IT Consolidation Phase 3

Preliminary Report to Provost Rick Miranda
Friday, August 4
2:00-3:30 PM
Provost’s Conference Room, Administration Building
Agenda

1. Introductions

2. Presentations
   1. O365 – Kelley Branson (for Bryan Gillispie)
   2. Standardizing Help Desk Software – Kelley Branson (for Richie Nelson)
   3. Reducing MS Domains – Scott Baily
   4. A Standard Content Management System (CMS) – Joe Rymski
   5. Server Room Consolidation – Scott Baily
   6. TimeClock Plus – Nick Cummings
IT Consolidation Phase III
Office365 Adoption and Use

Presenter:

Committee Members: Bryan Gillispie, Candace Ryder, Kelley Branson, Tyler Wilson
Background

- CSU migrated faculty and staff accounts to Office 365 in 2015
- Faculty and staff have one official CSU email account on Office 365
- Faculty and staff may obtain a RAMS account on Google
- Other services can be used through email forwarding
- Students are provisioned a RAMS email account through Google
- Student email addresses appear in the global address book in Office 365
Committee Considerations

• Did most units adopt Office 365 as their primary email and calendaring solution
• Are most individual users using Office 365
• Are there any groups running their own mail servers
• Should CSU look at integrating the students into Office 365’s email and calendaring services
• What are the benefits to integrating the students into Office 365
Findings

• At the division level migration complete
• Only a few small groups running independent mail servers
• Only 28% of O365 users forward email or link calendar to another service
• 81% of the responding IAC members surveyed support having one official system
• CiTAC supports integrating the students into Office 365
• Migrating the students to Office 365 would not require additional funding
• ACNS would need to plan a project for integrating students
Benefits of Student Integration

• Less confusion to users across campus in finding the correct email or scheduling calendars
• Provides a common set of tools and easier collaboration across those tools
• Faculty would have an easier time of integrating Office 365 apps into their courses
• Simplify the account provisioning process
• Appears to have no budgetary impact
Recommendations

• Move to Office 365 as the required email and calendar system for CSU
• CiTAC & ACNS engage with the students for their feedback on integration
Phase 3 Consolidation
Help Desk Subcommittee

Members
Richie Nelsen – Chair
Kelley Branson
Terri Pecora
Kacie Reed
Mission

Evaluate the feasibility of consolidating the many Help Desk software packages used on campus. Determine potential value proposition of consolidating.
Methodology

Identify Stakeholders
Gather Requirements
Determine Qualified Vendors
Validate top 3 Vendors
Present Findings
Value Proposition

Bulk Pricing
Standardized User Experience
Campus Wide Analytics / Reporting
Alignment With Best Practice
Time / Efficiency Gains
Common Problem Identification / Management
Seamless interoperability to transfer tickets across all operational boundaries
Current Spend Campus Wide
~$45,000/yr

1. Remedyforce
   Recommended
   ~$135,000/yr

2. Freshservice
   Requires Configuration
   ~$117,000/yr

3. Servicewise
   Not Recommended
   ~$89,000/yr

Estimates 250 License Count Based Off Campus Wide Survey
*Results based on 15 respondents = 206
  33 non-respondents estimated = 44
Thank you
Reducing MS Domains

Scott Baily, ACNS
Sub-Committee Members

• Kelley Branson and Andrew Paul (Engineering)
• Joe Rymski (Web Communications)
• Candace Ryder (CoB)
• Scott Baily (ACNS)
• Joe Volesky, Mike Willard (ACNS, Ex Officio)
In a nutshell

• “Windows Domain”: Collection of user accounts, computers, printers, etc. registered with a common database; managed separately by local IT staff

• CSU’s top-level “root” is called COLOSTATE
  • 25 “child domains” exist under COLOSTATE

• eIDs (username/pw) are synched with COLOSTATE
  • Different username/pw used in some “child domains”
Background

• 2011 IT Consolidation analysis considered this
  • 34 Child Domains (CDs) existed at that time
  • Users: Multiple logins confusing and problematic
  • Recent enhancements to central identity and access management should eliminate need for some child domains
  • Multiple Exchange environments at that time added complexity and exacerbated this problem
    • No longer the case, now easy to consolidate
Why – Benefits

• Fewer usernames/passwords easier for users
• Reduces operational complexity
• Reduces staff effort in the units
• Lower hardware costs
• More domain controllers => increased security risk
To understand issues & opportunities

• Surveyed IT managers across campus
• Learned more about how child domains are being utilized on campus
What we learned

• Step 1 to decommission CD: use eID credentials
• eID logins are common for campus workstations
  • Currently used or planning to: 14
  • No plans: 6
  • No response or N/A: 5
• “Would you consider decommissioning your CDs?”
  • Yes: 5
  • Maybe: 9
  • No: 5
  • No answer: 1
Concerns about consolidation:

• Loss of control
  • E.g. Need tougher rules for user acct. passwords

• Loss of flexibility
  • Custom local scripting to pre-populate user groups

• Some custom solutions require CD objects

• Cost of migration (lack of resources)

• Insufficient robust, automated tools for distributed management of AD objects (lack of feature parity compared to child domain mgmt)
Recommendations

• Goal is NOT to collapse to 1 resource domain
  • 1 CD per College or Division is reasonable for most areas
  • Confirmed by survey results
• Abandoning many of the smaller CDs makes sense
  • ACNS to discuss with the appropriate admins
• Maintaining some larger CDs also reasonable
  • One college estimated 2,000 hours to change!
• Develop additional central tools -> ACAA
• Develop min. requirements for departmental domain controllers
Discussion and Questions

• Are most welcome
IT Consolidation Phase III
Standard Content Management Systems - Web

Joe Rymski (Web Communications), chair
Dawn Paschal (Library)
Terri Pecora (Registrar’s Office)
Background

ACNS provides both Windows and LAMP web services

Some colleges and departments also run web servers

Web Communications runs WordPress Multisite, one hosting 100 sites
Levels of integration considered

- Full: standard CMS, single installation
- Hybrid 1: standard CMS, multiple installations
- Hybrid 2: common CMS, some exceptions, multiple installations
- Minimal: combine standalone CMS installations where possible
- Do nothing
Survey

What CMS platforms are in use and why?

What is the cost and time required?

Are they secure?

Additional comments
What we learned

22 of the 30 responses are using or planning to use WordPress

Also SharePoint, Kentico, Drupal, Modx, dotCMS, home built

Not everyone is using a CMS

Environments seem mostly secure, but some concerns

Some interest in common platform, more support
What we learned continued

- No one-size-fits-all
- Public-facing vs. intranet websites
- Data-driven sites and web applications
- Special integrations and other special needs
Recommendation

Hybrid 2: common CMS (WordPress), some exceptions, multiple installations

Single CMS seems unrealistic given broad needs

Have some security concerns to address
Server Room Consolidation

Scott Baily, ACNS
Sub-Committee Members

• Kelley Branson (Engineering)
• Neal Lujan (Student Affairs)
• Kacie Reed (CVMBS)
• Stephanie Wolvington (Internal Auditing)
• Scott Baily (ACNS, Chair)
Background

• 2011 IT Consolidation analysis
• Recommended various levels of consolidation
  • Moving existing servers/storage to E7
  • Virtualizing systems on central hardware
  • Consider building water cooled area for higher-density systems
• Considerable consolidation has been done
  • Still room for improvement
FM Sustainability Team

• Looped in because of their unique expertise
• Carrol Dollard and Stacey Baumgarn
• Introduced us to the Brendle Group
  • Engaged by PRPA to conduct data center research
  • Interested in energy costs of data centers (S/M/L)
  • CSU was identified as a preferred partner
  • Possible development of energy assessment tool
  • Work began April, 2017
Security Concerns

• Steve Lovaas conducted security review
  • Significant security controls implemented in E7
  • Compliance issues for research data
  • Risk of lost or compromised data
    • Personally Identifiable Info, credit card, SSNs, etc.
  • Monitoring, auditing very important
  • Data center firewall in place in central data center
To assess scope

• Queried Property Accounting Database
  • Looked for computer equip. > $10K
  • Some false positives; identified 44 server rooms
  • Didn’t count locations with one server (~30)
    • May need to revisit this
  • Data collected prior to current inventory exercise

• Did a survey (thanks/sorry!)
  • Provided details about 12 server rooms
  • Need to dig deeper!
What we learned

• 44 data centers around campus
  • An additional 30+ single-server locations

• Survey results: good, but incomplete info
  • Will require time to follow up on remainder

• Some unique situations out there
  • Health/Medical Center: HIPAA
  • Computer Science: part of student experience
  • Weather and Climate research
What we learned (Cont’d)

• Units that have centralized enjoy the benefits
  • High quality, availability and uptime
  • Access control, firewalls, video surveillance, etc.
  • Redundant power and cooling
  • “Convenience factor” less important than suspected

• Engineering E7 and Scott Bio: Primary choices
  • Free vs. low-cost doesn’t seem to be an issue
  • Some IT managers want additional redundancy
Concerns about consolidation:

- Convenience (#1 by a large margin)
- Performance
- Redundancy
- Control
- Sensitive nature of data
- Familiarity
- Cost (one-time & recurring)
- Downtime for the move
Benefits of Consolidation

• Energy efficiency
  • Brendle Group estimates $1650/year savings for consolidating medium sized data centers

• Reduced maintenance costs (cooling, power)

• Improved physical security & monitoring

• Potential for improved data security (firewall)

• Efficient and consistent compliance controls

• Economies of scale for equipment purchases
Recommendations

• Need to reconsider space allocation in E7
• Water-cooled section of E7 should be built
  • Budget Request: May 2017 estimate was $250K
• Need accurate energy consumption tools
• Re-visit risks of single-server instances
• Consider “central” facilities on south and foothills campuses
Recommendations (Cont’d)

• Consider expanding scope of data centers in new construction
• Continue to investigate cloud options
• Work with colleges/divisions to re-examine benefit of consolidation
• Look for ways to incentivize consolidation
• Investigate funding options for additional redundancy in Scott Bioengineering Building
Discussion and Questions

• Are most welcome
IT Consolidation

TimeClock Plus Subcommittee

Presenter: Nick Cummings, Assistant Director, Human Resources
Subcommittee Members

- Bob Engmark
- Neal Lujan
- Stephanie Wolvington
TimeClock Plus System

- Provides central solution for CSU supported by Human Resources and Information Systems
- Replaces current outdated time clock system
- Allows electronic timesheet entry for non-exempt (overtime-eligible) salaried employees
- Allows sick/annual leave request and approvals
Advantages of Consolidation

- Offers electronic timesheet/leave solution to many areas (most of campus) that previously had none
- Creates consistent and centrally accessible audit trail; particularly important with potential increased focus on FLSA compliance (depending on court results and the Federal administration)
- Ensures consistent application of central policies, including overtime and comp time
- Reduces need for resources in departments with homegrown or third-party solutions
Steps Already Taken

• Meetings with representatives from Colleges/Units with homegrown or third party systems (CVMBS, Engineering, Student Affairs)
• Meetings with departments with unusual time and leave requirements (Housing and Dining, Facilities Management, CEMML, CSU Police)
• Worked within central policy guidelines to meet the needs of these units and avoid any unnecessary disruption of business practices

• No “stoppers” found, after extensive effort!
Recommendations and Next Steps

- Continue engaging with campus partners as TimeClock Plus is rolled out to find solutions to any remaining issues
- Transition majority of departments to TimeClock Plus on July 1
- Allow departments to continue entering time and leave directly into Oracle in exceptional cases
- Transition all departments to TimeClock Plus by December 31, 2017