CSU Subnet Managers Meeting

March 23, 2011
Spring is Finally here!
Agenda

- IT Consolidation Committee update
- Paper Cut update
- Middleware update
- RamCT Conversion to Learn 9 update
- UNIX
- Site Licenses

3/23/2011
Agenda (con’t)

• Networking/Security

• Advisory Groups Update

• Tech Demo
  Lecture Capture Product evaluation
IT Consolidation Committee Update
Allison Horn, Director, Internal Auditing

- Campus committee charged with reviewing campus IT resources and providing a ‘framework for discussion’ regarding possible areas of consolidation.

- Report delivered to the Provost on March 15, 2011 and is currently under review.
Paper Cut Initiative – Don Albrecht

- Printing quota and billing program.
  - Less expensive than other products evaluated.

- Currently used by 6 colleges at CSU.

- Library plans to run pilot.

- Exploring access to printing resources through quotas as well as RamCard payment.

- Combining existing licensing agreements into one agreement for CSU.
Middleware Update – Randy Miotke

- ACNS website
- Google Apps
- Shibboleth
ACNS Website

- New notifications section
- Displays current and last seven days activities
Google Apps

• Automated deprovisioning in production
• @rams account expiration cycle
  – Runs parallel with eID expiration cycle
  – On expiration, account is suspended
  – Suspended account is housed for six months
  – Grace periods before account suspension
    • Students – 365 days
    • Applicants – 45 days
    • Faculty/Staff/Associate – 30 Days

eID expiration information:
https://eid.colostate.edu/About.aspx
Shibboleth

- Shibboleth IdP and supporting Open LDAP Directory Server moved to the ACNS high availability cluster
RamCT Update to Learn 9 Timeline  
-Kevin Nolan

• Now
  – Finalize self host / out source system decision.
  – Become familiar with new system.
  – Work with other schools that transitioned to Learn 9.
  – Develop partnership with Blackboard cohorts.
  – Train College RamCT Coordinators.

• Summer 2011
  – Select pilot participants (approx 15)
  – Develop training program/materials
RamCT to Learn 9 Timeline

• Fall 2011
  – Select and train pilot participants fall 2011.
  – Create courses for pilot.
  – Identify which RamCT sections need to be converted to Learn 9.
  – Integrations with SIS, EZip Grader, Final Grades

• Spring 2012
  – Conduct pilot.
  – Begin converting RamCT sections to Learn 9.
  – Training available to instructors, TA’s and students.

3/23/2011
RamCT to Learn 9 Timeline

• Summer 2012
  – Quiet launch for all summer school courses.

• Fall 2012
  – All online courses taught in Learn 9.
  – Continue to identify and address any issues.
  – Continue to train faculty, TA’s and students.

• Update information will be posted on
  [http://help.ramct.colostate.edu](http://help.ramct.colostate.edu)
UNIX – James Cizek

- IBM infrastructure/VM update
- Mass storage project update
IBM - Virtualization

• Replacing (20) IBM AIX servers between ACNS and IS with (4) power7 p470’s

• Uses IBM’s “PowerVM” hypervisor

• Increased reliability and offers failover for faults and maintenance

• Thanks to UTFAB, Provost, ACNS and IS for funding!
ACNS – DIY storage

• Green box storage mounted and spinning
  http://www.colostate.edu/~curtisb/mass_storage/

• Thanks to colleagues, have found a likely replacement for bending our own sheet metal!

• Although dampens the DIY spirit, the system is essentially the same, but uses commercial case with redundant power and cooling built in
ACNS – DIY storage

• Case is available in 36 drive + MB
• Expansion case is 45 drive
• Price point is the same, but build, install and test time reduced to near zero
• New design uses SAS so can be built with redundant 6Gb/s paths instead of single 3
• SAS and SATA compatible
• MANY more OS choices
Front of case
Rear of case
Inside!
Site Licenses – Diane Noren

- JMP – exploring pricing and site license.
- Qualtrics – exploring pricing and site license.
- MS Campus Agreement – renewal process about to begin.
NOC Agenda

• Internet Connection status
• CIC buildings
• Wireless update
• Building status
• Workflow (Departments/Telecom/NOC)
• Speedtest.colostate.edu
• Switch to switch connections
• Switch models
Internet Connection Status

Two words:

10 Gig
Internet Connection Status

- 10G
- 3 border routers currently (during transition)- most of campus using 10G in/out
- 2nd 10G on the way (early Summer)
Internet Connection Status:
College/Department Traffic Stats....

- Old pages ("cricket graphs") deprecated.

- New pages in the works!
  - Will have contact information for subnet managers
  - Access to traffic graphs
  - "Portal" to other subnet manager specific tools...
Internet Traffic Status:  
Core/Border Outages (since last meeting)  

Some LAN issues and some maintenance work, but no meltdowns or loss of Internet links!
CIC Buildings

Campus Infrastructure Committee

- 9 buildings initially identified
- 10g capable switch
- Dual 1G links to core
- Redundant power supplies
- UPS reassessment
- Move EMS/Security to this switch where possible.
CIC Buildings

Upgraded:
- OT
- Shepardson (this week, hopefully)
- ARBL
- Clark C

Pending (by end of May)
- Clark A
- NESB
- Engineering
- A/Z
- Atmos
- VTH
Wireless Update

• Finished since last meeting:
  – UTFAB funding
  – Micro, Gifford, Yates, Military Science, Johnson Hall Theatre, Pathology, Physiology, Visual Arts, Animal Science, NESB, Forestry

• Pending (by end of year):
  – MRB, Guggenheim

• Possibly: Clark B and Lory Student Center
Wireless Update - issues

• Currently slow fail over: 3-5 minutes and only for Aruba access points.

• Clustering such that there is a 15-20 second failover continues to evade us due to technical issues.

• Investigating reports of Macs not connecting properly in Clark.
Wireless Update - usage

• Spring semester 2010:
  – Maximum: 2000-4000 at a time

• Fall semester 2010:
  – Maximum: 4000-6000 at a time

• Spring Semester 2011:
  – 8000+ connected devices
Building Status

• Pending:

  – CVMBS moving into Parking Garage
  – Student Center to have presence in Parking Garage
  – Morgan remodel (ongoing)
  – Alder Hall
Workflow (Departments/Telecom/NOC)

- Department /College
- Service orders (field crew)
- Patching (field crew)
- Design/upgrades (Demchok)
- Outages connectivity, no connectivity
- Network issues (slow)

Telecom
Design/upgrades
Physical problems/issues
NOC
Speedtest

Speedtest.acns.colostate.edu

- Detects speed/duplex issues
- Variable results on XP/Vista
- Useful debugging within campus or to campus from outside.
Switch-to-switch connections

Due to

– the size of the campus network
– legacy equipment
– well intentioned mistakes...

the NOC has tracked down a number of problems relating to “loops”.

Switch-to-switch connections (cont.)

Thus, a couple of reminders, please:

– Switches can’t be plugged into other switches. (Please work with NOC to do this.)

– Wall ports can’t be plugged back into other wall ports. (NOC can’t do this either!)

– Not all ports are equal
Switch Comparisons

Thanks for all the work on upgrades and working with NOC on HP purchases!

<table>
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<th>Model</th>
<th>10G capable</th>
<th>Redundant Power</th>
<th>Gig to Desktop</th>
<th>PoE</th>
<th>Price for 48 ports</th>
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• ...Questions?

• Thank you!
Security Issues – Steve Lovaas

- SSL Gateway crash
- Other upcoming products/services
- Keystroke loggers
- Risk Assessment process
SSL Gateway Crash (3/15/2011)

• Bug caused the file system to fill up, killing our redundant server, and then the primary at 4pm on Tuesday. Automated backup had not been working; roll-back lost recent changes.

• Vendor replaced one box; basic service was restored by Thursday morning.
SSL Gateway Crash (3/15/2011)

- By yesterday (3/22) most customizations had been restored; some individual bookmarks need to be manually re-created. Automated backup is now working, and both servers are patched.

- Please contact the NOC with lingering issues.
SSL Gateway New Features (testing)

• Java-based Remote Desktop for Mac and Linux (Mac works, Linux still testing) – no tunnel required, no separate client to install.

• Free “Junos Pulse” VPN client for Apple iOS (via iTunes Store), and for Android (via Marketplace).
SSL Gateway New Features (testing)

• Host Checker – AV, OS & app patches. Awkward for constant production use, but experimenting with use as a separate self-service compliance check.
Other Upcoming Products/Services

• Cisco Firewall Services Module in core
  – Replace ACLs, maybe some LAN firewalls

• F5 Web Application Firewall
  – Protect vs. SQL-injection, etc.

• Symantec Endpoint Protection v12
  – Purge SAV v10, no upgrade path
Other Security Issues

• Physical keystroke loggers
  – Found one: be wary of computers in public areas
  – Watch for things attached between keyboard and USB

• Risk assessment process
  – If you haven’t completed this, please contact me
  – Reaching the end of our 3-year cycle
  – If you get audited annually, do this each year
Campus Advisory Group Updates

• Advisory group agendas and minutes are available on the IAC web site:
  http://www.acns.colostate.edu/IAC

• Windows (WAG) – Joe Volesky
  – Previous two WAG meetings done; last meeting focused on campus AD structure
  – Next meeting (tentatively May 4, 2011, 10:30AM, Weber 202) will focus on Application Virtualization
Campus Advisory Group Updates

• Macintosh – Jim Cox
  – Met two times so far, next meeting will be in May (TBD)
  – Working on the Mac Standards for the campus
  – If anyone wants to join, the listserv is MAG-L
Campus Advisory Group Updates

• UNIX – Curtis Brown
  – An introduction to CSU's Cray computer, presented by Richard Casey
  – Making email and web servers more redundant
  – Linux distributions
  – Mass Storage update
  – The full minutes of the meeting will be available on the IAC web site later this week.
Tech Demo

• Lecture Capture Product Evaluation
  – Al Powell, Continuing Education