CSU Subnet Managers Meeting

Wednesday, Sept. 16, 2015

Less than 90 degrees, must be Fall!
Agenda

- ACNS Updates - Scott Baily
- Office 365 Update - Dave Hoffman
- Campus Project Managers Users Group - Dave Hoffman
- VOIP Update - Kyle Haefner
- Adobe Creative Cloud Renewal - Kevin Nolan
- Canvas Update - Kevin Nolan
Agenda (cont.)

- Security Update - Steve Lovaas
- Networking Update - Greg Redder

We’ll get you out of here by 11:15 so you have the opportunity to attend the president’s fall address and picnic.

(We’ve limited Greg to 30 slides ;)}
ACNS Updates - Scott Baily

- Advisory Committee for Academic Applications (ACAA)
- Campus Cloud Infrastructure Upgrade
- Internet2 Azure Services
- ISTeC Data Subcommittee
Advisory Committee for Academic Applications (ACAA)
Members

- Bryan Carney
- Bryan Gillispie
- Neal Lujan
- Terri Pecora
- Ed Peyronnin
- Ron Splittgerber
- Scott Baily (chair)
- Pat Burns and Dave Hoffman participate as ex-officio members
About ACAA

- An IAC Subcommittee (see http://www.acns.colostate.edu/IAC)
- Committee’s charge will be available, as well as all meeting minutes
- Serving as a “gatekeeper” for new project requests, as per a major recommendation from a Spring 2015 external review of ACNS
- Working on an online project request form and corresponding workflow
- Questions?
Campus Cloud Infrastructure

- Bug was identified that resulted in two very significant FY15 outages

- Underlying storage has been “stable” since

- Investigating options moving forward
Internet2 Net+ Azure Services

- Net+ has negotiated terms that waive data egress charges
  - Very significant savings
- Contracting Services worked with I2 on Master Services Agreement
  - Would make it easier to include other Net+ services, including Azure
- Dell is CSU’s reseller for Microsoft EES licensing
  - Dell and MS are still working through their piece of the agreement
- Hoping that this will be resolved soon
HPC Activities

- ISTeC Cray recently upgraded
- Moving forward with the “condo model”
  - Every year, build a new cluster
  - Researchers have the option of purchasing nodes, home storage, etc
- CSU and CU were awarded $4M grant from NSF
  - Shared 400+ TFLOP system
  - To be housed at CU
  - RFP is about to be released
- ISTeC Research Computing Committee recommends additional support staff
  - CSU has .75 FTE while peers have between 4 and 15
ISTeC Data Management Committee

- Being re-formed

- Recently lost the chair and two committee members

- Resuming activities next month
Electric Vehicle Project
Questions or comments for me?
ACNS/Telecom Projects - Dave Hoffman

Project Stats

- 146 Active Projects
- 11 in Queue
- 4 New Requests

- Starting a new process for requesting projects
Office 365 Migration

Migrated from Exchange to Office 365

10,700

Mailboxes Still on Exchange

6000

64% Complete

Complete by October 9*
Migrating Colostate.edu MX Record

- Complete by Nov 1

- Outbound Mail Servers smart hosting to SPAM Canners need to be directed to smtp.colostate.edu
Project Managers User Group

- Forming a Group to Share PM Practices
- Possibly for a PMI Chapter
- Meeting in Oct/Nov
- Looking to review larger PM tools
VoIP Stats - Kyle Haefner

- Phones
  - Previous 5,105
  - Current 5,634

- 1,884,612 calls in 2015
- 100% uptime since 06/12/2014

The first VoIP call was made in 1974, on the ARPANET
## Upcoming Buildings

<table>
<thead>
<tr>
<th>Building Name</th>
<th>Completion Date</th>
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<tr>
<td>ARBL</td>
<td>October 2015</td>
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<tr>
<td>VTH/DMC</td>
<td>Q4 2015</td>
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<td>CEMML</td>
<td>February 2016</td>
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<td>Weber</td>
<td>March 2016</td>
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<td>Yates</td>
<td>May 2016</td>
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<tr>
<td>Engineering Buildings</td>
<td>Q3 2016- Q4 2016</td>
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Reminders

- Moving Phones - Don’t!
  - Telecom will move them for FREE
  - We now send a friendly email 😊
- No Building Power = No network = No Phone
Additional Projects

- User editable Phone Tree audio
- Call Center
- Group call out
- SIP Trunking
- Push alerts to phones
- Multicast Paging/Push to Talk
Adobe Creative Cloud Renewal

Kevin Nolan standing in for Diane Noren.

- In Process
- Cost Staying the Same.
- Device License - $175.00
- Named User - License - $250.00
Canvas Update - Kevin Nolan

▶ Approx. 3,000 fall courses in Canvas.
▶ 8 courses in RamCT! (5 instructors)
▶ Firefox and Chrome preferred browsers
  ▶ Issues with Safari and IE.

▶ Wholesale creation of spring courses by end of Sept.
  ▶ Instructors need to be assigned in ARIES to see.

▶ RamCT and Spring 2016
  ▶ Used for incompletes and to retrieve content.
  ▶ End of May 2016 - begin process to decommission RamCT.
ACNS Middleware - Randy Miotke

- Grouper groups management
  - An enterprise access management system designed for the highly distributed management environment common to universities

- Facilitates collaboration - You can set up groups, roles, and permissions for many purposes

- Proof of concept in-progress
ACNS Middleware

- Grouper diagrams
  - Grouper high-level concepts
  - Grouper architectural diagram

- Grouper
  - Proof of concept in-progress.
    Hope to have something in November.
  - Project page:
Upcoming changes to eID

- Authentication for eID creation and reinstatement process
  - Message with one-time use, expiring token sent to e-mail address on record with Admissions, HR, Semester at Sea
  - Self-service recovery for those that have an expired token

- Forgotten password help
  - One-time use, expiring token sent to recovery e-mail address supplied in eID create process or eID self-service
  - Alternate method of recovery for edge cases where e-mail can’t be delivered

- Two-factor authentication for eID Admin - coming soon!
ACNS Middleware

- Shibboleth SSO
  - Identity Provider version 3 proof of concept in process

- Google accounts
  - An increase in compromised accounts sending spam
Security Update

Steve Lovaas, ACNS
Security Issues

- Security staffing
- Endpoint protection
- PCI compliance
- SSL gateway
- Broader vulnerability scanning
- Awareness & training
Security Staffing

- Replacing Scott Dawson
  - IT Security Analyst position - looking at resumes
- Added Angie Asmus
  - Focusing on PCI compliance
Endpoint Protection

- SCEP is the new SEP
  - Symantec contract ended in June
  - MS System Center Endpoint Protection (SCEP)
  - ACNS distributed install/uninstall template

- Many have switched already
  - Home, unmanaged users lagging

Q: Where do *you* feel we are in the transition?

- Next step: management of AV
PCI Compliance

- PCI Team
  - Collaboration with BFS
  - Funding model being approved
  - Open forum October 7th, LSC (invitation coming)

- PCI-DSS v3
  - “Business as Usual”
  - We dodged a bullet on e-commerce (for now)
  - Looking for cloud e-commerce host
  - TLS 1.2 baseline (June 30, 2016)

Next PCI Open Forum: Oct 7, 2015, 1 pm, LSC Grey Rock Room
SSL Gateway

- Pulse Secure
  - New company, transition hurdles
  - Moving to minimum TLS 1.1 over winter break
  - Minimum TLS 1.2 by next summer

- Pulse replacement for Network Connect
  - Delayed by company transition
  - Will come over winter break
  - Two-factor authentication available soon
Broader Vulnerability Scanning

- We’ve been trying it out
  - 2 months of scanning subnets 1-19, no complaints

- Expanding starting in October
  - Monthly scan of everything, email just Critical/High
  - Standard IT Security Policy exemption request form
Awareness & Training

- SANS Securing the Human
  - Online security training & awareness refresher
  - Discounted through REN-ISAC partnership (1200 seats)
  - Starting with PCI, compromised eIDs, and by request

- October: Security Listening Tour
  - Learn concerns, pain points, local risks
  - Scheduling open drop-ins with colleges, large admin units
  - Individual chats, smaller groups - just let me know
NOC
(Network Operations Center)
Greg Redder

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 HOW DO YOU PLAN DISTRIBUTION OF WATER AROUND THE GLOBE?

I'M THINKING OF A CLOUD-BASED SOLUTION

The Creation – Day Two
Agenda

- Outage!
- Campus bandwidth
- Network upgrades
- Wireless (of course!)
- Speedtest
“Great” Internet Outage of 2015

100% uptime for Internet connection for years, until...

Tuesday, June 23, 2015: 12:15AM-2:15AM

(100% uptime since then though!)
Campus Bandwidth

Global Internet

Peering Service to:
Microsoft
Apple
Google

TeliaSonera
Level3

Internet2

FRGP

10G

CSU

Research LAN

7Gig!
Campus Bandwidth
(April 2015)

- Main Campus Wired Connections: 31,874
- Main Campus Wireless: 54,769
Network Upgrades
Recently Completed

- ARBL (CVMBS)
- AECom (Engineering)
- UCA Addition (HHS)
- Ag Ed Addition (AgSci)
- Rockwell (COB)
- Bayfarm Horticulture Center (AgSci)
Network Upgrades Pending

Q3:
- GSB
- Weber
- Deer Facility and Foxhound
- Voc Ed

Q4:
- CVMBS @ South Campus
- Yates
Network Upgrades
Construction

- South College Parking Garage
- Chemistry
- Biology
- Aggie Village
- New Medical Center
- Stadium
Wireless Upgrades

- **GA Classrooms, Morgan, TiLT:**
  - All have 802.11ac capability

- **Buildings with GA classrooms:**
  - All have 5GHz capability
  - All being addressed for any “holes”

- **Non GA buildings:**
  - 2.4GHz coverage nearly completed in all buildings
  - Going back and trying to address “holes”
Wireless SSIDs

![Wi-Fi SSID Overhead Calculator](image)

**VARIABLES:**
- Beacon Data Rate (Mbps): 802.11b 1 Mbps
- Beacon Frame Size (Bytes): 380
- Beacon Interval (ms): 102.4

**ASSUMPTIONS:**
- 802.11b Long Preamble used for 1 Mbps; Short Preamble used for 2, 5.5, 11 Mbps
- 802.11g short slot time is assumed, with no 802.11b clients within range
- WMM is enabled and beacons are transmitted using Best Effort AC

**Amount of Overhead:**
- 0-10% Low
- 10-20% Medium
- 20-50% High
- >50% Very High

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Wireless
“Okay, now everyone hit ‘enter’”
problem!

Clark A101 debriefing:

- Use csu-eid (csu-guest is not for production)

- Use 5GHz

- Set expectations accordingly
Wireless Issues

Current top issue:

- Macs continually reconnecting!
  ACNS modified configuration tool: [http://www.acns.colostate.edu/wireless](http://www.acns.colostate.edu/wireless)

Relay issues through:

- [help@colostate.edu](mailto:help@colostate.edu)
- 491-7276
- Central IT Help Desk at Morgan Library.
Speedtest
speedtest.colostate.edu:7123

YOUR TEST RESULTS

UPLOAD SPEED
395.82 mb/s

DOWNLOAD SPEED
484.56 mb/s

Network latency: 1 msec round trip time
Better is less ms.

More information about NDT
More information about Measurement Lab

TEST AGAIN

9/16/20
UPSs

- MDF: supported centrally

- IDF: departmental choice
  - Department supplies batteries (2-3 year cycle)
  - Department supplies standard mgmt. card
  - ACNS will install and monitor

9/16/2015
Thank you.  noc@colostate.edu
Angie Asmus (security)
Steve Banghart (wireless)
Zack Davis (wireless)
Richard Duffy (switching/routing)
Jim Farnell (wireless)
Nic Garrison (switching/routing)
Kyle Haefner (VOIP)
Steve Lovaas (security)
Greg Redder (manager)
Robert Remsik (switching/routing)
Trent Shane (switching/routing)
Questions?

Enjoy the president’s fall address and picnic.

► Next Meeting:
Wednesday, November 18, 2016
10 am - noon
LSC 372 - 374