

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



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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



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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