

IET Preliminary Response to Email Review Report

1. Planning and Execution

Recommendations: Develop a mature Quality Assurance/Quality Control unit within the Data Center that is independent of the functional units, supported by a true test environment and a commercial software testing tool such as SILK:

Information and Educational Technology (IET) fully supports these recommendations, and would extend them to an IET-wide approach. A draft (but comprehensive) white paper describing a best-practices-based approach to Quality Assurance/Quality Control (QA/QC) has been developed and will be shared by April 30, 2008 with the Technology Infrastructure Forum (TIF), the Deans' Technology Council (DTC), and other groups. A strengthened QA/QC program will also be supported by the SILK software tool that has already been purchased based on previous planning (but unfortunately too late to be of benefit for the implementation of the new Cyrus campus email service).

IET also supports the development of a test hardware environment for these types of projects. Such an environment was established for the Cyrus project and was in fact moved into a production environment when the system was implemented. Additional test hardware was acquired from Sun during subsequent testing.

Recommendation: Review staffing and organization of the Data Center and ensure adequate resources are being applied in this area.

IET very much appreciates the support for ensuring adequate staff resources are available and properly organized to meet campus needs. IET will immediately begin a review and inventory of staffing resources and their organization to be completed no later than June 30, 2008.

We also appreciate the review committee's comments on the importance of technical cross-training and the advantages of staff who are expert in and dedicated to individual applications and operating systems – and note that the two concepts need not be considered mutually exclusive. We also know the reviewers appreciate that there are many systems outside the scope of their review – and the number of these services (over 70) - representing approximately 800 systems - limits the degree to which individuals can be dedicated to focus on individual services or systems.

It is also worthwhile to note that the complexity of the Cyrus challenge was such that diagnosis and resolution eluded even the international community of Cyrus developers and the larger resources available from Sun. In the end it was the small Data Center unit, supported by faculty experts from the College of Engineering, who completed the extensive testing and research needed to discover the source of the problem and resolve it.

Recommendation: Develop a defined project management structure within the Data Center, including roles of the project manager and business analyst. Develop policies and procedures to enhance the selection and evaluation process for new software and applications implemented on campus, including a more formalized feasibility study process that provides a solid understanding of the risks, total costs of ownership, and planning necessary to implement systems of this scale at the University.

Response: IET agrees with these recommendations and recognizes the need for additional project management resources to better manage the implementation of new services and changes to current services. The Cyrus project most certainly suffered from staff transitions including the period between the departure of the original Cyrus Program Manager provided by the Vice Provost's Office and the successful recruitment of the dedicated project manager now assigned to the Data Center.

Regarding the selection and evaluation of new software, applications, and systems, IET will use the new format set forth by the IT Administrative Systems Policy PPM 200-45 (<http://manuals.ucdavis.edu/ppm/200/200-45.htm>) to ensure a consistent approach for planning, evaluating, procuring, testing, implementing, and assessing services and systems.

2. Technical Aspects

Recommendation: UC Davis should consider the feasibility to run/manage Cyrus over OS/hardware platforms used by other comparable institutions, and consider alternate operating systems such as Linux.

IET agrees that it would be advantageous to mimic the exact architecture of similar institutions that have successfully implemented Cyrus. However, and as was referenced in the review itself, research before and after the implementation of the Cyrus project revealed that no two institutions have implemented Cyrus email services and supporting architecture in the same manner. It appears that the variety of hardware, operating systems, application software and middleware choices make it virtually impossible to find any two organizations with identical configurations.

The Data Center was aware early on that many institutions have successfully implemented the open source Linux operating system, but decided a safer and more conservative approach would be to use the latest version of Sun's Solaris operating system – in no small part to ensure the benefit of comprehensive vendor support for a mission-critical service. The rather astounding experience with Sun support, which is well-documented in this review, suggests the perceived advantages were – at the very least – overestimated and a long time in coming. However, the email review committee's efforts to develop specifications for an alternate Linux-based system (which could be run on Dell boxes) was very useful. Ultimately, we believe this work greatly accelerated Sun's willingness to develop and deliver the patch needed to remedy the Solaris bug causing the Cyrus failure.

3. Communications

Recommendation: For technical or less urgent information, continue to rely on groups such as TSP and TIF to filter or disseminate what is appropriate to their end-users; for urgent information, contact end-users directly rather than relying on the tree structure to forward communications. Develop a clear protocol for the chain-of-command for information distribution and determine the best approaches to inform different groups.

IET will continue working through groups such as the technology support staff in campus departments (Technology Support Program) and the technology leads in the schools, colleges and administrative units (Technology Infrastructure Forum) for dissemination of technical information. We will by June 30, 2008 present these groups with updated guidelines that clearly outline communication channels and expectations about individual efforts within academic and administrative units. IET will also establish by the same date well-documented procedures for communicating with non-technical audiences, including use of RSS feeds, the IET and campus main Web sites, and the new campus emergency notification system.

IET will also initiate an internal review of its chain of command for event-driven communications, which currently involves two separate units within IET. The effort will engage technical and non-technical advisory groups in the review of communications protocols (including those to executive-level campus management). The results of this review and resulting actions will be shared with campus IT advisory groups (CCFIT, TIF, TSP, DTC) and similar groups by May 30, 2008.

Implementation

Morna Mellor, Director, IET-Data Center and Client Services, will oversee the implementation of the steps outlined in this document. All dates referenced above refer to estimated completion dates. Regular progress reports will be provided to the community, including through the Email Review Web site at http://vpiet.ucdavis.edu/email_review.cfm .