Fall 2021
Subnet Managers
Sept. 15, 2019

It Almost Feels Like Fall!
Here We Go!

- Campus Cloud – James Cizek
- DUO and Oof365 – Dave Hoffman
- Microsoft Office Update – Lance Baatz
- ERP Projects – Candace Ramsey, Shawn Baker
- RAMTech Licensing – Diane Noren
Here We Go!

- Networking / Telecom – Jason Huitt
- Cybersecurity/IAM – Randy Miotke
- Presentation: Research IT – Stephen Oglesby
Campus Cloud – James Cizek

- New Campus Cloud infrastructure
- Migrating current Campus Cloud workloads
- Welcome Dennis Anderson to the team
- Thanks to Ed Overacker – he is retiring in Oct.
Campus Cloud Update
Old hardware stack:

- **Main Datacenter:**
  - 10 Dell hosts with 512GB Ram (Campus Cloud)
  - 4 Dell hosts with 512GB Ram (Division of IT VM services)
  - Dell Compellent (SC8000) SSD SAN with 400TB (16 Gb/s Fiberchannel connection)
  - (5) 10Gb/s Ethernet connectivity (20Gb/s dedicated to data networks)

- **DR Datacenter:**
  - 4 Dell hosts with 256GB Ram
  - Dell Compellent SSD SAN with 45TB
New hardware stack:

**Main Datacenter:** Our production Infrastructure and Campus Cloud Clusters.
14 Dell hosts in two clusters
- 500 usable CPU cores during rolling updates, 708 cores at full capacity.
- 768GB RAM each for a total of 8TiB of usable RAM after allowing for rolling updates and overhead.

PowerStore 5000T two chassis cluster:
- 500TiB of Usable storage (after compression and de-duplication expected) **NVMe SSD based storage.**

Hosts are utilizing the new 100Gb/s Ethernet core installed this summer. Each host has (4) 25Gb/s Ethernet connection (Storage connectivity is now (2) 25Gb/s redundant iSCSI connections)

**DR Datacenter:** Expanded capabilities for DR failover for critical VM’s.
4 Dell hosts
- 192 usable CPU cores during rolling updates, 256 cores at full capacity.
- 768GB RAM each for a total of 2TiB of usable RAM after allowing for rolling updates and overhead.

PowerStore 3000T appliance
- 200TiB usable.

DR orchestration software was added to our system to automate the maintenance and testing of the DR VM’s.

**We’re seeing sustained real world data transfer rates over 1.5TB/second and expect to support up to 200K IOPS. 100K was the design goal.
Hello, my name is Dave Hoffman.

When you duel, use DUO two-factor authentication!
October 4

Faculty, Staff, Students

Microsoft O365 Cloud
Avoid Interruption to Your CSU Email

CSU will require students to use Duo Two-Factor Authentication to access their campus email and other Microsoft applications on Oct. 4th

1. Download the FREE Duo Mobile App

2. Register Your Account at eid.colostate.edu

3. Visit duo.colostate.edu for more information

- Quick Start Videos
- FAQs
- User Guides
- Help Contacts
Adoption Statistics

Duo Adoption

Date Updated: 9/8/2021

Faculty Progress
- 2268
- 81

Staff Progress
- 4648
- 511

Duo Adoption Stats
- 17946
- 15550

Number of people that have created a Duo Account
Number of People Remaining
General Communications

• Tables staffed by our student cybersecurity interns will be setup around campus. You can see the schedule here: https://www.acns.colostate.edu/duo/in-person-support/
• Banner Ads on Ramweb, HDS, and Canvas websites
• Notices on RegReady for Students that do not have Duo configured
• Instagram Messaging from ASCSU (and others)
• Drop in support available in the Library
• CSU Media with Radio and spots and articles in the Collegian
• Classroom messaging with slide from Faculty Member
More Specific Communications

**Faculty/Staff Communications**

- This Week: Articles in Source/CSU Life
- Sept 20: Next list of Non-Adopters sent

**Student Communications**

- Aug-Move in Week: Flyers in all Move-In Packets
- Aug 30: Messages being sent from all local apartments housing students letting them know if they get locked out, it’s not because of the apartment complex Wi-Fi
- Aug 31: Direct Email to Students
- Sept 14: Second Direct Email to Students
- 9/27: Working on a Pop-In Popcorn popper for support setup on campus
- Sept 28: Final Direct Email to Students
- Sept 30: Instagram Takeover by Cybersecurity Interns
• We’re all in it together
• What’s different this time
• Beefed Up Helpdesk Support for Tier 1
• Teams Channel in SubNet Managers for Tier 2 Support
• Duo Only
• Only for our Tier 1 support folks to use
How You Can Help

• Contact People in your area – New list coming out Sept. 20
• Provide Tier 1 support
• Encourage Duo Mobile App & Push
November 1

Retirees/Emeritus

Microsoft O365 Cloud
Microsoft 365 - Lance Baatz

3 Things

1. Changes to Microsoft 365 Licensing (December 31, 2021)
   - Retiree/Emeritus to be downgraded to A1
   - Office download (5 copies) will no longer be available after 30 day grace period…likely to “hit” in the January/February timeframe
   - More communications to come…

2. “External Senders” markup → Still looking at it!

3. Integration of CSU Pueblo email in M365 → Targeting January 2022
ERP Projects

SUBNET MANAGERS MEETING: SEPTEMBER 15, 2021

SHAWN BAKER & CANDACE RAMSEY
Joint Banner Project

CSU System

CSU-Pueblo

Student Information System

CSU-Fort Collins
JBP Project description

OBJECTIVE
– Implement the Banner MEP/STP Platform

PURPOSE (CSU System)
– Economies of Scale
– Improved Student Experience
– Process Standardization
– Improved Reporting

TIMELINE
– January 2019 LAUNCH
– August 2021 LIVE WITH ALL BANNER FUNCTIONS
– September 2021 thru June 2022 TRANSITION/HARDENING
– July 2022 Forward SUSTAININ SUPPORT
Business owners

- Admissions
- Financial Aid
- Registrar
- Extended Studies
- Business & Financial Services
- Institutional Research
- Faculty & Advisors
- Academic Departments
- Students
2021 Milestones

January
Overall & General Student

February
Holds
Faculty, Staff, Catalog, Class Schedule

March
FALL 2021 REGISTRATION

June
Academic History

July
Accounts Receivable
STUDENT PAYMENT PORTAL
EXTENDED STUDIES REGISTRATION

August
FINANCIAL AID DISBURSEMENT
FEE ASSESSMENT, STATEMENTS, A/R BATCH
>> FALL CLASSES START <<

September
New Transcript
# JBP INTEGRATIONS for CSU Pueblo

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<th>Category</th>
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<tr>
<td>Scholarship Management</td>
<td>ScholarX</td>
<td>Bookstore</td>
<td>MBS</td>
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<td>Health (Immunization)</td>
<td>PyraMED</td>
<td>Parking</td>
<td>iParq</td>
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<td>EMS</td>
<td>Student Printing</td>
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<td>CSU Pueblo AIS</td>
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<td>Student Behavior</td>
<td>Maxient</td>
<td>Collections</td>
<td>Williams &amp; Fudge</td>
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NEW WITH JBP

- Banner
  - Student Self-Service
  - Faculty Self-Service
  - General Self-Service
  - Banner Access Management (BAM)
  - Banner Communication Management (BCM)
  - Action Item Processing (AIP)
- NetID / Midpoint
- Fort Collins – Pueblo VPN Tunnel
Kuali cloud Project

CSU System

CSU-Pueblo

Kuali Financial & Kuali Research Systems

CSU-Fort Collins
Project description

- Kuali Cloud – January 2019 –
  KFS -> included Kuali Research
  Planning Period –
  Implementation Plan
  Kick-off April 2020

- SaaS Advantages
Timeline, Milestones and CSU-Pueblo

**Timeline**

- 3 Data Migrations since summer 2020
- Upcoming 4th Data Migration in October
- Dry Runs in November & December
- Go-Live either January or February

**Milestones**

- ETL Processes
- Reporting
- AppMan Batch -> Boomi iPaaS

**CSU-Pueblo**

- Research Compliance
- Institutional Proposal
- Finance Testing
Thank You!
Chem-Bio-Office
Renewal notices sent
Chem-Draw

ESRI
Renewed July 1

Endnote
Renewal notices sent
Version 20
Licensing

Adobe:

**Creative Cloud**
Renews Sept. 30
Working with Adobe on renewal

**Acrobat Pro**
Renews in February

**Adobe E-sign**
Renews in February
Licensing

**Maple**
Renewal notices Sent

**Mathematica**
Renews Nov.30

**Microsoft**
Renewed July 1.

Billing will start in October for one-off departmental Microsoft purchases (such as for Windows Server, SQL Server, Dynamics CRM, Visio etc.)
Licensing

**SPSS-Amos**
January 1 renewal

**Zoom**
Renewed July 1
Billing in process
RAMtech

Apple
Back to School Promotion ends Sept. 27, 2021
For Personal purchases

Questions?
Updates from Networking & Telecommunications

SUBNET MANAGERS MEETING

SEPT 15, 2021
Wireless Updates

• Outage on 8/26, 8/30, 9/1 and 9/2
  – Root cause identified
  – Waiting on further guidance from Aruba
  – Lessons learned

• Wireless network funding
  – UTFAB: $500k/year since 2016
  – Central Support: ~$250k/year
  – Capital construction projects
  – Divisions, Colleges and Departments
Obtaining Service and Support

- Network and Security Operations
  - Tickets – helpdesk.colostate.edu (please use the form!)
    - Select “Networking, Security and Wireless”
  - Emergencies: noc@colostate.edu and on-call number

- Telecom Services
  - Tickets - helpdesk.colostate.edu
    - Select “Telecommunications” – submit Teams Voice support tickets here!
  - TelecomServiceOrder.colostate.edu
    - Small projects (low quantity cable pulls in existing locations, etc.)

- Telecom Projects
  - E-mail: telecom_projects@mail.colostate.edu
Outage Notifications

- Subnet Managers e-mail list
  - Cross-posted to Teams
  - Membership open to all campus IT
  - Maintenance and outage notices

- Status.colostate.edu
Coming Attractions!

- Border firewalls
  - October-ish
- New VPN solution – Global Protect
  - Deadline for conversion – May 2022
- New wireless network authentication system
  - Fall 2021
- Network Uplift project
  - Over $3m of state funding to refresh the campus network
    - Over 400 switches, core and border routers, firewalls
Teams Voice

• Over 1,000 users on the new VoIP system
• Resource Coordinator Tools for Onboarding
  – Broad release coming in October
  – New tools for shared mailboxes and auto-attendants – late 2021
  – Still accepting early adopters!
• Currently exploring Teams device ecosystem
  – Departments will be expected to purchase handsets and other equipment
Teams Voice

- Partnership with Enabling Technologies
  - Communications campaign
  - Train the Trainer events
- Network Chargeback revamp – October/November 2021
  - Existing Telecom bills slated to continue through end of FY22
A moment for security…

• The wide-open SSH rule has been closed at the border!
  – Exceptions granted by request only – submit a ticket please

• Firewall exceptions – from recognized Subnet Managers only!
  – True-up effort kicking off soon

• Vulnerability mitigations
Other Notes

• University Technology Fee
  – Over $150k in one-time funding available
  – Proposal process notification forthcoming

• Thank you for your support!
Cybersecurity Services – Randy Miotke

- Atlassian Access
- Cybersecurity Insurance & LAMP services
- Cybersecurity Awareness Month
- Grouper
- Cybersecurity Internship
- NetID/midPoint update
Atlassian Access - CSU

What is Access?

• Enterprise-grade security and management capabilities for administrators of Atlassian cloud tools
• Centralize security and governance across their entire organization
• SAML single sign-on
• User provisioning
• Two-step verification
• Organization audit log
Atlassian Access - CSU

Products

- Only cloud-based applications

- Trello
- Confluence
- Jira Software
- Jira Service Management
- Bitbucket

- 1,150 unique @colostate.edu Atlassian accounts – 3,170 product accounts
- @rams.colostate.edu are not managed
Atlassian Access - CSU

- Requests from several departments to use CSU Identity Provider (Shibboleth)
- CSU SSO authentication policy
- Placed into production in spring 2021
- Allows for opt-in SSO for @colostate.edu accounts
- Account will use SSO for all Atlassian cloud-based products
Atlassian Access - CSU

• Current default authentication policy is Atlassian credential
  • Email & password or social provider

• New Request

• Use CSU SSO authentication policy as the default

• How it works – enter @colostate.edu email – redirect to CSU IdP

• Suggested path
  • Notify Atlassian account owners
  • Test use cases
  • Transition to CSU SSO late September
Cybersecurity Insurance Renewal

• Getting more expensive, covering less, harder to get at all
• We achieved SOME coverage, with the caveat that we **MUST**:  
  – Eliminate vulnerable protocols from the internet, including SSH (other than through a VPN) by October 1  
  – Address the Critical/High vulnerability count in public-facing servers  
  – Conduct a ransomware exercise  
  – Complete Duo for M365
Retiring the LAMP Web-Hosting Service

- Servers: lamphost1, webhost0, cpanel-production-1
- All three servers to be shut down by the end of this semester
- All responsible parties should be aware, and a plan underway
Cybersecurity Awareness Month

- October 1 - Bio-Cybersecurity 2021 Symposium
- October 4 - 2 Factors are Better than One – Why CSU moved to DUO
- October 6 - Data Security Basics: How to Safeguard Your Data
- October 14 - Phishing: Don't Take the Social Engineering Bait!
- October 19 - Women Securing CSU: Discussion Panel
- October 27 - Advanced Data Security for Research: Data Classifications and Controls
- October 27 & 28 - Capture the Flag: Ram Security Dash

Contact Kelly Poto in the Division of Information Technology for more information.
Grouper

- Grouper and RabbitMQ (message queue) delivered via Docker swarm
  - Work to be completed this week
- Canvas course groups used for lecture capture streaming
  - 41,300 groups
    - Goal: improve Grouper performance – currently 20-hour sync
    - 2020SP and 2020SM removed from Grouper – will be removed from Active Directory soon
    - Also intend to remove 2020FA, 2021SP and 2021SM from Grouper
    - Groups will stay in AD and be removed when not needed
    - **Permissions will remain active until one year after semester end**
      - i.e., 2020FA would be removed sometime in Jan 2022.
Cybersecurity Internship Program

• Funding provided by Colorado Senate Bill 18-086 (SB18-086)
• Providing an environment for students to learn, practice, and promote best security practices while enhancing Colorado State University's cybersecurity efforts

• Teams
  • Threat and Vulnerability Management
  • Incident Response and Early Detection Management
  • Asset Management
  • Secure Voting
  • 19 interns
NetID/midPoint Update

• CSU Pueblo live January 1, 2021
• Current areas of focus
  – Extending NetID self-service for addition of CSU (Fort Collins) population
  – eID migration to midPoint
  – midPoint provisioning to eduPerson and Active Directory
  – Campus communications
  – WEID directory data replacement
  – Pueblo email migration to CSU M365 tenant
That’s All, Folks!

Meeting slides will be posted in Teams and on the **Subnet Managers website**.

Meeting recording will be posted in Teams.

Our next Subnet Managers meeting will be

Wednesday, November 17, 2021.

10 – 11:30 AM