CSCF Objectives and Milestones

September 2016

<u>Hardware Acquisition, Deployment, and Lifecycle Management</u>

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

- <u>Objective</u>: annual hardware purchasing based on CSCF budget and evergreening priorities

  ○ W16 (INF): finish FY15 purchasing by UW's FY15 purchasing deadline *(ordered, waiting for shipments)*

- <u>Objective</u>: timely deployment of desktop/laptop equipment to incoming graduate students

  ○ 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

  ○ 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

  ○ S16 (INF/RSG) acquire and deploy equipment for incoming F16 students by 31 August, for equipment choices/locations identified by the grad office before 10 August *(done – 12 students)*

- <u>Objective</u>: CSCF-standard equipment configurations and images, updated on an annual cycle

  ○ F16 (INF): patch the current (Win10/14.04) image for W17 deployments

  ○ F16 (INF): tentative 2017 hardware configuration

  ○ W16 (INF): F16 image ready for use on May hardware deployments *(not done, but expected for May 1)*

  ○ W16 (INF): 2016 desktop, laptop, and server hardware configurations finalized *(done)*

<u>Machine Rooms and Server Infrastructure</u>

Machine rooms and infrastructure for School and research equipment.

- <u>Objective</u>: redundant machine rooms to host CS on-line services

  • S16 (INF): improved bandwidth between CS machine rooms to support replicated services (*mostly done - 40 Gb links in place between two pairs of rooms*)

- <u>Objective</u>: rationalize CS networks

- **F16 (INF)***: server vlans routed on server room switches, client vlans routed on building aggregation switches*
- <u>Objective</u>: virtualization for CS servers
  - **F16 (TOP/INF) migrate/update fms12.cs from Vmware4 to Vmware5**
- <u>Objective</u>: load balancing and failover for critical CS on-line services
  - **F16: (INF): deploy redundant load balancing service to balance load to apache**

Teaching Labs

Management of teaching labs in support of academic programs.

- <u>Objective</u>: database of usage statistics for all teaching labs
  - W16 (INF): accurate usage stats for thin client labs (MC 3022, MC 2061) *(done, but some doubts about veracity of data)*
- <u>Objective</u>: evergreen Lab computing equipment
  - S16 (INF/TOP): refresh (equipment, furniture) in MC 3005 (Mac lab) (done)
  - S16 (INF/TOP): acquire/install new desks in MC3027 (Mac lab) (deferred)
  - S16 (INF/TOP): evergreen MC3018 (real-time lab) equipment (done)
  - S16 (INF/TOP): evergreen MC3007 (graphics lab) – four new stations (partially done, partially deferred)
  - W16 (INF/TOP): finish evergreening of MC3022 by replacing 5 missing work sites *(done)*
  - W16 (INF/TOP): planning August evergreening of 2nd and 3rd floor Mac labs *(done)*
- <u>Objective</u>: ensure that lab equipment is functional and works well
  - **F16 (TOP) – docs for external users explaining what's available in the teaching labs**
  - S16 (TOP): have ISA desktops and all Mac labs managed by Caspar suite and upgraded to Mac OS 10.11 (done)
  - S16 (TOP/INF): as Mac labs are OS upgraded, move each to a separate VLAN (done)
  - W16 (TOP): diagnose, fix if possible, very slow login and poor performance in labs *(some progress)*
  - W16 (TOP): establish a process for imaging Macs (in offices and meeting rooms, as well as in the labs) and for switching from image to image. *(done)*
- <u>Objective:</u> simple access to programming contest server from any general purpose lab

- - F16 (INF): system for providing remote contest server desktops available for use in Mac labs for F16 contests
  - S16 (INF): investigate and deploy system for providing remote contest server desktops on any machines in any of the general purpose (Linux, Mac) labs. (done for Linux, not for Macs)
- Objective: lab for use by CS coursework Mmath students
  - F16: (INF/TOP) plan for refurbish of coursework Mmath lab, and move to new space once identified

Meeting Room and Public Space Management

Management of A/V in CS meeting rooms.

- Objective: A/V for grad classrooms and meeting rooms
  - F16 (TOP) – plan, get approval for, and deploy video upgrade in DC2568 (grad classroom)
  - W16 (TOP): update signs, labels and incident management procedures, and establish procedures for responding to problems. (partially done – signage is not yet in place)
- Objective: Manage and maintain SCS public display boards
  - F16 (TOP) – plan and obtain approval for third SCS public display, in Great Hall

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.
  - W16 (INF): 3-node MySQL cluster in production and ready to accept data and host applications (Feb'16) *(largely done, except for documentation)*
  - W16 (TOP/RSG): port non-teaching applications to new MySQL cluster *(done)*

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 (Ubuntu 16.04 in production by April 2017)
  - S16 (INF): ubuntu 16.04 servers on-line, announced and available for end-user testing in both general and teaching environments (*not done, but close*)

- W16 (INF): ubuntu14.04.student.cs in production *(done)*
- W16 (INF): ubuntu14.04.cs in production *(done)*
- W16 (INF): ubuntu14.04.cs is default for linux.cs *(happening last week of April)*
- W16 (INF/TOP): ubuntu14.04.student.cs is default for linux.student.cs *(happening last week of April)*
- W16 (TOP): transition teaching and course/specific software to 14.04 *(done, including marmoset built servers, seashell daemons, uC++, CS452 cross compiler)*

On-Line Services: Teaching Systems

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

- Objective: manage on-going operation of Seashell service
  - S16 (TOP): transition Seashell to a CSCF-managed service (done)
- Objective: manage and maintain Markus
  - F16 (TOP): upgrade Markus to version 1
  - F16 (INF/TOP): update assignments.student.cs container (12.04 to 16.04)
  - F16 (INF/TOP): saltify markus and marmoset deployment onto assignment.student.cs
- Objective: manage and maintain Marmoset
  - F16 (TOP): configuration improvements to Marmoset to improve reliability
- Objective: ISG server for CS200
  - F16 (TOP) decommission and shut down Oscar, old ISG server for CS200

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
  - F16 (INF/RSG): DFS in production under FSS
- Objective: file syncing/sharing (FSS) service for SCS faculty, staff, grads
  - F16 (INF/RSG): roll-out of FSS service to SCS

- Objective: reliable Samba service

  - F16: (INF): Redundant samba service for both teaching and general environments

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.

  - F16 (INF): re-design and re-deploy existing exchange service, modernizing and avoiding current spam-forwarding problem.

  - S16 (INF): re-design and re-deploy existing 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

  - F16 (TOP/RSG) - decision about moving CSCF web to WCMS

  - F16 (TOP/RSG) - WCMS training for at least one staff

- Objective: support CS web presence

  - F16 (TOP/RSG) – migration of CS WCMS content from Math to UW

Teaching/Administrative Services

Custom services in support of teaching and School administration.

- S16 (TOP): investigate waiting/ticketing system for new ISG student waiting area (removed as goal)

- S16 (TOP): assist with CS transition to IST's staff absence management system (done)

- S16 (TOP): assist with SCS sharepoint reorganization (not done, not client priority)

- S16 (TOP): investigate Faculty on-boarding with Sharepoint (not done, not client priority)

- S16 (TOP): transition CS349 from svn to git (done)

Research Services

Custom services in support of research activities.

- Objective: "Paper" cluster – research infrastructure from surplus equipment, operated on a cost-recovery basis.
    - W16 (RSG): rack the surplus hardware we have *(not done)*
- Objective: SCS research computing systems and grad/faculty desktops behind UW-mandated firewall
    - F16 (RSG): get remaining research nets behind the firewall
    - S16 (RSG): finish research group consultations and have client net behind the firewall (client nets done, most research nets are done)
    - W16 (RSG): finish research group consultations and have client net behind the firewall *(not done)*

SCS Software Projects: Exam Management System (EMS)

System to support exam seating, printing, and marking.

- Objective: on-going operation and management, client assistance, handled by TOP group
    - F16 (RSG): PoC for EMS for other Depts: Accounting & Financial Mgmt, Chemistry, Engineering, Stats, Distance – posted on the Odyssey EMS help page.
    - S16 (RSG/TOP): continue Nick as primary point of contact for EMS help (done)
    - W16 (RSG): broaden EMS support base by establishing non-Isaac point-of-contact for EMS *(progress made)*
- Objective: on-going feature enhancement
    - F16 (RSG): revamp EMS UI (supervised by Daniel)
    - S16 (RSG): testing of new EMS feature: push exam marks from Crowdmark into Learn (done)
    - W16 (RSG): modify exam printing process to embed fonts to improve workflow with Media Services *(done)*
    - W16 (RSG): modify EMS to handle multi-version exams *(done)*

SCS Software Projects: Grad Visit Day System

System to support annual Grad Visit Day, including scheduling

- Objective: ensure reliable system operation, customization and enhancements
    - W16 (RSG): updates for W16 visit day *(done)*

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

  - S16 (RSG): initial use and testing for S16 TA evaluations (*done*)

  - W16 (RSG): create project plan for this system *(done, and system is implemented)*

SCS Software Project: Teaching Preference System

System to collect faculty teaching preferences.

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

  - W16 (TOP): update preference information to reflect changes in UW scheduling process *(done)*

SCS Software Projects: OAT

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

- Objective: ensure reliable system operation, enhance functionality

  - S16 (RSG): add admissions data (*not done, external challenges*)

  - W16 (RSG): overhaul data import to use new data source *(blocked, not done)*

  - W16 (RSG): add admissions data *(not complete, on-going external challenges)*

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

  - S16 (RSG): implement modifications requested by Assoc. Director Grad Studies (*done*)

  - W16 (RSG): implement modifications requested by Assoc. Director Grad Studies *(not done due to lack of data feeds)*

- Objective: port OGSAS to OAT backend

  - S16 (RSG): port OGSAS to OAT (*not done, blocked on data availability*)

  - W16 (RSG): port OGSAS to OAT *(blocked, not done)*

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

CSCF-Internal Systems: Inventory

System to track equipment inventory.

- Objective: ensure reliable operation, feature enhancements

    - W16 (RSG): version 3.5.1 bug fixes *(done)*

    - W16 (RSG): explore machine room mapping *(not done, some progress)*

CSCF-Internal Systems: Research Subscription System

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

- Objective: ensure reliable operation, feature enhancements

    - F16 (RSG): modify subscription system as necessary for revised billing model

    - W16 (RSG): bug fixes *(done)*

CSCF-Internal Systems: Request Tracking

System to track research support requests.

- Objective: move CSCF request tracking to RT by 1 May 2017

    - F16 (RSG/TOP/INF): RT replacement for ST system in test, with sample queues and staff dashboards

    - S16 (RSG/INF/TOP): plan for moving CSCF request tracking to RT (done - #103960)

    - W16 (RSG): make a decision about the future of current ST system *(not done)*

Strategic Planning

Review and long-term planning of CSCF services.

- F16 (INF/TOP/RSG): plan for revision of CSCF web space?

- F16: (INF) develop printing support plan

- F16 (TOP) investigate and possible deploy/migrate on campus Slack aternative

- S16 (INF/TOP): review remaining mail services in student environment and set objectives (not done)

- S16 (INF): develop long-term plan for backup and archiving (review done, plan not done)

- S16 (INF/RSG): go/no-go decision on owncloud/file service project (done)

- S16 (TOP/INF): review applications that remain on MySQL in the student environment and develop a plan for supporting them (not done)

- S16 (INF/RSG): review existing PostgreSQL/Odyssey infrastructure and develop a plan for managing it (review done, plan not done)

- W16 (INF/RSG): go/no-go decision on owncloud/file service project *(not done)*

- W16 (RSG/TOP/INF): hold CSCF staff retreat, generate recommendations *(done)*

Financials

Manage CSCF spending on staff, equipment, and services.

- Objective: Produce annual equipment budget proposal for SCS.

  ◦ F16 (INF): draft FY17 budget

  ◦ W16 (INF): FY16 CSCF budget request to the School   *(done)*

  ◦ F15 (INF): draft of FY16 budget   *(mostly done – pricing updates needed)*

- Objective: Timely and well-managed spending – avoid last minute spending.

  ◦ F16 (INF): At least 85% of CSCF budget spent by 31 December

  ◦ S16 (INF/TOP/RSG): Develop spending plan for FY16 budget. (*done #676380*)

  ◦ S16 (INF/TOP/RSG): At least 40% of CSCF budget spent by August 31st. (*done*)

- Objective: timely billing of researchers for research services

  ◦ F16 (RSG): F16 billing under new billing model by end of October

  ◦ S16 (RSG): S16 bills out by the end of May 2016 (*done, but at end of August*)

  ◦ W16 (RSG): F15 and W16 bills out in early Feb'16 *(done)*