

## CCITP - Meeting Notes

Date: Thursday 5/3/2018

Time: 2:00-3:30

Location: TLC 215

Zoom: <https://cuboulder.zoom.us/j/945880316>

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**Next meeting is Thursday, June 7, 2018**

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Attendees (15): Chris Bell, Dylan Sallee, Gena Welk, Jim McKown, Melanie Pappas, Duncan McBogg, Erika Kleinova, Deb Hamrick, Julian Kinsman, Jeff Greene, Manny Wayo, Dominique Ingoglia, Sante Jonker, Jennifer Methlie, Jerry Spivey

Attending remotely (20): Jon Budoff, Joey LaConte, Jeff Groth, Ian Lenehan, Greg Hoppes, Gina Scott, Eric Heltne, Dustin Rumsey, David Panish, Dave Kohnke, Bryan Radke, Ashton Mellott, Todd Schaefer, Ben Mandel, Scott Griffith, Robert Dixon, Sean Pease, Paul Stallworth, Patrice Thoresen, Josiah Workman

### Agenda:

	Topic	Time	Speaker(s)
1	Introductions / Agenda Review / Announcements / Follow-up	2:00	Chris Bell
2	Endpoint Management Services	2:15	Jeff Greene
3	Classroom AV and Labs	2:40	Julian Kinsman and Duncan McBogg
4	Draft SaaS Purchase Guidance	3:10	Orrie Gartner and Sarah Braun
5	Decision & Action Item Review		Gena Welk

## **Agenda 1: Introductions and Announcements**

(led by Chris)

### **Digital Signage Update**

From Joanna Bertrand in the Office of Strategic relations:

*On Tuesday, May 15 the Digital Signage (Four Winds) service is transitioning from OIT to Strategic Relations.*

*Strategic Relations and OIT have agreed to cover the cost of the campus Four Winds license for one year. OIT will be sending out detailed information to digital sign stakeholders next week about the service transition and support resources going forward.*

*As part of this transition, the digital sign service offering is going to be re-evaluated. The Strategic Relations team will be spending the next few months meeting with stakeholders, gathering business requirements and proposing a plan for a new Digital Sign Service to campus leadership this fall. Additional communications will be issued during this process and once decisions have been made.*

*Four Winds will remain available to campus through June 30, 2019. However, this vendor's service has been found to be inaccessible and campus will most likely transition to a more accessible digital signage solution. Please be wary of paying for content development, as it may not be available past June 2019. In addition, Strategic Relations is suggesting that departments reach out to them before moving forward with implementing new signs and/or engaging with digital sign vendors. Information about this will be part of the communications going out later next week.*

**Tech Talks** - OIT hosts presentations every two weeks on technology topics and all are welcome to attend. OIT provides lunch if you RSVP prior to 3:30 on the Monday before the talk. Talks are hosted in the Computing Center, Room 123 (3645 Marine Street)

The upcoming topics are:

1. 5/16/18: Cloud Architecture Strategy with Adrian Cockcroft (Amazon Web Services)
2. 5/30/18: #46 Degree Audit with Joseph Ciecior

To RSVP and for more information, please visit the website:

<https://www.colorado.edu/techtalks/>

## **Agenda 2: Endpoint Management Services (EMS) - Jeff Greene**

(slides attached at the end of the meeting notes)

What is an endpoint? An endpoint is anything with an ip address and connected to the network.

EMS uses the following for managing endpoints:

- SCCM - to manage Windows endpoints
- Jamf Pro - to manage Apple endpoints

OIT's service goal is not for EMS to manage your machines -  
But rather, to help you manage your own machines.

We (EMS) will provide the tools (such as SCCM and/or Jamf Pro), and you provide the trained administrators. (This only works if you have AD clients)

There is no need for you (ITP) to spend time doing what OIT is already doing - let us implement the management software for you so you can spend time on your departmental needs.

How to reach Jeff Greene and/or his team?

- 5-HELP - ask for the service team that works with SCCM and Jamf Pro
- oit-dl-sccm@colorado.edu
- oit-dl-jamf@colorado.edu
- greene@colorado.edu

ITP question: Where can we be trained to become admins on these tools?

One suggestion is New Horizons Computing Learning Center (<https://www.newhorizons.com/>), where they host a 5-day training - some consider it an investment but well worth it.

## **Agenda 3: Classroom AV and Labs - Julian Kinsman and Duncan McBogg**

(slides attached)

### Classroom AV, presented by Julian

- OIT supports technology in centrally scheduled classrooms.
- Lecture hall upgrades coming in 2018
- Real time monitoring coming to classrooms in 2019

### Classroom Capture and Distance Learning, presented by Duncan

- Some classroom captures is generally funded, and they also offer auxiliary services.
- 39 classroom capture rooms across across campus
- 15 distance learning classrooms across across campus
- "1 out of 3 students use classroom capture." There is a growing need but there is also a resource hurdle to be overcome.

#### Computing Labs (run by Dilan Weerasinghe)

- Computing labs are increasing across campus. (Surprise! NOT decreasing.)
- Labs across campus are increasingly being managed by OIT because of economies of scale and efficiencies.
- This is a significant value offered by OIT for ITP's to take advantage of.
- Coming up in labs:
  - Live lab maps!
  - Demand forecasting!
  - Reporting on quantity of logins and what software gets used!

ITP Question concerning AV Space Planning & Design: Looking beyond classrooms, do you also provide consultation on administrative spaces such as conference rooms or lobbies?

Answer: Yes!

ITP Question: In regards to classroom capture - are there adjusted fee schedules for things that are not class related, but university related?

Answer: Over the next year, costs will be analyzed to see what we can offer and what we are willing to accommodate.

ITP Question: Is it an option to capture locally instead?

Answer: As part of MyMediaSite you can capture locally but this is currently being evaluated to see how it works for us.

ITP Question: What to expect with Adobe software for labs, now that it's not funded by CU due to their change in licensing costs and management?

Answer: This is under review. We know that CS6 is not sustainable going forward and have yet to come up with a workable plan for Creative Cloud. More to come here.

From Dylan, ITSGB (IT Student Governance Board) president: ITSGB has a goal of attaining Adobe licensing for students (paid for) or at a reduced rate. Send email to [itsgb@colorado.edu](mailto:itsgb@colorado.edu) if you want to help them.

#### **Agenda 4: Draft SaaS Purchase Guidance:** Sarah Braun and Orrie

<https://www.cu.edu/ois/choosing-saas-solution> (view in this doc, as captured on 5/8/2018)

A cross-campus committee was formed to examine the challenge of purchasing SaaS products (whether on P-cards or not) and illustrating the current SaaS landscape across the CU Systems. Some of the questions under evaluation include:

- *Will department-purchased SaaS integrate effectively with campus systems?*
- *Does it work with identikey?*
- *Are there concerns regarding data offerings and privacy?*
- *Are we making enough purchases that we could be qualifying for a bulk discount?*

The “SaaS Checklist” is a work in process. Consider these items before you procure a service.  
(<https://www.cu.edu/ois/choosing-saas-solution>)

The committee is looking for your feedback

Please give comments to Sarah Braun ([sarah.braun@cu.edu](mailto:sarah.braun@cu.edu)), Jason Armbruster ([Jason.Armbruster@Colorado.EDU](mailto:Jason.Armbruster@Colorado.EDU)), or Mike Viola ([michael.viola@cu.edu](mailto:michael.viola@cu.edu)) via email.

ITP Question: How does this relate to the forms for ICTReview?

They are currently separate processes as the SaaS Purchase guidelines are still being developed. Ideally they would be integrated, but that is a longer term program.

Phase 2 of this committee task might be a centralized reviewed software list with guidance on how to acquire it.

#### **Agenda 5: Decision & Action Item Review**

No items raised.

#### **Reminder: Here is how OIT communicates with IT Practitioners:**

- **OIT Weekly email**  
To get on the list, click “Submit your Information” on this page:  
<https://oit.colorado.edu/about-oit/oit-campus-outreach>
- **OIT News**  
To see the main headlines go to the OIT news page:  
<https://oit.colorado.edu/news>
- **OIT Service Alerts**  
<https://oit.colorado.edu/service-alerts>
- To **subscribe** to OIT Service Alerts and News, go to  
<https://oit.colorado.edu/subscriptions>
- **OIT Home**  
<https://oit.colorado.edu/>

#### **How ITP’s communicate with ITP’s:**

- **Membership in ITSuppComm email discussion group.** The IT Support Community discussion group is a CU Boulder peer-to-peer discussion group for all things technical. You can submit a question to your IT peers by sending an email to [itsuppcomm@lists.Colorado.EDU](mailto:itsuppcomm@lists.Colorado.EDU).





# Endpoint Management Services

## SCCM and Jamf Pro



Office of Information Technology  
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# Who or what is EMS?

- Bomgar
- Large File Transfer
- Identity Finder
- VDI
- SCCM
- Jamf Pro





# SCCM

System Center Configuration Manager

- Enables departments to manage their own Windows endpoints
- Deploy new machines and software quickly
- Inventory and patch compliance reporting
- BIOS and driver management



# Jamf Pro

- Enables departments to manage their own Apple endpoints (MacOS, iOS, tvOS)
- Integration with Apple DEP and VPP for Education
- Inventory and reporting
- Full support for zero-touch deployments



# What's included?

- Off-campus patching and software delivery
  - COMING SOON for Jamf Pro
- Software packages and updates
- Self-Service portals
- Close to zero-day availability of new OS versions



# What's expected of me?

- We provide the tools, software and support, you provide the admin(s)...
- ...we mean TRAINED admins
- Client machines exist in the ad.colorado.edu domain



# We drink our own champagne



# OK, enough. What's it cost?



- **\$4.28** client/month
- Significant discounts based on number of clients, starting at 150
- Contact EMS for a quote



# What does that pay for?

- Infrastructure
  - Servers, redundant DPs, PKI, dev and test
- Software and Support
  - 3<sup>rd</sup> Party Patching, escalated vendor support
- Staff
  - 4 full-time trained and certified employees





# What's in it for me?

- Spend IT time on projects specific to your department or school
- Better security
- More options for your customers



# Questions?

Here's where you can get answers:

- 5-HELP
- [oit-dl-sccm@colorado.edu](mailto:oit-dl-sccm@colorado.edu)
- [oit-dl-jamf@colorado.edu](mailto:oit-dl-jamf@colorado.edu)
- [greene@colorado.edu](mailto:greeneg@colorado.edu)



A scenic view of the University of Colorado Boulder campus. In the foreground, there are trees with vibrant autumn foliage in shades of orange, yellow, and green. Behind the trees, a large, historic red brick building with a prominent central tower and arched windows is visible. In the background, a range of rugged, rocky mountains rises under a blue sky with scattered white clouds. An American flag flies on a tall pole in front of the mountains.

# Learning Spaces Technology

Office of Information Technology



University of Colorado **Boulder**



# Learning Spaces Technology (LST)

- LST creates and supports enhanced spaces and experiences with audiovisual technologies, educational tools, and software platforms.
- Services
  - Technology Equipped Classrooms
  - Auxiliary A/V Service
  - Classroom Capture
  - Zoom Web Conferencing
  - Computing Labs
  - CU Clickers

# Growth in Learning Spaces Technology

- **Technology Equipped Classrooms**
  - In the last 10 years, LST supported spaces have grown from 107 to 344
- **Computing Labs**
  - 9 new labs since January of 2017, supporting 154 new devices
- **Classroom Capture**
  - 20% Increase in usage from 2016
- **Zoom Web Conferencing**
  - Over 350% increase in usage since 2015

# Technology Equipped Classrooms

- Out of 585 classrooms on campus, 214 are centrally supported by LST
- **How does CU Boulder use it?**
  - Standardized presentation systems for a common user experience across environments
  - Intuitive control systems for ease of use
  - Increase focus on teaching vs technology
  - Proactive and reactive support for instructors

# Technology Equipped Classrooms

## Summer 2018 Lecture Hall Upgrades

- Touch panel standardization for accessibility and ease of use
- 24 High output laser projectors will be installed into 14 lecture halls
- New rechargeable microphone systems for all lecture halls
- Old document cameras will be replaced with new digital units with LCD preview screens



# Technology Equipped Classrooms

## Future Developments

- By Fall 2018, all 214 supported classrooms will have digital connection capabilities (HDMI)
- In FY18/19, 115 classroom LCD projectors will be replaced with laser LCD projectors
- By 2019, remote monitoring tools will be in place for 230 classrooms
  - Providing real-time monitoring capabilities

# Auxiliary A/V Service

- **What is it?**
  - A/V Consultation, Design, Installation, Crestron programming, AV system Commissioning, Support and Maintenance
  - Equipment Sales
  - Event Support
  - Projector/Screen Rentals

# Auxiliary A/V Service

- **How does CU Boulder use it?**
  - Various departments and Colleges utilize this service to meet their departmental A/V needs:
    - UMC
    - Wolf Law
    - Housing and Dining
    - University Libraries
    - MCDB
    - College of Engineering
    - Physics

# Auxiliary A/V Service



# Auxiliary A/V Service

- Competitive Labor Rates
- On campus resource
- Hourly Rates for FY18-19

\$93 - Design & Programming

\$70 - Project Management & Integration

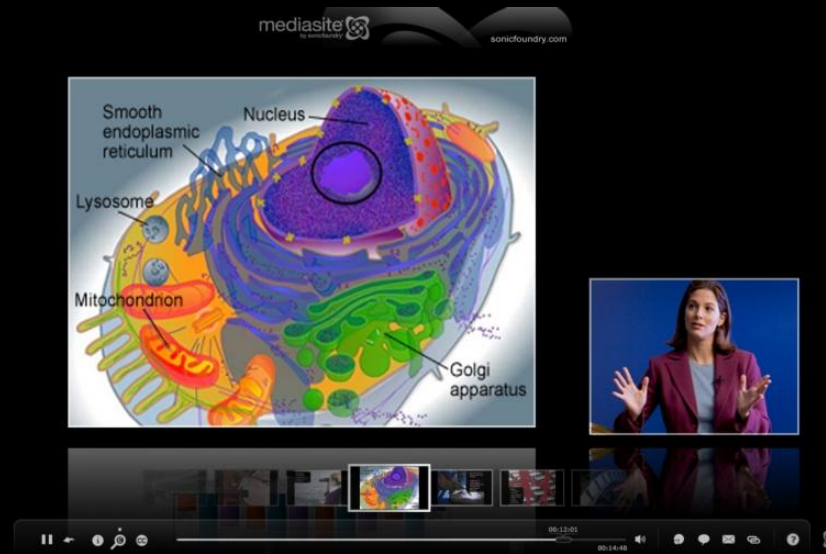
\$17 - Student AV Support

# Classroom Capture



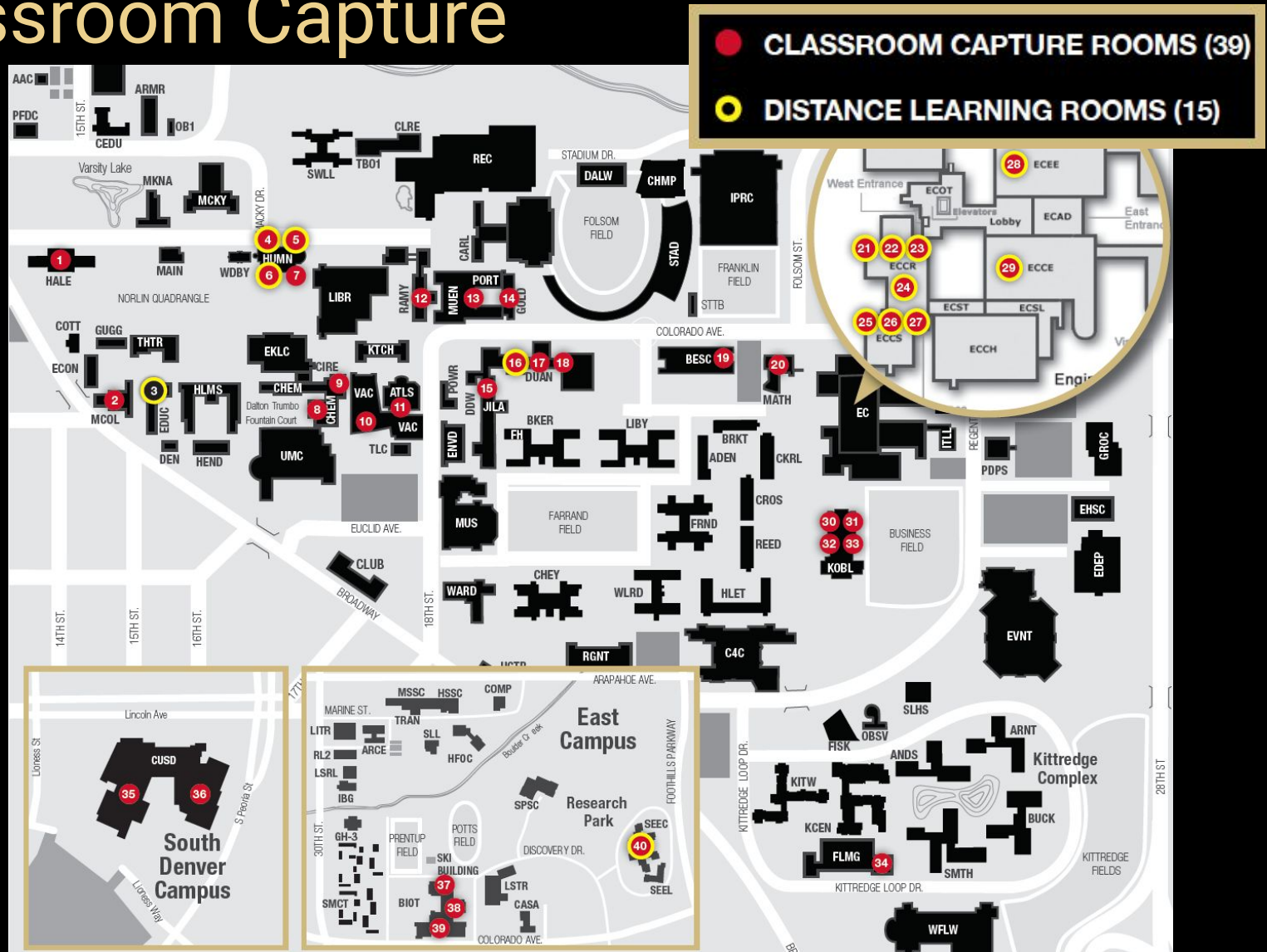
# Classroom Capture

- **What is it?**
  - Centrally supported lecture capture solution providing instructors the ability to automatically record classes and make them available online in a rich interactive format for student review.





# Classroom Capture



# Classroom Capture

## 2017 Metrics

20% Increase in Usage from 2016

- ❑ 9,816 Unique Users
- ❑ 5,077,380 Minutes Watched
- ❑ 625,500 Minutes Recorded
- ❑ 8,346 Presentations

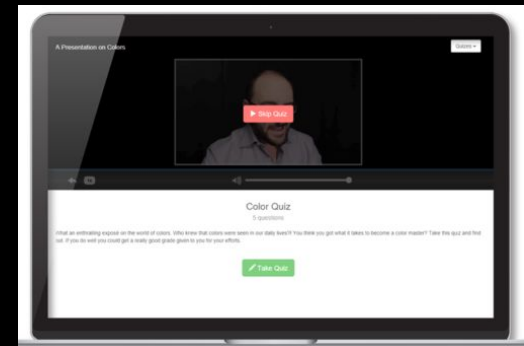
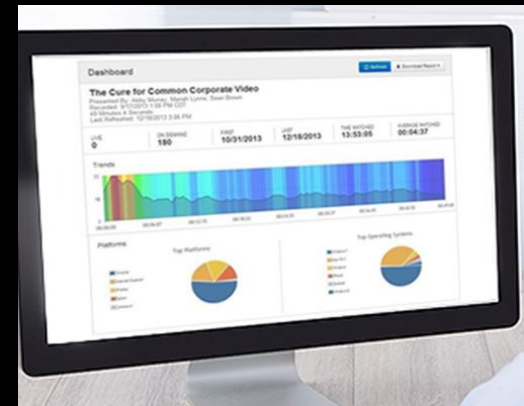
## FY18-19: Service Expansion Pilot

Broadening the service parameters to allow users to record not only their classroom lectures but any event supporting the academic mission of the University.

# Classroom Capture

## Future Developments

- **My Mediasite**  
Software allowing users to easily create, edit, and share their content from anywhere
- **Analytics**  
Provides insight into student viewing trends to enhance learning opportunities
- **In-Video Quizzing**  
Creates interactive lecture experiences for increased material retention



# Zoom Web Conferencing

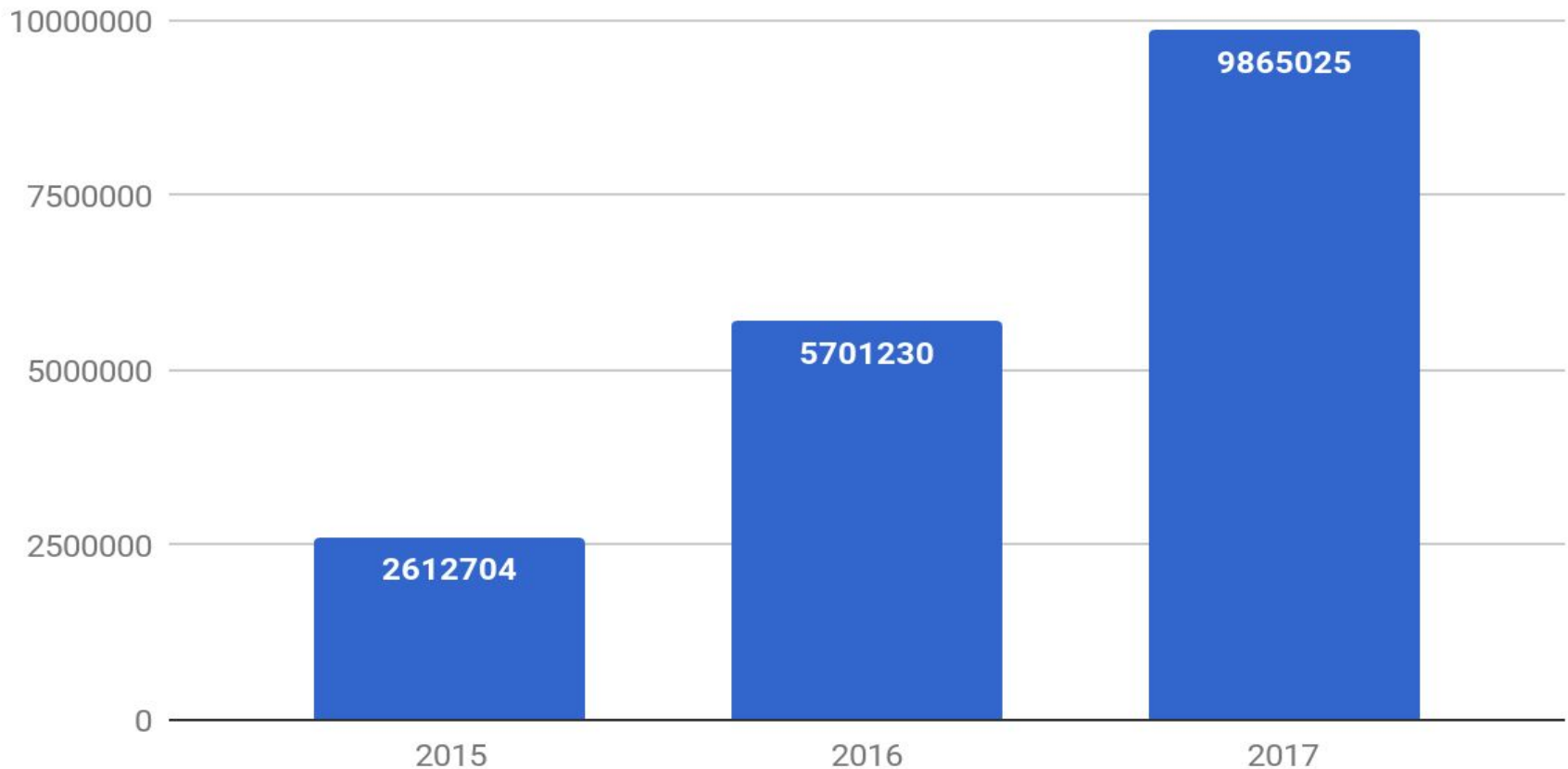


# Zoom Web Conferencing

- **What is it?**
  - Web conferencing at the touch of your fingers on almost any platform.
- **How does CU Boulder use it?**
  - Live classroom participation
  - International collaboration
  - Instructor office-hours
  - Staff meetings
  - Etc...

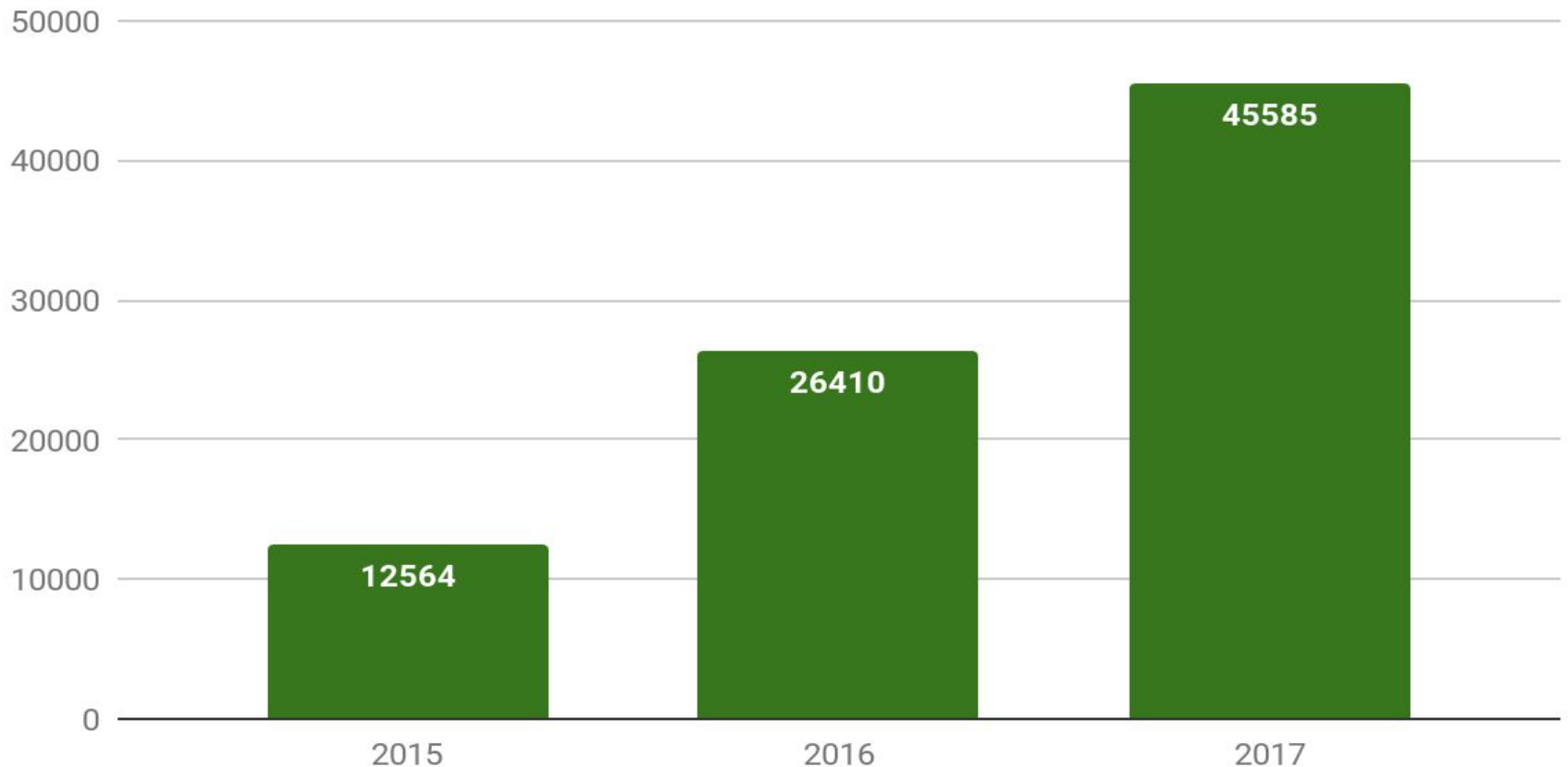
# Zoom Web Conferencing

CU Boulder User Minutes in Zoom by Year



# Zoom Web Conferencing

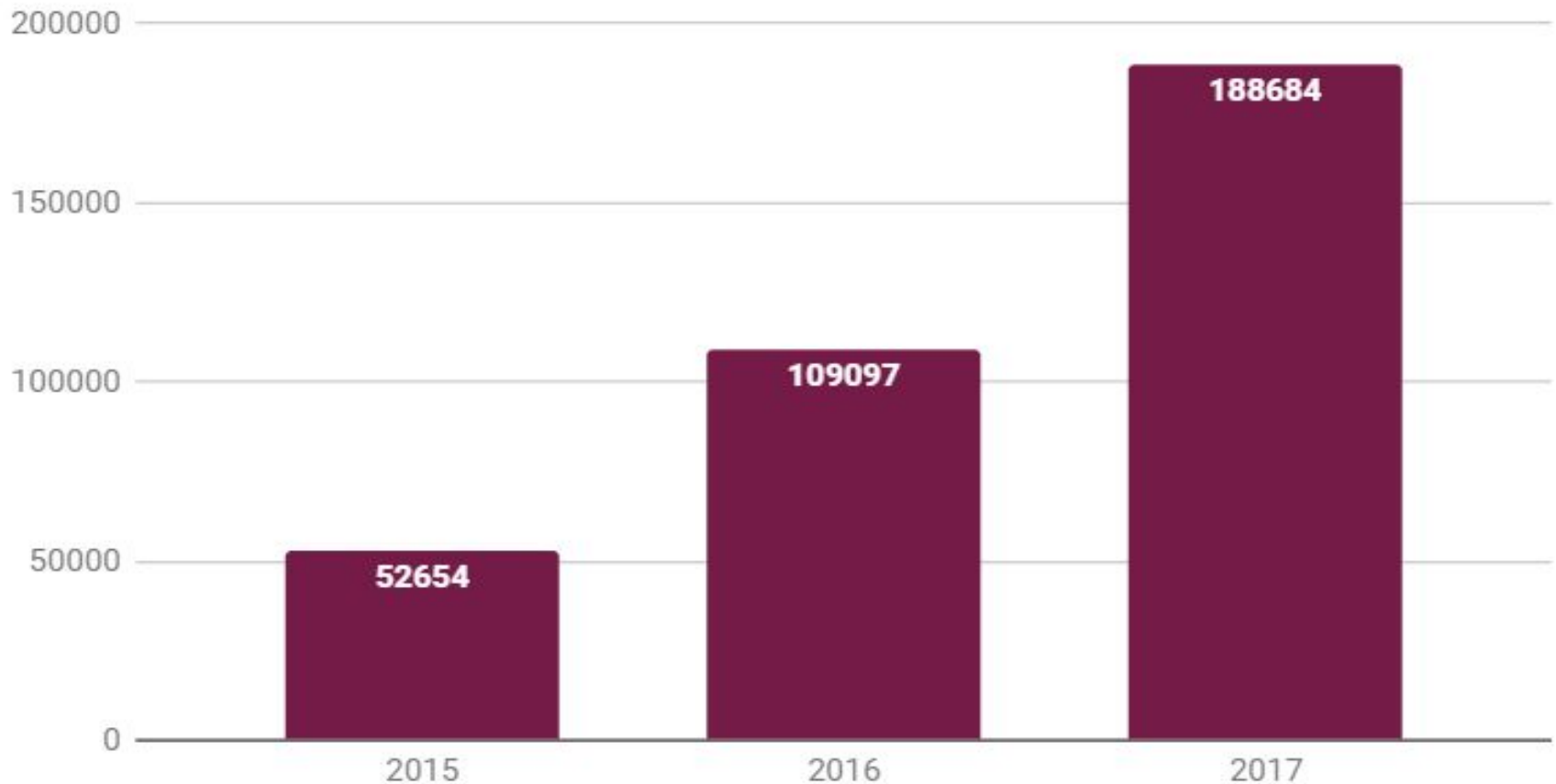
CU Boulder User Meetings in Zoom by Year





# Zoom Web Conferencing

CU Boulder Meeting Participants in Zoom by Year



# Zoom Web Conferencing

## Future Developments

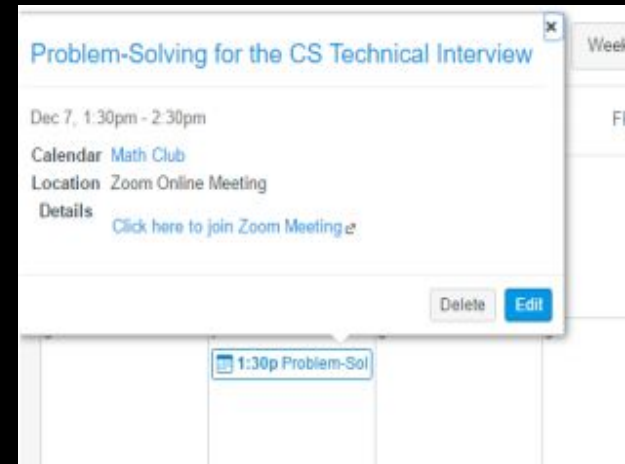
- **Canvas Integration**

Access to use Zoom directly from Canvas for ease-of-use (ETA Summer 2018)

- **Augmented Reality (AR)**

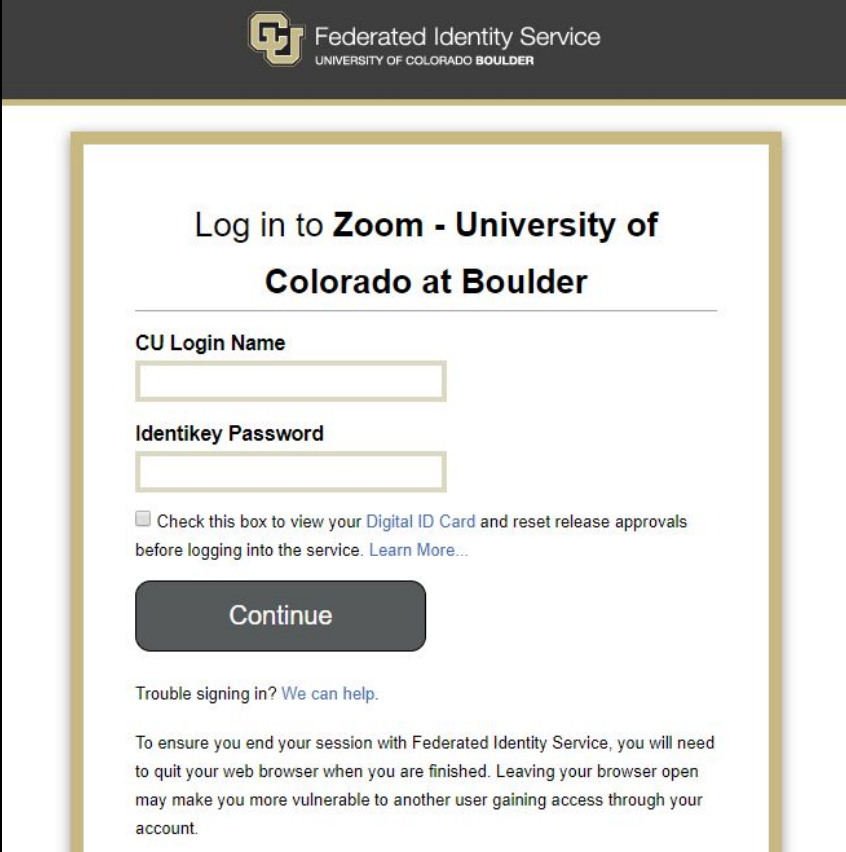
### Capabilities

Integration with virtual components for truly immersive learning and demonstration (evaluation FY18/19)



# Single Sign-On (SSO) Integration

- **Single Sign-On (SSO)**  
Provides streamlined and multi-platform login capabilities for increase ease-of-use
- **Zoom SSO**
  - Summer 2018
- **Classroom Capture SSO**
  - Fall 2018



The screenshot shows the Zoom login interface for the University of Colorado at Boulder. At the top, the University of Colorado Boulder logo and 'Federated Identity Service' are displayed. The main heading is 'Log in to Zoom - University of Colorado at Boulder'. Below this, there are two input fields: 'CU Login Name' and 'Identikey Password'. A checkbox option is present: 'Check this box to view your Digital ID Card and reset release approvals before logging into the service. [Learn More...](#)'. A 'Continue' button is located below the checkbox. At the bottom, there is a link for 'Trouble signing in? [We can help.](#)' and a paragraph stating: 'To ensure you end your session with Federated Identity Service, you will need to quit your web browser when you are finished. Leaving your browser open may make you more vulnerable to another user gaining access through your account.'

# Computing Labs

- **What are they?**

- Student computing resources that fulfill a wide variety of teaching and learning needs
- High performance physical devices and virtual machines allow students to engage with industry software at home and in the classroom

- **How does CU Boulder use them?**

- 100 Labs, 1,708 managed devices, 515 supported applications
- 31,742 Unique users and 567,574 logins in 2017

# Lab Services

- **Departmental Labs**

- OIT supports 51 departmental computer labs
- 19 departments in 24 buildings across campus

- **Lab pricing model:**

- Departmental management costs are determined by the complexity of the Loadset, not the number of systems.

# Lab Services



- **Support for a wide variety of Hardware**
  - Physical Workstations - Apple and Dell
  - Tablets - iPads, Windows Surface Pros
  - Laptops - Macbook Pros and Dell Laptops
  - Thin / Zero Clients for Virtual Desktops
- **Virtual Desktop Infrastructure**
  - OIT supports 25 Virtual Desktop Labs, with 363 thin clients across campus
  - Fully virtual lab deployments to support student BYOD programs

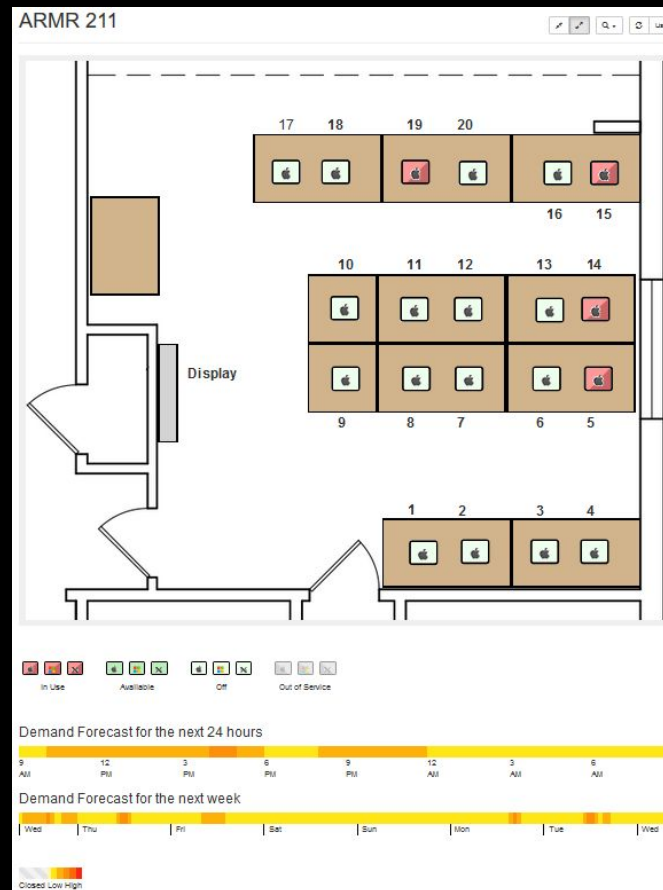
# Lab Services

- **Keyserver.colorado.edu (Beta)**

- Live lab maps that display available machines and installed software
- Demand Forecasting

- **Annual Usage reporting**

- Login counts
- Application launch counts
- Peak usage data
- Login Affiliation data





# CU Clickers

- **What is it?**
  - Portable audience response system
  - Immediate assessment of learning
- **How does CU Boulder use it?**
  - 1800+ members of the users group
    - 186 new users since Fall 2017
  - Almost universal usage among large lecture classes, especially in the sciences
  - Promotes active learning and retention while increasing student engagement with the material.

A scenic view of the University of Colorado Boulder campus. In the foreground, there are trees with vibrant autumn foliage in shades of orange, yellow, and green. Behind the trees, a large, historic brick building with a central tower and arched windows is visible. In the background, a range of rugged, rocky mountains rises under a blue sky with scattered white clouds. An American flag flies on a tall pole in front of the mountains.

Thank you!

Questions or comments?

**Learning Spaces Technology**  
**Office of Information Technology**



University of Colorado **Boulder**



# Choosing a SaaS Solution

## Introduction

Software as a Service (SaaS) is a software licensing and delivery model in which software is licensed on a subscription basis and is centrally hosted. It is sometimes referred to as "on-demand software." SaaS is typically accessed by users using a thin client via a web browser.

## SaaS Checklist

A SaaS product used for the University of Colorado community should strive to meet the following requirements. While we recognize that different use cases may require more or less stringent guidelines than those outlined here, the checklist has been designed to be a good starting point for any purchaser of a Software as a Service product.

*Please consult your campus IT provider for more information or help in answering these questions.*

### Business Requirements:

- ☐ The product provides functional support for University of Colorado's business.
- ☐ The product satisfies a unique need and there is not an existing IT-supported solution which accomplishes the same thing.
- ☐ Acquisition of the product adheres to [University procurement rules](#).
- ☐ The service provider is viable and provides support for the product.
- ☐ The service provider has a process to notify the user about changes in the product (e.g., functionality, UI).

### Technical/Integration Requirements:

- ☐ The system availability of the product meets business requirements.
- ☐ The product supports requirements around the management of users and access rights.
- ☐ The product supports development and testing requirements.
- ☐ Use of the product is reviewed and approved by the appropriate data oversight groups.

### Security Requirements:

- ☐ The product supports University of Colorado's [data security requirements](#).
- ☐ The product complies with University policy and legal requirements.
- ☐ The product is reviewed and approved for accessibility and security review, as appropriate.
- ☐ The product includes log and/or event notification.