

CSCF Objectives and Milestones

May 2017

Hardware Acquisition, Deployment, and Lifecycle Management

Plan, purchase, configure, deploy and manage lifecycle of equipment for offices, labs, and server rooms.

- Objective: timely deployment of desktop/laptop equipment to incoming graduate students
 - S17 (INF): acquire desktop equipment for incoming F17 students based on graduate enrollment estimates and historical equipment type distribution
 - S17 (INF/RSG): image, assign, and deploy equipment for incoming F17 students by 31 August, for equipment choice/locations identified by the grad office before 1 August.
 - W17 (INF): desktop equipment prepared for assignment to incoming S17 grads by April 15th, based on March 1 best estimate of requirements (*done*)
 - F16 (INF/RSG): acquire and deploy equipment for incoming W17 grads before the holiday break, for equipment choices/locations identified by the grad office before 2 December (*not done - we did not have info from the grad office by 2 December*)
 - F16 (INF): purchase grad equipment for W17 in mid-October, based on best estimates of requirements available at that time, so that all equipment is here by end of November (*done*)
- Objective: CSCF-standard equipment configurations and images, updated on an annual cycle
 - S17 (INF/RSG/TOP): eliminate use of roaming profiles for staff/grad desktop machines
 - W17 (INF): new (Fall 2017) Win10/Ubuntu image ready for use on May desktop deployments (*done*)
 - F16 (INF): patch the current (Win10/14.04) image for W17 deployments (*done*)
 - F16 (INF): tentative 2017 hardware configuration (*done*)

Machine Rooms and Server Infrastructure

Machine rooms and infrastructure for School and research equipment.

- Objective: redundant machine rooms to host CS on-line services
- Objective: rationalize CS networks
 - F16 (INF): server vlans routed on server room switches, client vlans routed on building

aggregation switches (*not done, not a priority for W17*)

- Objective: flexible, up-to-date server infrastructure
 - S17 (INF) no SCS servers running end-of-life ubuntu 12.04
 - W17 (INF/TOP) no SCS servers running end-of-life ubuntu 12.04 (*not done*)
 - F16 (TOP/INF) migrate/update fms12.cs from Vmware4 to Vmware5 (*done*)
- Objective: load balancing and failover for critical CS on-line services
 - F16: (INF): deploy redundant load balancing service (*done*)

Teaching Labs

Management of teaching labs in support of academic programs.

- Objective: usage statistics for all teaching labs
 - S17 (TOP/INF): Director-accessible tabular usage data (room, time, count) for *all* MC labs, with on-going updates and no discard of old data
 - W17 (TOP/INF): Director-accessible tabular usage data (room, time, count) for all MC labs, with on-going updates and no discard of old data (*partially done – only for Mac labs*)
- Objective: evergreen Lab computing equipment
 - S17 (TOP/INF): refresh computers in MC2062 and MC2063
 - S17 (TOP/INF): evergreen MC3003
 - W17 (INF/TOP): acquire/install new desks in MC3027 (*done*)
 - W17 (INF/TOP) – prepare project plan for evergreening MC3003 in August (*done*)
- Objective: ensure that lab equipment is functional and secure
 - S17 (TOP): configure sound support in graphics lab
 - W17 (TOP): investigate alternatives to punch key code access to (real time and graphics) labs, to simplify code management (*done – don't need alternative*)
 - F16 (TOP): docs for external users explaining what's available in the teaching labs (*not done, cancel*)
 - F16 (TOP): incorporate monitoring systems (Nagios) into Caspar admin interface (*done??*)
- Objective: simple access to programming contest server from any general purpose lab
 - S17 (TOP/INF) evaluate approaches to dual-boot Macs in MC3005 for CEMC-type events, propose one, and implement if agreed

- F16 (INF): system for providing remote contest server desktops available for use in Mac labs for F16 contests (*mostly done, some unresolved issues with Mac xserver hanging*)
- Objective: lab for use by CS coursework Mmath students
 - S17 (TOP/INF) plan log-in environment for shared-use machines (Mac/Linux/Windows), and implement on Macs and dual-boot machines in the coursework MMath lab
 - S17 (TOP) simple, clear help signs in coursework MMath lab
 - W17 (TOP/INF) update work-sites in DC3335 coursework MMath lab - 1/3 Mac, 1/3 dual-boot PC, 1/3 power/networking only. (*done*)
 - F16: (INF/TOP) plan for refurbish of coursework Mmath lab, and move to new space once identified (*new space not known yet*)

Meeting Room and Public Space Management

Management of A/V in CS meeting rooms.

- Objective: A/V for grad classrooms and meeting rooms
 - S17 (TOP): develop plan for improving A/V in DC2585
 - W17 (TOP/INF): install podium monitor in DC2585 (*done*)
 - W17 (INF/TOP): plan, get approval for, and deploy video upgrade in DC2568 grad classroom (*done – problems resolved without upgrade*)
 - F16 (TOP): plan, get approval for, and deploy video upgrade in DC2568 grad classroom (*not done*)
- Objective: Manage and maintain SCS public display boards
 - F16 (TOP) – plan and obtain approval for third SCS public display, in Great Hall (*cancelled*)

On-Line Services: Database Management

Backend database services to support other on-line services and School operations.

- Objective: Highly available MySQL cluster to serve non-teaching applications, including ST, inventory.
 - W17 (TOP): implement auto-restart for HA-MySQL (*done*)
- Objective: Highly available Postgres service to support OAT and other CS applications
 - S17 (TOP/RSG/INF): migrate remaining apps and databases from postgres.cs, shutdown service, and decommission/repurpose hardware

- Objective: DB2 for teaching
 - S17 (TOP): upgrade DB2 server from ubuntu12.04

On-Line Services: Linux Computing Environments

Linux computing environment(s) for teaching and for faculty/staff/grad general use.

- Objective: track Ubuntu LTS releases in teaching and general environments
 - W17 (INF/TOP): linux.cs and linux.student.cs refer to ubuntu 16.04 servers (*done*)

On-Line Services: Teaching Systems

Systems for marking, assignment submission, and other teaching-related tasks.

- Objective: manage on-going operation of Seashell service
- Objective: manage and maintain Markus
 - W17 (TOP/INF): update assignments.student.cs container to 16.04 (*done*)
 - F16 (TOP): upgrade Markus to version 1.2 (*done, upgraded to 1.4*)
 - F16 (INF/TOP): update assignments.student.cs container (12.04 to 16.04) (*deferred to April 2017*)
 - F16 (INF/TOP): saltify markus and marmoset deployment onto assignment.student.cs (*deferred to April 2017*)
- Objective: manage and maintain Marmoset
 - S17 (TOP): replace or repackage pswatcher for Ubuntu systems
 - F16 (TOP): configuration improvements to Marmoset to improve reliability (*progress*)
- Objective: ISG server for CS200
 - F16 (TOP) decommission and shut down Oscar, old ISG server for CS200 (*done*)
- Objective: support phones for CS446 and other courses
 - W17 (TOP): acquire ThinkingApe-funded phones, and develop plan for managing them beyond W17. (*done*)

On-Line Services: File Storage

File storage for students, staff, and faculty.

- Objective: highly-available network file service (NetApp) with limited capacity (4GB/undergrad, 20GB/ grad, 50GB/faculty)

- Objective: highly-available, performant, high-capacity file service (DFS) for SCS faculty, staff, grads
 - S17 (INF): migrate non-home-directory network mounts to DFS
 - S17 (RSG/INF): handover of on-ongoing management of the DFS to the INF group
 - W17 (RSG/INF/TOP): Director-accessible downtime records (start time, duration, planned/unplanned, reason) for DFS and FSS services, regularly updated and not discarded (*not done: FSS only, data link not accessible*)
 - W17 (RSG/INF): DFS in production under FSS (done)
 - F16 (INF/RSG): DFS in production under FSS (*not done, progress*)
- Objective: file syncing/sharing (FSS) service for SCS faculty, staff, grads
 - F17 (RSG/INF): official launch of FSS service to SCS
 - W17 (RSG/INF): soft roll-out of FSS service to SCS (*done*)
 - F16 (INF/RSG): roll-out of FSS service to SCS (*not done, progress*)
- Objective: reliable Samba service
 - F16: (INF): Redundant samba service for both teaching and general environments (*done*)

On-Line Services: Email

Supplemental e-mail services to support of SCS-specific requirements.

- Objective: SCS mail exchange service supporting local mail scripting and SCS-specific aliases.
 - S17 (INF/TOP): review, re-design and re-deploy existing (MX) exchange service, modernizing and avoiding current spam-forwarding problem.
 - W17 (INF/TOP): review, re-design and re-deploy existing (MX) exchange service, modernizing and avoiding current spam-forwarding problem. (*not done*)
 - F16 (INF): re-design and re-deploy existing (MX) exchange service, modernizing and avoiding current spam-forwarding problem. (*not done*)

On-Line Services: WWW

Web presence for SCS and CSCF

- Objective: refresh/upgrade CSCF web presence
 - F16 (TOP/RSG) - plan content of revised site (*not done*)
 - F16 (TOP/RSG) - decision about moving CSCF web to WCMS (*not done*)

- F16 (TOP/RSG) - WCMS training for at least one staff (*not done*)
- **Objective:** support CS web presence
 - S17 (RSG) – all SCS web-based applications work with new clustered web server
 - S17 (TOP/RSG) – support migration of CS WCMS content from Math to UW, update CS WWW proxy
 - S17 (INF/RSG) – deploy Ubuntu-16.04 Apache 3-node cluster
 - W17 (INF/RSG) – deploy Ubuntu-16.04 Apache 3-node cluster (*not done*)
 - W17 (TOP/RSG) – migration of CS WCMS content from Math to UW (*not done – external delay*)
 - F16 (TOP/RSG) – migration of CS WCMS content from Math to UW (*not done*)

Teaching/Administrative Services

Custom services in support of teaching and School administration.

- S17 (TOP): deploy Xerox fleet printer in DC2320

Research Services

Custom services in support of research activities.

- **Objective:** “Paper” cluster – research infrastructure from surplus equipment, operated on a cost-recovery basis.
- **Objective:** SCS research computing systems and grad/faculty desktops behind UW-mandated firewall
 - F16 (RSG): get remaining research nets behind the firewall (*done*)

SCS Software Projects: Exam Management System (EMS)

System to support exam seating, printing, and marking.

- **Objective:** migrate support and operational responsibility for EMS to RO and IST
 - S17 (RSG): migrate operational instance of EMS to IST server in time for S17 exams
 - W17 (RSG): PoC for EMS for other Depts: Accounting & Financial Mgmt, Chemistry, Engineering, Stats, Distance – posted on the Odyssey EMS help page. (*not done*)
 - F16 (RSG): PoC for EMS for other Depts: Accounting & Financial Mgmt, Chemistry, Engineering, Stats, Distance – posted on the Odyssey EMS help page. (*not done - there is a page of contacts, but it is not linked and some are confirmed*)

- Objective: on-going feature development
 - W17 (RSG): revamped EMS UI is live (*done*)
 - F16 (RSG): revamp EMS UI (supervised by Daniel) (*not done, progress. Beta is live.*)

SCS Software Projects: Grad Visit Day System

System to support annual Grad Visit Day, including scheduling

- Objective: ensure reliable system operation, customization and enhancements

SCS Software Projects: TA Evaluation System

Proposed system to support TA Evaluation workflow for the Grad Office.

- Objective: design, develop, deploy, maintain
 - F16 (RSG): solicit feedback on TA evaluation system, propose any Phase 2 changes (Isaac) (*not done, not a priority for W17*)

SCS Software Project: Teaching Preference System

System to collect faculty teaching preferences.

- Objective: ensure reliable system operation, refine and enhance as needed

SCS Software Projects: OAT

Backend database supporting advising tools, UW Portal, EMS, and other applications.

- Objective: ensure reliable system operation, enhance functionality
 - W17(RSG): all raw data inputs made available in the OAT DB for querying (*progress, not done – external delays*)

SCS Software Projects: OGSAS

System to support graduate admissions workflow.

- Objective: ensure reliable system operation, on-going feature enhancement
 - F16 (RSG): solicit feedback, propose new features if needed (*not done, not a priority for W17*)
- Objective: port OGSAS to OAT backend

CSCF-Internal Systems: Accounts Management

Manage and utilize accounts data for CS students, faculty, and staff

- Objective: exploit OAT database for accounts data
 - F16 (INF/RSG): get course enrollment (group) data in Directory Service from OAT DB (*not done, some progress*)

CSCF-Internal Systems: Inventory

System to track equipment inventory.

- Objective: ensure reliable operation, feature enhancements
 - S17 (RSG/INF) *inventory-driven tftboot and salt configuration for server provisioning*

CSCF-Internal Systems: Research Subscription System

System to manage research support subscriptions, track time, generate bills

- Objective: ensure reliable operation, feature enhancements
 - W17 (RSG): prepare subscription system to support annual billing (*not done, required changes not determined*)
 - F16 (RSG): modify subscription system as necessary for revised billing model (*unnecessary*)

CSCF-Internal Systems: Request Tracking

System to track research support requests.

- Objective: CSCF request tracking via campus RT system
 - S17 (RSG): *integration of RT time tracking with existing tools*
 - W17 (RSG/TOP/INF): RT goes live (all new requests and updates in RT) on 1 May. (*done*)
 - W17 (RSG/TOP/INF): fewer than 50 open requests per staff member by term's end, and none assigned to non-staff (*progress*)
 - F16 (RSG/TOP/INF): RT replacement for ST system in test, with sample queues and staff dashboards (*not done*)

Strategic Planning

Review and long-term planning of CSCF services.

- S17 (INF/TOP/RSG) *develop plan for home directory file services for linux.student.cs and*

linux.cs beyond end-of-life of current NetApp file server, including transition timeline

- S17: (INF/TOP/RSG) develop plan for printing services for SCS faculty, staff, grads – usage tracking not necessary
- W17: (INF/RSG) develop plan for SCS PostgreSQL servers (*done*)
- F16: (INF/TOP) develop printing support plan (*not done*)
- F16 (TOP) investigate and possible deploy/migrate on campus Slack alternative (*done*)

Financials

Manage CSCF spending on staff, equipment, and services.

- Objective: Produce annual equipment budget proposal for SCS.
 - W17(INF/RSG/TOP): final FY17 budgets to SCS (*done*)
 - F16 (INF): draft FY17 budget (*not done*)
- Objective: Timely and well-managed spending – avoid last minute spending.
 - S17 (INF/TOP/RSG): complete S17 spending according to budget targets
 - W17 (INF/TOP/RSG): complete FY16 equipment spending (*done*)
 - W17 (TOP/INF/RSG): develop a process for managing staff budget (*done*)
 - F16 (INF): At least 85% of CSCF budget spent by 31 December (*not done, progress – about 70% spent through November*)
- Objective: timely billing of researchers for research services
 - S17 (RSG): establish FY17 RSG unit billing rate and distribute single annual bill for each support account
 - W17 (RSG): combined F16/W17 bills distributed in Jan 2017 (*done*)
 - F16 (RSG): F16 billing under new billing model by end of October (*not done, progress*)