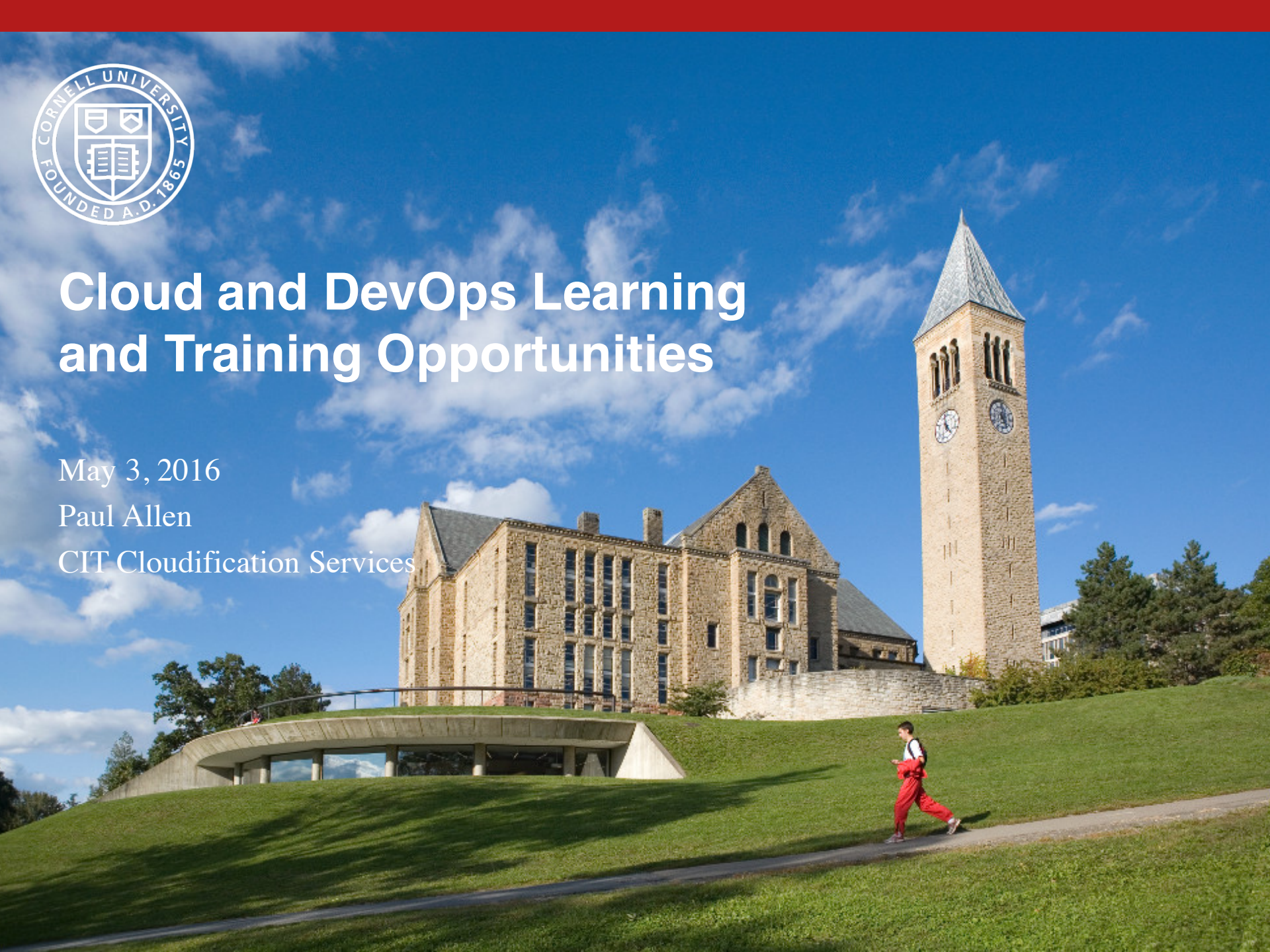


# Cloud and DevOps Learning and Training Opportunities

May 3, 2016

Paul Allen

CIT Cloudification Services





# Cloudification Services Team

## Mission:

Facilitate Campus' transition to the cloud while encouraging modern DevOps practices

## Team

- Shawn Bower
- Ned La Celle
- Marty Sullivan
- Paul Allen
- Nicole Rawleigh
- Sarah Christen (mgr)



# DevOps

- What?
  - infrastructure as code
  - blah, blah, blah, ...
- Tools of the Trade
  - IaaS, PaaS: AWS, Azure, ...
  - continuous integration/deployment: Jenkins, ...
  - configuration management: Chef, Puppet, Ansible
  - containers: Docker, ...
  - monitoring: ELK (Elasticsearch, Logstash, Kibana), PaperTrail, CloudCheckr, OpsGenie, Pingdom, New Relic, ...



# Connecting with Cornell's Cloud Community

- Monthly cloud practitioners meeting
  - e.g. Ansible for Class Roster
- HipChat AWS room
- Cloudification Services Confluence site
- Monthly training
- CU-CloudCollab GitHub
- General queries:
  - `cloudification-l@list.cornell.edu`
- Specific requests:
  - `cloud-support@cornell.edu`

<https://confluence.cornell.edu/x/MtPeEw>



# On-campus, In-person Training

- Past
  - AWS EC2/RDS 101 (~quarterly)
  - AWS Lambda & API Gateway
  - Azure Hands On 101
  - Docker (bi-annually)
- Upcoming - May 20
  - AWS EC2 Container Service (Docker in AWS)
- What do you want?

<https://confluence.cornell.edu/x/0qOoEw>





# Tutorials and Online Training

## qwikLABS – “official” AWS training

- hands-on
- free intro courses
- Payment options
  - Unlimited \$55/m
  - or, per course

The screenshot displays the qwikLABS website interface. At the top, there is a navigation bar with the qwikLABS logo, a search bar, and links for 'Create New Account' and 'Sign in'. Below the navigation bar, there are tabs for 'Quests (16)' and 'Labs (96)'. A table lists various AWS training labs, including 'Introduction to Amazon Elastic Block Store (EBS)', 'Introduction to Amazon Elastic Compute Cloud (EC2)', 'Introduction to Amazon Elastic MapReduce (EMR)', 'Introduction to Amazon Relational Database Service (RDS) (Windows)', 'Introduction to Amazon Simple Storage Service (S3)', 'Introduction to AWS Elastic Beanstalk', 'Introduction to Elastic Load Balancing', and 'Introduction to AWS CloudFormation'. Each lab entry includes a title, level, cost, and a globe icon. To the right of the table, a detailed view of the 'Compute & Networking' quest is shown, including an 'Enroll' button, a description of the quest, learning objectives, and a badge earned. The badge is labeled 'Compute & Networking' and 'Support'.

Title	Level	Cost
Introduction to Amazon Elastic Block Store (EBS)	introductory	FREE
Introduction to Amazon Elastic Compute Cloud (EC2)	introductory	FREE
Introduction to Amazon Elastic MapReduce (EMR)	introductory	FREE
Introduction to Amazon Relational Database Service (RDS) (Windows)	introductory	FREE
Introduction to Amazon Simple Storage Service (S3)	introductory	FREE
Introduction to AWS Elastic Beanstalk	introductory	FREE
Introduction to Elastic Load Balancing	introductory	FREE
Introduction to AWS CloudFormation	introductory	FREE

**Compute & Networking** [Enroll](#)

In this quest, you'll learn to work with services related to Compute and Networking, including Amazon EC2, Amazon Elastic Load Balancing, and Amazon Virtual Private Cloud (VPC).

**Learning Objectives:**

- This quest is designed to teach you how to work with AWS services for Compute and Networking.

**Badge Earned:**

**Total Lab Credits:** 64

**Total Hours:** 04 h:08 m

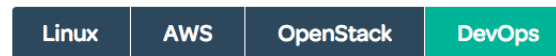
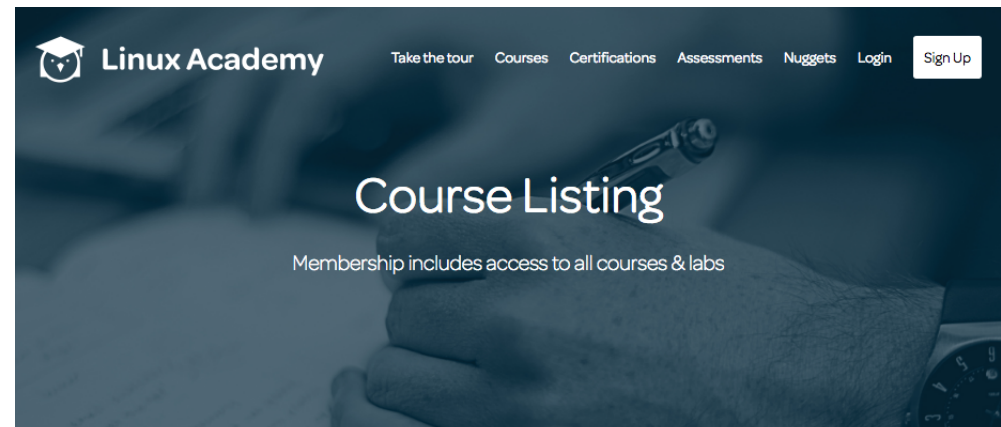
**Support**



# Tutorials and Online Training

## Linux Academy – AWS, DevOps, Linux

- hands on
- certification prep courses
- Payment options
  - Unlimited \$29/m
  - Cornell group license



### DevOps Training



# Tutorials and Online Training

## **Lynda** – limited AWS

- free to Cornell
- 3 recent courses
  - AWS Enterprise Security (Apr-2016)
  - AWS Data Services (Sept-2015)
  - Fundamentals of Cloud Data Storage (Sept-2015)





## More Resources

- [AWS Whitepapers](#)
  - “Architecting for the Cloud – AWS Best Practices”
  - ...
- [Cornell Libraries Online](#)
  - [Books 24x7](#)
  - [Safari Books Online](#)
- [Cornell Cloudification Tech Blog](#)
  - “The Cornell Standard VPC”
  - “Automatic OS Patching”
  - ...



## April-2016 Hackathon

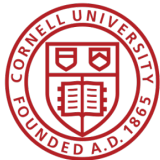
- 15 people (veterans  $\leftrightarrow$  newbies)
- AWS gaps solved
  - update DNS for variable IP on boot
  - update AMU for auto-scaling group
  - automate growing size of root EBS
  - automate config of logging for ELB
  - find & restore EBS snapshot

<https://github.com/CU-CloudCollab/aws-gaps>



# GitHub CU-CloudCollab

- you are welcome - 100% public
- examples
  - aws-examples – CLI examples
- tools repos
  - cucloud\_module - Python cloud library
  - ebs-restore
- aws-gaps
  - list of gaps as “issues”
  - e.g., autokill instances based on tag
- <https://github.com/CU-CloudCollab/aws-gaps>



## “100 Days DevOps” Training

- Mentored, focused training
- Activities
  - mini devops project
  - programming exercise
  - Linux Academy-AWS Architect Associate
  - Linux Academy-Chef/Puppet/Ansible
  - The Phoenix Project

