

24/7 INFORMATION TECHNOLOGY SUPPORT - Implementing After-Hours Support for a Small Residential Campus

John Dixon
Director of Information Technology
Cornell College
600 First Street SW
Mount Vernon, Iowa
(319) 895-4357
jdixon@cornellcollege.edu

Abstract

Technology services on a residential liberal arts campus have become highly desired, no, better yet highly demanded services which are expected by faculty, students, and administrators alike to be available beyond the normal hours of both administrative and academic operations. With this growing expectation of ubiquitous technology comes the necessity for support and uptime. Most small liberal arts colleges with limited budgets and staff find it a challenge to meet these expectations. Cornell College, in the rural historic town of Mount Vernon, Iowa operating on a very stringent calendar of delivering courses one at a time, created a 24/7 technology support model that leverages Campus Safety's 24-hour presence and a mobile phone to address the demand for critical technology services after normal business hours.

Introduction

Since technology has become an integral part of both work and life on residential liberal arts campuses, operations and support beyond normal business hours are essential to meet the expectations of faculty, students, and administrators and ensure quality customer service.

The intent of this paper is to explain how the division of information technology (IT) at Cornell College went about gaining campus support for after-hours technology assistance, developing the model that best fits Cornell's environment, and how the model was implemented on the campus.

As a residential liberal arts campus, Cornell College houses approximately 90% of its students in on-campus facilities. Roughly 90% of the students living in campus housing have one or more personal computers. For computer access, the other 10% depend on friends as well as public access computers in computer labs and common areas around the campus. One of Cornell's distinctions is the One-Course-At-A-Time instructional delivery method where students and faculty spend 3.5 weeks focused on a single course. This delivery method requires high availability of resources both during the day and throughout the evening hours. In addition to computer, network, and Internet availability, the campus community also depends on telephone and video services. So whether it is work or entertainment, technology support is expected 24 hours a day, 7 days a week.

The IT staff never complained about being called in, however, because there was no system to handle these occurrences, many campus members did not know what to do in the event services

were unavailable. This led to frustration and complacency on the part of both the campus community and IT staff members. It was apparent that a system was needed to identify exactly what technology services were considered critical enough for immediate attention, a process for reporting service outages, a method for verifying those downed services, and a channel for communicating system failures to IT.

Gaining Campus Support

The first step was to gain support from various campus groups to move forward with a model to address a “round-the-clock watch and respond” effort for technology services. Four primary groups were identified to work through the details of introducing extended hours support for technology services: the IT staff, the Information Technology Advisory Committee (ITAC), the President’s Council, and Human Resources along with the Salary Review Committee.

As stated earlier, because of their commitment to the campus as a support group, the IT staff never complained about having to come in on occasion to address a downed service. However, when the subject came up about a systematic approach for reporting and responding to technology service outages outside of normal business hours, they were a bit apprehensive. In addition to the idea that it was not in their job description to be “on-call”, they were concerned that the campus community might abuse a service like this for non-emergency-type calls. It took a number of conversations with the IT staff to bring them “on board” with the idea of a structured process for after hours IT support.

After discussing the idea of after hours support with the President, it was recommended that the Information Technology Advisory Committee (ITAC) be included in the discussions to get a better community perspective on needed services after hours. The ITAC is a group of representatives from staff, faculty, and students which makes policy recommendations to the President’s Council on technology-related issues. The idea was well received and viewed as a positive development for a residential campus that was dependent on technology for academics, research, communication and entertainment. The discussion moved from ITAC to the President’s Council where the decision was made to support this new initiative. It was concluded that focusing on those critical services that had the greatest impact would be adequate and reasonable funding would be provided.

Also during these discussions, the vice president for student life volunteered the use of Campus Safety as the central contact point on campus to help screen and forward valid outages to on-call IT personnel.

Now that the specific outages had been identified and reasonable funding had been approved, it was necessary to work with Human Resources and the Salary Review Committee to determine fair and reasonable compensation for implementing the new extended coverage. Several models were discussed with Human Resources for compensating staff for these new job expectations which will be discussed later.

Developing the Model

Once the IT staff was on board with the idea of providing support after hours for technology services and other necessary approvals were granted, it was necessary to establish a model for delivering extended hours to the campus. The challenge at this level was to develop a structured list of outages that affect users for which IT could be responsible and compensation for this extra ordinary expectation that was agreeable with the College.

The structured list was developed by working with the IT staff to list all technology services that are directly supported and maintained by IT. This list included 27 potential service outages in six technology areas and grouped into three categories: 24-hour coverage, 12-hour coverage, and next business day coverage. The six technology-related areas included:

1. *Network Infrastructure*
2. *Server*
3. *Academic Software*
4. *Administrative Applications*
5. *Voice & Telephone*
6. *Cable TV*

The rationale used for priority ranking was based on three criteria: is an individual's safety at risk, does it directly affect the performance of the college's academic programs, or is the college at risk of losing prospective students. Using these criteria each of the 27 potential outages were sorted and placed into one of the three categories.

These categorized services were then shared with ITAC. This group was asked to review the list and help ensure that they were categorized properly from a user-based perspective. The idea was to arrive at some consensus with a representative group from the user community on service priorities. After some adjustments were made based on their recommendations, the list was presented to the President's Council for discussion and final approval.

The President's Council concluded that the College would support a model that covered those services which ranked within the 24-hour coverage category. The 27 potential technology outages originally identified were reduced to five areas of covered services:

1. Cornell e-mail system
2. Internet access
3. Cornell's webpage
4. Cornell telecommunications system
5. Network Applications and Home Directories

Since the idea of being available on a rotating basis for after hours support was new to the IT staff, it was agreed by both the President's Council and the Salary Review Committee that compensation may be in order with these new job expectations. Human Resources looked at several models as consideration was given to compensation. If personnel are asked to be available outside of normal business hours, then there must be a communication device such as a pager or cell phone carried to ensure they could be reached. It was discussed whether to pay an hourly rate for

carrying the device or a flat rate. It was also discussed whether they would earn additional monetary compensation for actual work performed or provided time off for time worked.

It was concluded for Cornell that since IT personnel are salaried there should be no pay for this additional responsibility. It was also decided that the time and effort needed to maintain records when someone is called in would not be feasible. Therefore, it was decided and approved by the Salary Review Committee to provide a small salary increase for each of the staff expected to be on-call and to include the responsibility in job descriptions for future hires. It was also decided that staff stay within a 30-mile radius of the campus while on call.

To incorporate Campus Safety into this model required IT to provide training and documentation on which services ranked within the 24-hour coverage, how to verify, validate, and report covered outages, and simple resolutions that could be performed by Campus Safety. Follow up responses were also provided to Campus Safety to assist them in their new responsibilities.

The IT staff use InterMapper (<http://www.intermapper.com/index.html>), a network monitoring and alerting tool, to monitor many of the campus technology data services. Documentation was created with instructions on how to use InterMapper to verify outages related to email, Internet access, College web server, and network applications. Additional instructions were included for verifying and validating campus phone and video services.

The training included how to use InterMapper to determine which data services were down and how to verify the down services as well as how to determine and verify downed voice services. Instructions were provided on how to respond to callers. If the reported outage met the criteria for an emergency response, Campus Safety was given specific instructions on how and what to say to the caller. Likewise, instructions were given on how to respond to calls that did not meet the criteria for an emergency response.

Several meetings occurred with the Vice President of Student Life and Director of Campus Safety to review and discuss the documentation and instructions to ensure clarity and usability for non-technical readers and users. After several iterations, a generally clear and easy to follow set of instructions were produced. In addition to instructions on verifying and validating reported outages, Campus Safety was also provided with follow up responses for communicating to callers.

Communication was developed to inform the campus community of the new service and how it should be used.

Implementing the Model

Once the model was established, implementing it was simple. The first thing that was done to implement the model was to train the Campus Safety staff using the documentation and instructions on how to verify, validate, and report an outage. Copies of the documentation was provided to Campus Safety for inclusion in their Standard Operating Procedures manual, and IT assumed the responsibility to keep Campus Safety up-to-date on all changes that occur in the extended hours service initiative.

The next step was to inform the campus community via email of the existence of the after hours support with instructions on what services qualified for an emergency response and how to report the outages. The information was also posted on the IT web site. IT job descriptions were updated to include participation in the on-call duties.

In order for IT to track emergency responses, a small Access application was written and implemented by IT. The application tracks the calls, the IT technician who resolved the issue and the solution. This application also provides a routine for scheduling on-call technicians.

Since the model was implemented in March 2005 there have been only 16 calls which required the IT staff to respond after hours. This is about 1.2 calls per month. Since the original communication to the campus community, two additional communiqués have been distributed via email. Efforts will be made over the next year to increase the frequency of reminding the community of the service and the process for reporting outages.

CONCLUSION

The availability of technology services beyond normal business hours of both administrative and academic operations on residential liberal arts campuses has become necessary to meet the demands of faculty, students, and administrators. With this growing expectation of ubiquitous technology, comes the necessity for support and uptime. Cornell College developed and implemented a model that suits their campus and culture. Support for the model was gained through the collaboration of the IT staff, IT community, the President's Council, and Human Resources. These collaboration efforts helped establish a model that fairly addressed priority outages and personnel expectations with a simple and sustainable implementation.