Texas A&M University

Detailed Assessment Report
2013-2014 Computing & Information Services (CIS)
As of: 3/06/2015 10:15 AM EST
(Includes those Action Plans with Budget Amounts marked *One-Time, Recurring, No Request.*)

Mission / Purpose

Computing & Information Services (CIS) delivers information technology leadership, expertise, and resources to help the Texas A&M University community achieve their goals in research, teaching, learning, and outreach. We provide these resources in a professional, timely, and cost-effective manner.

Other Outcomes/Objectives, with Any Associations and Related Measures, Targets, Findings, and Action Plans

O/O 1: Data Center Objective

The objective for Data Center Services is to provide robust, reliable, and secure facilities for hosting critical IT Infrastructure that meets the standards for Tier 2 as defined by the Uptime Institute.

Connected Document
Assessment TIA 942

Related Measures

M 1: Data Center Measures

All changes in the environment of the Teague and Wehner Data Centers are documented through our problem tracking system (Keystone). Annual downtime is calculated from the Keystone problem tracking system. Annual downtime is calculated from Keystone entries for the period September 1, 2013 through August 31, 2014.

Source of Evidence: Professional standards

Connected Document
Assessment TIA 942

Target:
Data Center downtime not to exceed 22 hours annually.

Finding (2013-2014) - Target: Met
The Teague and Wehner Data Centers had no downtime for the report period.

Related Action Plans (by Established cycle, then alpha):

Campus Network Resiliency
Established in Cycle: 2010-2011
Uptime measurements for the data center (Teague was 99.97%, Wehner was 100%), message services (99.98%) and internet connectiv...

Data Center Action Plan
Established in Cycle: 2013-2014
The Teague and Wehner Data Centers had no downtime for the report period. The Teague Data Center is currently supported by a si...

For full information, see the *Details of Action Plans* section of this report.

O/O 2: Internet Access

Most critical information technology services depend upon network availability. A key aspect of network availability is access to and from the internet via the campus network backbone, which includes redundant connectivity to the Teague and Wehner data centers. Due to dependency by other services, internet access will maintain 99.999% availability on an annual basis.

Related Measures

M 2: Internet Availabilty

Internet availability is measured by polling campus backbone device status, user-reported incidents, and periodic low level communication attempts to off-campus locations. Data including network configuration and test results are kept on internal Networking and Information Security (NIS) server. Availability will be reported based on actual data for the period of September 1, 2012 through August 31, 2013.

Source of Evidence: Existing data

Target:
99.999% uptime which is 5.25 minutes downtime.

Finding (2013-2014) - Target: Met
Availability for FY2014 was 99.999%. Deployment of redundant hardware is 75% complete. The backbone was reconfigured to minimize impact from external loss of connectivity.

Related Action Plans (by Established cycle, then alpha):

Internet Availability
Established in Cycle: 2012-2013
A plan to provide outdoor wireless for several areas has been created. Several groups will review/consider the plan in FY2014, ...

For full information, see the *Details of Action Plans* section of this report.

O/O 3: Virtualization Services Objective

The objective of CIS Virtualization Services is to provide a robust and reliable shared services infrastructure that supports the essential business, teaching, and research functions of the University. The Virtualization Service infrastructure includes servers, storage and network service components. The service objective of this infrastructure is to maintain at least 99.9% availability during scheduled service periods, and to provide the features and tools necessary to advance the business and teaching mission. Availability is calculated by subtracting the scheduled maintenance minutes from the total clock minutes available, and using the results to calculate actual availability by subtracting unplanned downtime. Calculated amount of allowed unscheduled downtime to achieve 99.9% availability is 43.2 minutes/month. Applicability and usability of features and tools will be evaluated periodically through the use of customer surveys or questionnaires.

Related Measures

M 11: Virtualization Services Availability

Virtualization services are to be measured using internal monitoring systems and Keystone reports of customer accessibility. Actual usage averaged over the complete service complex will be measured and reported for the period between August 1, 2013 and July 31, 2014. Service availability analyses annually will provide data necessary for capacity planning and service expansions. Downtime in excess of 43.2 minutes/month will trigger investigations into prominent causes and solutions required to bring the system back into compliance. Customer surveys/questionnaires will provide the necessary input to determine future features and changing requirements. Customer reports received through Keystone will also be collected. This data will be used to plan enhancements and improvements to the service. SolarWinds is the online tool used to track and measure availability for our services. Using the described assessments will provide information essential for the continuous improvement of existing services, and to plan capacity increases as demand for the services grow. Use of customer surveys, questionnaires, and information gleaned from Keystone will allow stakeholders to be involved in the assessment process. This measurement and assessment plan is feasible and achievable with current resources and staff at current customer loads. Any substantial growth in the customer base, or additional features, may require additional staffing and financial resources to achieve significant results in a timely manner. Data collection and analyses related to Virtualization Services will be performed by CIS's Infrastructure Systems & Services and Communications teams.

Source of Evidence: Existing data

Target:

Maintain sufficient capacity to service customer demand. Targets have been set for the availability of hypervisor resources and storage resources. A target of 70% utilization of Random Assess Memory (RAM: memory utilization used as a representative benchmark) has been set to trigger the planning and procurement processes to add additional computer capacity. Similarly, a target of 85% of peak Input/Output Operations Per Second (IOPS: the speed at which data is being transferred either to/from the system) or 70% utilization will trigger processes to add storage capacity.

Finding (2013-2014) - Target: Met

Storage IOPS are currently being measured at 85% of peak capability. Additional storage resources are being requested as a result of reaching this threshold. Service infrastructure in the Wehner Data Center lacked sufficient resources to facilitate optimum resiliency. Additional server resources were added in 2014 to address this deficiency.

O/O 4: Open Access Lab Objectives

The objective of the Open Access Lab (OAL) is to provide desktop services supporting academic instruction in classrooms, labs, and remotely to the students and faculty of Texas A&M University. The OAL service consists of PCs, servers, storage, printers and network components. The service objectives for this service is to maintain an average login time of no more than 50 seconds, an average reboot time of less than 3 minutes, and provide the features and tools necessary to advance the teaching mission. The service objectives were set by monitoring the login and restart times of machines during a semester after an optimization period with Microsoft. The average login time is calculated by averaging the login times over each 5-minute period. The average restart times are calculated by averaging the restart times over each 5-minute period as well. Applicability and usability of features and tools will be evaluated periodically through the use of customer surveys or questionnaires.

Related Measures

M 3: Login and Reboot Times

OAL login and reboot times are important for faculty teaching in classrooms with technology. Often a reboot is required if the previous faculty member locked the computer screen and did not log off. Faculty complaints regarding the time required to reboot computers in the classrooms and the amount of time to login triggered an investigation into the cause of the reboots lasting almost 10 minutes in some cases. We brought in a Microsoft analyst to help us determine ways to improve the times. With the new tools provided by Microsoft and a better understanding of the issues, we have been able to lower the login and restart times. OAL login and reboot times are to be measured using internal monitoring systems and Keystone reports of customer experiences. Actual login and reboot times averaged over the complete service complex will be measured for the period between August 1, 2013 through July 31, 2014. Service analyses annually will provide data necessary for capacity planning and service expansions. Login time averages in excess of 50 seconds and reboot time averages in excess of 3 minutes will trigger investigations into prominent causes and solutions required to bring the system back into compliance. Customer surveys/questionnaires will provide the necessary input to determine future features and changing requirements. Customer reports received through Keystone will also be collected. This data will be used to plan enhancements and improvements to the service. Using the described assessments will provide information essential for the continuous improvement of existing services, and to plan capacity increases as demand for the services grow. Use of customer surveys, questionnaires, and information gleaned from Keystone will allow stakeholders to be involved in the assessment process. This measurement and assessment plan is feasible and achievable with current resources and staff at current customer loads. Any substantial growth in the customer base, or additional features, may require additional staffing and financial resources to achieve significant results in a timely manner. Data collection and analyses related to OAL login and reboot times will be performed by CIS's Open Access Lab and Communications teams.

Source of Evidence: Existing data

Target:

The targeted average login time of no more than 50 seconds and reboot time of no longer than 3 minutes are based on data collected over the spring semester.

O/O 5: Integrated Emergency Notification (IEN) System Objective

The IEN project includes the purchase, implementation, operational support, and IT management activities for the Code

Maroon Shared Services system at Texas A&M University. This version of the Code Maroon system replaced the previous system powered by E2Campus in September 2009. In 2014, the IEN project team upgraded the Code Maroon system to a "shared service" offering support for multiple campuses. Campuses currently in the shared service are the Texas A&M University campus in College Station and the School of Law campus in Fort Worth. The application software, licensed from AtHoc, Inc., provides the ability for multiple campuses to broadcast campus-specific alerts. Specifically, the TAMU University Police Department publishes emergency information alerts to the College Station campus simultaneously to multiple devices (SMS, email, desktop popups, RSS, and Twitter). A newly designed registration website capable of supporting all campuses was also developed in FY2014. The dedicated hardware and software runs on virtualized servers with automatic failover and load balancing. Additional intended outcomes of the upgrade include support for a larger number of desktop popup clients (described in M6), the future capability to support a smartphone alerting application, and future integration with additional channels.

Related Measures

M 4: Short Message Service (SMS) Text
Texas A&M University students, faculty, and staff who have a Texas A&M NetID and password can register one number to receive SMS text message alerts. By limiting this feature to campus members, emergency notifications can be delivered as quickly as possible.

Source of Evidence: Existing data

Target:
The time allowed from when the alert was published until the text message is delivered to the cell phone carriers of all Code Maroon registrants, is up to 7 minutes.

Finding (2013-2014) - Target: Partially Met
For the alerts published between September 1, 2013 through July 31, 2014, and out of 16 uses of this channel, I did not meet the performance measure. Mediation: The CIS team asked the vendor (AtHoc, Inc.) to investigate this issue. The vendor attributed the delay on the date in question to their SMS delivery provider (MIR3, Inc.), which experienced one of the largest notification days in their history because of the number of active storms in the eastern and central United States during that time.

M 5: Email
Code Maroon emergency alerts will automatically be sent to the Texas A&M Email (Neo) accounts ending with "@neo.tamu.edu." During FY2014, the University added automatic delivery of alert messages to the email accounts ending with "@exchange.tamu.edu". Tests indicate text messaging is a faster notification method than email, so campus members are encouraged to register for text message alerts. During the summer 2014, the University began migration of all Neo email accounts to Google Apps in the internet cloud. This outsourcing of email addresses is expected to prevent TAMU from obtaining delivery statistics for those mailboxes going forward and may result in this specific metric becoming unavailable.

Source of Evidence: Existing data

Target:
The time allowed from when the alert was published until the email message is converted from text to voice and the broadcast is begun on KAMU FM radio and campus television channels is up to 2 minutes.

Finding (2013-2014) - Target: Partially Met
For the alerts published between September 1, 2013 through July 31, 2014, and out of 16 uses of this channel, 4 uses for the same event did not meet the performance measure. Mediation: The CIS team contacted CIS-ITIO engineers to investigate. CIS-ITIO determined that 90% or more of the emails were delivered within the performance measure. CIS-ITIO stated that there were possibly several contributing factors why some emails waited longer than normal to be delivered, however, no clear reason was determined.

M 6: Emergency Notification Message Broadcast
Each department on campus receives an EAS radio to allow for broadcast of emergency notification messages in the department areas.

Source of Evidence: Existing data

Target:
The time allowed from when the alert was published, until the message is converted from text to voice, and the broadcast is begun on KAMU FM radio and campus television channels, is up to 2 minutes.

Finding (2013-2014) - Target: Met
For the alterts published between September 1, 2013 through July 31, 2014, and out of 16 uses of this channel, all met the performance measures.

M 7: Twitter
Code Maroon text messages can be received by following Twitter. Twitter's "Fast Follow" feature allows one to receive text message alerts without signing up for a Twitter account.

Source of Evidence: Existing data

Target:
The time from when the alert was published until the message is delivered to the TAMU Twitter account, is up to 1 minute. Delivery time from the account to each "follower" is dependent upon how quickly Twitter can deliver the message, and is not controlled by the University.

Finding (2013-2014) - Target: Met
For the alerts published between September 1, 2013 through July 31, 2014, and out of 16 uses of this channel, all met the performance measure.

M 8: Really Simple Syndication (RSS)
Code Maroon text messages can be received by subscribing to Code Maroon's RSS feed. The feed is monitored through an email client (Microsoft Outlook or Novell GroupWise), various news readers (My Yahoo, Google Reader, etc.).

Source of Evidence: Existing data

Target:
The time allowed from when the alert was published until the message is available as an RSS feed, is up to 1 minute.

Finding (2013-2014) - Target: Met
For the alerts published between September 1, 2013 through July 31, 2014, and out of 16 uses of this channel, all met the performance measure.

M 9: Computer Alerts Desktop Popup Clients
Approximately 6,000 PC's and Macs on campus have Desktop Clients installed, which automatically display alerts in a popup window. All classroom computers that use Instructional Media Services (IMS) equipment, have the computer alerts enabled.

Source of Evidence: Existing data

Target:
The time allowed from when the alert was published until the message is displayed on a desktop computer that is running the client application, which is polling up to 3 minutes.

Finding (2013-2014) - Target: Met
For the alerts published between September 1, 2013 through July 31, 2014, and out of 16 uses of this channel, all met the performance measure.

M 10: Classroom Speakers
Code Maroon emergency alerts are automatically broadcast over loud speakers in registrar-controlled classrooms (for a listing of classrooms, see http://registrar.tamu.edu/FacultyStaff/ClrmLiPer.aspx). This enables students and instructors to get alerts when cell phones have been silenced or where cellular signals are weak.

Source of Evidence: Existing data

Target:
The time allowed from when the alert was published until the message is delivered to the online classroom speakers, is up to 2 minutes.

Finding (2013-2014) - Target: Met
For the alerts published between September 1, 2013 through July 31, 2014, and out of 16 uses of this channel, all met the performance measure.

O/O 6: Networking - Wireless
The objective of providing wireless coverage to high priority locations, which include the library and other gathering places for students.

Related Measures

M 12: Wireless
The campus office space is approximately 12 million square feet and is at 69% completion.

Source of Evidence: Existing data

Target:
A plan to provide wireless coverage to key outdoor locations will be developed by September 2013. Office space coverage will be increased by 5% each year.

Finding (2013-2014) - Target: Met
The outdoor plan has been developed and is being implemented. Office space coverage increased from 69% to 75%.

Details of Action Plans for This Cycle (by Established cycle, then alpha)

Campus Network Resiliency
Uptime measurements for the data center (Teague was 99.97%, Wehner was 100%), message services (99.98%) and internet connectivity (99.997%) exceeded or partially met CIS goals. However, the TechQual+ survey indicated that CIS customer's perceptions of the services were not as good as the actual numbers. Customers do not care why they cannot compute. Any failure (power, electronics, cut lines, insufficient access points, etc.) between the customer and CIS entry points can disrupt service. The plan is to increase the overall campus network resiliency. It is a long-term project that will provide incremental progress as funding permits. Matching grant opportunities have been available to modify CIS' preferred order of implementation. The following description comes from the Strategic Plan for Texas A&M Information Technology, 2011-2015: "Campus Network Resiliency: In the face of infrastructure failures (e.g., loss of power, cooling, electronics, or fiber cuts), the campus computer network must be resilient to meet user mission-critical devices. If a building has power, the network should be operational. Improving network resiliency will require generators at key network hubs and dual fiber optic connections to each major building. Also, complete coverage of campus buildings with the next generation of Wi-Fi (802.11n) will be needed, and WiMAX (802.16d) will be added to support outdoor campus and community needs".

Established in Cycle: 2010-2011
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Data Center Measures | **Outcome/Objective:** Data Center Objective

Implementation Description: The major network HUBs have been connected with the dual physically separated paths. Initial investment of $400,000 was allocated to upgrade power and cooling.
Responsible Person/Group: Cheryl Cato, Director, ITIO and Willis Marti, Director, NIS

Internet Availability
A plan to provide outdoor wireless for several areas has been created. Several groups will review/consider the plan in FY2014, including the Council on Built Environment.

Established in Cycle: 2012-2013
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Internet Availabilty | **Outcome/Objective:** Internet Access

Responsible Person/Group: Networking and Information Security

Data Center Action Plan

The Teague and Wehner Data Centers had no downtime for the report period. The Teague Data Center is currently supported by a single generator, and a single source of main campus power. To improve resiliency, the following actions will be completed by January 21, 2015: overhaul and modernize existing generator; add a second 2.2MW generator to achieve N+1; add a second power feed from an additional campus power station.

Established in Cycle: 2013-2014
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Data Center Measures | **Outcome/Objective:** Data Center Objective

Analysis Questions and Analysis Answers

Based on the analysis of your findings, what changes are you currently making to improve your program? Identify the specific findings you analyzed and how they led to your decision.

We have identified the need for more effective IT Service Management. We have invested over $1M to acquire, implement, and deploy the ITIL-based ServiceNow solution.

Provide an update for completed or ongoing action plans from the previous year(s). Highlight your improvements.

Uptime measurements for the data center (Teague was 99.97%, Wehner was 100%), message services (99.98%) and internet connectivity (99.997%) exceeded or partially met CIS goals. However, the TechQual+ survey indicated that CIS customer's perceptions of the services were not as good as the actual numbers. Customers do not care why they cannot compute. Any failure (power, electronics, cut lines, insufficient access points, etc.) between the customer and CIS entry points can disrupt service. The plan is to increase the overall campus network resiliency. It is a long-term project that will provide incremental progress as funding permits. Matching grant opportunities have been available to modify CIS' preferred order of implementation. The following description comes from the Strategic Plan for Texas A&M Information Technology, 2011-2015: "Campus Network Resiliency: In the face of infrastructure failures (e.g., loss of power, cooling, electronics, or fiber cuts), the campus computer network must be resilient to meet user mission-critical devices. If a building has power, the network should be operational. Improving network resiliency will require generators at key network hubs and dual fiber optic connections to each major building. Also, complete coverage of campus buildings with the next generation of Wi-Fi (802.11n) will be needed, and WiMAX (802.16d) will be added to support outdoor campus and community needs". The major network HUBs have been connected with the dual physically separated paths. Initial investment of $400,000 was allocated to upgrade power and cooling.

Detailed Assessment Report
2013-2014 Educational Broadcast Services

As of: 3/06/2015 10:15 AM EST

(Includes those Action Plans with Budget Amounts marked *One-Time, Recurring, No Request.*)

Mission / Purpose

Educational Broadcast Services operates the Trans Texas Videoconference Network (TTVN), which is the Wide Area data Network (WAN) for the Texas A&M University System. The mission of TTVN is to provide premiere wide area network communications and a related portfolio of shared services to the Texas A&M System and affiliated organizations.

TTVN's mission relates to TAMU Vision 2020 Imperative 7 (Increase Access to Knowledge Resources). In particular, it relates to the precept "Lead in Information Technology". The TTVN Network is the fundamental architecture on which virtually all of the university computing communications technologies are transmitted to the outside world. The speed and reliability of this network is critical for TAMU to develop and maintain a leadership role in Information Technology.

Goals

G 1: Network Backbone Reliability of 100%
Operate a wide area data network backbone that provides 100% reliability to TAMU and TAMUS campuses connected to the backbone.

G 2: Provide Monthly Reliability Measure to Telecommunication Council
Provide an accurate tool to track the monthly reliability of the TTVN backbone and present this data to the TAMUS Telecommunications Council monthly.

G 3: BTOP Grant Fiber to System Campuses
Deploy BTOP grant fiber to system campuses to enable a minimum of 1 Gbps bandwidth capaicty to each.

Other Outcomes/Objectives, with Any Associations and Related Measures, Targets, Findings, and Action Plans

O/O 1: Network Backbone Architecture with 99.999% uptime
Strive for a minimum of 99.999% annual uptime (reliability); reported as the percent of time in a month that the network was up. This is a best practice benchmark for commercial internet services providers.

Strategic Plan Associations

Texas A&M University
6 Diversify and globalize the A&M community.
7 Increase access to intellectual resources.
9 Build community and metropolitan connections.
11 Attain resource parity with the best public universities.

Related Measures

M 1: Backbone Reliability Reports
Track each second of down time on the backbone and summarize in a monthly report. Keep a cumulative chart of the percent of uptime each month. This is a benchmarking or best practice used by commercial ISP providers.

Source of Evidence: Benchmarking

Target:
99.999% uptime of TTVN Backbone over 1 year.

Finding (2013-2014) - Target: Met
The backbone reliability for TTVN for FY 13-14 was 100%, exceeding the goal. There was 0 downtime on the network backbond

Connected Document
Reliability Fy 14.pdf

Related Action Plans (by Established cycle, then alpha):

Monthly Reliability Reports
Established in Cycle: 2008-2009
To track network reliability, monthly reports will be presented to the TAMUS Telecommunications Council. The reports will show ...

Clearer Communication with LEARN
Established in Cycle: 2011-2012
In FY2012, the largest downtime was due to an unclear communication with LEARN as LEARN was attempting to add a new leg to the N...

For full information, see the *Details of Action Plans* section of this report.

O/O 2: Reliability Measurement tool for tracking and presentation of backbone uptime
Use the existing network measurement tool to present backbone uptime to the TAMUS Telecommunications Council. Update / refine as needed. MRTG has been the tool of choice but is very labor intensive. We are looking for a less burdensome way to collect the data.

Strategic Plan Associations

Texas A&M University
6 Diversify and globalize the A&M community.
7 Increase access to intellectual resources.
9 Build community and metropolitan connections.
11 Attain resource parity with the best public universities.

Related Measures

M 2: Reliability Graphs posted to TTVN website
The tool will be used to track monthly uptime percentages of the backbone. Output will be a bar chart for each month of the fiscal year showing percent of uptime for each month and an annualized uptime for the year. Each graph will be posted within the "Council Status Report Presentation" under the Reports/Metrics section of the TTVN web site.

Source of Evidence: Document Analysis

Target:
12 graphs of reliability statistics presented to the TTVN Telecommunications Council and documented by posting to the TTVN website.

Finding (2013-2014) - Target: Met
All 12 reliability graphs were reported to the TAMUS Telecommunications Council at the monthly TTVN Telecommunications Council meeting. Additionally, the graphs were posted in the monthly report and are located on the TTVN.tamu.edu website under "reports and metrics".

Connected Document
Council Reports FY 14.pdf

Related Action Plans (by Established cycle, then alpha):

Monthly Reliability Reports
Established in Cycle: 2008-2009
To track network reliability, monthly reports will be presented to the TAMUS Telecommunications Council. The reports will show ...

Better network relibiliby tracking instrument
Established in Cycle: 2013-2014
Move reliability tracking from open source MRTG graphs to a more accurate commercial product. PRTG holds promise. TTVN staff w...

For full information, see the *Details of Action Plans* section of this report.

O/O 3: Complete 65%of BTOP Connections to Campuses
Complete 65% of BTOP Connections to Campuses

Strategic Plan Associations

Texas A&M University
6 Diversify and globalize the A&M community.
7 Increase access to intellectual resources.
9 Build community and metropolitan connections.
11 Attain resource parity with the best public universities.

Related Measures

M 3: BTOP Progress Report
Updated Measure 7-3-12. The Texaspipes.tamu.edu website does not provide easily documentable information regarding the specific connections to system campuses. Rather, it reports the progress of the number of fiber miles to

the campus. Thus, the updated measure will be a document of the Director of Telecomunications at TAMU, or the Principle Investigator (Rodney Zent) of the project, listing those campuses where the fiber installation is complete. This document will be uploaded to WEAVE each September until project is complete.

Source of Evidence: Document Analysis

Connected Document
BTOP Progress FY 13

Target:
Connect 65% of campuses during FY13

Finding (2013-2014) - Target: Met
All but two campuses are now connected. 11 out of 13 is an 85% completion rate that exceeds the goal.

Connected Document
BTOP Progress Fy 14.pdf

Related Action Plans (by Established cycle, then alpha):

BTOP Grant Construction
Established in Cycle: 2010-2011
Construction of BTOP fiber to system campuses. BTOP award was made in August, 2010

For full information, see the *Details of Action Plans* section of this report.

Details of Action Plans for This Cycle (by Established cycle, then alpha)

Monthly Reliability Reports

To track network reliability, monthly reports will be presented to the TAMUS Telecommunications Council. The reports will show the percent of uptime for the TTVN backbone.

Established in Cycle: 2008-2009
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Backbone Reliability Reports | **Outcome/Objective:** Network Backbone Architecture with 99.999% uptime
Measure: Reliability Graphs posted to TTVN website | **Outcome/Objective:** Reliability Measurement tool for tracking and presentation of backbone uptime

Implementation Description: Implementation of this action plan involves EBS staff in the following manner. TTVN engineering senior management must work on a continuing basis with fiber providers such as LEARN, AT&T, TLSN, etc. to insure fiber maintenance is done within maintenance windows. Next, EBS staff must actually monitor uptime on all backbone circuits, and report this uptime monthly utilizing the tool staff has developed and continues to refine.
Projected Completion Date: 08/2015
Responsible Person/Group: Wayne Pecena

BTOP Grant Construction

Construction of BTOP fiber to system campuses. BTOP award was made in August, 2010

Established in Cycle: 2010-2011
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: BTOP Progress Report | **Outcome/Objective:** Complete 65% of BTOP Connections to Campuses

Implementation Description: Expend grant funds to construct fiber to system campuses. Contract this work with fiber vendors. TTVN staff will provide connectivity via the fiber as it is completed. TAMU Telecom will manage construction and requisiton of equipiment. TTVN will act as financial management and Project Director. One new engineering staff member at Telecom has been hired through grant resources (80% grant, 20% Telecom)
Projected Completion Date: 08/2016
Responsible Person/Group: TTVN, (Rodney Zent, PI) Telecom (Walt Magnussen, Project Manager)

Clearer Communication with LEARN

In FY2012, the largest downtime was due to an unclear communication with LEARN as LEARN was attempting to add a new leg to the Network. LEARN felt they had communicated the proposed downtime to TTVN, and TTVN believed the downtime would not impact TTVN. Subsequent discussion between TTVN staff and LEARN officials has already taken place but an even more concertrated effort will be put in place by TTVN staff to insure accurate intrepretation of the messages. In addition, TTVN assistant Director Wayne Pecena will continue to attend the weekly teleconfence call between LEARN, UT, TTVN and stress the importance of working only in the maintenance window of midnight to 6am. FY 2013 saw improved communications. No work was done outside the maintenance window to disrupt the network. Failures were automatically resolved due to the network architecture and resulted in a 100% uptime. The communications process is working and we will continue in this manner in the future.

Established in Cycle: 2011-2012
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Backbone Reliability Reports | **Outcome/Objective:** Network Backbone Architecture with 99.999% uptime

Projected Completion Date: 08/2015

BTOP Final Connectivity

There are a number of issues with BTOP fiber to locations that are still in limbo regarding final connectivity. These issues range from final permits, final legal documents, construction of fiber from other BTOP or University partners that is not completed, and the like. TTVN will work with these issues over the FY14 year to insure final connectivity of all circuits.

Established in Cycle: 2012-2013
Implementation Status: In-Progress
Priority: High
Implementation Description: Must start construction to TAMIU after highway construction is finished. Must work with UT to ensure progress on fiber crossing port authority land that will connect to our underwater bore.
Projected Completion Date: 08/2016

Better network relibiliby tracking instrument

Move reliability tracking from open source MRTG graphs to a more accurate commercial product. PRTG holds promise. TTVN staff will evaluate this over the next 24 months.

Established in Cycle: 2013-2014
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):

Measure: Reliability Graphs posted to TTVN website | **Outcome/Objective:** Reliability Measurement tool for tracking and presentation of backbone uptime

Analysis Questions and Analysis Answers

Based on the analysis of your findings, what changes are you currently making to improve your program? Identify the specific findings you analyzed and how they led to your decision.

Educational has made progress in all areas identified. Of paramount importance is the reliability factor of the backbone network. This is the second year we have been able to report 100% uptime. This is a continuous effort working with network providers to ensure maintenance work is done in the maintenance window. Our findings 2 years ago lead to more communication with LEARN and UT to ensure they are aware of our 99.999% uptime goals for the backbone. We have learned that the monthly reporting is important to make sure all our stake holders understand our success in this area. However, this is a fairly complex process for engineers to gather the data and summarize it across the 20+ entities that belong to TTVN. We are looking at software such as PTRG that could make the process easier and perhaps more accurate. Evaluation of cost vs complexity will be under consideration throughout the next 2 years.

Provide an update for completed or ongoing action plans from the previous year(s). Highlight your improvements.

The action plans for reliability and the reporting of that reliability have served us well the past 2 years and have been extended for another year. We believe these will be on going as there will not be a time when we would want to accept less than the industry standard of 99.999% uptime. The network architecture is built to facilitate this. We have redundant equipment and paths built in a ring topology. Changes that could effect this plan could be a changing in funding which could cause redundant circuits and equipment not to exist. At this time, we do not expect this to happen. The BTOP Action plans have been extended through 2016. While 11 out of 13 sites are connected and the grant is actually closed, there are still two campus that must be connected. The actual BTOP construction is complete at TAMUG. We did a bore under the ship channel from the campus across the water to a point on port authority land where we would meet with UT fiber construction and use their fiber as we do in many of our areas to connect back to the backbone. However, UT has had legal issues getting the require permits to finish their construction. We are assured this will eventually happen but are not in control of the process. The other site not connected is TAMIU in Laredo. Major highway construction is ongoing at a point between the campus and our fiber, and it is not feasible to construct during this time. Once we get proper authority to install the fiber we will move forward. It is estimated this will take at least through FY15. In the mean time TAMIU continues with a commercial circuits. A new action plan was added this year to evaluate software that might make the job of monitoring and reporting backbone reliability easier and better. Give the size of the network and the numerous monitor reports required, the cost to do this is not insignificant. We will gather data on cost, reporting capability, labor required to maintain, and decide a course of action within the suggested timeline.

Annual Report Section Responses

Program Contributions

Connectivity to the internet is critical to the way the university functions. No longer is this just a specialized interest to computer scientists, engineers, and those in technical fields. The use of the internet cuts across nearly every facet of life at the university. Students carry as much computer power in there phones and tablets as super computers had 20 years ago. Students communicate with faculty and each other via our network connectivity. Class handouts, worksheets, course activity, in fact nearly every facet of a student's career is complimented with important computing resources that must work 24 hours a day. TTVN has been successful in two ways to assist in this. First, it purchases required commodity and internet2 resources and brings them to the campuses of the TAMU System. Secondly, it maintains a backbone network that strives for an industry standard of 99.999% uptime. For the past 2 years, TTVN has actually delivered 100% uptime, thus exceeding the goal and providing 0 downtime for university staff, faculty, and students. In FY 2014 we made strides in increasing of capacity of internet bandwidth. The backbone operates at 20 Gbps, shared with UT. All campuses have at least 1Gbps access to the backbone. In Corpus Christi, TAMUCC has implemented new equipment over the BTOP fiber we installed to now access the backbone at 10 Gbps enabling their growing group of researchers a very wide pipe to research facilities around the world thru our connection to Internet2. Similar, in FY14 TAMU College Station competed a 100Gbps connection from Houston to College station. This increases our backbone between these cities to 100Gbps and puts TAMU in a top tier of universities measured by this type of internet connection. TTVN's negotiations with LEARN have enabled a 100Gbps to Internet2 as well. In FY15 we expect to upgrade the backbone circuit from College Station to Dallas to 100Gbps to enable redundant 100Gbps connectivity to TAMU. TTVN believes it is ready and able to keep up with the expanding need for internet communications demanded by universities with the TAMU System.

Detailed Assessment Report

2013-2014 Enterprise Information Services

As of: 3/06/2015 10:15 AM EST

(Includes those Action Plans with Budget Amounts marked *One-Time, Recurring, No Request.*)

Mission / Purpose

The mission of the Enterprise Information Systems department is to provide reliable and cost-effective mission-critical, enterprise-wide information for the campuses in College Station, Galveston and Qatar, the School of Law and Health Science Center to support the academic, administrative, research, and recruiting missions of the university, the Texas A&M System and Vision 2020.

The Enterprise Information Systems (EIS) department is responsible for the mission-critical, enterprise-wide information systems at Texas A&M University. The team manages the Compass system for the university's campuses in College Station, Galveston, Qatar, the School of Law and Health Science Center. The university purchased the system, a software product called Banner, from SunGard Higher Education (now Ellucian). To improve reporting capabilities, the EIS project team is also responsible for maintaining the Ellucian Operational Data Store (ODS). Additionally, the project team maintains a web portal, called Howdy, that serves as the "front door" for Compass end-users. Compass and Howdy provide access to mission-critical information to faculty, advisors, staff and students in support of Vision 2020 imperatives 1, 2, 3, 6, and 7. Argos provides a mechanism for departments to create customized reports to evaluate their programs. The Enrollment Management tool is designed to assist in recruitment and tracking of contacts with potential students, also in support of Vision 2020.

Goals

G 1: Meet the needs of the campus community and make Compass and Howdy easier to use.
Achieving the goals listed below will contribute to the attainment of Vision 2020 Imperatives 1, 2, 3, 6, & 7. Compass and Howdy are used by the campus community including faculty, staff, and students for a wide range of functions. Continuing to enhance Compass and Howdy to serve the needs to the campus is a top priority for EIS. 1. Ensure EIS has sufficient staff and other resources to complete work requirements as quickly as possible. 2. Work closely with functional departments and the broader campus community to ensure that all needs are identified and met.

G 2: Support the reporting needs of the campus community.
Achieving the goals listed below will contribute to the attainment of Vision 2020 Imperatives 1, 2, 3 & 7. 1. Maintaining a reporting database and enabling the colleges and academic units to write reports and analyze data related to their academic programs. The colleges and other departments will have direct access to Compass data. Previously, all data requests required an EIS programmer's effort. 2. Provide training to enable university staff to write and run reports in their units.

G 3: Make improvements in Howdy to assist students to complete their degree requirements in accordance with TEC §51.9685.
Achieving the goals listed below will contribute to the attainment of Vision 2020 Imperatives 1, 3, and 7, which will be enhanced by enabling students to improve their undergraduate degree planning experience.

G 4: Replacement of Howdy Infrastructure
Howdy currently runs on Luminis 4 which will no longer be supported after December 2015. EIS has been evaluating options to replace the infrastructure with a more robust platform that will provide the best possible service to students, faculty and staff. We will implement a new solution by the end of 2015.

Other Outcomes/Objectives, with Any Associations and Related Measures, Targets, Findings, and Action Plans

O/O 1: Meeting campus community needs within Compass and Howdy.
1. Ensure EIS has sufficient staff and other resources to complete work requirements as quickly as possible by working under the guidance of the EIS Steering and Executive committees and the Vice President and Associate Provost for Information Technology. Completing requests for enhancements to Compass through Compass Work Requests (CWR's) enable us to identify and resolve needs of the university community. 2. Work closely with functional departments and the broader campus community to ensure that all needs are identified and met. This is accomplished through the weekly Cross Functional Committee Meeting consisting of members from academic and administrative departments with appropriate EIS staff; Compass Advisor User Group Committee consisting of Academic Advisors; Primary Authorizing Agent (PAA) meetings and electronic newsletters. These groups allow us to communicate with stakeholders to discover and discuss the needs.

Relevant Associations:

Vision 2020 Imperatives 1, 2, 3, 6, & 7

Strategic Plan Associations

Texas A&M University
2 Strengthen our graduate programs.
3 Enhance the Undergraduate Academic Experience.
11 Attain resource parity with the best public universities.
12 Meet our commitment to Texas.

Related Measures

M 1: Quantitative aspects of this issue.
1. Total number of Compass Work Requests received to date (July 1- June 30): XXX Total number of work requests completed or no longer pending (July 1- June 30): XXX Completion of Compass work requests is one measure by which we can evaluate effectiveness of staffing levels in relation to the needs of the campus community. 2. Total number of EIS Cross Functional Committee meetings July 1-June 30: XXX Total number of Compass Advisor User Group meetings July 1- June 30: XXX and number of attendees: XXX Total number of Primary Authorizing Agent (PAA) meetings July 1- June 30: XXX and attendees: XXX Total number of newsletters sent July 1- June 30: XXX The Cross Functional Committee is comprised of representatives from functional areas across campus. They meet weekly to discuss Compass and Howdy enhancement needs to meet the needs of the academic community. The Compass Advisor User Group is comprised of academic advisors who meet with EIS each semester to discuss the needs and tools to assist them in meeting student needs. The PAA meetings are held each semester with individuals in academic and functional departments, enabling them to express their needs as related to Compass and Howdy. The number of meetings, newsletters and when available, attendees is a measure of our efforts to find out what the needs of our stakeholder are and how we can best meet those needs.

Source of Evidence: Activity volume

Target:

1. EIS will evaluate staffing and organize EIS to most efficiently meet the needs of the campus community. 2. EIS will conduct EIS Cross Functional Committee Meetings, Compass Advisor User Group meetings, and Primary Authorizing Agent (PAA) meetings and send out electronic newsletters to Compass users to exchange information with the university community. 3. EIS will complete 80% of Compass Work Requests received to meet the needs of the campus community making Compass and Howdy easier to use. Requests are evaluated by functional and technical teams to assess viability then reviewed by the EIS Steering Committee Meeting for approval. Some requests can be resolved by other means or the information is already available and others are not viable due to technical, legal or other limitations. These requests reduce the overall completion rate.

Finding (2013-2014) - Target: Met

1.EIS has continued to evaluate staffing needs, adding staff as needed to meet the needs of the university, including the use of Graduate Assistants, temporary staff and contract staff from other departments. During the implementation of Health Science Center data into Compass this spring, two members of the HSC technical staff assisted EIS in data conversion. Total number of Cross Functional Team Meetings: 38; attendance not recorded Total number of Compass Advisor User Group meetings: 3; total number of attendees: 57 in first two meetings Total number of Primary Authorizing Agent (PAA) meetings: 2 and average number of attendees: 30 per meeting Total number of newsletters sent: 13, plus electronic maintenance notices as necessary: 6 EIS completed 86% of requests for data feeds, reports and improvements to functionality received. Of 627 requests received, 539 have been completed or are no longer pending. These requests result in changes to Compass and Howdy that provide additional functionality, access to student data and convenience for students, advisors, faculty, staff and parents. Highlights of activities EIS completed for the benefit of Compass and Howdy users include: Conversion of Law School student data into Compass in fall 2013 including the enhancement allowing +/- grading required by the Law School. Student ID images were added to class rosters and the Advisor tab in Howdy as requested by faculty and advisors. The Health Science center implementation of student data into Compass began in fall 2013 with Financial Aid processing ready in April. Most data was converted into Compass by the middle of summer 2014.

Related Action Plans (by Established cycle, then alpha):

Degree Planner Effort
Established in Cycle: 2013-2014
EIS will continue to work to identify and implement enhancements to the undergraduate degree planner with the assistance of the ...

Making Compass and Howdy easier to use.
Established in Cycle: 2013-2014
EIS will continue to complete Compass Work Requests to provide data to meet campus reporting needs. We will insure that there is...

For full information, see the *Details of Action Plans* section of this report.

O/O 2: Meeting the reporting needs of the campus community.

1. Create a reporting database and the associated technical infrastructure needed to support campus-wide reporting. 2. Complete the Compass Reporting Pilot Program and expand access to the campus community through additional classes and open access labs in which previous attendees can obtain help to create queries.

Relevant Associations:

Vision 2020 Imperatives 1, 2, 3 & 7

Strategic Plan Associations

Texas A&M University
11 Attain resource parity with the best public universities.
12 Meet our commitment to Texas.

Related Measures

M 2: Quantitative aspects of this issue.

1. Total number of Argos Reporting Training Sessions offered Aug. - July : XXX 2. Total number of Argos Reporting Training attendees: XXX 3. Total number of open lab sessions for prior Argos Reporting Training attendees (Aug. - July): XXX Additional Argos Reporting Training sessions will be offered in each semester. Open lab sessions will be offered to allow additional support in developing departmental reports.

Source of Evidence: Activity volume

Target:

(1) Between August 2013 and July 2014, EIS plans to offer 4 levels of ARGOS training sessions for faculty and staff: Beginner Report training for those with little or no technical background in SQL programming; Refresher Report Training to refresh existing users; ADV-Beginner Report Training for those with moderate to extensive SQL programming experience and technical backgrounds; and Advance Report Training with moderate to extensive ARGOS experience. (2) Open Lab sessions for past course attendees will be offered to provide assistance on creating reports.

Finding (2013-2014) - Target: Met

In this reporting year, EIS held 5 ARGOS Refresher Report Training sessions with 21 attendees; 4 Beginner ARGOS Training sessions with 44 attendees and 1 Advanced ARGOS Training session for two attendees. Some user needs resulted in approximately 6 one-hour individual sessions to provide additional expertise to write complex reports for departments. The total number of ARGOS users is 188. The Keystone problem tracking tool is used by the Reports team to receive help requests from ARGOS users. EIS responded to more than 1500 requests for ARGOS support during this reporting year. At times, users realized that they did not have the advanced technical skills for specific data needs and chose to submit a Compass Work Request for EIS staff to write the program on their behalf.

Related Action Plans (by Established cycle, then alpha):

Additional training and open lab sessions offered
Established in Cycle: 2012-2013
EIS will reach out to Academic Advisors through the Advisor User Group to encourage more of them to use the Argos reporting tool...

For full information, see the *Details of Action Plans* section of this report.

O/O 3: Improve student use of Howdy

Improve student use of Howdy related to degree planning. 1. Make improvements to the baseline CAPP program to address "best-fit" issues for core curriculum requirements. The baseline program does not always use courses in an optimal way to meet a specific student's degree requirements. 2. Begin work on a pilot of the planning tool to allow students to better plan courses to meet degree requirements as quickly as possible. 3. Begin planning enhancements of the planning tool with additional features desired by students and advisors such as an advisor view of the student's degree plan.

Relevant Associations:

Vision 2020 goals 1, 3 and 7.

Strategic Plan Associations

Texas A&M University

3 Enhance the Undergraduate Academic Experience.
12 Meet our commitment to Texas.

Related Measures

M 3: Quantitative Aspects of the Degree Plan Project

1. Complete baseline changes to CAPP for the best-fit issue. 2. Complete the pilot of the Undergraduate Degree Planner and review with the AOC Deans and advisors. 3. Continue to enhance the planner including an automatic approval process workflow and other enhancements.

Source of Evidence: Administrative measure - other

Target:

1. Based on feedback from the campus community including the AOC Deans, the Compass Advisor User Group, the Faculty Senate Executive Committee and the Department Head Steering Committee improvements to the design of the Undergraduate Degree Planner will be made. 2. The degree planner will be live and will be deployed in a phased roll-out by academic program. 3. Based on feedback, enhancements to the degree planner will continue to be made, including an approval workflow.

Finding (2013-2014) - Target: Met

The Undergraduate Degree Planner (UGDP) became available to students in August 2013 with all new students required to have an approved plan by the end of fall 2014. An approval workflow was developed in Howdy to allow advisors easy access to review and approve students' plans as they are submitted. An enhancement to the UGDP was made to grant automatic approval for plans with 100% compliance, resulting in less work by advisors. EIS continues to meet with advisors to identify further enhancement needs.

Related Action Plans (by Established cycle, then alpha):

Degree Planner Effort

Established in Cycle: 2013-2014

EIS will continue to work to identify and implement enhancements to the undergraduate degree planner with the assistance of the ...

For full information, see the *Details of Action Plans* section of this report.

O/O 4: Replacement of Howdy Infrastructure

Replace the de-supported Howdy infrastructure with a new solution which will provide greater tools and functionality for students, faculty, advisors, and staff.

Relevant Associations:

Vision 2020 Imperatives 1, 2, 3, 7, 11, and 12

Strategic Plan Associations

Texas A&M University

2 Strengthen our graduate programs.
3 Enhance the Undergraduate Academic Experience.
11 Attain resource parity with the best public universities.
12 Meet our commitment to Texas.

Related Measures

M 4: Replacement of Howdy Infrastructure

Testing and selection of product by end of fall 2014. Implementation of product during 2015 using a phased approach (e.g., begin with EIS only, followed by administrative offices, etc).

Source of Evidence: Activity volume

Target:

We plan to make a decision on which product to implement by December 2014. We will install and begin testing immediately after the decision is made. We plan to complete the implementation by fall 2015.

Finding (2013-2014) - Target: Not Reported This Cycle

This Goal was established in August 2014. Findings will be collected in the next evaluation cycle.

Details of Action Plans for This Cycle (by Established cycle, then alpha)

Degree Plan Effort

EIS will continue to work on designing and developing the undergraduate degree planner with the assistance of the academic community including the AOC deans and academic advisors. We will ensure that sufficient functional and technical resources are assigned to this strategic, high priority project.

Established in Cycle: 2011-2012
Implementation Status: Finished
Priority: High
Projected Completion Date: 08/2014
Responsible Person/Group: Ramesh Kannappan, EIS

Additional training and open lab sessions offered

EIS will reach out to Academic Advisors through the Advisor User Group to encourage more of them to use the Argos reporting tool and offer additional Argos Report Training sessions each full semester. In addition, twelve open lab sessions will be held during this period providing technical assistance to previous attendees in creating reports to meet their departmental reporting and evaluation needs. Special sessions will be scheduled for Health Science Center employees.

Established in Cycle: 2012-2013
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Quantitative aspects of this issue. | **Outcome/Objective:** Meeting the reporting needs of the campus community.

Implementation Description: EIS will offer four levels of Argos Report training: Beginner; Advanced Beginner; Refresher and Advanced levels and open lab sessions to assist attendees with report writing.
Projected Completion Date: 06/2015
Responsible Person/Group: EIS Argos Team

Degree Planner Effort

EIS will continue to work to identify and implement enhancements to the undergraduate degree planner with the assistance of the academic community including the AOC deans and academic advisors. We will ensure that sufficient functional and technical resources are assigned to this strategic, high priority project.

Established in Cycle: 2013-2014
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Quantitative Aspects of the Degree Plan Project | **Outcome/Objective:** Improve student use of Howdy
Measure: Quantitative aspects of this issue. | **Outcome/Objective:** Meeting campus community needs within Compass and Howdy.

Projected Completion Date: 08/2016
Responsible Person/Group: Ramesh Kannappan, EIS

Making Compass and Howdy easier to use.

EIS will continue to complete Compass Work Requests to provide data to meet campus reporting needs. We will insure that there is sufficient staff to support the needs and have been approved to purchase additional Ellucian consulting for technical support. In addition, since the implementation stage of the student system has been completed and we are now in a maintenance and enhancement stage, functional and technical staff will begin cross-training and sharing the workload across those areas as well as different functional areas, i.e. Financial Aid and Accounts Receivable. EIS will continue meeting with key constituents across the university community to identify needs.

Established in Cycle: 2013-2014
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Quantitative aspects of this issue. | **Outcome/Objective:** Meeting campus community needs within Compass and Howdy.

Projected Completion Date: 06/2015
Responsible Person/Group: Ramesh Kannappan, EIS

Analysis Questions and Analysis Answers

Based on the analysis of your findings, what changes are you currently making to improve your program? Identify the specific findings you analyzed and how they led to your decision.

Review of the findings for Goal 1: “Meet the needs of the campus community and make Compass and Howdy easier to use”, was done by the EIS Director and the EIS staff during regular EIS meetings. Two major projects, integrating the School of Law and the Health Science Center into Compass and Howdy required significant effort reducing staff availability for other requests. The integration effort has been successful with all important tasks completed on time, but some new initiatives for other campus priorities have been deferred. As the integration effort is nearing completion, EIS staff have discussed an increased effort for other campus priorities. Review of the findings for Goal 2: “Support the reporting needs of the campus community,” was conducted by the EIS director, Assistant to Director and key members of the EIS Reporting team. Discussion of the findings also included discussions about needs expressed by training session attendees and by ARGOS users in Keystone messages. It was noted that the majority of attendees are academic advisors and they are the ones who do the most advanced reports using ARGOS. It was determined that reporting requirements will be discussed at a Compass Advisor User Group Meeting. The findings for Goal 3: “Make improvements in Howdy to assist students to complete their degree requirements in accordance with TEC §51.9685,” were reviewed by the Director, members of the Registrar's office, key EIS staff who support the degree planner effort and at the weekly Undergraduate Degree Planner meeting. The review indicates that the Undergraduate Degree Planner (UGDP) has now been implemented and made available to students but additional enhancements will continue to be needed. One enhancement that will be addressed is the need for recurring approvals at various stages in students' academic careers. EIS will continue to meet weekly with the members of the UGDP meeting, each semester with the Compass Advisor User Group and with the AOC Deans as needed to discuss additional enhancements to the planner and the timeline for each.

Provide an update for completed or ongoing action plans from the previous year(s). Highlight your improvements.

Since last year's assessment goals were established, two new major projects became a high priority for the team: conversion of the newly acquired TAMU School of Law and the Health Science Center student information systems into Compass. Both implementations occurred with very short time lines, unique academic terms and other unique data needs (such as the +/- grading required by the law school) which put a heavy demand on EIS staff. EIS staff have successfully met each required milestone in the implementations, allowing financial aid processing, registration, fee assessment and other critical processes to occur when needed. While resources were strained with the additional tasks, EIS still met the targets established in last year's assessment. Another highlight was the successful roll-out of the Undergraduate Degree

Planner to all students in fall 2013 with a requirement that all new students will have an approved plan by the end of fall 2014. An approval workflow was developed in Howdy to make it easier for advisors to review and approve the plans as they are submitted. To reduce advisor workloads, an enhancement was made that will grant automatic approval for plans with 100% compliance without advisor action. EIS has continued to conduct ARGOS user training, adding additional levels to meet the needs of advanced users. This year an additional trainer began sharing the training responsibilities. The Luminis 4 infrastructure on which Howdy operates will no longer be supported by Ellucian in December 2015. EIS has begun reviewing other options for a replacement to the current infrastructure. While looking for a product that will continue the current functionality of Howdy, EIS is looking for a product that will add additional functionality and tools to improve the campus community's use of Howdy.

Detailed Assessment Report
2013-2014 Instructional & Media Services

As of: 3/06/2015 10:15 AM EST

(Includes those Action Plans with Budget Amounts marked *One-Time, Recurring, No Request.*)

Mission / Purpose

Instructional Media Services (IMS) strives to enhance the classroom teaching experience for the faculty and students through the use of multimedia equipment in the Registrar Controlled Classrooms at TAMU. Our role is to provide consistency, based on the most common multimedia equipment needs, throughout classrooms at TAMU so that the faculty and students can feel comfortable with the technology provided. In order to fulfill this task, IMS installs computers and multimedia equipment, as well as maintains, develops, programs, and refines the equipment and systems under their control.

Goals

G 1: Provide and Maintain Quality Service

1. Provide the standard multimedia presentation equipment that is well maintained and in working order, for the Registrar controlled classrooms placed under IMS control. 2. Ensure the least amount of downtime due to equipment malfunctions. 3. Provide fast and efficient technical service to the faculty at all times. 4. Continue to upgrade equipment in older classrooms; 12 to 15 classrooms will be targeted annually. 5. Continue to use the ADA podiums, as well as Assisted Listening Devices in all new and upgraded installs. 6. Take advantage of opportunities to gain new Registrar controlled classrooms.

Other Outcomes/Objectives, with Any Associations and Related Measures, Targets, Findings, and Action Plans

O/O 1: Maintain/upgrade IMS Classrooms and/or acquire new classrooms

IMS permanently installed equipment in 12 new or additional classrooms. In addition, 10 older IMS classrooms were upgraded with all new equipment. IMS also worked alongside the Classroom Improvement Committee (CIC) in their classroom projects. This committee seeks to enhance the classroom experience by upgrading the lighting, seating, painting or removing walls. As the CIC worked in these classrooms, IMS upgraded the equipment. Some of the projects include removing walls between small classrooms and making them into larger classrooms. This was done with Blocker 105/106 and 107/108. These four classrooms, which have IMS equipment, are now two classrooms of 49 seats each. In this case IMS lost two classrooms but the university will have more utilization.

Related Measures

M 1: Equipment Usage

IMS will use the information gathered from the AMX Resource Management Suite (RMS) reports and the annual surveys in order to prove the heaviest and least usage of certain types of equipment in the IMS classrooms. RMS is a software package that gives the ability to measure lamp hours, source usage as well as uptime and downtime of devices. The types of equipment tracked on RMS: Desktop Computer - with Open Access Lab (OAL) image and software. Data Projector Document Camera Smart Podium (Smart Sympodium) Laptop VHS/DVD

Source of Evidence: Existing data

Target:

The target is to gather evidence of the pieces of equipment that is utilized 70% or above in usage. These items will continue to be installed in the IMS classrooms. Identify the pieces of equipment, 15% or less, that will need to be discontinued from future IMS installations. Computer Data projector VHS/DVD DVD drive in the computer Document Camera Smart Podium iClickers

Finding (2013-2014) - Target: Met

The findings on equipment usage according to the IMS survey are as follows: Computer or Data Projector - 97% VHS/DVD Player - 9% Faculty who would use the DVD drive in the computers - 88% Document Camera - 33% Smart Podium - 37% iClickers - 17% The RMS Source Usage History, which registers uses of the IMS devices (Document Camera, DVD, Laptop, PC or Computer and VHS), shows usage of the classroom computers ranging from 80% to 99%.

Connected Documents

2014 Faculty Survey
Fall 2013 Source Usage History
Spring 2014 Source Usage History

M 2: New Classrooms

IMS obtains a list of the Registrar controlled classrooms. IMS takes that list and highlights all of the classrooms containing the IMS audio visual (AV) package. In addition, any classrooms in which other departments have engaged in conversations concerning IMS taking over the AV package are also highlighted.

Source of Evidence: Client satisfaction survey (student, faculty)

Target:

IMS seeks opportunity to gain new classrooms, by providing customer service in the classrooms with AV equipment currently controlled by IMS.

Connected Document

Spring 2014 Priority List 10 21 13

Finding (2013-2014) - Target: Met

As a result of a one-time 1/3 departmental funding the IMS staff and student workers were able to install equipment in 12 new classrooms: ARCC 307, 305, 207, 205, 111; CE 118, 137, 219; NAGL 104; LAAH 466; and HECC 103, 104. Some of the classrooms were unique to the departments teaching in these classrooms. The extra or special equipment will be serviced by the Department. The classrooms affected were ARCC 207, CE 219 and HECC 104.

Connected Documents

December 2013 Projects
FY 2014 INSTALL SCHEDULE
Summer 2014 Projects

M 3: Full Upgrades for Older Classrooms

IMS keeps a spreadsheet of the supported classrooms with the original equipment installation date. IMS reviews this sheet to target older classrooms that are in need of a full upgrade or new AV equipment.

Source of Evidence: Existing data

Connected Document

IMS INSTALL HISTORY 9 2013

Target:

IMS seeks to annually upgrade 12-15 classrooms. This can only be done when the classrooms are offline. IMS has three main installations periods for FY 2014: 1. December 12, 2013 - January 10,2014 - 14 days for equipment installations due to the Christmas holidays 2. March 10-14, 2014 - 3 days for minor repairs due to the Spring Break holiday 3. May 8 - July 14, 2014 - 41 working days for the first summer session 4. July 8 - August 29, 2014 - 39 working days for the second summer session, fall classes start on September 1, 2014

Finding (2013-2014) - Target: Partially Met

IMS upgraded a total of 10 classrooms. 1. Six classrooms with all new equipment: PETR 104, 106, 113; PSYC 338; SCTS 215, 216 2. IMS shared the cost with Geosciences and upgraded O&M 112 by adding multiple data projectors 3. IMS shared the cost with the CIC and upgraded the equipment in BLOC 105/106 and BLOC 107/108. These are now two classrooms instead of four. 4. IMS shared the cost with the CIC and upgraded HELD 100. A new podium was designed and the multiple data projectors were added.

Connected Documents

December 2013 Projects
FY 2014 INSTALL SCHEDULE
Summer 2014 Projects

M 4: Maintenance And Downtown

IMS asked the faculty to rate the services of each Media Center (Blocker, Harrington and West Campus). IMS also asked the participants to rate our response time and customer service abilities when problems occurred. This was done on our annual survey.

Source of Evidence: Service Quality

Target:

We want to respond to complaints promptly and efficiently, with a ratings of 85% or higher response time. We want our customer service ratings per center to be at an 8 or above (10 being the highest ratings).

Finding (2013-2014) - Target: Partially Met

According to the survey; here are the percentages to the following findings for incident management. 88% of the IMS staff and/or student employees responded in a timely manner to their problems. 92% reported that the IMS staff and/or student employees understood their problems. 81% reported that their problems were resolved. 94% reported on the professionalism of the IMS staff and/or student employees. The Customer Service Rating of each service center which we call a Media Center, from the survey, were as follows. The rating was on a scale from 1 - 10, with 10 being the best rating. Harrington Media Center, HECC 109 - 8.27 Blocker Media Center, BLOC 168 - 8.31 West Campus Media Center, HFSB 118a - 7.73

Connected Documents

2014 Faculty Survey
Fall 2013 Keystone Reports
Fall 2013 Location Quality of Service
Spring 2014 Keystone Report
Spring 2014 Quality of Service

Details of Action Plans for This Cycle (by Established cycle, then alpha)

Data Projector Lamp Usage

In an effort to maintain the met target of 99% up-time for the Resource Management Suite (RMS). IMS is closely monitoring lamp hour usage each semester.

Established in Cycle: 2012-2013
Implementation Status: In-Progress
Priority: High
Projected Completion Date: 08/2014

IMS Installs

IMS can continue to upgrade older classrooms while acquiring audio visual packages in new additional classrooms.

Established in Cycle: 2013-2014
Implementation Status: Planned
Priority: High
Implementation Description: In an effort to not over extend the IMS staff, careful consideration will be applied to the classrooms done by the CIC. Any classrooms that are NOT in need of an equipment upgrade or that is NOT on the

IMS upgrade calendar, for the current time period, may not receive a full upgrade if the current installation equipment is altered.
Projected Completion Date: 08/2015

Analysis Questions and Analysis Answers

Based on the analysis of your findings, what changes are you currently making to improve your program? Identify the specific findings you analyzed and how they led to your decision.

Even with planning months in advance, scheduling electrical work, networking, etc. can add much needed time to the classroom equipment installations. IMS will continues to look at racking podiums (installing racks, equipment, computer and wiring in the podium) in their staging area. This allows less time to be spent in the actual classroom. Currently most podiums are built on site, as in the classroom. IMS is seeking opportunities to gain more workshop space in an effort to be able to rack podiums before gaining access to the classroom.

Provide an update for completed or ongoing action plans from the previous year(s). Highlight your improvements.
Last year, we were focused on lamp outages. This year we monitored RMS and changed lamps before there was a problem within the class.

Detailed Assessment Report
2013-2014 Instructional Technology Services
As of: 3/06/2015 10:15 AM EST
(Includes those Action Plans with Budget Amounts marked *One-Time, Recurring, No Request.*)

Mission / Purpose

Instructional Technology Services, a department of Texas A&M Information Technology, delivers professional development opportunities, administers educational technology resources, and empowers instructors to use best practices in higher education to enhance student learning through the use of technology at Texas A&M University.

Goals

G 1: User Application Quality and Reliability
Provide high quality and reliable instructional technology applications for customer usage.

G 2: Business Continuity and Disaster Recovery
Maintain business continuity and disaster recovery procedures.

Other Outcomes/Objectives, with Any Associations and Related Measures, Targets, Findings, and Action Plans

O/O 1: Provide High Quality Training.
Ensure the scope of training provided satisfactorily meets constituent needs.

Strategic Plan Associations

Texas A&M University
1 Elevate our faculty in their teaching, research and scholarship.
2 Strengthen our graduate programs.
3 Enhance the Undergraduate Academic Experience.

Related Measures

M 1: Constituent Survey
An annual survey of ITS customers to assess overall satisfaction with training and support services provided, system availability and system response.

Source of Evidence: Client satisfaction survey (student, faculty)

Target:
93% or more of ITS customers, who respond to the satisfaction survey, will rate their level of satisfaction with training events as satisfied or better.

Related Action Plans (by Established cycle, then alpha):

Expand/Revise Survey Topics
Established in Cycle: 2011-2012
Surveys on ITS Help will be revised to include additional questions such as those related to specific products supported by ITS ...

For full information, see the *Details of Action Plans* section of this report.

M 6: Workshop Participant Survey
Workshop participants will be surveyed to assess satisfaction with workshop content, instructor, etc.

Source of Evidence: Client satisfaction survey (student, faculty)

Target:
95% of survey responses will indicate satisfaction with workshops.

Related Action Plans (by Established cycle, then alpha):

Expand/Revise Survey Topics
Established in Cycle: 2011-2012
Surveys on ITS Help will be revised to include additional questions such as those related to specific products supported by ITS ...

For full information, see the *Details of Action Plans* section of this report.

O/O 2: Provide Technical Support Which Meets Constituent Needs.
Satisfactorily resolve requests for assistance.

Strategic Plan Associations

Texas A&M University
1 Elevate our faculty in their teaching, research and scholarship.
2 Strengthen our graduate programs.
3 Enhance the Undergraduate Academic Experience.

Related Measures

M 1: Constituent Survey
An annual survey of ITS customers to assess overall satisfaction with training and support services provided, system availability and system response.

Source of Evidence: Client satisfaction survey (student, faculty)

Target:
93% or more of ITS customers, who respond to the satisfaction survey, will rate their level of satisfaction with support services as satisfied or better.

Related Action Plans (by Established cycle, then alpha):

Expand/Revise Survey Topics
Established in Cycle: 2011-2012
Surveys on ITS Help will be revised to include additional questions such as those related to specific products supported by ITS ...

For full information, see the *Details of Action Plans* section of this report.

M 3: Service Desk Response Time SLA Report
SLA Reports generated from Numara Footprints showing the number of issues meeting or breaching service level agreements for response time.

Source of Evidence: Efficiency

Target:
95% of survey respondents will indicate satisfaction with Service Desk initial response time.

Related Action Plans (by Established cycle, then alpha):

Expand/Revise Survey Topics
Established in Cycle: 2011-2012
Surveys on ITS Help will be revised to include additional questions such as those related to specific products supported by ITS ...

For full information, see the *Details of Action Plans* section of this report.

M 4: ITS Help Customer Survey
A satisfaction survey is sent to each customer when the issue is closed. Survey responses are anonymous and optional.

Source of Evidence: Client satisfaction survey (student, faculty)

Target:
95% of responses will show an average rating of satisfied or better.

Related Action Plans (by Established cycle, then alpha):

Expand/Revise Survey Topics
Established in Cycle: 2011-2012
Surveys on ITS Help will be revised to include additional questions such as those related to specific products supported by ITS ...

For full information, see the *Details of Action Plans* section of this report.

M 5: Service Desk Resolution Time SLA Report
Reports generated from Footprints showing number of issues meeting or breaching the Resolution Time SLA.

Source of Evidence: Efficiency

Target:
95% of survey respondents will indicate satisfaction with Service Desk resolution time.

Related Action Plans (by Established cycle, then alpha):

Expand/Revise Survey Topics
Established in Cycle: 2011-2012
Surveys on ITS Help will be revised to include additional questions such as those related to specific products supported by ITS ...

For full information, see the *Details of Action Plans* section of this report.

O/O 3: Provide Reliable and High Quality Applications and Systems for Customers
Ensure that systems which serve the university as a whole, such as eLearning, wikis@tamu.edu, and blogs@tamu.edu, have minimal downtime.

Strategic Plan Associations

Texas A&M University
1 Elevate our faculty in their teaching, research and scholarship.
2 Strengthen our graduate programs.
3 Enhance the Undergraduate Academic Experience.

Related Measures

M 2: Track system uptime.
System logs will serve as sources for determining system availability and downtime.

Source of Evidence: Benchmarking

Target:
To provide the 97% uptime and access of the course management system (currently Bb VISTA) and supporting applications as provided by ITS.

Finding (2013-2014) - Target: Met
eLearning System Up Time was 99.87% for the 2013-2014 period. *eLearning will be decommissioned 9/30/14. eCampus System Up Time was 98.88% for the 2013-2014 period.

Related Action Plans (by Established cycle, then alpha):

Increase uptime goal of 98%
Established in Cycle: 2013-2014
Look at possibly changing the measuring goal to 98% uptime.

For full information, see the *Details of Action Plans* section of this report.

O/O 4: Provide Prompt Response to Customer Service Requests
The Service Desk will promptly respond to requests for assistance.

Strategic Plan Associations

Texas A&M University
1 Elevate our faculty in their teaching, research and scholarship.

Related Measures

M 3: Service Desk Response Time SLA Report
SLA Reports generated from Numara Footprints showing the number of issues meeting or breaching service level agreements for response time.

Source of Evidence: Efficiency

Target:
95% of issues submitted will meet the Response Time Service Level Agreement.

Finding (2013-2014) - Target: Not Met
60% of requests submitted between 08/01/2013-07/31/2014 met the Response Time Service Level Agreement. The Response Time Service Level Agreement was met for 60% of the issues submitted 08/01/2013-07/31/2014. The SLA breach rate by priority was Critical - 27% High - 28% Medium - 48% Normal - 44% Service Request - 62%

O/O 5: Provide Timely Resolution to Service Requests
ITS will provide a timely resolution to requests for assistance from customers.

Strategic Plan Associations

Texas A&M University
1 Elevate our faculty in their teaching, research and scholarship.

Related Measures

M 5: Service Desk Resolution Time SLA Report
Reports generated from Footprints showing number of issues meeting or breaching the Resolution Time SLA.

Source of Evidence: Efficiency

Target:
95% of issues submitted will meet the Resolution Time Service Level Agreement.

Finding (2013-2014) - Target: Met
The Resolution Time Service Level Agreement was met at a rate of 97% for the 8651 issues submitted 08/01/2013-07/31/2014. The total number of requests for assistance submitted represents at 37% increase in the number of requests submitted for the same time frame in 2012-2013.

Related Action Plans (by Established cycle, then alpha):

Expand/Revise Survey Topics
Established in Cycle: 2011-2012
Surveys on ITS Help will be revised to include additional questions such as those related to specific products supported by ITS ...

For full information, see the *Details of Action Plans* section of this report.

O/O 6: Provide Timely Resolution to Application Related Service Requests
ITS applications group will provide a timely resolution or workaround to requests from the service desk.

Related Measures

M 8: ITS Help Applications Team Performance Report
The applications team report showed an average of 7 days to resolve issues. Spreadsheet generated from ITS Help metrics and uploaded to show findings.

Source of Evidence: External report

Target:
The ITS applications team will resolve issues within a 30 day period.

Finding (2013-2014) - Target: Met
Applications Team Performance Report showed an average of 9 days, 21 hours, 59 minutes to resolve issues. Development Team Performance Report showed an average 7 days, 5 hours, 24 minutes to resolve issues.

Reports generated from the ITSHelp service desk workspace.

Related Action Plans (by Established cycle, then alpha):

Service Now Reporting
Established in Cycle: 2013-2014
With the new Service Now implementation, new measurement and reporting will need to be addressed for the next cycle.

For full information, see the *Details of Action Plans* section of this report.

O/O 7: Provide System High Availability and Disaster Recovery Strategy
ITS applications group will provide technology and hardware to support system high availability and disaster recovery.

Related Measures

M 7: Annual Data Center Switchover Exercise
The annual data center switchover exercise was performed during the time frame of August 15-16 to verify disaster recovery and business continuity procedures. The exercise was done successfully with no issues in regards to customer service or performance of the application.

Source of Evidence: External report

Target:
Successful data center switchover of infrastructure for disaster recovery procedure testing.

Finding (2013-2014) - Target: Partially Met
eLearning system data center switchover exercise was not done as the system is set to be decommissioned on 9/30/14. eCampus system data center switchover was not done during the scheduled time for this reporting period (July 20-27, 2014). However, the system design of which proved as a switchover test during two of the data center outages during this time period which could constitute towards the controlled switchover.

Related Action Plans (by Established cycle, then alpha):

Rescheduled eCampus Switchover
Established in Cycle: 2013-2014
The annual switchover test will be rescheduled for a later date.

For full information, see the *Details of Action Plans* section of this report.

Details of Action Plans for This Cycle (by Established cycle, then alpha)

Expand/Revise Survey Topics
Surveys on ITS Help will be revised to include additional questions such as those related to specific products supported by ITS in order to gauge satisfaction with support at a more granular level.

Established in Cycle: 2011-2012
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Constituent Survey | **Outcome/Objective:** Provide High Quality Training.
| Provide Technical Support Which Meets Constituent Needs.
Measure: ITS Help Customer Survey | **Outcome/Objective:** Provide Technical Support Which Meets Constituent Needs.
Measure: Service Desk Resolution Time SLA Report | **Outcome/Objective:** Provide Technical Support Which Meets Constituent Needs.
| Provide Timely Resolution to Service Requests
Measure: Service Desk Response Time SLA Report | **Outcome/Objective:** Provide Technical Support Which Meets Constituent Needs.
Measure: Workshop Participant Survey | **Outcome/Objective:** Provide High Quality Training.

Implementation Description: ITS support team will develop new questions for ITS Help survey.
Projected Completion Date: 10/2012
Responsible Person/Group: Carol Henrichs

Increase uptime goal of 98%
Look at possibly changing the measuring goal to 98% uptime.

Established in Cycle: 2013-2014
Implementation Status: Planned
Priority: Low

Relationships (Measure | Outcome/Objective):
Measure: Track system uptime. | **Outcome/Objective:** Provide Reliable and High Quality Applications and Systems for Customers

Implementation Description: Setting a new goal of 98% uptime to measure against.
Responsible Person/Group: ITS Application team.
Additional Resources: None.

Rescheduled eCampus Switchover
The annual switchover test will be rescheduled for a later date.

Established in Cycle: 2013-2014
Implementation Status: Planned
Priority: Medium

Relationships (Measure | Outcome/Objective):
Measure: Annual Data Center Switchover Exercise | **Outcome/Objective:** Provide System High Availability and Disaster Recovery Strategy

Implementation Description: Controlled switchover to run out of the Wehner data center for a period of time and then switch back to the main Teague data center.

Projected Completion Date: 12/2014
Responsible Person/Group: ITS Applications Team, CIS DBA Team
Additional Resources: None.

Service Now Reporting

With the new Service Now implementation, new measurement and reporting will need to be addressed for the next cycle.

Established in Cycle: 2013-2014
Implementation Status: Planned
Priority: Medium

Relationships (Measure | Outcome/Objective):

Measure: ITS Help Applications Team Performance Report | **Outcome/Objective:** Provide Timely Resolution to Application Related Service Requests

Implementation Description: New measures and reporting from Service Now application.
Projected Completion Date: 05/2015
Responsible Person/Group: ITS
Additional Resources: ITS, Service Now Training.

Analysis Questions and Analysis Answers

Based on the analysis of your findings, what changes are you currently making to improve your program? Identify the specific findings you analyzed and how they led to your decision.

For customer support and service - we are migrating to the central university Service Now application to improve and redefine matrices for providing service level agreements. For System performance and disaster recovery - we hare designed the new eCampus application to be fully redundant in operations and infrastructure. The new data center in Dallas will be evaluated for implementation of a third data depository for disaster recovery needs.

Provide an update for completed or ongoing action plans from the previous year(s). Highlight your improvements.

ITS will concentrate on the two goals not met and plan for improvement in those areas as necessary.

Detailed Assessment Report
2013-2014 Telcommunications

As of: 3/06/2015 10:15 AM EST

(Includes those Action Plans with Budget Amounts marked *One-Time, Recurring, No Request.*)

Mission / Purpose

Provide customer-focused, fast, reliable, and cost-effective telecommunications services to the students, faculty, researchers, and staff of Texas A&M University and The Texas A&M University System. Additionally, Telecommunications will help Texas A&M in becoming a leader both nationally and globally in the development, implementation and innovation of telecommunications technology.

Other Outcomes/Objectives, with Any Associations and Related Measures, Targets, Findings, and Action Plans

O/O 1: Customer Satisfaction

Achieve a rating of "satisfied" or above on at least 80% of the customer satisfaction survey responses received.

Related Measures

M 1: Measuring customer satisfaction

Customer satisfaction will be evaluated and measured through the use of software and departmental procedures.

Source of Evidence: Service Quality

Target:

Target is 80%

Finding (2013-2014) - Target: Partially Met

Due to a lack of response from customers, we have discontinued the existing survey plan . A new web based system by BlazeLoop will be implemented by September 1, 2014.

O/O 2: Cost Effective Telecommunication Services

We will compare our services costs to institutions of comparable size and stature with the goal to be in the lower 25%. .

Related Measures

M 2: Bechmarking - Cost Effective Telecommunications Services

We will continue to compare our services costs to to institutions of comparable size and stature with the goal to be in the lower 25%. A Questionnaire concerning the cost of VoIP, Centrex, and PBX services will be circulated to 15 Tier 1 institutions. Our cost will then be compared to the responding institutions to gauge where we stand in our offerings. We will however, take into consideration the location of the institution and the organizational make up of the institution during the comparison.

Source of Evidence: Benchmarking

Target:

Be able to make the comparison between our University and the other Tier 1 Universities. To be in the lower 25% comparing costs to other institutions of comparable size and stature.

Finding (2013-2014) - Target: Met
In a recent benchmark study of the cost of VoIP services for 55 other Colleges and Universities, we found an average cost of $21.95 per month as compared to the Texas A&M University cost of $12.00. Only one other comparable university, Iowa State, had a lower cost, and they are operating on the same platform as Texas A&M. This Benchmark was completed in the Spring of 2014 through a web search of published rates of peer institutions.

O/O 3: Availability of Key Services
Key services (Verizon Central Office, VoIP server, Matrix card access, voice mail, PBX, long distance trunks) will be available 99.9% during the calendar year.

Related Measures

M 3: Availability of Key Services
Key Services (Verizon Central Office, VoIP server, Matrix card access, voice mail, PBX, long distance trunks) will be available 99.9% during the calendar year. Telecommunications has implemented these monitoring guidelines and will be continued indefinitely. The intent is to ensure the availability of key services. Measurement Critical – catastrophic failure of entire system Major – A significant subsystem is not available but the majority of users are only slightly impacted Minor – An outage impacting 50 to 200 users Central Office – The TAMU Central Office is a Lucent 5ESS installed in 1997 and maintained by Verzion. It currently supports about 17,000 lines Critical – Complete loss of Central Office Major – A remote module being shut down or disconnected from the network that supports a significant portion of campus Minor – a cable cut involving one or two buildings TAMU VoIP system – The TAMU VoIP system is an Aastra Clearspan system installed in 2009. Currently there are about 4,700 users on the system. To meet long term goals conversion rate will be increasing from 1,000 lines per year to 2,400 lines per year. This platform is a distributed architecture with major nodes geographically located in two hardened buildings on campus. Critical – Loss of both switching nodes or loss of loss of one node with failover provisions not functioning properly. Major – Loss of one of the two nodes with failover operating properly for the majority of the users Minor – Loss of one or two buildings. Matrix Keyless Entry System - This is the back office system for the keyless entry systems on campus. At this time we have a little over 2,000 doors on campus but it is one of our fastest growing services. It is a distributed system with the individual door units able to operate in a standalone manner in the event of a network failure. Critical - None of the card access door systems on campus are able to function. Major - Loss of functionality of 30 or more doors Minor - Loss of functionality of one building. Campus Voice Mail System - The TAMU Voice Mail system is a Broadsoft VoIP server that supports Voice mail for the campus Centrex and VoIP customers. It currently supports about 8,000 users. Critical - Loss of Voice Mail System Major - Voice Mail receives new voice mail but cannot be accessed for retrieval or message waiting link is not functioning. This can also be a complete loss of either the Centrex or the VoIP connections but not both. Minor – features such as unified messaging not functioning for the entire system 800 MHz Radio System - This is the main campus radio system that currently supports all law enforcement and operational units on campus. It is an 800 MHz Motorola Digital Trunked radio system with approximately 1500 subscribers on it. Critical - System non functional to any radios Major - System operating in a fail-soft mode Minor – System operating with less than half of repeaters operating 700 MHz P25 Radio System - This will be the main law enforcement radio system with its commissioning in January of 2010. It is a 700 MHz Motorola P25 Digital Trunked radio system and will have approximately 400 subscribers on it. It was funded through a $2.8 million FEMA grant to provide radio interoperability with the City of Bryan, the City of College Station, the City of Brenham, Brazos County, Washington County and the greater Houston area. Critical - System non functional to any radios, including network backup from other repeaters on the network Major - System operating in a fail-soft mode, operating on other network repeaters or loss of all TAMU consoles. Minor – System operating with less than half of repeaters operating or loss of one TAMU console.

Source of Evidence: Service Quality

Target:
Key telecommunication services, (Centrex, VoIP, keyless access, voice mail, PBX, and long distance trunks) will be available at least 99.9% during the calendar year.

Finding (2013-2014) - Target: Partially Met
In February 2014 internal study of monitoring systems was conducted. Study looked at cost, ease of operation, and features. Solarwinds was recommended based on existing metrics. Additionally other TAMUS members use product which will mutually aid in configuration and operation of system. Server hardware and software for Solarwinds has been purchased. Servers are being tested and configured. System will be online by August 31, 2014. Uptime metrics will be gathered and presented on Telecommunications web page as system availability. Other university services that Telecommunications depends upon to deliver high system availability will be documented when or if they fail therefore causing a degraded level of service.

O/O 4: Modernization of installed services
As technology evolves replacement cycles of old, non-supported, and legacy solutions is essential to cost effective services. We will be making a transition from legacy equipment and services to state of the art technologies that can more efficiently meet customer's needs.

Related Measures

M 4: Comparing status and rate of transition from Centrex telephone service to VoIP.
Using data gathered from our telemanagement system we will publish historical and current quantities of Centrex numbers versus VoIP numbers. Source of evidence: Activity Volume

Source of Evidence: Activity volume

Target:
Our goal is to transition from the 90% of the total lines being Centrex down to 10% in 8 years' time.

Finding (2013-2014) - Target: Partially Met
Transition expectations of 2000 new VoIP lines for previous year not met due to Kyle Field football renovation, delay in decision to transition two major offices, and movement of existing VoIP customers. In FY 2014 Telecommunications adjusted deployment strategy. Deployment focused on using the PC connected behind a VoIP phone (Piggybacking Method) has aided in a faster deployment and reduced costs to end customer.

Details of Action Plans for This Cycle (by Established cycle, then alpha)

Plan of Action 2010-2011
Plan of Action With the three existing objectives there is continuing work to improve and expand on the work already

started. The first area of measurement is the customer satisfaction surveys. We have previously grouped our services into three types: Telephone, Cellular, and Other Services. We are tracking responses for customer satisfaction improvement. While we will continue to seek improvement in all areas. We will be evaluating the survey questions this year to determine of changes are needed to better reflect customer opinion. The second area of measurement was the completion of a Benchmark Study. While we attempted to complete the study, we did not receive enough responses to make the study valid. We reached out to ACUTA for assistance: An ACUTA university member has contracted WTC consultants to perform a benchmark survey for ACUTA members. We will participate in the survey and use the results of that survey to meet the achievement target. This year (2011) in the third area of measurement will be implementing monitoring of more event metrics in the University telecommunications system. We look to expand measurement of up time on the PoE (power over Ethernet) switches, DC backup power plants, and individual call quality. We will also be incorporating uptime measurements for the keyless access system. This year we have added an additional area of measurement. This area is reporting the ratio of legacy technologies deployed to new updated technologies offered. We are collecting and publishing the raw numbers on the conversion from Centrex to VoIP on the Telecom Web site (http://telecom.tamu.edu/Reports/Phone_Line_Metrics.php).

Established in Cycle: 2010-2011
Implementation Status: Planned
Priority: High

Plan of Action 2014-2015

There are two areas that we are targeting our actions in support of improving service over the next year. The first one impacts Objective 3 which is availability of key services. At this time all critical VoIP services have 100% redundancy including DC power plant with the exception of the Session Border Controller (SBC). Telecommunications has ordered the High Availability (HA) SBC that will be installed over the Christmas Holidays 2014. The new monitoring system will check the status of all key components and the results will be made available on a dashboard on the Telecommunications web page. The second set of action items impacts Objective 4 which is the modernization of installed services. One action item that is being implemented this year is to prioritize areas that are more at risk and convert these services earlier. Two such areas are Centrex lines served by cable 12 on west campus and the lines served by the Connelly PBX. Cable 12 is at risk of failing due to age and condition and customers on this cable have been targeted for transition. The Connelly PBX is no longer supported by the manufacturer and is the process of being replaced. At this time only two departments have yet to be transitioned and we are targeting December of 2014 to complete this transition. To accelerate the transition to VoIP Telecommunications also budgeted an additional VoIP engineer and an additional VoIP installer but these positions are on hold pending approval by Texas A&M University.

Established in Cycle: 2013-2014
Implementation Status: Planned
Priority: High

Analysis Questions and Analysis Answers

Based on the analysis of your findings, what changes are you currently making to improve your program? Identify the specific findings you analyzed and how they led to your decision.

We continue to improve in two of the areas measured. At this time, all critical VoIP services have 100% redundancy including a DC power plant with the exception of the Session Border Controller (SBC). Telecommunications has ordered the High Availability (HA) SBC that will be installed over the 2014 winter holidays. The new monitoring system will check the status of all key components, and the results will be made available on a dashboard on the Telecommunications web page. The second area is the modernization of installed services. One action item being implemented this year is to prioritize areas at risk, and convert these services promptly. Two such areas are Centrex lines served by cable 12 on west campus and the lines served by the Connally PBX. Cable 12 is at risk of failing due to age and condition. Customers whose services are provided via this cable have been targeted for transition. The Connally PBX is no longer supported by the manufacturer and is in the process of being replaced. At this time, only two departments have yet transitioned, and we are targeting December 2014 to complete this conversion. To accelerate the transition to VoIP, Telecommunications has budgeted for an additional VoIP engineer and an additional VoIP installer; however, these positions are on hold pending approval by Texas A&M University.

Provide an update for completed or ongoing action plans from the previous year(s). Highlight your improvements.

The Benchmarking Cost Effective Telecommunications Objective was met with our costs being lower than 75% of peer institutions. The impact of additional lines being converted to VoIP will be to place pressure to lower the cost even more. Once fully converted, it is anticipated that Texas A&M University costs will be in the lower 10% of peer institutions in the United States. With the implementation of the new customer satisfaction survey, Telecommunications will monitor the results of the surveys and make changes to operational procedures as warranted.