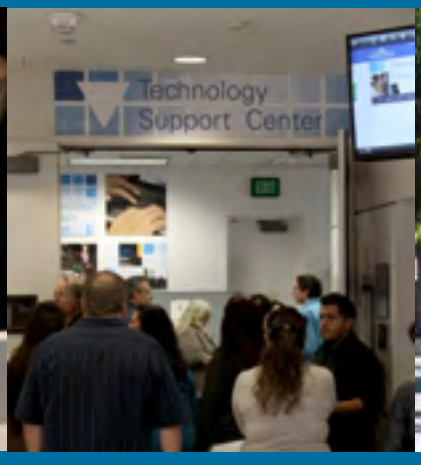
CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO
Information Technology Services

INFORMATION TECHNOLOGY SERVICES

ANNUAL REPORT

2015-16



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Introduction

The Information Technology Services (ITS) team continued its forward momentum this year by renewing its commitment to our students, faculty and staff through the ITS Strategic Planning process. The process started in October of 2015 with a series of presentations by experts from within and outside of CSUSB. This was followed by faculty and student forums, ITS divisional meetings, and surveys to students, faculty and staff. We received valuable feedback regarding the internal operations of the ITS Team as well as where we need to be headed over the next four years.

We divided the feedback we received from the Campus Community into three categories: (1) Operational, (2) Tactical, and (3) Strategic. We are addressing many of the issues expressed in the operational and tactical feedback and present to you the strategic goals and objectives of the process. We have prioritized the objectives within each goal and have formulated an implementation plan, which we will start operationalizing during the summer of 2016.

Our strategic plan is aligned with the University Strategic Plan as well as the California State University Trustee Initiatives, both of which focus on the success of the academic mission of CSUSB.

We renewed the mission of ITS as follows:

Our mission is to support student, faculty and staff success by providing world class customer service, fostering faculty-led innovation and research, and enhancing operational efficiency through the effective use of information technologies. For the complete ITS Strategic Plan, please visit: https://www.csusb.edu/its/its-strategic-plan-2016-2020

Progress

We have made significant progress on the three key areas of our operation:

World Class Customer Support Services & Support

We continued to train staff in the Technology Support Center staff on providing world class customer service to our students, faculty and staff, and recognized and spotlighted staff who went above and beyond the call of duty. We expanded the services that Blackboard User Support Services provides to supplement overflow calls during the day so that phone calls to the Technology Support Center are answered and and resolved promptly.

We reorganized the ACBI (Academic Computing and Business Intelligence) Training Services department to ITS Training Services and moved the unit to the first floor of the Pfau Library to provide comprehensive training services for a variety of software and to work closely with the Technology Support Center. The ITS Training Services has launched a New Employee Technology Orientation Program (NETOP) to allow onboarding of new employees to take advantage of all the technological resources available on campus, in a more streamlined and timely way.

We introduced a monthly newsletter titled “We’re on IT” to inform the campus community of the different services, software and support available through ITS. The newsletter has an employee spotlight section that introduces one ITS staff member to the campus. In addition, it has a software spotlight and a section summarizing IT Governance Executive Committee decisions.

We welcomed on board a new position, Director of Distributed Technology Services, to better coordinate efforts between the college IT teams and the central ITS team. David Nimri, from the College of Social and Behavioral Sciences was hired in this role after a national search. David works closely with the Deans, Associate Deans and the College Technology Consultants to standardize processes and equipment across the university and extend world class customer service to the colleges and departments.

We continued to work with students to improve and expand the wireless coverage across campus as well as identify areas where outdoor wireless access needed to be deployed. As a part of the strategic plan, we are planning to significantly improve outdoor wireless coverage and improve cellular connectivity across the San Bernardino and Palm Desert Campuses.

Fostering and Supporting Faculty-Led Innovation and Research

The Academic Technologies & Innovation (ATI) team welcomed on board Dr. Mihaela Popescu, Associate Professor of Communication Studies, as a faculty associate for ATI. Dr. Popescu took leadership of the Instructional Design Team and quickly forged a close relationship with the new Director of the TRC as well as the greater faculty community. The Faculty Showcase event lead by Dr. Popescu was a highlight of the new frontiers of faculty support that ATI will be providing in the coming years.

ATI also welcomed three new Instructional Designers, one in collaboration with the College of Business and Public Administration to expand the instructional design and online course development support for faculty. ATI continues to support reassigned time for faculty from various disciplines to further technology integration and innovative teaching practices into their curriculum.

A group of twelve faculty and staff visited Arizona State University in March 2016, coordinated by Dr. Vipin Gupta, to learn more about online course development and support as well as Institutional Analytics at ASU. The team came back with several ideas that can be implemented at CSUSB.

With the support of the President and the Provost, we established a Faculty Led Innovation Fund (FLIF) under ATI to fund faculty professional development and technology integration initiatives.

The ITS Team continued to work with faculty in ramping up our infrastructure for high performance and high throughput computing to support faculty-led research. We worked with Dr. Kim Cousins and Dr. Kurt Collins on a proof of concept. Dr. Mihaela Popescu, Dr. Kurt Collins and I attended the Internet2 Conference in Chicago and brought back information that will allow us to further expand our infrastructure and support for faculty research and scholarly activities.

Operational Efficiency

There were several ITS-led and collaborative projects that have been completed or are ongoing to improve efficiency across the university and to provide predictive analytics for proactive decision making. The OnBase workflow management system went live this year, taking two of the most complex forms at the university online – The Study Abroad form and the Computerized Information Access (CIA) form. Teams across the university worked collaboratively in reengineering processes before moving the forms online.

We extended wireless coverage in and around the Legacy Fountain and the Swimming Pool to meet outdoor wireless needs of our students, faculty and staff. Plans are underway to extend outdoor wireless coverage to the two parking structures and the new parking lot H this summer.

We moved the campus website to a content management system and to the Cloud with Pantheon Web Hosting, creating efficiency of operation and disaster recovery capabilities.

We collaborated with the Chancellor's Office to license Portfolium and Zoom software systems and rolled it out to all students, faculty and staff. We will be upgrading our firewall to the new generation intelligent firewall systems from Palo Alto Networks as a part of the CO Common Network Initiative (CNI) project.

We continue our work with the Institutional Research Team to create business intelligence, predictive analytics and institutional data warehouse platforms for institutional intelligence driven decision making.

We standardized our survey platform with Qualtrics and obtained an institutional license. We licensed JMP Statistical software for the entire campus. These campus-wide licenses were obtained through consolidation of departmental licenses and pooling costs across the university.

The Standard Operating Procedures (SOP) team was formed by the Director of Distributed Technology services to standardize operating procedures, technology support and procurement across the colleges. This team has formulated several initiatives that will reduce redundancies and allow for collaborative purchasing of hardware and software across the university.

Looking Ahead

We are looking forward as a team in collaboration with the campus community to pursue the following initiatives this coming academic year:

- **Implementation of the Year One objectives of the ITS Strategic Plan**
- **Implementation of Campus Climate Survey Recommendations**
- **Collaboration with ASI and other student organizations**
- **ITS Decision Making Process Implementation**
- **Infrastructure Expansion for Faculty-Led Research and Scholarly Activities – Work with Internet2, NSF grants and other R1 University Collaborators**
- **ITS Consulting Services – Establish an IT Consulting Services protocol under the project management office to provide consulting services for the campus community**
- **Creating a multi-year strategy for Human Capital Management within ITS**

Vital and Expanded Technologies Initiative

The Vital and Expanded Technologies Initiative (VETI), formerly Vital Technology Initiative (VTI), provides Student Success Initiative (SSI) funds to campus departments and colleges to purchase and implement technology products and services that positively impact student success. Allocation of funds is determined through a competitive grant process which is open to all campus units and Associated Students Incorporated (ASI)-recognized student organizations. The VETI committee, comprised of six students and five employees, reviews the grant proposals and deliberates funding. For Fiscal Year 2015, the process was streamlined to include reporting and assessment metrics that measure and report the effectiveness of the funded projects in contributing to student success.

The Vital and Expanded Technologies Initiative won a University Business Models of Excellence Award for Summer 2016.

VETI grant proposals were due on March 25th. We received 25 grant proposals totaling $1.02 Million. The **VETI Committee** reviewed these proposals and deliberated on funding recommendations. Following are the projects that will be funded for the upcoming fiscal year starting on July 01, 2016. Awardees will be contacted for a presentation that will explain their responsibilities for spending, implementation, assessment and reporting requirements. We appreciate everyone who participated in this grant process and we congratulate the awardees:

Vital and Expanded Technologies Awards

Proposal ID	Proposal Title	Amount to Fund
32	Transforming English-Language Arts Teacher Preparation: Preparing Pre-service Elementary Teachers to Integrate iPad into Literacy Lessons	$15,000.00
32	Digital Microscopes: Enhancing Student Collaboration and Engagement in Biology Classrooms with Information Technologies	$95,500.00
38	Objects to Avatars	$39,798.00
40	Mobile classroom for Palm Desert Campus	$60,000.00
65	Assistive Technology Access for ALL CSUSB Students	$82,772.00
66	GoPro Cameras & Updated Photo Gear for Students	$3,770.00

Proposal ID	Proposal Title	Amount to Fund
67	UCDD Student Observation Initiative	$5,500.00
68	CSE455, Inc.: Evolution of a CSUSB Software Mobile App Company	$100,000.00
70	WorkAbility IV Technology Enhancement	$5,936.00
71	iPad Pro Pilot Project, Interactive Technology Resources	$14,000.00
75	Proactive Academic Advising and Outreach	$10,000.00
76	Library Laptop Lending Expansion	$ 70,000.00
78	School Psychology Enhanced Assessment	$14,278.18
79	Thesis Digitization, Phase 1	$25,000.00
80	The Use of Real Life RN to Improve Test Scores	$37,500.00
81	Superman's X-ray vision for CSU students: digital radioimaging in the biology classroom	$79,940.00
82	JB Collaborative Spaces	$35,000.00
84	College of Education Assistive Technology Lab	$15,000.00
86	Online Specific Course Platform	$20,000.00

Deadline Dates:

1. Purchase all hardware and software by December 01, 2016
2. Submit a progress report that includes appropriate assessment metrics by Feb 01, 2017
3. Submit a full report of progress and assessment by April 15, 2018

For more information on the Vital and Expanded Technologies Initiative, please visit:

http://its.csusb.edu/vitalTechnology.html

Academic Technologies & Innovation

Executive Summary

Academic Technologies and Innovation started the year with bringing Dr. Mihaela Popescu on board to be part of the ATI team as a faculty associate to further strengthen the ties with faculty. One of the new initiatives Mihaela spearheaded was the faculty summer institute on learning technologies where 14 faculty members from 8 departments got together for three days to work on 10 different course redesign projects. Participants described their institute experience as “enriching“, “enlightening”, ”energizing”, and “eye-opening”.

2015 Faculty Summer Institute

Spring Showcase award recipient Dr. Murray teaching in the Incubator classroom

We continued our partnership with TRC in providing faculty training, consultation, course redesign assistance as well as promoting and showcasing faculty accomplishments throughout the year in activities such as the summer faculty institutes, innovators series, dialogues on digital and information literacy, invited speaker on games in education, and the faculty spring showcase.

We worked closely with the faculty senate Academic and Distributed Technologies Committee (ATDL) subcommittee in revising the DL policy, which was previously updated in 2008. The committee also worked on drafting a resolution to support the California Open Education Resource (AB798) initiative that was passed in the faculty senate unanimously.

ATI continues to work with faculty to secure funding from the Chancellor’s Office in support of course redesign, online quality assurance, and adopting affordable, open education resources. Our campus received a total of $79,667 for the coming academic year.

We brought several new academic support services to campus and made them available campus-wide. Among them, Zoom for Web-conferencing, Qualtrics for surveys and data collection, and JMP for statistical discovery that links statistics with graphics to interactively and dynamically explore and visualize data and draw hypotheses about possible relationships.

Highlights of the Year:

Second Spring Faculty Showcase on Innovative Teaching - 15 faculty members presented their innovative teaching strategies with six awards given.

Lightboard introduced on campus for creating engaging instructional videos.

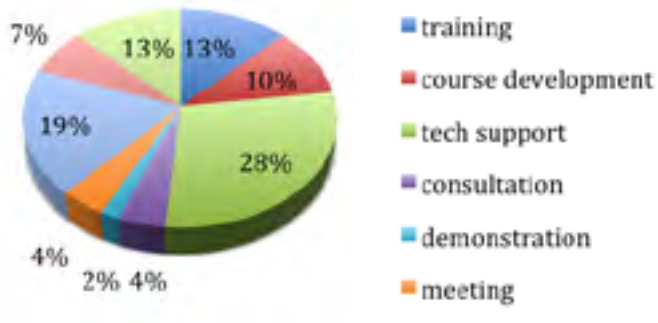
Incubator classroom (PL015) created for promoting active learning space design. History department faculty participated in piloting the space and it is now open for campus use.

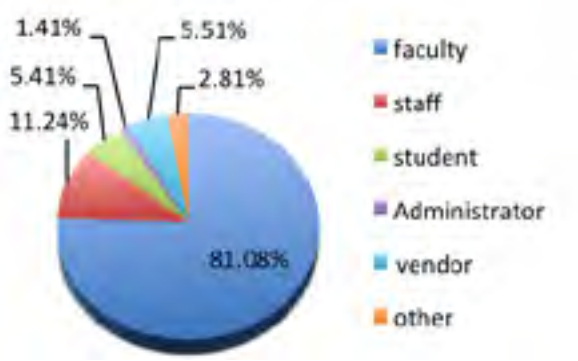
IDEA Lab/Lounge created for faculty training and consultation

Assistive Technology and Accessibility Center, previously known as ACRC moved to the new location (PL1109D) to better serve all students.

Instructional Design/Faculty Support Services

Statistics:



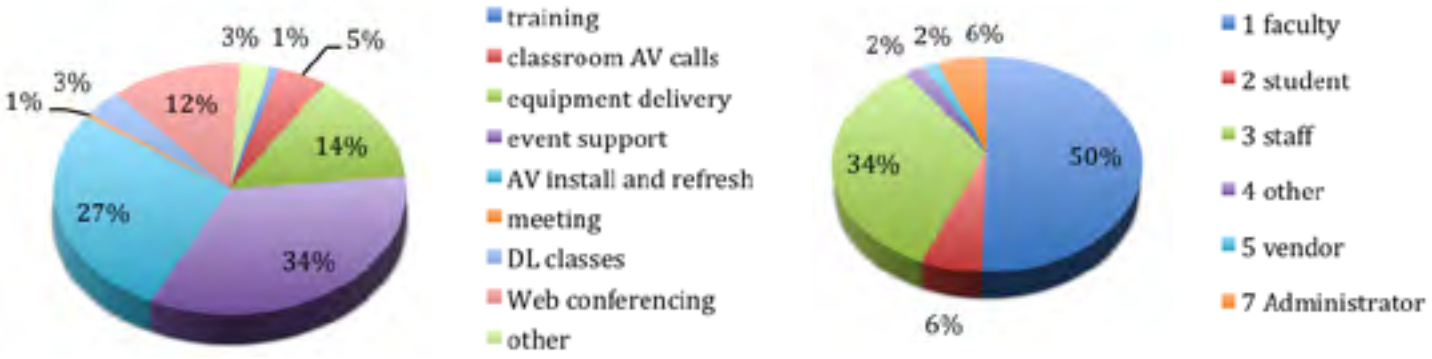


Numbers that count:

- 821 faculty support requests assisted
- 23 class visits by instructional designer team
- 25 workshops/training sessions
- 14 faculty participated in the summer institute, representing 8 departments
- 15 faculty from 11 departments presented at the second annual spring showcase attended by 33 faculty, staff, and administrators
- $79,667 grant funds received from the Chancellor's Office Course Redesign with Technologies, Quality Assurance, and Affordable Learning Solutions initiatives
- 105 instructional videos recorded/produced
- 48 online course design/redesign projects

Classroom/Event/AV Support Services

Statistics:



Numbers that count:

- 90 classroom podium PC's replaced
- 49 classroom projectors replaced
- 61 monitors upgraded
- 41 courses supported in DL and the incubator classrooms
- 141 Web conference events supported
- 397 events AV support provided

Assistive Technology and Accessibility Services

Statistics:

Numbers that count:

- 50 training sessions provided
- 197 students assisted
- 16 closed caption requests (71 instructional videos)

Customer Testimonials

"Tracy's excellent customer service and communication skills are very impressive. She is extremely professional and was dedicated to listening to my issues and quickly provided support and resolved all of my concerns."

Dr. Mahmoud Sally RN

"All of the work of these ATI and ITS personnel played an important role in making our English Department 50th anniversary celebration such a memorable success. We are grateful for the outstanding staff and administrators on our campus"

Dr. Sunny Hyon, chair, English Department

"This is the first time I have met Mauricio, and I appreciated his assistance in the matter. ... I just want to take the time to point out a great example of an employee provided excellent customer service."

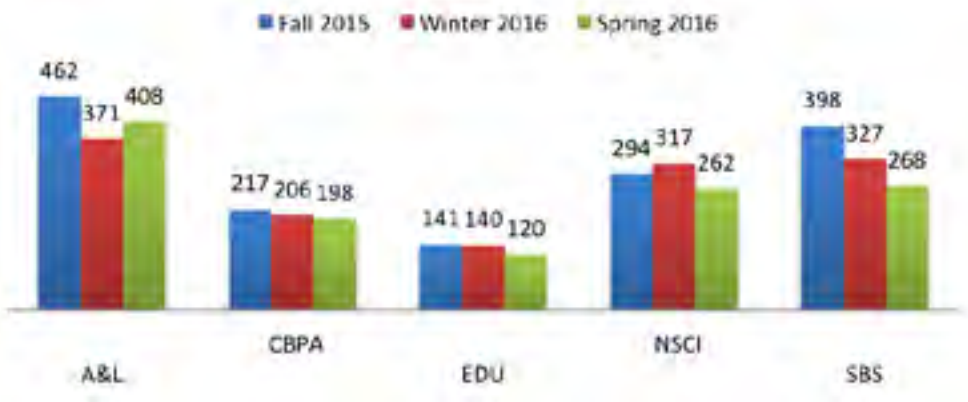
Bob Miller, PA Department

"I gave 10 to you (Joeleen) and your department! You all are wonderful! Great job in helping me and my classes. Thanks"

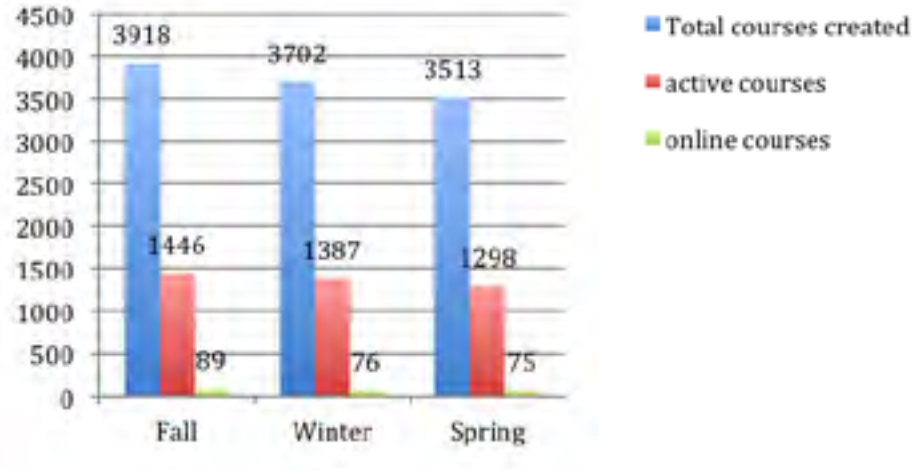
Dr. Sovyanhadi, Health Science

Blackboard Usage Summary

Courses Active in Blackboard by College:



By terms:



Numbers that count:

- 11,133 total courses created in Blackboard
- 4202 courses actively using Bb accounts for about 37% of all total courses in Blackboard
- 257 fully online courses (all sections included)
- 6% of all courses taught through BB are online courses (1.5% increase in online offerings from previous years)

Looking ahead

ATI will be offering two summer institutes in collaboration with Academic Research and two summer institutes in collaboration with TRC.

- **Atlas.ti Institutes: June 22-24 and Sept. 6-8: The purpose of these institutes is to familiarize faculty with qualitative research and the qualitative data analysis package Atlas.ti.**
- **Online/Hybrid Course Redesign Institute, Aug.31-Sept. 1: The purpose of this institute is to support faculty in designing a previously face-to-face course for online or hybrid teaching using accepted standards of quality in online design.**
- **Connected Learning with Engaging Technologies, Sept. 12-14: The purpose of this institute is to introduce faculty to cutting-edge learning technologies and to assist faculty in integrating some of these technologies into their courses.**

Online Accessibility module

During 2016-17, ATI will collaborate with Drs. Nelson and Texeira to develop an online accessibility module freely available to the campus that uses gaming principles to teach faculty how to use accessibility guidelines in preparing their instructional materials.

VETI funded initiative

ATI will deploy an ATAC accessible workstation in every public access lab on campus, including PDC

Blackboard training online module

During the summer, ATI instructional designers led by the Faculty Associate will design an online Blackboard training module freely available to the campus. The module will present a campus-specific overview of the Blackboard interface, along with instructional design training on how to set up basic Blackboard functions. We intend to pilot this module to incoming new faculty in Fall 2016.

Administrative Computing and Business Intelligence

Mission

Administrative Computing and Business Intelligence, a division of ITS, develops, provides support for, and manages various campus enterprise software applications on a variety of hardware platforms. Support is provided for all CSUSB Administrative Systems. ACBI strategic plan cultivates functional and technical team members that thrive and succeed in a culture of change, involvement and continued learning. ACBI fosters the integration and adoption in enterprise software applications of today -- and tomorrow -- by engaging developers and administrative users together in various trainings that align professional growth with the IT strategic plan. ACBI teams excel as individuals while driving the campus toward an information rich technology vision of the future.

The following is a report that summarizes the most significant highlights, accomplishments, and support provided during the academic year 2015-2016

Highlights

During the academic year (AY) 2015-2016, the ACBI team worked collaboratively with other divisions of the university to upgrade/implement several major administrative systems.

Photos in PeopleSoft - In September 2015, the ACBI Team rolled out Photos in PeopleSoft. This allows faculty to view the photos of the students on the class roster. The student has the option to opt out of allowing their photo to be viewed.

Grade Batch Import in PeopleSoft - You asked, we listened! Starting with the Fall 2015 Grade Cycle, faculty was given the capability to load their grades by batch into PeopleSoft. They can use their own spreadsheet or download one from their grade roster to upload their grades into PeopleSoft. ACBI provided a video to help them with the new process.

CFS 9.2 MP 2.0 upgrade - CMS Financial Systemwide Upgrade. With collaboration of all the finance users, ACBI participated in the upgrade of CFS which included a CFS upgrade to MP 2.0 and a PeopleTools upgrade. Major changes in the Check printing system going from Crystal Reports to BI. This went live on April 25, 2016.

HR/SA People Tools Upgrade to 8.54 - The ACBI Team worked with the HR and Student Administration groups to upgrade to a new tools release in PeopleSoft. We went live in March 2016.

CFS DW Phase II - Participate in the redesign of the CFS Data warehouse. Review and provide training on the new functionality.

SkillSoft Training System - SkillSoft was updated to include the UEC employees in late 2015. We worked with the Chancellor's Office to provide a new interface that would include all our employees.

MyCoyote Portal modifications - As ITS rolls out new services, MyCoyote Portal is continually changing to allow access to these systems through single sign on. Such as 'Not Anymore', Qualtrics, ZOOM, new Quick Links on the home page and others. Also added an Extended Learning Student tab.

EAB-SSC Campus - EAB-SCC acquired Grades First to provide a complete package for Student Success combining the analytics of EAB with the advisor/student appointments available with Grades First. The combined system went live in Spring 2016.

Qualtrics Survey - New survey tool available for the whole campus. August 2015, the campus rolled out a new survey tool. ACBI provided the student/faculty/staff data to pre-populate data and handles the administration of the new survey tool.

CalPASS-Plus Implementation - By February 2016, ACBI provided CalPASS all the historic data. Cal-PASS Plus, created through leadership and funding by California Community College Chancellor's Office, is an accessible, actionable and collaborative pre-K through 16 system of student data.

SOAR Registration upgrades - Fall 2015 was the first term that we integrated SOAR Registration into PeopleSoft. For the Fall 2016 Registration, SOAR Registration was improved to provide more administration functions, send reminders, and other improvements.

Early Start Program and Coyote First Step enhancements - ACBI is continually looking for new ways to improve the student's registration through this program. This year we implemented the students 'To-Do' list. For the administrative offices, we streamlined some of the processes and enhanced their reporting capabilities.

CONCUR Travel System: Working with the Finance Department to provide a more robust traveling system to replace the Connexxus Travel System. This will allow better travel and expense process for employees (i.e. booking travel and reconciling charges). Workflow is built into the system. Unify the travel and expense policy compliance. CONCUR was released campus-wide Fall 2015.

Title IX – Not Anymore Project - Developed a system in PeopleSoft to track students' progress for the mandatory Title IX Training. Worked closely with the 'Not Anymore' vendor to send and receive files to track who completed the training and when. Also created a batch process to upload groups of students that fulfilled the training other ways. Created processes to set/remove service indicators on the student's records in PeopleSoft to only allow students who took the training to register for their classes. Lastly, created an inquiry page on the student's self-service page to review their own training records.

Pre-Provisioning of Employees - Worked closely with the other ITS Departments, HR, and Academic Personnel to streamline and improve the timing of providing services to new employees.

Dashboard Projects - Institutional Research is continually rolling out new statistical Dashboards with the help of ACBI. We work collaboratively with IR to provide them with the data needed to create the dashboards. Currently IR has 63 active dashboards.

CISP – Admissions Automation - Worked with the Center for International Students & Programs to automate many of the time consuming manual processes. We took advantage of the PeopleSoft CommGen processes to automatically generate all of their admissions letters.

Cayuse 424 HR Connect Web Application Project - The ACBI Team worked closely with Research and Sponsored Programs to pre-populate HR PeopleSoft data into the new System. Cayuse 424 is a fast, easy-to-use Web application created specifically to simplify the creation, review, approval, and electronic submission of grant proposals. Cayuse 424 helps organizations of all sizes accelerate proposal development, reduce pre-award overhead, and improve the quality and accuracy of sponsored funding proposals.

HR Forms modified - Make changes to HR EHIRE and STF forms and changes to Temp Faculty Contracts.

Mobile Applications - In partnership with the Computer Science and Engineering students led by Arturo Concepcion, the team continues to roll out new applications for the CSUSB students and CSU.

PAWS Degree Audit Upgrade: u.Achieve - This project provided students and advisors with an easy-to-read progress report that allows for "what if" planning and creates a clear picture of the degree requirements necessary for graduation. This replaced our existing Degree Audit (DARwin). We are also including a batch audit request system to allow other departments to request multiple audits at one time. Went live in January 2016.

Advancement System - Last year, the ACBI team worked with the Advancement Services office and Ellucian special consultants to customize the standard delivered Advance Web pages. A number of unique role-based profiles were developed so that users would view a particular home page depending on their job function. Each profile has its own dashboards, reports, quick links, etc. In addition, a number of existing forms were reconfigured so that unused data elements were hidden. This allowed for a more compact appearance of the forms and also improved data entry efficiency. The Reeher Platform was implemented late last summer. Reeher works with the Advance database and provides predictive models, productivity tools, metrics, reports and peer benchmarking to help University Advancement work more efficiently. Every night, current Advance data files are uploaded to the Reeher system. As part of the project, Reeher generated custom ratings for our existing alumni and parent records in Advance. These scores are used to help prioritize prospects for alumni relations, annual giving, and major giving and planned giving.

On-going Projects

Commencement Registration and Reporting System Integrated into PeopleSoft - We are in the process of re-writing our home grown Commencement system to integrate it into PeopleSoft as a bolt-on. This will provide an enhanced registration system and provide better reports for the administration groups.

Directory information in PeopleSoft - ACBI working closely with other areas in ITS to move the Faculty/Staff directory information from the current TelDat system to PeopleSoft. This will allow titles and department information to be maintained by HR. Allow easier access to the directory information in PeopleSoft. We are still working on this to iron out all the details.

PeopleSoft Credential Tracking and Reporting Module - ACBI is developing a new PeopleSoft Credential Module that will replace the current antiquated home grown system with a PeopleSoft Bolt-on system. This will provide less duplication of data, streamline processes, improve reporting and integration.

Food Flash Project in Blackboard Connect - Currently ACBI is working to create a process using Blackboard Connect to reach out to CSUSB Students when there is excess food from an event.

Enterprise Data Warehouse Project - Provide data for Institutional Research Office and others who need to do data analysis. One place to have access to delivered reports with drill down capabilities for:

- **Admissions & Degree data: available but continue to enhance**
- **Enrollment data: available but continue to enhance**
- **Degree Audit**
- **Student Financials**
- **Financial Aid**
- **Finance**

MyCoyote Portal Enhancements - We are working to add portlets for PeopleSoft such as a view of the student's class schedule, student finance data, and more. We are working on portlets for Gmail and Blackboard. We are striving to provide students and employees with one place to go to find whatever they need to succeed at CSUSB.

Data Masking Project with CO - Work with CO to test data masking in the development/test instance in PeopleSoft.

SEVIS in PeopleSoft - Continue to implement SEVIS into PeopleSoft.

Upcoming Projects

CourseLeaf Curriculum Management (CIM) - As part of the Quarter to Semester Conversion, CIM is a tool that streamlines the entire process of entering, editing, storing, and managing course and program proposals. CIM takes the entire process online and offers the following capabilities and benefits (partial list):

1. Web-based
2. Integrates with PeopleSoft
3. CIM PeopleSoft Sync
4. Ecosystem
5. Manages Workflow
6. Manages Processes
7. Tracks Edits
8. Central Management Console
9. Reporting
10. Shares Content
11. CIM PeopleSoft Bridge

Advance 9.1 Upgrade - The ACBI Team will be upgrading the Advance Web Database from version 9.8.1.0 to 9.10. New functionality includes membership tracking, enhanced reporting, duplicate checking improvements, streamlined data entry forms and additional data elements added to various forms. Plan to go-live at the end of October 2016.

CS9.2 upgrade - All CSU's plan to be upgraded by the end of 2018. This includes a split from HR.

CHRS Project - All CSU's will upgrade to a consolidated HR database by the end of 2019.

Quarter to Semester Conversion (Q2SC) - Fully implemented for Fall 2020. CSUSB will convert from a quarter campus to a semester campus by Fall 2020.

U.Direct - Leverages existing degree audit data to create interactive roadmaps defining a clear path to graduation. Students can use these roadmaps to build their own personal plans to help them stay on track to meet their educational goals. The creation of term-by-term plans provides us with aggregate data needed for demand analysis and classroom scheduling.

Explore the use of Approval Workflow Engine (AWE) for forms with work-flow. Begin replacing paper forms used by Student Affairs such as Faculty Grade Change form.

Replace old antiquated home grown web systems with PeopleSoft bolt-on Systems.

- **Training Databases**
- **Application Management System (AMS)**
- **SIS Plus Archive Application system**

Online Application for Admission Replacement Project - Liaison Application System - Rollout for Winter 2018 quarter (Open June 1, 2017). This application will replace the Mentor Application.

Technology Operations and Customer Support

Summary

2015-16 was a year of growth for the Department of Technology Operations and Customer Support in terms of empowering and enabling our users, and to further support BYOD and mobile initiatives on campus. Several of the department's key projects, such as GoPrint upgrade, outdoor wireless expansion, and the installation of charging lockers across the two campuses demonstrates the division's commitment to "anytime, anywhere" access. Through the strategic partnership with Powermat, CSUSB became the world's first University to deploy wireless charging solutions.

To further signal the division's strategy of increased utilization of cloud services, Data Center and Enterprise Applications were merged to form a new department, Enterprise and Cloud Services, in July 2015. The new department is led by Assistant Director, Khalil Daneshvar. In addition, ITS Training Services was merged with the Technology Support Center in April 2016, and was relocated to the Pfau Library wedge to provide more accessible IT training resources to campus. With the addition of a Director of Distributed Services in January 2016, IT Services is positioned to better coordinate IT needs and functions across the five colleges.

A number of high-impact projects were completed, including:

- **University Village point-to-point network upgrade**
- **Completed Office 365 migration**
- **GoPrint server upgrade and mobile printing add-on**
- **Barracuda to Proofpoint Spam Filter migration**
- **Alertus Emergency notification system**
- **New Employee Technology Orientation**
- **Campus private cloud infrastructure upgrade**

Technology Support Center

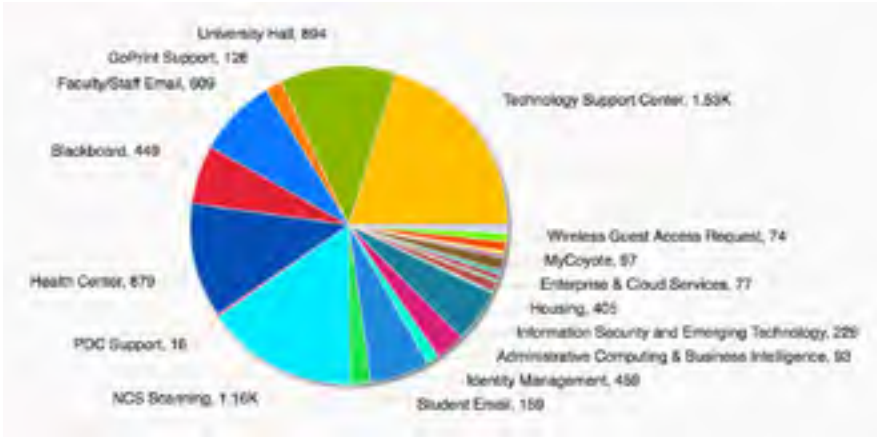
The ongoing partnership with Blackboard Student Services allowed the campus to be agile in expanding our support services, particularly during times with unexpected spikes, while sustaining our 24x7 support effort with limited staffing. As such, the Technology Support Center was able to reduce their weekly average wait time by 40% (from 37 seconds to 21 seconds) and the average weekly abandoned calls by 26% (from 32.83 calls to 24.23 calls). In addition, Blackboard Student Services accounted for about 23% of the Technology Support Center's total tickets for 2015-16.

In April 2016, we opened the doors to the new ITS Training Services Center, formerly known as CMS Training. With the expansion, ITS is able to increase training offerings such as the New Employee Technology Orientation, targeted to help new employees get acquainted to campus technologies and to help shorten the amount of time needed to gain access to critical systems.

Working closely with Emergency Management, the Technology Support Center, Telecommunication and Network Services, and Project Management Office assessed several tools to further expand and integrate campus emergency notification. Alertus was launched as a pilot to IT Services, and will be launched to all campus desktops in AY 2016-17. The GoPrint system upgrade allowed the campus to provide mobile printing to meet our students' needs and to expand support of BYOD initiatives.

Service Desk

While there is a general increase in the call volume to the Technology Support Center, the number of support tickets moderately decreased. This was due to the increased amount of knowledgebase articles available on the Technology Support Center website, so users can search for and resolve common issues quickly.



GoPrint

Technology Support Center upgraded the campus GoPrint system in Summer 2015 to enhancing the printing experience for our students. As such, a mobile printing module was added to allow students to access campus printing resources from mobile browsers or devices. Out of the 780,000 pages printed within 2015-16, about 2.5% (20,160 pages) were printed via mobile app or devices.

Training Services

Training Services (formerly CMS Training) was merged with the Technology Support Center in April 2016 to provide the campus with expanded training services on an array of new software such as Office 365, Proofpoint, etc. In addition, a New Employee Technology Orientation was launched to provide new employees a more streamlined onboarding experience to get access to campus systems.

Powermat Wireless Charging

The campus installed over 40 wireless charging stations at locations across campus including the Pfau Library, Student Union, and Social and Behavioral Science Building. Since it's launch in July 2015, the campus has been keeping our users powered up! Over 68,000 were used, with an average session length of 32.31 minutes per charge. The monthly and daily usage are 5,672 and 286 minutes respectively and is on an upward trend.

Social Media Presence

Knowing that providing only in-person, phone, and email support is not sufficient for our students, ITS turned to the social media space to further engage our students and provide proactive support. Partnering with Coyote Advertising, we ramped up the division's social media presence within the past year and created many targeted materials such as our "Tech Hookup" videos. Across our social media platforms, there are over 1,100 followers on the CSUSBSupport Facebook, Twitter, Instagram, and Snapchat accounts.

Partnering with Strategic Communication, we also launched the first official CSUSB-sponsored Snapchat Geo-filter, a special 50th Anniversary Class of 2016 filter. It was widely accepted and in the short amount of time during Commencement weekend, the filter was used over 2,000 times and was viewed over 107,000 times.

151 Followers

616 Followers

351 Followers

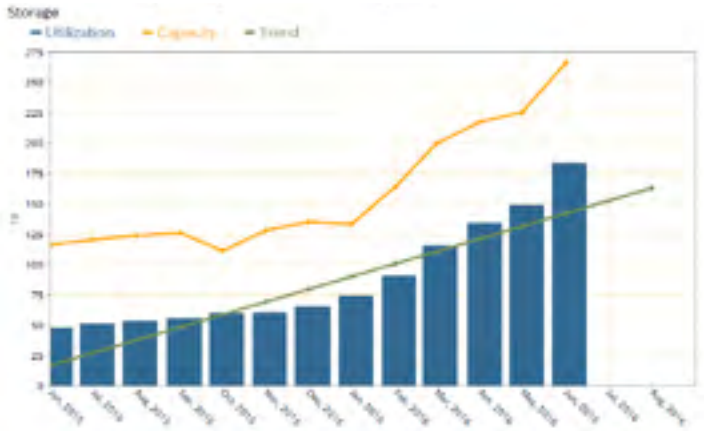
Enterprise and Cloud Services

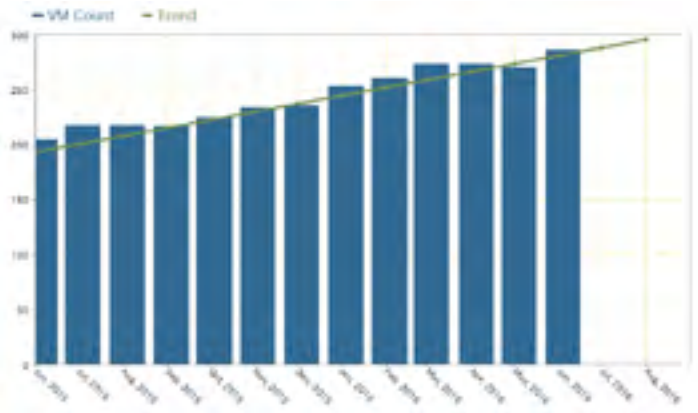
The name change from Data Center and Helpdesk Services signaled a drastic change from the old “server” days to the forward-thinking “cloud” days, and further highlights the campus’ focus on cloud services. The reorganization of the two teams, data center team and enterprise application team, created this dynamic team that manages the campus’ most critical systems and applications. As such, the campus data center was literally shrunk by 600sf to generate the space to accommodate the two teams.

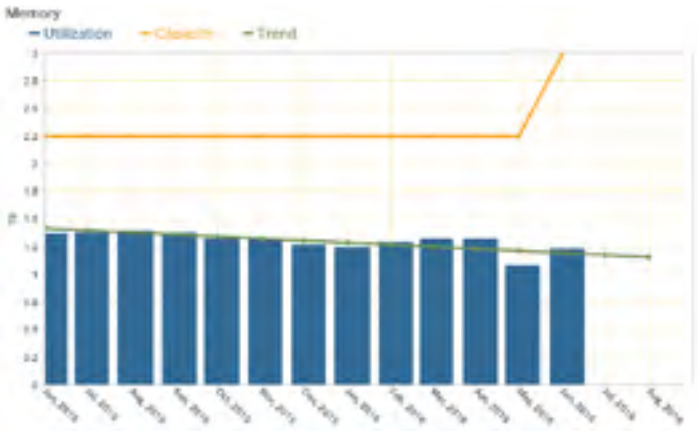
In perpetration of centralizing campus server hosting/co-location, we enhanced the data center’s physical security by installing additional surveillance cameras. The campus private cloud storage infrastructure has been fully migrated onto new hardware as of May 2016.

Campus private cloud

Continuing the effort to virtualize campus server, the campus virtual environment infrastructure was upgraded to better serve the campus’ needs. A new comprehensive Dell storage and server infrastructure was deployed while the old IBM infrastructure was phased out. Over the past year, we saw an increase of 50% in the number of virtual servers hosted in the campus private cloud. There was also a significant increase in demand for storage, which grew by about 350%.







OnBase

The campus OnBase transactional content management and electronic document routing system was launched across many units on campus in 2015-16.

OnBase Imaging

As of June 2016, over 1 million documents were archived, with a total page count of over 4.2 million. The campus departments that utilize OnBase imaging include:

- **Academic Affairs – Graduate Studies**
- **Administration and Finance – Accounting, Purchasing, Student Financial Services**
- **Student Affairs – Admissions, Financial Aid, Registrar**

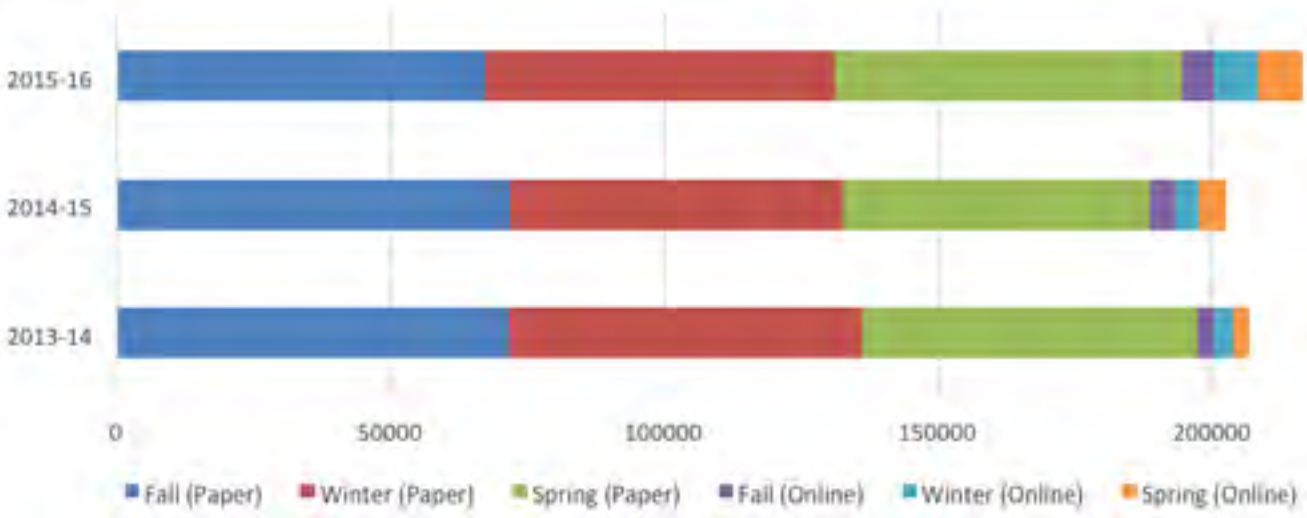
OnBase Workflow

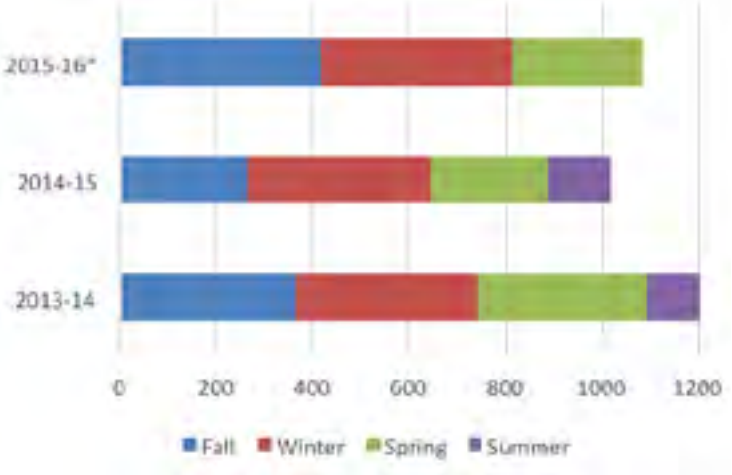
Two campus workflows have been launched, and two are currently in testing. To date, the OnBase workflow system has processed 61,000 workflow transactions.

- **Academic Affairs – Study Abroad Form**
- **Administration and Finance – Equipment Purchase Order Form, Delegation of Authority**
- **Information Technology Services – CIA Form**

SOTE

IT Services continued to work closely with Academic Personnel and academic units to enhance the SOTE process and partnered with Printing Services to ensure timely printing and distribution to colleges. Within the last year, we saw a significant increase (58%) of online SOTEs, while paper SOTEs also increased (3%). This contributed to a total increase of 7% compared to AY2014-15.





NCS exam scoring system upgrade

Enterprise and Cloud Services continues to provide campus excellent services on exam scoring. After a drop of the number of exams processed in 2014-15, we've seen a steady rise in requests and are able to maintain the 24-hour turnaround for exam scoring.

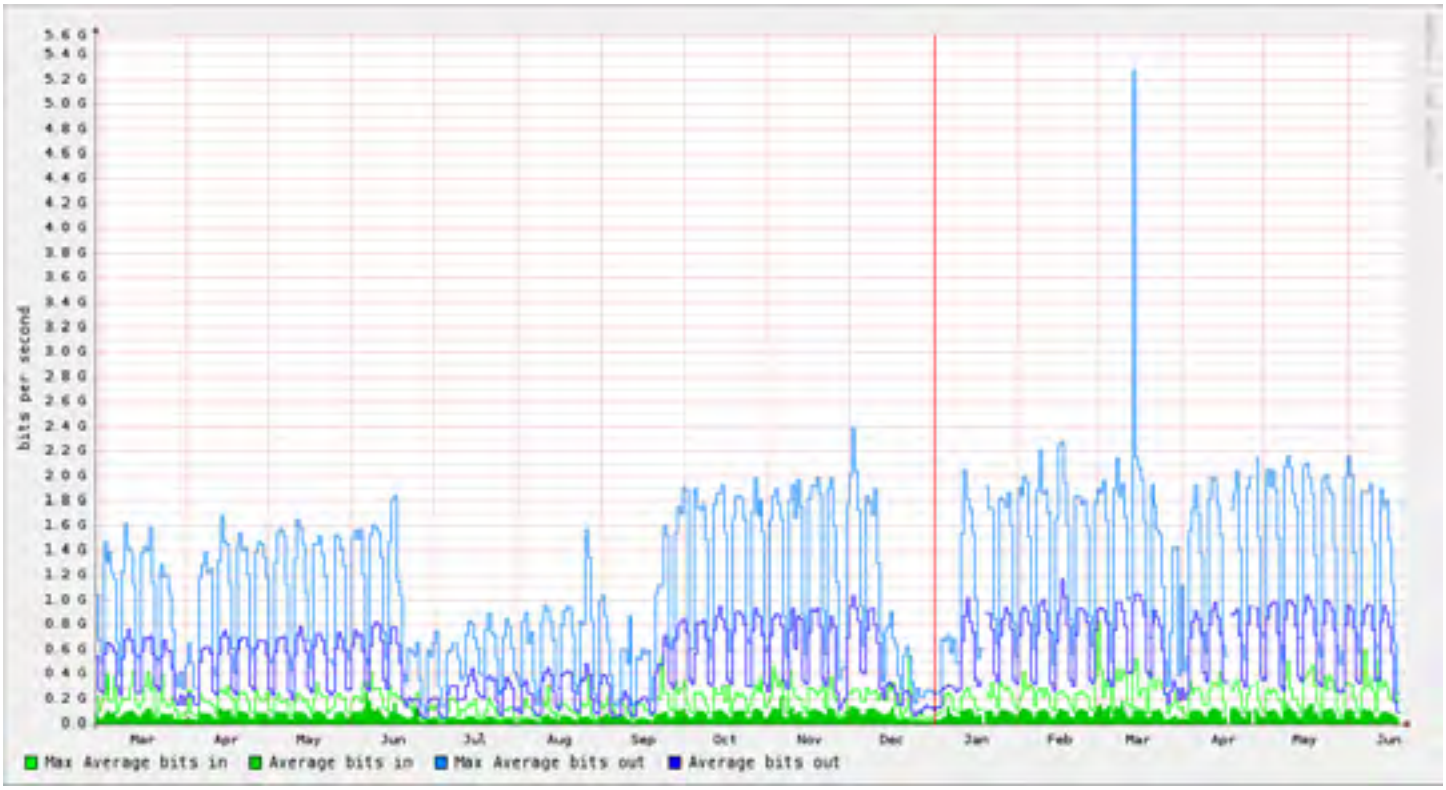
Telecommunication and Network Services

Over the past several years, Telecommunication and Network Services have successfully upgraded most of the campus core networking infrastructure as part of the CSU Common Network Initiative. As the campus wired and wireless networks continue to grow and efforts to further support BYOD initiatives, CSUSB saw its our first outdoor wireless installation. With the 50th Anniversary kick-off and the unveiling of the Legacy Fountain, TNS expanded outdoor wireless coverage surrounding the Physical Education building. Additional outdoor wireless expansion has been planned for the 2016-17 Academic Year. To further enhance residential students' connectivity, the campus point-to-point network connectivity to University Village was upgraded in Summer 2015, tripling the bandwidth serving University Village. The network services team has embarked on a firewall replacement project, which will upgrade the campus firewall over Summer 2016 and subsequently replace the server farm firewall. The next-generation firewall will have many emerging technologies that will combat the fast-growing risk of malware, ransomware and other malicious network attacks. In addition, the team has also implemented Splunk, a big data/machine-generated data analytic tool to improve system and network performance, as well as to provide further security enhancements.

2015-16 was also a year when campus capital projects resumed. The department was engaged by Facilities Planning and participated in the design of two major capital projects – Student Housing and Dining Commons, and Parking Lot N. The telecommunication services team continues to provide the campus reliable VoIP services while transitioning the VoIP system to the campus private cloud infrastructure. The team also completed a project which brought non-ADA compliant courtesy phones up to code.

Network Services

With more and more applications moving to the cloud, the campus saw a general increase in outbound network traffic. The average peak usage on the campus CENIC circuit increased from approximately 1.5Gbps to approximately 2.0Gbps.



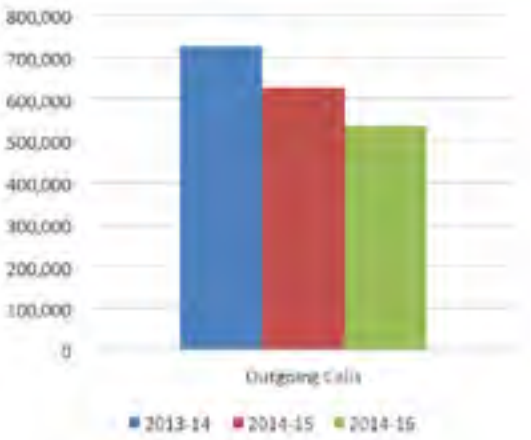
As such, the wireless network management tools discourage rogue and misconfigured devices from connecting to the network while preserving access to legitimate users. Therefore, the number of unique devices more accurately reflects devices successfully connected while the number of concurrently connected devices increased by over 14%.

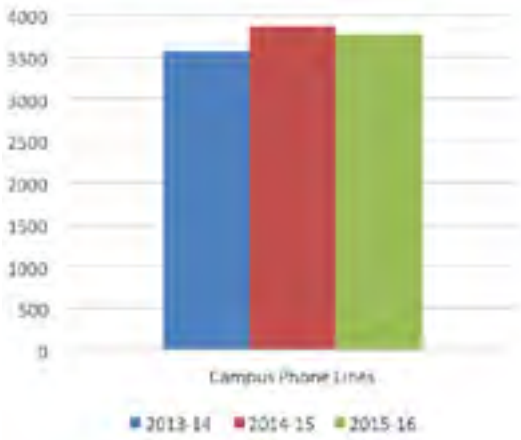
**2013-14 data is pre RFProtect*

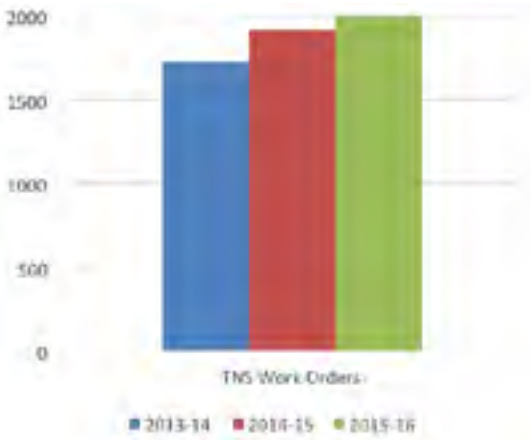
Telecommunication and Client Services

While the total number of campus phone lines remain relatively stable (2% variance), there has been a 14% year-over-year decrease in campus outgoing call volume, primarily due to additional communication tools that the campus and CSU deployed, such as Zoom video conference and Skype for Business.

As the campus continues to grow, TNS work orders continue to increase year-to-year by about 5% annually. Since the standardization of campus cellular accounts in July 2015, the campus has been able to maintain the 12% per-line savings achieved from that project, while we saw growth in the number of cellular accounts, particularly on non-stateside accounts.







Distributed Technology Services

We believe some of our strengths at CSUSB come from the diversity of the colleges, the technical expertise of college technicians, and providing world class customer service. The challenge before IT at CSUSB is to use our strengths to align our collective IT units at CSUSB with the Campus Strategic Plan and move CSUSB forward towards a more standardized, efficient, and fiduciarily-conscious framework called the *Business Modularity* [1] architecture. In the short 6 months since the formation of Distributed Technology Services (DTS) we have made great strides in meeting our challenge in a transparent and collaborative manner.

Highlights

DTS has made significant progress on the four key areas:

Setting Standards and Increasing Efficiency

The colleges collaboratively formed the Standard Operating Procedures (SOP) working group made up of a technical representative from each area with the goal of creating better standardization, transparent and equitable support, and identifying further efficiencies within the system. The SOP Group has standardized the following on campus:

- **Computer Naming Convention**
  A naming convention is a key component in identification and resolution of issues on systems.
- **2016 Computer Standards**
  Computer standards help ensure a larger purchase has a lower overall cost and increased efficiency of IT support staff.
- **Communication**
  Faculty and Staff will be notified using a standard Post-it Note if the individual is not in the office when a technician services the computer.

Transparency

The SOP group elected to post all information on the SOP website providing direct visibility to all best practices and procedures decided upon by the SOP group for the campus to read.

Mass Computer Purchase

The SOP group determined 2016 computer purchase standards on campus and leveraged the unified power of the colleges and ITS to drive down the cost of new computer purchases. DTS collaborated with the SOP group in purchasing 229 new computers, saving the university over $35,000. The “Bulk Purchase Savings” graph demonstrates the per-machine savings and the power of collaboration and standardization.

Computers purchased through the SOP group were faster, better and cost significantly less.

[1] Business Modularity is an optimized and efficient model which is modular, can be applied at all locations with the same positive result and allows for global standards with local area flexibility. Jeanne W. Ross **Enterprise Architecture as Strategy**. Boston, MA: Harvard Business School, 2006.

Collaboration

DTS has collaborated and assisted all colleges by adding ITS resources, at request, to become a force multiplier for college techs. A sampling of projects at the various colleges:

1. Assisted Colleges with configuration of Nessus vulnerability scans
2. Provided support for various Centers and Departments on campus.
3. Increased wireless Access Points.
4. Video recording system integration support.
5. Install, upgrade, support, augment or maintain the following labs: CS335, PS333, PS103, VA112M, VA232, VA201, VA224
6. MAC/PC research and systems inventory.
7. Distance learning technology evaluation.
8. Increase usage of campus resources.
9. Combined ITS & College software licenses to leverage greater cost savings

Palm Desert Campus

2015-2016 was pivotal year for the Palm Desert Campus. The PDC ITS team was part of the pilot on many campus-wide initiatives including the transition to SCCM, Office 365, and ESET antivirus. These endeavors provided the San Bernardino ITS team with valuable insight that enabled them to deploy the products and services at a larger scale.

The PDC ITS team ensures student success through their continued support of the University's academic mission. In the past year, the team took the PDC Distance Learning environment from an analog to a digital delivery system that can be centrally managed. With the increased enrollment, the campus expanded classrooms utilization to the adjoining University of California, Riverside – Palm Desert Campus lecture halls. A new Med Dispense system and iClicker system were installation for Nursing Program.

To further strengthen the CSUSB brand in the Coachella Valley, a new larger marquee facing Cook Street was installed, as well as digital displays in building lobbies to promote campus-wide events using new web-based application, Reach Digital Media.

Other highlights include:

Upgraded Indian Wells Theater stage lights to energy savings LED lights, for efficiencies and significant reduction in energy costs.

Supported Life Long Learner's Osher program transition from College of Extended Learning to the Palm Desert Campus. Supported 74 Osher classes taught on PDC campus.

Installed additional Coyote OneCard station to be used for SOAR and large student events.

Looking Ahead

Technology Support Center

Continuing the past several years' success in providing comprehensive technical support and technology enhancements, the Technology Support Center will focus on strengthening the team's skill set and will partner with distributed technology services in providing world-class support across campus. Further enhancements to the campus service fulfillment system will be made in order to streamline service request across departments and divisions. With the integration of other IT units across campus such as Facilities Services, the TSC will truly become an enterprise resource.

Enterprise and Cloud Services

To further enhance the campus' business continuity and disaster recovery efforts, the Enterprise and Cloud Services team will collaborate with the PDC team to leverage their geo-redundancy to create a disaster recovery site in PDC. Furthermore, the team will continue to collaborate with faculty to provide additional support to faculty-led research and innovations, and enhance resources for teaching and learning. On the operational aspect, the team will enhance efficiencies by further consolidating campus severs in order to provide campus departments reliable co-location resources.

Telecommunications and Network Services

As part of the systemwide Common Network Initiative, CSUSB will embark a year-long project to replace all campus security firewalls with next-generation firewall technologies. Additionally, an outdoor wireless roadmap will guide the team in meeting the ITS strategic goal of having comprehensive outdoor wireless coverage by 2020. This multi-year effort will begin with outdoor wireless coverage on the north part of campus, with the additional of Parking Lot N. A fully-overhauled campus online directory will be launched this year, which will be a catalyst on integrating many campus systems.

Distributed Technology Services

The SOP group is looking forward to further refining and building up on the progress we made. Future endeavors include backing up end user computer systems in mass, customer service feedback surveys and many other ventures. In addition, DTS is looking forward to working with the SOP group to continue the collaborative efforts that have empowered and assisted students, faculty, and staff on campus.

Palm Desert Campus

As the Palm Desert Campus continue to grow, the ITS team at PDC will continue supporting faculty, students, and staff on distance learning technologies. With the transition of the Osher Institute to PDC and the expansion to the UC Riverside Palm Desert Campus, the ITS team will leverage innovative and effective use of technology to strengthen Palm Desert Campus' programs.

Project Management and Assessment

Introduction

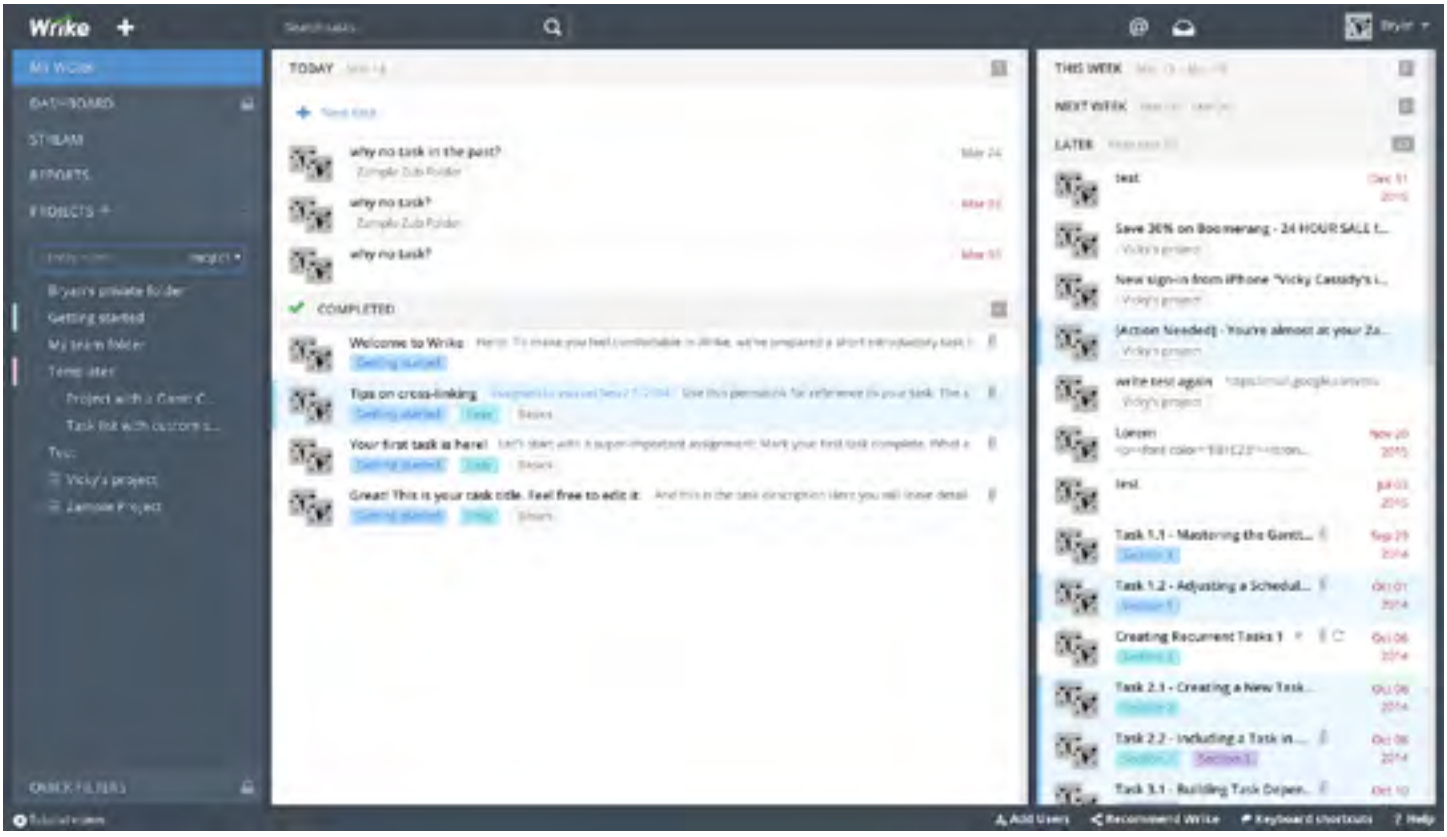
The Project Management Office is a key component in the success of the ITS Division. We not only work across the various departments of ITS but across all the divisions of the university to ensure project success for our students, faculty and staff. The vast array of projects that our division worked on this year kept the Division of ITS and the Project Management Office moving. We are constantly striving for ways to improve project success, team communication and client satisfaction.

Highlights

We made significant progress on the three key areas:

Creating One Project Management System for Tracking and Reporting

ITS has adopted Wrike for project management purposes. This online project management system has allowed for our teams to collaborate in a common interface all while establishing baseline reporting for the ITS division.



Project Management

The Project Management Office is currently tracking 75 open projects in the Division of ITS. We have successfully completed 25 during the academic year of 2015-2016.

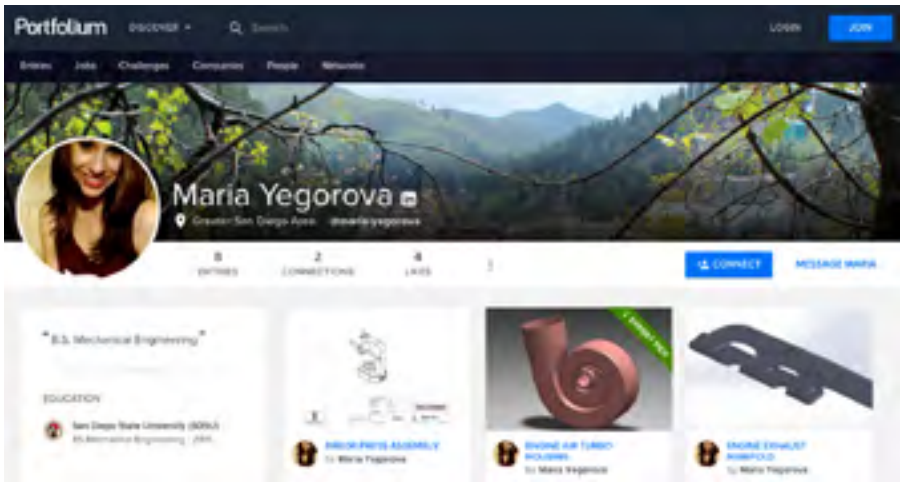
Initiative Implementation

There have been several initiatives that originated at the CSU Chancellor's office this past year.

Zoom is new for web teleconferencing, Anyone in the world can join a Zoom meeting for free. Zoom pro licenses are prepaid for all Faculty Staff and Students at CSUSB.

Zoom Stats	Students	Faculty & Staff
	1600+	300+

Portfolium is a prepaid online portfolio system for students, that they can keep even after they graduate. Faculty can use Portfolium in the classroom to assess a students work and validate that they completed assigned projects.



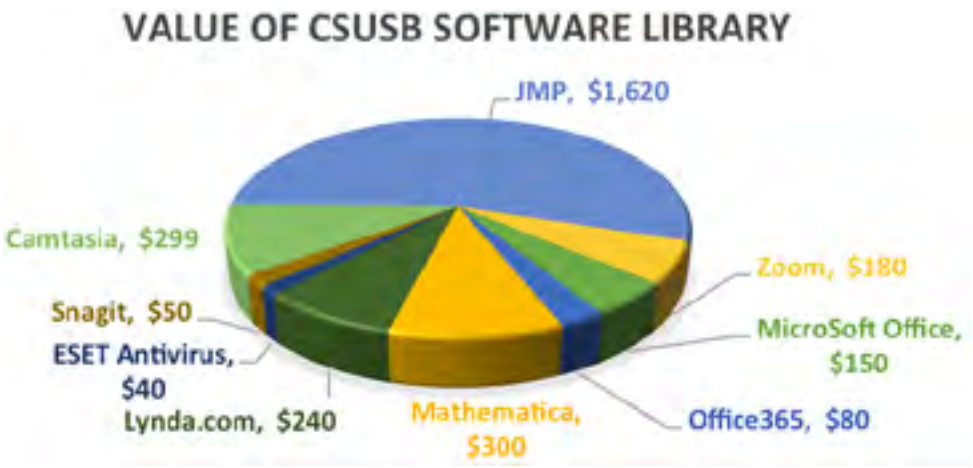
Top 5 Reasons Students Use Portfolium:

1. Get a Job
2. Grants and Scholarships
3. Enhance my Resume
4. Land an Internship
5. Showcase my work

Portfolium Stats	Students	Alumni
	6,800+	4,700+

CSUSB Software Library

CSUSB currently offers a growing software library for Students, Faculty and Staff. The project management office works across divisions to ensure that are campus community is aware of the software benefit that they receive.



Looking Ahead

ITS Consulting Services

The Project Management Office will serve as a first STOP for IT consulting requests. The campus community can request IT consulting services such as project implementation, software consultation resource planning and consultation and guidance from our division by filling out a simple request. The Project Management Office will then follow up and develop a needs assessment for planning and resource allocation purposes, and assist the requestor with building the proper team to implement the request successfully and eventual project success.

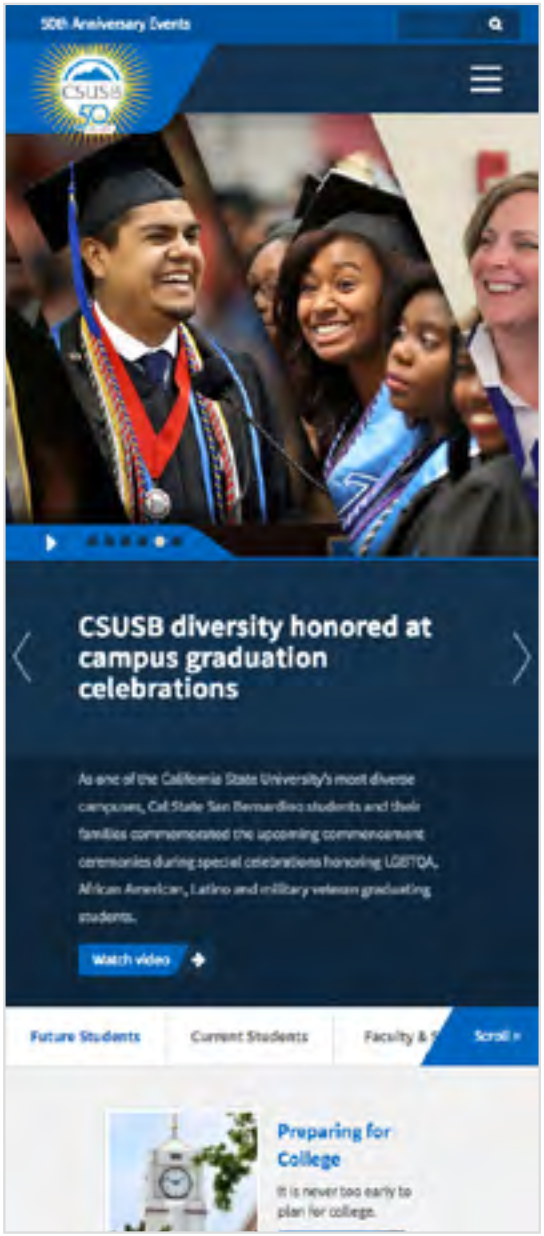
Web Services

Executive Summary

Web Services has grown over the course of the past year. We literally started the year in the basement and in January moved up to the first floor of the John Pfau Library. In the new, larger space we also increased our staff by two. Rob Garcia joined the team from the College of Education as a Web Services Developer / Liaison. Esmirna Nolasco also came on board from the College of Social & Behavioral Sciences as an additional Web Developer. The student assistants in Web Services also grew this past year, totaling as many as five students working as web developers and front-end designers.

The largest project for Web Services is the campus wide implementation of Drupal, the content management system (CMS) used to centralize website development and maintenance. After months of planning and development, a new university website was launched on January 25, 2016. This included a new campus home page, several landing pages, a new look to the directory, along with five other websites. Since then, 10 more websites were launched, including Institutional Research, Events and Guest Services, Early Start, and Academic Advising Services. In all, 10% of our 230 websites have been migrated to the new CMS.

Web Services will be continuously launching new websites throughout the next year, as we are currently working with the Divisions of Student Affairs, Administration and Finance, and our own Information Technology Services. We have also been working with the Colleges of Education and Arts & Letters to build out their websites in the new CMS.



Highlights of New CMS

- Universal Design templates for all websites
- Uniform branding of university
- Shorter development and production time
- Faster implementation of online forms
- Scheduled security scans
- Increased ease of accessibility alterations
- Campus Events Calendar
- Slideshows

Current Major Projects

- Campus Directory
- Staff & Faculty Profiles
- Custom CMS Training with Accessibility
- Cashnet Integration with Drupal
- 50th Anniversary Branding, Website, Events, RSVP forms
- Division of Student Affairs migration to Drupal CMS

Information Security and Emerging Technologies

Introduction

The ISET office collaborates and provides assistance to all units across the campus on information system related projects and initiatives for the implementation of CSU and CSUSB information security standards and best practices in order to provide reliable and robust information technology services in support of the university mission.

The following is an abbreviated list of the highlights and achievements of the ISET during the 2015-2016 academic year.

Information Security Governance and Compliance

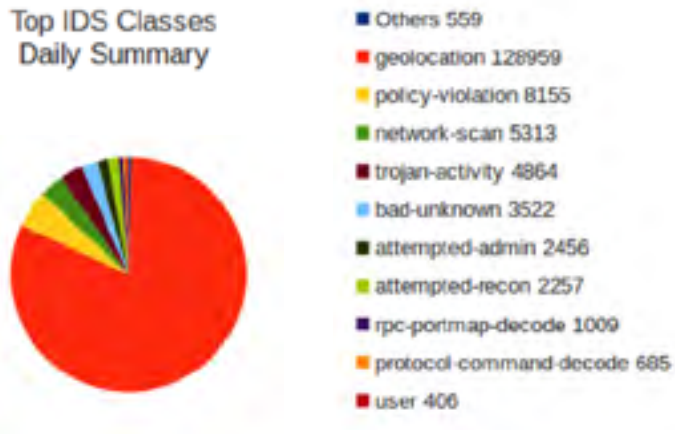
This year, and in close collaboration with the members of the Subcommittee in Information Security, Compliance and Emerging Technologies, reviewed and approved the following standards:

- **Vulnerability Management Standard**
- **Vulnerability Management Guidelines**
- **Log Management Standard**
- **"Phishing" Program Standard**
- **Request for Authorization for Local Administrative Privilege**

In the area of compliance, the ISET team provided support for the Admissions Audit, continued to work closely with the campus on the implementation of process in response to the Information Security Audit conducted in the previous year, conducted the Master Payroll Warrant Authorization (MPWA)/Absence Management Audit, conducted the annual Student eAuthentication Risk Assessment and Certification for Campus Data Centers. In addition, it conducted the annual compliance review for PCI DSS and Red Flag Rules Program.

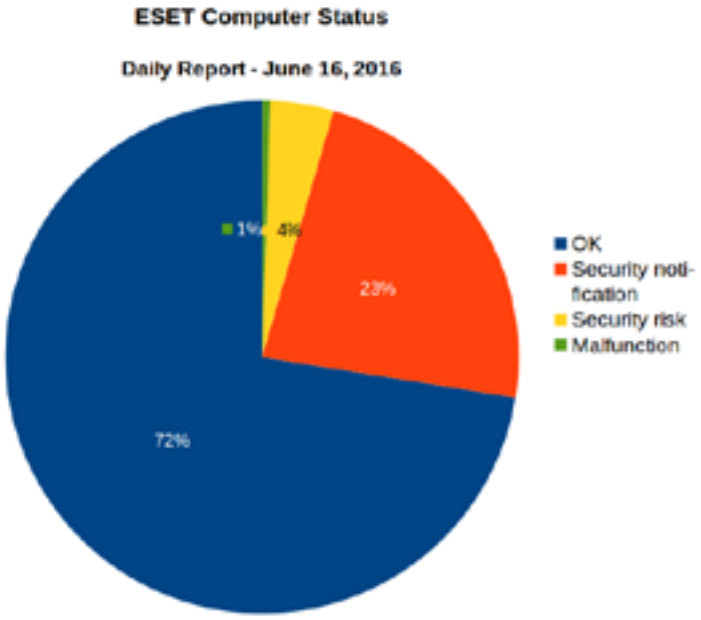
Network Security

Network Intrusion Detection System – This year the network intrusion probe at Palm Desert campus was configured and moved to production. The IDS provides information about attacks and possible compromised computers. ISET staff monitor the campus and PDC's intrusion detection system for signs of possible compromised computer systems.

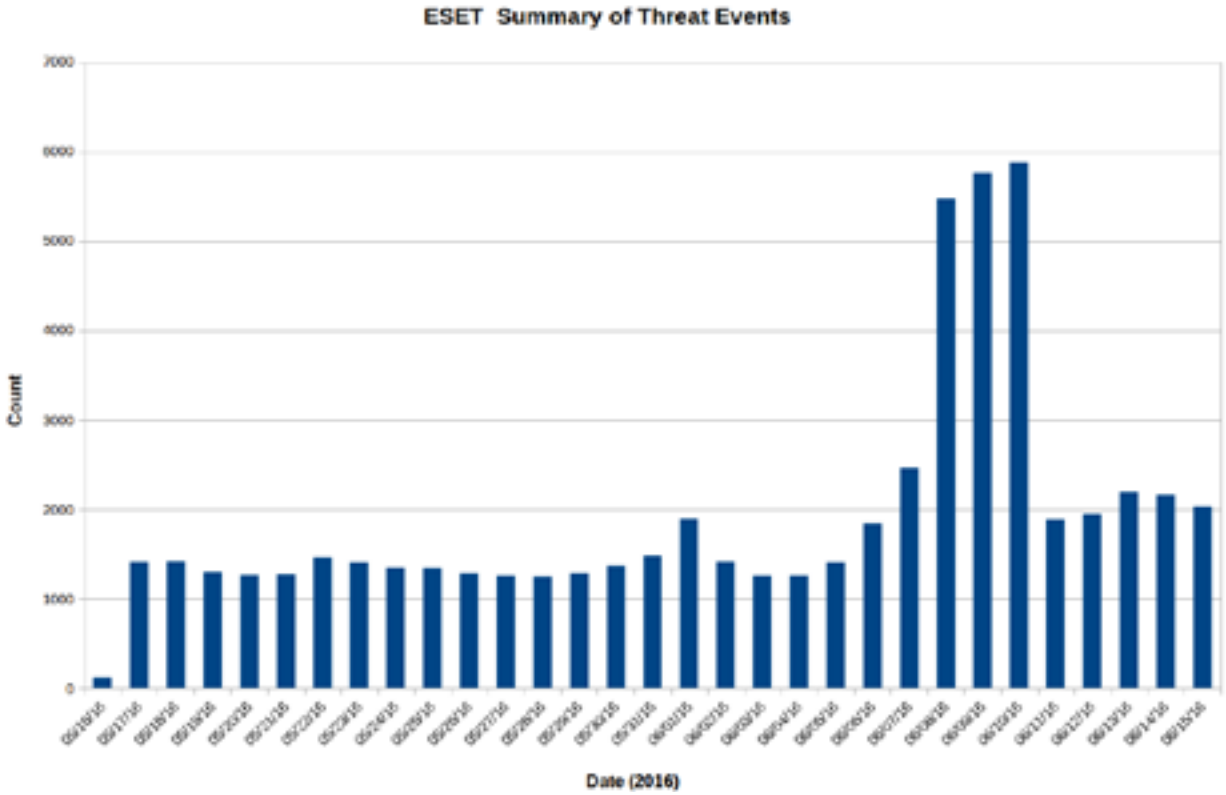


Anti-Malware Solution (ESET) - A new anti-malware for workstations and servers was deployed during this academic year, providing a robust protection against malware infection. The new campus anti-malware solution (ESET) prevents possible compromises as campus users access resources in the Internet and download information.

The following charts provide some statistics on the number of computers that are attacked and possibly infected on a daily basis (about 4%). As part of the campus incident response, reports of possibly infected computers are sent to campus IT staff on a daily basis to further investigate and take care of systems that are reported to be at risk.

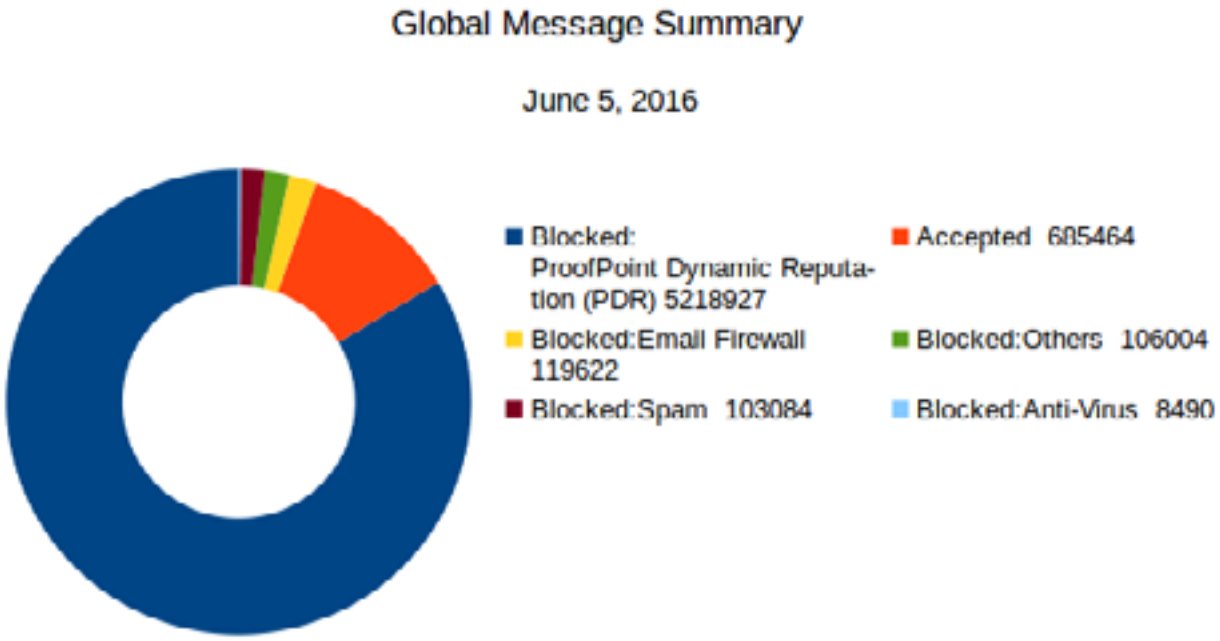


ISET staff closely monitors and respond to different malware attacks. This graph shows the number of threat events (malware) detected on a daily basis, clearly showing a spike on a malware attack on campus computers on June 8, 9 and 10, 2016.

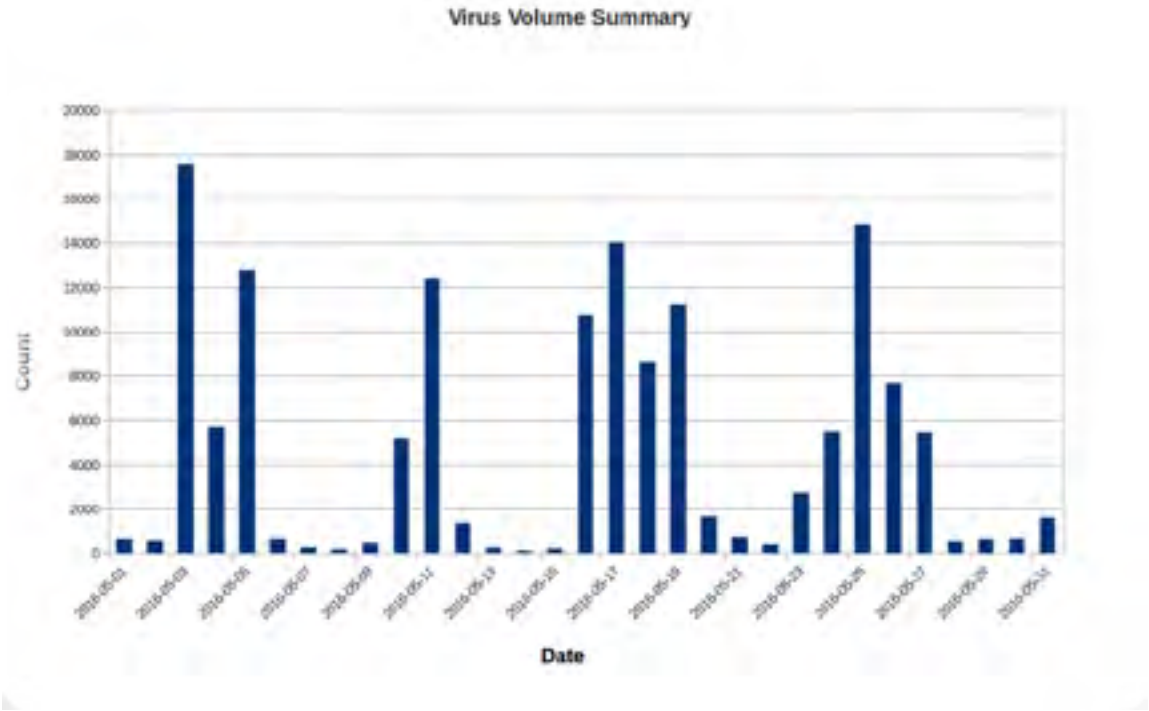


Cloud-Based Email Gateway - ITS migrated the on-site email gateway to a cloud-based email in May 2016. The new cloud-based service provided by ProofPoint gives end users additional functionality to manage their email.

The new solution has been very effective in the detection and blocking of email spam and malware, as it is shown by the Global Message Summary graph for the month of June 2016. The information collected shows that only 10.98% of all incoming email is legitimate email.



One of the important aspects to notice is the amount of infected emails that are sent to campus users. The campus received 145,546 emails infected with malware during the month of May-2016.



Enterprise Applications

The ISET staff played an important role in the deployment of several enterprise applications, and in particular the migration of user accounts to the new Identity Management System and the deployment of the campus authentication system to the cloud.

Identity Management System - The new identity management system for the campus was configured and deployed into production on April 6, 2015, and initiated the migration of user account in the Fall-2016. The migration of 45,500 user account was completed on March 31, 2016. The new system included the additional self-service options facilitating the on-boarding and claim account process, as well as for recovering and resetting passwords.

Securing Personal Identifiable Information (PII) - In an effort to mitigate the risk for unauthorized disclosure of personal identifiable information, the university deployed Identity Finder – a tool that facilitates the detection and removal of personal identifiable information from university computer. The tool allows employees and the university to conduct assessments and be proactive in the management of PII.

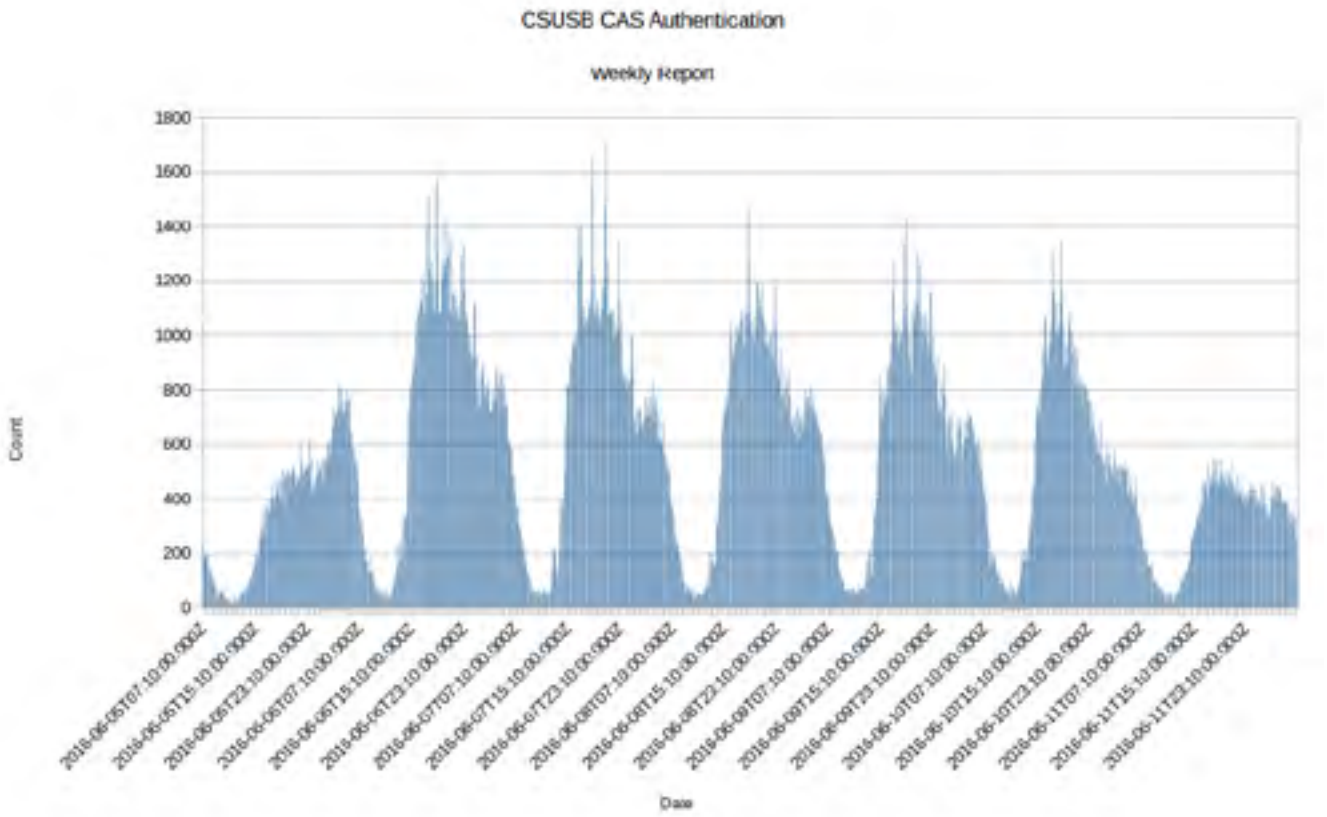
Information Security Access Controls

Online Computerized Information Access (CIA) - A new online workflow for the campus Computerized Information Access (CIA) Request Form was moved to production facilitating the request and processing of requests for access to university administrative system. This year a new security architecture was implemented providing secure access to the online CIA request from the **Internet**.

Single Sign On - The following additional applications were integrated into the campus single-sign-on facilitating their integration into the new campus portal (mycoyote) and the access to end users:

- **Blackboard Connect/FoodFlash**
- **Zoom.us**
- **Student Success**
- **Proofpoint Quarantine Self-Service**
- **InfoReady [Shibboleth]**
- **Qualtrics**

The increase in applications that rely on the in single-sign-on for authentication demand higher availability of this service. In response to this, the campus Central Authentication System (CAS) was successfully migrated to the cloud, increasing the availability of the campus authentication service. The graph show a typical volume of successful authentication for a week in June-2016; during this week the system processed over 540,000 authentications.



Web Accessibility

In the area of Web accessibility significant progress was made in the implementation of the process and procedures in support of the CSUSB IT Accessibility Policy and the Web Accessibility Standards and Guidelines that were revised and adopted the previous year.

Training Sessions: This year web accessibility training materials were reviewed to reflect the migration to the campus new environment (Drupal), and conducted 11 workshops providing training to 57 participants.

Web Accessibility Assessments - In addition to the periodic campus web accessibility assessments conducted during the year, assessments were conducted for vendor VPATS and EEAAP.

Digital Content Accessibility - in alignment with the university commitment to accessibility, and in collaboration with the assimilative computing resource center, instructional designers, training in the accessibility of digital content was integrated in the appropriate training for instructional materials.

Business Continuity

ITS Business Continuity Plan - worked in close collaboration with all the department in ITS to update and conduct tests of their business continuity plans. Conducted Continuity Plan Test of ITS Leadership, ACBI & TNS.

Collaborated with the Chancellor's Office BCP Working Group to review continuity planning applications as potential replacements of current solution: Kuali Ready.

Evaluated and tested the new Kuali Ready tool for maintaining business continuity plans.

Working in collaboration with the Office of Risk management, developed a migration plan for all campus users to migrate to the new platform by July-2016

Emerging Technologies

Mobile Apps - In collaboration with the Department of Computer Sciences and Engineering developed, tested and published the following apps: CSUSB Mobile App V3, campus Dining App and the Red Folder App which was deployed across the CSU.

Current Projects and Future Initiatives

Multifactor Authentication - In an effort to mitigate the risk of compromised credentials on applications using single-sign-on, the campus tested and deployed DUO - a multi-factor authentication solution. This solution has been deployed to system administrators and will be expanded to other groups who access protected information during the 2016-2017 academic year.

Digital Content Accessibility - Deployment and training of a digital content assessment tool to assist the campus community to publish accessible digital content on their websites.

Phishing Program - Implement a phishing education program to educate campus end-users about the risks associated with phishing attacks. This program will start in the fall 2016.

CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO
Information Technology Services

AWE

Management Action Plan

Review and recommendation

Consulting Services to Support Application Development in PeopleSoft

Introduction

There are many applications that have been requested from ACBI. I would recommend that we contract some of the work to a 3rd party consultant. There are some projects that are carried over from last year and there are many new projects for this year such as AWE (Approval Workflow Engine) used for creating workflow forms in PeopleSoft. Other projects would include Conversion of our current Web Commencement System from a home grown system to PeopleSoft Bolt-on. The ACBI Team will oversee all work performed by the consultant.

Challenge(s)

The demands for improving the service that ACBI provides is greater than we can accommodate with our current staff. We have some aging web applications that need to be upgraded into PeopleSoft or find another solution for the systems.

Alternatives

Purchase systems to replace aging web applications such as Web Commencement, ITS Training Application, HR Training Applications and hire additional PeopleSoft Analyst/Programmers to cover the workload.

Impact(s) if we do nothing:

Delay in implementing new/existing PeopleSoft projects. Nigel was involved in our HCM/SA implementation is very familiar with our campus needs since 2007.

Recommendation

Engage UNIACT, Inc Consulting for Nigel Ho for 6 months @ 120 hours per month for a rate of $120 an hour for work to be done remotely with campus visits as needed. No travel required.

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Information Technology Services

Budget Considerations

The maximum cost will be $84,400. 120 hours at $120 per hour for 6 months.

Assessment Plan and Key Performance Indicators (KPI)

Provide a minimum of two (2) key performance indicators (KPI) will best indicate project success:

1. Better performance and customer satisfaction.
2. Improve the service provided by replacing aging applications. Provide easier way of reporting data once it is in PeopleSoft which will allow for all the reporting to come from one source: PeopleSoft.

Estimated Timeline

Project Start Date: July 1, 2016

Project Completion Date: December 31, 2016

Departmental Resource Allocation

X-ACBI _- ATI _-DDTS _-ECS _-ISET _-TNS _-PMO _-Web

Approval

This project will require IT Governance review during the _____ monthly meeting.

Lenora Rodgers — May 10, 2016

Submitting MPP — Submittal Date

FTS Leaders — May 10th 2016

Approving MPP — Approval Date

CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO
Information Technology Services

Management Action Plan

Review and recommendation

Enterprise Secure File Transfer Service

Introduction

In order to provide proper support to administrative applications, campus data is exchanged constantly between different servers, both internal and external. These exchanges are conducted via a secure file server that is maintained by the campus. At this time, this service depends on one staff member for its configuration and maintenance. In order to meet the operational needs of the campus, we are proposing to replace the current service with an enterprise solution that will provide delegated administration, facilitate configuration for the different applications and improved notification and alerting.

Challenge(s)

The current service is provided with a physical server running on old operating system (info002.csusb.edu). The condition of the server is aging and running out disk capacities.

Alternatives

Replace the old system with a robust and reliable enterprise solution that provides additional functionality and reporting.

Impact(s) if we do nothing:

If this service fails, all data exchanges with different applications (about 28) will be affected, such as blackboard and campus portal (MyCoyote). This will have a significant impact to all students, faculty and staff.

Recommendation

The technical staff evaluated several solution and determined that Cleo provided the functionality and reporting needs for the campus.

Budget Considerations

This vendor provides two possible solutions - a product license per site and a subscription service. Based on the number of exchange sites the cost effective solution is the subscription solution which provides for an unlimited number of sites.

The cost of the subscription is $14,000 for the first year which includes $2,000 for the Quick Start and Training, and $12,000 for years 2 and 3.

Assessment Plan and Key Performance Indicators (KPI)

Provide a minimum of two (2) key performance indicators (KPI) will best indicate project success:

1. Improve reporting and alerting when data exchange takes places or fails
2. Improve configuration of services reducing the time to enable data exchange requests.

Estimated Timeline

Project Start Date: June 30, 2016

Project Completion Date: August 30, 2016

Departmental Resource Allocation

X-ACBI _- ATI _-DDTS _-ECS X-ISET _-TNS _-PMO _-Web

Approval

This project will require IT Governance review during the _____ monthly meeting.

Lenora Rodgers May 5, 2016

Submitting MPP Submittal Date

_____

Approving MPP Approval Date

University Anti-Malware Solution Recommendation

Introduction

California State University, San Bernardino currently has a variety of anti-virus solutions across the enterprise. Even though a majority of colleges and business units use Sophos as their anti-virus solution, there are other anti-virus solutions deployed across the decentralized organizational units across the University. There is a central console to monitor virus infections from machines that have Sophos, but no decentralized users with delegated access control.

Challenge(s):

- Lack of central visibility of virus and malware attacks across the University
- Timely signature updates to mitigate zero day vulnerability attacks
- Multiple licenses and costs incurred by different organizational units
-

Alternatives:

- Continue with the same license and deployment structure
- Standardize on the best of class anti-malware software across the University

Impact(s) if we do nothing:

Open organizational units and the University to virus/malware attacks and resulting vulnerabilities to University systems and data.

Recommendation:

- TAG Team to conduct a thorough and compressive evaluation of anti-virus solutions in the marketplace
- Bring a recommendation to the IT Governance Sub Committee for Technology Operations & Customer Support
- Bring a Recommendation to IT Governance Executive Committee

Cost: $$ (One time or recurring): $40,000/$30,000

Rationale:

A standardized best of class anti-malware solution will help the University protect its systems and data in a timely fashion and allow the ITS Staff to focus on serving students, faculty and staff

Assessment Plan and Key Performance Indicators (KPI):

- Improved Zero Day Vulnerability detection and mitigation
- Proactive actions to prevent infections based on system trends

History Active Learning Space PL 217

MAP for Review and Recommendation

Introduction

Most classrooms on campus were designed and furnished for lecture-based pedagogy and content delivery methods. There is a strong movement in academia toward team-oriented, project-based active learning methods. Faculty on our campus are already embracing this movement and adopting activities to promote active learning. However, the physical layout and furnishing of the classrooms impose severe limitations. In order to explore alternative space design options, there is a need for an experimental classroom space that can be set up in different ways with flexible desks and chairs. This furniture remodel will demonstrate what a classroom would look like with new furniture and how it can change the dynamics of teaching.

Details

The furniture currently in PL 217 is older furniture, which has not been updated in a long time. The faculty members involved have expressed an interest in changing how classes can be taught in a different manner with different furniture in the room.

Challenges(s)

- Traditional classrooms on campus with rows of old desks do not provide the right environment for team-based active learning activities.
- Existing classroom furniture does not provide the flexibility to accommodate different layouts within the same space.
- Instructors do not have the ability to change classroom furniture in existing classrooms based on how they plan to teach, they work with what they have.

Alternatives

Leave all existing classroom furniture as is.

Impact(s) if we do noting

The classroom will continue to operate as is.

Recommendation

Designate PL217 as an active learning classroom and equip it with flexible furniture.

Budget Considerations

☒This will cost more than $10,000 (multiple-bid solicitation required)
☐This will cost more than $50,000 (Purchasing approval required)
☐This will cost more than $500,000 (Procurement Audit)

☐This is considered a High-Risk (Liability) Project to CSUSB or the CSU

Other considerations:

Assessment

- Number of courses taught in the classroom
- Increase in active learning activities made possible in the space
- Student feedback (by survey/course evaluation)
- Increased ATI service level and customer satisfaction

KPIs

Provide a minimum of two (2) key performance indicators (KPI) will best indicate project success:

1. KPI: Student Satisfaction with the classroom by means of a survey

2. KPI: Faculty satisfaction, qualitative cases of how teaching was impacted by using this classroom.

Estimated Timeline

Project Start Date: November 4, 2015
Project Completion Date: June 30th, 2016

Departmental Resource Allocation

☐ACBI ☒ATI ☒DDTS ☐ECS ☐ISET ☐TNS ☒PMO ☐Web

Approval

☐ This project will require IT Governance review during the _____ monthly meeting.

_____

Submitting MPP Submittal Date

_____

Approving MPP Approval Date

PL 1104

MAP for Review and Recommendation

Introduction

In order to provide central access to the campus community for PeopleSoft and software training, ITS Training Services has been asked to move to a more central area. This move will help accommodate the services/courses that Training Services offers and will provide the campus community with quicker access to the training lab. In addition, the move will allow for the addition of a walk-in service which is currently not offered due to space limitations. This walk-in service will provide access to utilize the "touchdown stations" on a first come first served basis and will not interfere with the use of courses that are in session.

DETAILS

The furniture that is currently in PL 1104 is older furniture, that has not been updated in a long time. Due to the additions that are being made in this lab, some new furniture is needed.

Challenges(s)

- Budget constraints
- Existing furniture does not provide the flexibility to accommodate different layouts within the same space to maximize space.

Alternatives

Leave existing furniture as is and not adding the touchdown station.

Impact(s) if we do noting

The training lab will continue to operate as is and the additional touchdown service would not be added.

Recommendation

Designate PL1104 as the ITS Training Services lab and equip it with existing furniture adding some new furniture to help fill the needs for the lab.

Budget Considerations

☒This will cost more than $10,000 (multiple-bid solicitation required)
☐This will cost more than $50,000 (Purchasing approval required)
☐This will cost more than $500,000 (Procurement Audit)
☐This is considered a High-Risk (Liability) Project to CSUSB or the CSU

Other considerations:

Assessment

- Number of training courses taught in the training lab
- Increase in active learning activities made possible in the space
- Staff/Faculty feedback (by survey/course evaluation)
- Increased TSC service level and customer satisfaction

KPIs

Provide a minimum of two (2) key performance indicators (KPI) will best indicate project success:

1. KPI: Staff/Faculty Satisfaction with the classroom by means of a survey

2. KPI: Faculty satisfaction, qualitative cases of how the use of this lab

Estimated Timeline

Project Start Date: December 7, 2015
Project Completion Date: March 30th, 2016

Departmental Resource Allocation

☐ACBI ☐ATI ☐DDTS ☒ECS ☐ISET ☐TNS ☐PMO ☐Web

Approval

☐ This project will require IT Governance review during the _____ monthly meeting.

_____

Submitting MPP Submittal Date

_____

Approving MPP Approval Date

Email SaaS Gateway

MAP for Review and Recommendation

Introduction

ITS initiated a project to research and evaluate email gateway solutions to provide more effective anti-malware/anti-phishing protection for the campus.

Details

For this purpose, appliance and cloud-hosted solutions were considered. Several vendors, identified as leading vendors on this space by Gartner, were contacted to provide information about their products as well as to provide a test site for evaluation. Four vendors, Barracuda, ProofPoint, McAfee and Comodo, were identified, contacted and the functionality of their products was evaluated against a standard rubric developed by ITS staff. The results of the evaluation identified ProofPoint as the most effective solution that can provide the additional functionality to detect and prevent sophisticated email "phishing" attacks.

Challenges(s)

In spite of providing information security awareness to the campus users, incidents with users becoming victims of these attacks continue to occur, requiring the campus to provide better tools for the detection and prevention of these attacks.

Alternatives

There is no other alternative - the campus needs to invest in better tools for the detection and prevention of email attacks and reduce the risk and dependency on the end users.

Impact(s) if we do noting

Email attacks will continue placing the university and the campus community at risk for the disclosure of sensitive information. If we do not implement better solutions, the number of security incidents will increase, impacting users, services to the campus community as well as increasing the liability to the university.

We would need to re-purchase a license for the existing Barracuda product that expires on March 31st.

Recommendation

The recommendation is to implement a cloud-hosted email gateway solution to provide anti-malware protection. This will also provide high availability for email now that the campus has migrated all employee email to Office 365 cloud.

Budget Considerations

☐This will cost more than $10,000 (multiple-bid solicitation required)
☒This will cost more than $50,000 (Purchasing approval required)
☐This will cost more than $500,000 (Procurement Audit)
☐This is considered a High-Risk (Liability) Project to CSUSB or the CSU

The cost of the ProofPoint solution providing malware and targeted attack protection against phishing is $13.37 per mailbox per year for a three year contract, that is, a total of $100,325.00 for three years for 2500 users.

Other considerations:

Rationale

Attacks through email continue to be the most frequent and effective mechanism for installing malware on user computers and gaining access to institutional data and computer resources. "Phishing" attacks has been growing fast and becoming a major threat for campus users. Spammers continue to take advantage of holidays, global events and have become very effective in targeted attacks - "Spear Phishing" - against institutions. Blended phishing and malware attacks, which are more difficult to detect, are being used more frequently in order to increase the success rate. Although the campus has implemented anti-spam and anti-malware solutions to protect against email attacks, the current solution has limited functionality to effectively detect and prevent emerging "phishing" attacks.

Assessment

KPIs

Provide a minimum of two(2) key performance indicators (KPI) will best indicate project success:

The effectiveness of the solution will be assessed by collecting metrics on the number of emails with malware, as well as "phishing" attempts, detected and prevented by the tool. A KPI will be a reduction on reports of phishing attacks from end users and number of compromised computers and mobile devices.

1. KPI: Number of emails with Malware, phishing attempts and preventions

2. KPI: Number of compromised computers

Estimated Timeline

Project Start Date: January 14th, 2016
Project Completion Date: April 1st , 2016

Departmental Resource Allocation

☐ACBI ☐ATI ☐DDTS ☒ECS ☒ISET ☐TNS ☒PMO ☐Web

Approval

☐ This project will require IT Governance review during the _____ monthly meeting.

_____
Submitting MPP Submittal Date

_____
Approving MPP Approval Date

ZOOM

MAP for Review and Recommendation

Introduction

Zoom has been awarded the system-wide contract for video and web conferencing services, online meetings, and group chats for The California State University. Zoom will be providing a unified platform for video, audio, and collaboration to approximately 400,000 students, faculty and staff. Zoom will allow students, faculty, and staff to share knowledge and work together.

Details

CSUSB currently uses a variety of video collaboration tools including Blackboard Collaborate which was previously sponsored by the CSU.

Challenges(s)

- Many options for users for video communications (Skype, Collaborate, Hangouts)
- How does this technology impact classroom communication?
- Limited video storage on cloud
- Deployment to all stakeholders
- True LTI integration equivalent to Blackboard Collaborate

Alternatives

Continue using Blackboard Collaborate

Impact(s) if we do noting

CSUSB will continue to have issues with the limitations of Blackboard Collaborate.

Recommendation

1. **Take advantage of negotiated pricing for Zoom from the CSU and provide a video conferencing tool for All Faculty Staff and Students.**
2. **Consider Zoom for classroom use after it has been evaluated as a pilot by faculty.**

Budget Considerations

Projected Budgetary Expense $__26,000_____

☒This will cost more than $10,000 (multiple-bid solicitation required)

☐This will cost more than $50,000 (Purchasing approval required)

☐This will cost more than $500,000 (Procurement Audit)

☐This is considered a High-Risk (Liability) Project to CSUSB or the CSU

Other considerations: The CSU Chancellors Office has negotiated pricing for this service, CSUSB may have to pay the CO instead of the vendor; this still needs to be determined. Some cloud storage is allocated based on the agreement, if we use additional storage, we will be charged for that.

Assessment

KPIs

Provide a minimum of two (2) key performance indicators (KPI) will best indicate project success:

1. KPI: Effectiveness in the use of Zoom with the video collaboration and web services that it offers. (Satisfaction Survey)

2. KPI: Number of Meetings hosted by Faculty, Staff and Students.

Estimated Timeline

Project Start Date: 1/26/2016
Project Completion Date: 6/30/2016

Departmental Resource Allocation

☐ACBI ☒ATI ☒DDTS ☒ECS ☒ISET ☐TNS ☒PMO ☒Web

Approval

☒ This project will require IT Governance review during the _April 2016___ monthly meeting.

_____

Submitting MPP Submittal Date

_____

Approving MPP Approval Date

CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO
Information Technology Services

IT Governance Executive Committee Meeting

Regular Meeting – May 25, 2016

Item: Alertus : Emergency Notification system

Background
The ability to send emergency notifications to individual desktops has been identified as a critical gap in an emergency situation that requires notification to the campus community. CSUSB currently uses *Informacast* to notify the campus community utilizing the Cisco IP Phone system (CUCM). Separately, Blackboard Connect is used to text, call and email students, faculty and staff. Currently, there is no system in place to notify the campus community to their desktop or laptop computer. Likewise these systems are not tied to each other, adding an increased layer of complexity during a critical time period. All systems have separate administration, interfaces, requirements and limitations for sending critical communications from each specific system.

Alternatives
1. Do nothing and continue with manual process for emergency notification.
2. Implement *Alertus* to cover the gap in emergency desktop notification as phase I. In phase II work to unify these emergency communication systems where possible to limit manual processes. Phase III, could expand our emergency capabilities to include:
    a. Physical/digital panic buttons to the University Police Department.
    b. Alert beacons in large classrooms or key designated areas.

Recommended Action
The ITS Team recommends that we implement the Alertus system to cover the gap in desktop emergency notifications. It is also recommended that we unify these systems where possible to limit the number of manual processes to alert the campus in the event of an emergency.

Rationale:
Alertus will cover the gap in Desktop Emergency Notification. Likewise, it will tie in to Blackboard Connect via CAP Notifications and will trigger automatically when an emergency alert is sent from BB Connect. In addition, Alertus can tie into our exiting *REACH* Digital Signage system and display emergency communications on digital signs across campus. Finally, *Alertus* has a free mobile app that can be notified in the event of a campus emergency.

Suggested Timeline:
- In May 2016, install and configure the *Alertus* server on campus.
- June – September 2016, install the *Alertus* application on all campus computers

Emergency Blackboard system maintenance protocol (draft proposed by ATI)

1. An imminent maintenance need is identified through
    a. Escalated case via Bb Support Services
    b. Bb Support Services notification
    c. Internal administrative discovery
    d. CSUSB Bb Support Team (TSC/ATI)
2. Determine scope of impact
    a. Is the need a Bb built-in or 3rd party?
    b. What portion of the user-base is affected?
    c. Do any work-arounds exist?
    d. At what point are we relative to the academic term timeframe (beginning, middle, end, or between terms)?
    e. What are the consequences if no action is taken?
    f. What are the consequences related to when maintenance is performed?
    g. Are there contingencies should maintenance fail?
    h. May the fix be postponed until regular, quarterly maintenance?
3. Obtain feedback from support staff at all levels.
    a. ATI Designers
        i. What instructional events are imminent (e.g. comp. exams)?
        ii. Other concerns.
    b. Bb Support: How will this affect CSUSB IT support services?
    c. ITS Leadership: will maintenance interfere with other scheduled maintenance?
4. Communicate plan to execute emergency maintenance to faculty and students; provide feedback option and timeframe for receipt of such considerations.
    a. Faculty list: Michael
    b. Campus list: Jim
    c. Bb Homepage: Micah or Brandon
5. Revise and update communications based upon potential feedback from the university at-large.
6. Check fix/maintenance after completion and monitor impact/improvement.

University Scheduling Solution Recommendation

Introduction

CSUSB currently uses two systems, EMS and Ad Astra, to schedule all classrooms and spaces on campus. Both systems are obsolete and must be updated to maintain functionality and accessibility. The current scheduling process is cumbersome because data must be put into both systems thus double entry. In an effort to find a single system an RFP was issued to find one solution for the entire campus. There were 4 responses: EMS; 25 Live (College Net); Ad Astra; and Propel. Upon investigation, 25 Live (College Net) was tested but the product did not deliver and schedulers had to go back to double entry. Propel was discounted because the maker wanted the University to work with them to develop the software from scratch and the process would take 3-5 years. Ad Astra did not offer the ease of use for the event schedulers however EMS did provide for the needs of both academics and events schedulers. The software was demonstrated to the campus schedulers and it was agreed that EMS would be selected. The campus schedulers included: Michael Arteaga (Special Events), Carol Dixon (Special Events), Todd Jennings (College of Education), Ruth Landeros (Academic Curriculum & Scheduling), Jessica Madrigal (Special Events), Rich McGee (IT), Sally McGill (College of Natural Sciences), Kim Nichol (Academic Curriculum & Scheduling), Lenora Rodgers (IT), Jenny Puccinelli (SMSU), David Riefer (College of Social & Behavioral Sciences), Ginny Stewart (Special Events), Mick Verdi (College of Education), Peter Williams (College of Natural Sciences). Craig Seal (College of Business & Public Administration) was unable to attend but will view a demonstration. Patricia Weyand (Palm Desert Campus) and Rueyling Chuang (College of Arts & Letters) were also unable to attend.

Challenge(s):

- The system works with Peoplesoft but it would require assistance and from IT to set it up and maintain it
- Campus users would require some training or demonstration

Alternatives:

- Continue to stay on two different systems and pay to upgrade Ad Astra and pay again to upgrade EMS (This will double the cost of scheduling software for the campus)
- Continue with double entry until Ad Astra is defunct. Then resort to paper and pencil

Impact(s) if we do nothing:

The deadline for Ad Astra to expire is coming this year, thus the Academic Scheduling system will no longer be supported. The EMS maintenance agreement expired last year and is no longer supported.

Recommendation:

- Adopt EMS as the university scheduling software

Cost: $$ (One time or recurring): $140,910 (one time cost and vendor is willing to negotiate a discount if purchased before June 30, 2016) / $27,500 annual expense for license.

Rationale:

- All CSU campuses must have a third party vendor for classroom management as Peoplesoft does not support this. There is no option to not have a vendor
- There is currently no central scheduling database and given a potential safety threat to the university it would require information from multiple departments to track all activities on campus
- Academic Scheduling and Events must make a decision because Ad Astra and EMS are expiring or have already expired and the software is no longer supported
- CSU Northridge currently uses EMS for both academic and events scheduling and the team visited the campus and saw how successful the solution has been for its sister campus
- A common scheduling software would also assist Palm Desert with its scheduling needs and would tie it into a central system

Assessment Plan and Key Performance Indicators (KPI):

- Elimination of double entry systems
- Campus acceptance and use of software by all campus entities who schedule activity and / or provide support services for these activities such as: Public Safety, Facilities, Campus Departments, Parking, etc.

CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO
Information Technology Services

IT Governance Executive Committee Meeting

Regular Meeting – May 25, 2016

Item: Request for Authorization for Local Administrator Rights

Background
The CSU Office of the Chancellor conducted an information security audit of the campus during the 2014-2015 academic year. One of the findings and recommendations of this audit, under the Desktop Security Management, was to eliminate administrative access to workstations unless it is specifically approved by a supervisor.

Alternatives
1. Do nothing and continue to have this finding reported in the Annual Audit from the CO
2. Develop a procedure to manage local admin access for desktops across the Campus

Recommended Action:
In consultation with the ITS Technology Advisory Group and the Information Security and Emerging Technologies Subcommittee of the IT Governance, the Request for Authorization for Local Administrator Rights was developed as a procedure to address the audit finding and comply with the appropriate CSU Information Security Polices and Standards.

Rationale:
One of the recommended best security practices is to restrict the ability for end users to install software and prevent changes on the operating system configuration. This security control minimizes the possibility for end user's workstations and computer devices to become victims of malware and protect confidential information from unauthorized disclosure. This security control is implemented by removing the administrator rights from the end user's workstations and computer devices, which for most users does not affect their day to day operation. In addition, this security control allows to meet regulatory compliance, greatly minimize the Zero-Day threats, provides system stability, and ensure compliance with software licensing and end user agreements.

Suggested Timeline:
A deadline of September-2015 was given, in response to the audit finding to the CSU Office of the Chancellor, for removing all unauthorized local administrator rights and implement the procedure to request authorization for local administrator rights.

CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO
Information Technology Services

IT Governance Executive Committee Meeting
Regular Meeting – April 20, 2016

Microsoft Clutter Feature

Background
Microsoft introduced Clutter in Fall 2014 as a feature of the Office 365 email platform. On August 15, 2015, Clutter was enabled by default by Microsoft for all Office 365 email accounts. (https://blogs.office.com/2015/05/18/de-cluttering-everyones-inbox/).

Over the last eight months, IT Services have received feedback from several faculty and staff about important messages ending up in Clutter, including messages from President Morales. Because Clutter learns and adapts from users' email reading pattern (what a user opens, deletes, or ignores), each user's Clutter folder behaves differently.

Out of 18,752 mailboxes, 11,995 have Clutter disabled, 6,392 have Clutter enabled, and 365 could not be determined as of July 28, 2016.

Alternatives
1. Do nothing. Continue to educate faculty and staff regarding the Clutter feature, as well as provide assistance to turn Clutter off at their local account level. New accounts will also have Clutter turned on by default.
2. Turn Clutter off for new email account only, leaving Clutter settings unchanged for current users.
3. Turn Clutter off at the system level (including new accounts), while maintaining the option for individual users to turn it on, if they chose (opt-in).

Recommended Action
The ITS team recommends that we turn Clutter off at the system level and provide the option for individual users to turn on Clutter at their local account level. We also recommend turning Clutter off by default for all new mailboxes.

Rationale:
Since Clutter was turned on by default by Microsoft in August 2015, over 77% of users have opted to turn off Clutter. In addition, CSUSB has implemented a new spam filtering system, Proofpoint, which has a more robust spam filtering engine than the prior system, Barracuda. In addition, there is a higher risk of users missing important emails because Clutter automatically redirects email to the Clutter folder, if they are unaware, or unfamiliar with the Clutter feature.

Palo Alto Networks (PAN) Firewall Replacement Project

Introduction

The CSU Common Network Initiative (CNI) is an ongoing effort to maintain campus baseline network infrastructure as technology advances and user needs evolve. The program provides for the refresh of each campus network infrastructure on a cyclical basis to ensure that the network infrastructure continues to keep pace with technology and meet the changing needs of CSU students, faculty, and staff.

After the CSU wired and wireless network infrastructure upgrade, CNI issued an RFP and Palo Alto Networks successfully submitted and was awarded the contract to provide CSU with a next-generation network protection (firewall) solution. The CNI firewall replacement project consists of two distinct parts:

Part one will replace the campus border firewall that protect campus network from the internet and against intrusion attacks.
Part two will replace the server farm/data center firewall that protect campus servers containing various systems and various levels of sensitive data.

Both parts of the project will be multi-phased in order to minimize impact to the campus. CSUSB will be receiving PAN model 5060 for both border and server farm firewall, replacing the current Juniper SRX firewall and the Juniper ISG firewall. In addition, CSU established an Enterprise Licenses Agreement (ELA) with Palo Alto Networks to provide the following on a subscription basis:

1. **Threat Prevention** provides Intrusion Detection (IDS) and Intrusion Prevention (IPS).
2. **WildFire** provides threat detection and prevention for new threats, including malware, websites, and command and control traffic.
3. **URL Filtering** monitors for malware and files that contain embedded malware.
4. **Global Protect** delivers: End user device management and protection as well as remote data control.

Challenge(s):

- Significant increase in number of variety of threats to campus networks over the last decade.
- Various targeted attacks to exploit systems and/or to compromise data.
- Exponential growth in the number of devices connected to campus networks presents additional threat to campus networks.
- Changes and enhancements in network protocol means that current IP- and port-based firewall protection no longer provides adequate protection against advanced attacks.

Alternatives:

- Choose another equipment vendor outside of the Common Network Infrastructure.
- Continue utilizing existing Juniper equipment at a higher risk for CSUSB.

Updated: 5/24/2016

Impact(s) if we do nothing:

- Possible network failure due to aging hardware components.
- Increased risk due to more advanced threats to campus network.
- Decreased ability to protect CSUSB using outdated hardware and protocol.

Recommendation

Join the CSU Common Network Initiative in upgrading to Palo Alto Network firewall equipment along with the Enterprise Licenses Agreement to leverage advanced network protection tools to secure and enhance protection to the campus network.

Rationale:

Given the increased number of threats that campuses are experiencing and the risk of having accounts and data compromised, it is critical that CSUSB enhances network security by utilizing the latest technology, protection tools to proactively combat threats and attacks.

Assessment Plan and Key Performance Indicators (KPI)

- Enhanced network security to the campus community.
- Decreased incidents of malware, phishing, and other security threats.
- Integration with other security products such as Proofpoint email and threat protection.

Key Stakeholders

- CSUSB Faculty, Staff, and Students
- CSUSB Palm Desert Campus Faculty, Staff, and Students
- CSU Chancellor's Office

Project Team

- Dr. Sam Sudhakar, VP of IT Services and CIO (Executive Sponsor)
- Gerard Au, AVP of Technology Operations and Customer Support
- Dr. Javier Torner, Director of Information Security and Emerging Technologies
- David Hatch, Network Analyst, Telecomm and Network Services
- David Vasilia, Network Analyst, Telecomm and Network Services
- Rick Conway, Network Analyst, Telecomm and Network Services
- James Macdonell, Operating Systems Analyst, Information Security and Emerging Technologies
- Edward Szumski, Operating Systems Analyst, Information Security and Emerging Technologies
- Michel Davidoff, Director of Cyberinfrastructure, CSU Chancellor's Office
- James Fisher, Project Manager, AT&T Consulting

Process (Project Scope) and Schedule Overview

The firewall replacement project is a two-part, multi-phased project that began late December 2015 with initial planning. The project will officially begin in June 2016, ending in late 2017 and will consists of:

- **Part 1 – Border Firewall:** December 2015 – December 2016 (approx.)
  - Phase 1-1: Installation and migration to new firewall equipment
  - Phase 1-2: Rewrite old firewall rules with new standards
  - Phase 1-3: Decommission of old firewall rules
  - Phase 1-4: Advanced configuration
- **Part 2 – Data Center/Server Farm Firewall:** August 2016 – August 2017 (approx.)
  - TBD

Key Milestones

December 2015	Chancellor Office announced Part 1 of PAN replacement for CSUSB
December 2015	Information gathering
January 2016	AT&T Project Manager assigned
January 22, 2016	Test equipment received
April 2016	Bill of Materials developed and approved
May 17, 2016	Introductory call with AT&T
May 24, 2016	Chancellor Office announced Part 2 of PAN replacement
May 26, 2016	Informational call with AT&T, TNS, and ISET
June (TBD) 2016	Onsite kick-off meeting
June 6-10, 2016	Hardware arrival and installation
June 13-24, 2016	Network firewall change freeze
June 20-24, 2016	Engineers on-site, pre-migration preparation (San Bernardino Campus)
June 24, 2016*	**Phase 1-1 Migration to new equipment (San Bernardino Campus)***
June 24, 2016 – Mid-August 2016	Machine learning and "break-in" period (San Bernardino Campus)
June 27, 2016	Day-one support (San Bernardino Campus)
July 5-8, 2016	Engineers on-site, pre-migration preparation (Palm Desert Campus)
July 8, 2016*	**Phase 1-1 Migration to new equipment (Palm Desert Campus)***
July 8, 2016 – Late August 2016	Machine learning and "break-in" period (Palm Desert Campus)
July 11, 2016	Day-one support (Palm Desert Campus)
August 2016 – September 2016	Phase 1-2 (Non-impacting)
Fall 2016 (TBD)	Phase 1-3 (Non-impacting)
Winter 2016 (TBD)	Phase 1-4 (Non-impacting)
August 2016 – August 2017 (TBD)	Part 2 (TBD)

Impact

*Activities that require service interruptions are noted below:

Date	System Changes	Impact	Status
June 24, 2016 (5-11 pm) San Bernardino Campus	Upgrade border firewall equipment on San	Campus network connectivity to the	Planning

Updated: 5/24/2016

	Bernardino Campus.	internet may be momentarily disrupted. **Impact: Minimal**	
July 8, 2016 (tentative) Palm Desert Campus	Upgrade border firewall equipment on San Bernardino Campus.	Palm Desert Campus network connectivity to the internet and its VPN tunnel to CSUSB may be momentarily disrupted. **Impact: Minimal**	Planning

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