



**EDUCAUSE**  
ANNUAL CONFERENCE **2016**

#EDU16

# Cloud-Adoption Strategies: Using the Cloud to Enable the Future University

Greg M. Smith • Mohammad A. Haque  
University of Maryland University College



# Who we are

- Part of the University of Maryland system
- 84,000 students world-wide, 95 degree programs and certificates
- Replaced every major system at the university in the last four years
- Today, we have a cloud-first approach

# Global footprint



# UMUC IT in the Past

- Self-hosted and homegrown LMS (WebTycho) – best technology 1999 had to offer
- Hardware and technology older than your 4<sup>th</sup> grader
- Lots of “heavy metal”
- Low morale in the operations team
- Lack of strategic direction
- Series of turnover at all levels
- Multiple staff layoffs over 2 years (2012 – 2013)

# Stages of Cloud Migration

## Project

- Idea Stage, limited knowledge of Cloud services
- Lack of ownership and confidence in the Cloud

## Foundation

- Assign resources, begin planning
- Security and budget questions

## Migration

- Define, develop and implement strategy
- Manage the environment, complete all target systems

## Optimize

- Costs and service management
- Application and Enterprise Services



# Gary Reid – Color of Thinking



Blue

- Pie in the sky thinking, not based on “rational” thoughts



Red

- This is the way we have always done it, this is the way we are always going to do it. Data Driven



Yellow

- Combination of “Blue” and “Red” thinking to devise action plan



Green

- Everyone is acting in concert, moving forward together

# Our Cloud Migration Stages

## Stage 1 – Blue

- “Everything is moving to the cloud”
- Migrate Exchange to G Suite /  
Outsource PeopleSoft
- Several failed starts migrating  
infrastructure to the cloud - ownership
- No recognition of the people side

# Our Cloud Migration Stages

## Stage 2 – Red

- We do data centers
- We are going to do the same thing we do in our physical data centers
- Data Driven – Need single pane of glass for the environment
- “The Meeting”



# Our Cloud Migration Stages

## Stage 3 – Yellow

- It comes all together
- Defining processes
- Transforming administrators to engineers
- Built, Test, Approve, Launch

# Our Cloud Migration Stages

## Stage 4 – Green

- Completed migration
- Optimizing the experience
- Reviewing lessons learned
  - This is not your father's data center
- What is next?

PROJECT

triton

- Born from a request from our academics
  - Replace an existing VDI vendor who was failing to meet the needs
  - Provide persistent experience for “life of a student”
  - Integrate into our classroom experience
  - Support programs from MBA to Cyber Security and everything in-between
- RFP wasn’t successful and cancelled

# Mid-April / May



- Met with Amazon
  - Change in the billing model
  - Integration into our classroom
  - Access to engineers and roadmap
- Internally
  - Built our internal business case
  - Captured high level requirements from the RFP

# June 2016



- Secured 2.5M investment funding for staff and 1<sup>st</sup> year operating costs
- **Unanimous** support from CTO, SVP of APT, Deans of the Graduate and Undergraduate Schools, VP Learning & Faculty Experience and Provost
- AWS Public Summit – DC

# July 2016



- Operate as an internal start-up
- Hire - Product Managers, Support and Cloud Engineers and Project Manager
- First integration prototype – *something the existing vendor couldn't accomplish.*
- Trips to Seattle

# August 2016



- Build the classroom experiences
- Integrate into the classroom
- Test, test, test!
- Deploy first round ~400 WorkSpaces

# September 2016

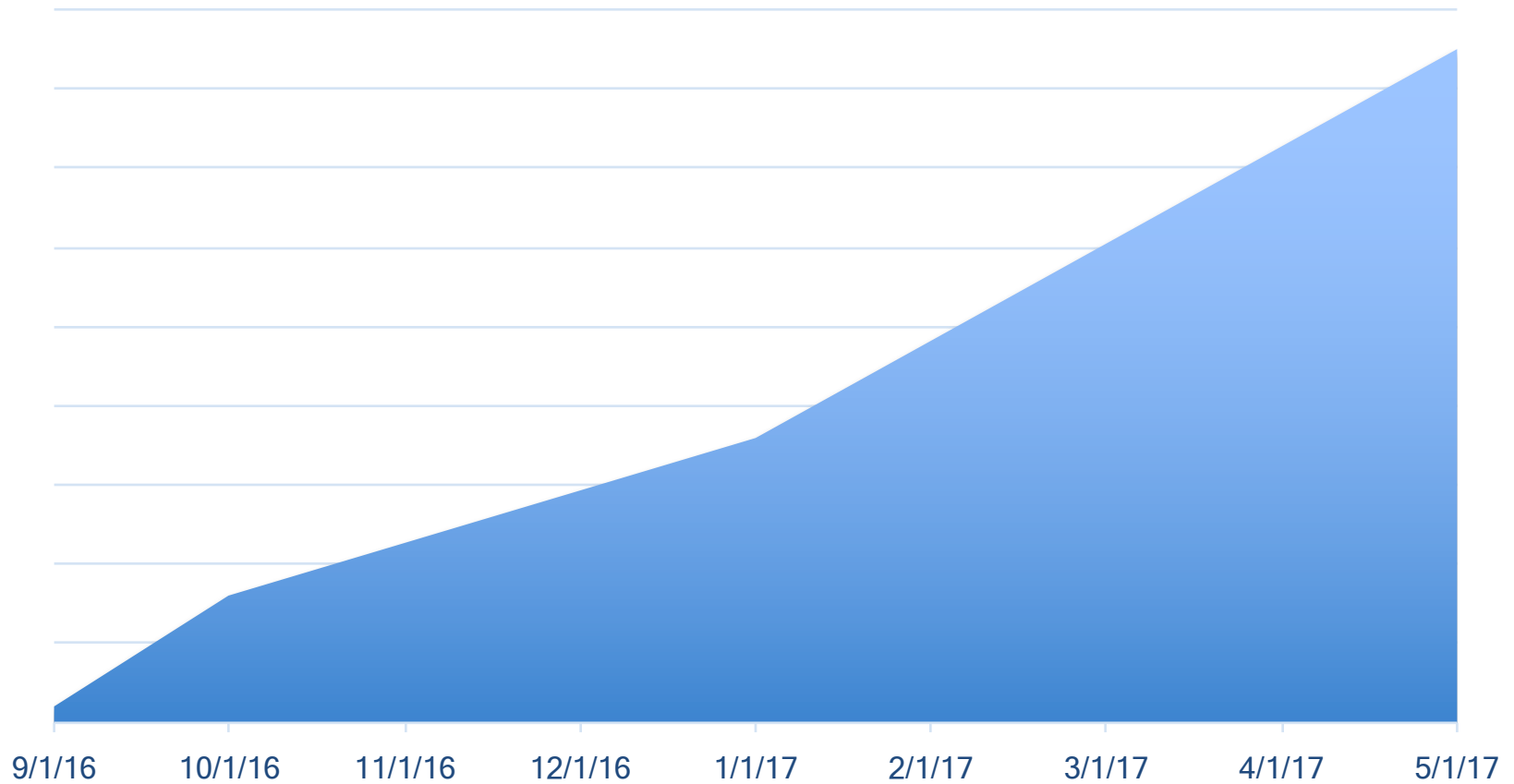


- Built October start date courses
- Developed scalable Cyber Lab
- Deployed additional 2800 WorkSpaces
- Usage of 160,000 hour since launch
- Total support tickets since launch: **30**



# Project Triton – Expected Usage

## Provisioned WorkSpaces



# Impact to the University



- Student first experience
  - Access to experiences they never had before
  - Analytics to help our students learn
  - Part of the classroom experience – not an after thought
  - Anywhere access – critical to success
- 10 smart people in a room
- Partnership with key technology vendor

# Three Takeaways

- Don't be afraid to jump in and just try. The tools available make it easy to adjust course
- The status quo does not work when making the move
- Don't forget the people – it is more about the human factor than 0s and 1s

# Contact Information

## **Greg M. Smith**

AVP, Enterprise Operations • [greg.smith@umuc.edu](mailto:greg.smith@umuc.edu)

<https://www.linkedin.com/in/gmsmith>

## **Mohammad A. Haque**

Solutions Architect • [mohammad.haque@umuc.edu](mailto:mohammad.haque@umuc.edu)

<https://www.linkedin.com/in/batmanppc>

# Help Us Improve and Grow

Thank you for participating  
in today's session.

We're very interested in your feedback. Please take a minute to fill out the session evaluation found within the conference mobile app, or the online agenda.