1. Support Services Report Template

Report Info
Name of the person completing this report: Gene Lim
Title of the person completing this report: Director
Division/College: Information Technology Services
Supervisor/dean reviewing report: Borre Ulrichsen
Name of second reviewer (if necessary): Brad Wells
Service: Information Technology

3. Mandated Service

Link to Scoring Rubric

1.1 Please indicate below if any aspect of the service is legally mandated by any of the following and provide the relevant reference.

Campus Policy: Systems operations and design are guided by and facilitates the enforcement of the Acceptable Computing Use Policy and the Information Security Policy
Any other: Systems operations and design are also guided by an overall framework derived from the ICSUAM Series that all CSU campuses operate under

Provide a brief explanation, if necessary, in < 60 words.
Evaluate, recommend, repair and manage information technology hardware, software and data that provides services relating to University business and academic processes.

4. Importance of Service

Briefly describe the service in terms of its primary function(s) and purpose(s) using <120 words

Provide and maintain an up-to-date and relevant information technology infrastructure to facilitate business/administrative and academic services to the campus such as financial applications, learning management systems, identity management, data storage and protection, as well as electronic communications and collaboration systems.

Link to Scoring Rubric

2.1 Who are the primary receivers of this service? (Please enter the percentage of each user group that is relevant)

Students: 25%
Faculty: 20%
Administrators/staff: 40%
Colleges/departments: 15%
Total: 100%

Link to Scoring Rubric

2.2 Please indicate the direct or indirect impact of the service on students for each of the three University Action/Student Impact Areas listed below (for example processing financial aid applications would be direct impact on students while managing utility services would be indirect).

<table>
<thead>
<tr>
<th>Direct Impact on</th>
<th>Indirect Impact on</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Provide a brief narrative (<60 words each) explaining your selection for each area.

<table>
<thead>
<tr>
<th>Area</th>
<th>Evidence submitted to support the chosen selection (&lt;60 words each)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-college (helping students to enter the system)</td>
<td>Establish identity that is key to major systems in the University, establish email for communications, facilitate infrastructure to import and manage application data into the University systems.</td>
</tr>
<tr>
<td>During college (helping students succeed while they are at Cal State East Bay)</td>
<td>Facilitate infrastructure for applications that help students in their curriculum and student life such as Blackboard, MyCSUEB, identity management, web services, and classroom computer lab virtualization resources.</td>
</tr>
<tr>
<td>After college (helping students establish meaningful lifework and be socially responsible contributors to society)</td>
<td>Facilitate the infrastructure for the continuation of student identity and allow email communications to continue, access to University websites that offer post-collegial resources.</td>
</tr>
</tbody>
</table>

**Link to Scoring Rubric**

2.3 Applying the four choices presented below, please indicate the consequence of NOT having this service on each of the actions in the left hand column.

<table>
<thead>
<tr>
<th>Area</th>
<th>4 - Service provides evidence of direct impact in more than one area</th>
<th>3 - Service provides evidence of direct impact in one area</th>
<th>2 - Service provides evidence of indirect impact in more than one area</th>
<th>1 - Service provides evidence of indirect impact in one area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-college (helping students to enter the system)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>During college (helping students succeed while they are at Cal State East Bay)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tbody>
<tr>
<td>Pre-college (helping students to enter the system)</td>
<td>Students will not be able to access tools and systems required for registration, payment of tuition, communications with the campus, staff, and faculty; application into the university will not be available and will be severely inefficient and archaic.</td>
</tr>
<tr>
<td>During college (helping students succeed while they are at Cal State East Bay)</td>
<td>Instructional processes will be severely impeded with the infrastructure not available to provide an LMS environment, an identity management system that will organize course registration as well as access, and the lack of electronic communication between students and faculty. Ongoing activities such as registration and tuition payment will also not be available in its current form.</td>
</tr>
<tr>
<td>After college (helping students establish meaningful lifework and be socially responsible contributors to society)</td>
<td>Electronic communications will be hampered and the student's ability to track their records such as transcripts and former coursework will be severely hampered without the infrastructure in place to facilitate and house student data.</td>
</tr>
</tbody>
</table>
### 2.4 Alignment with Shared Strategic Commitments

How does this service contribute to or align with any of the eight Shared Strategic Commitments (SSC) listed below?

<table>
<thead>
<tr>
<th>Reinforce academic quality through open-minded inquiry, innovative teaching, engaged learning, and distinguished scholarship</th>
<th>By facilitating data storage and identity management, the infrastructure allows for better organization in teaching and scholarship, as well as increasing responsiveness in communication and collaboration through online media and other channels. The service provides technical services and environments to facilitate modern academic research and approaches to teaching such as virtualized labs and high performance computing.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhance our inclusive campus, responding to the backgrounds and interests of our diverse community and promoting their academic, professional and personal development</td>
<td>Providing localized service for electronic media such as portal and departmental/collegial websites promotes dissemination of information to the whole campus. The infrastructure also facilitates various communication methods and innovations such as collaboration and social media to provide diverse channels of expression.</td>
</tr>
<tr>
<td>Serve students first, by expanding access and enhancing each student’s educational experience and prospects for success as a graduate and life-long learner</td>
<td>Servers and systems meant to provide ease of access to campus resources and enabling adaptive scholastic methods via online learning and electronic communications, as well as providing online portals to provide near real-time status of a student’s scholastic track makes the service invaluable in serving students with an enhanced education experience.</td>
</tr>
<tr>
<td>Foster a vibrant community through enriched student services and student life that support student engagement and learning</td>
<td>The infrastructure provides the systems to facilitate communications via email, social media, intranet portals, as well as online bulletins and websites.</td>
</tr>
<tr>
<td>Contribute to a sustainable planet through our academic programs, university operations, and individual behavior</td>
<td>The infrastructure provides ease of access to systems and resources for all students regardless of status or even location via online website services, managing identity records to report on both the students’ as well as the campus’ performance, as well as providing protection to such data from inadvertent access and use.</td>
</tr>
<tr>
<td>Continuous improve our efficiency, transparency, and accountability while practicing mutual respect, responsiveness, and collaboration across the University</td>
<td>Provides technical expertise to community organizations seeking volunteers to consult on information technology design and architecture.</td>
</tr>
<tr>
<td>Support the civic, cultural, and economic life of all communities in the regions we serve through partnerships that promote education and social responsibility</td>
<td>Facilitating advanced environments in high performance computing, virtual labs, centralized software distribution and management, as well as continually iterating existing online resource offerings are all part in providing the technical architecture and design expertise-- along with running the infrastructure in the data center-- makes the service the center of providing leadership and innovation in a 21st century classroom.</td>
</tr>
</tbody>
</table>

### 2.5 How might the demand for this service change over the next five years? (Please choose one category below).

**Likely to increase**

Provide a rationale for your choice (assumptions, impact of new policy, etc.) in <120 words.

As online instruction and improved efficiency in providing technical resources to students grow, the infrastructure and personnel required to support, iterate, and design the environment will only increase, especially in the face of new access methodologies in the
5. Quality of Service

3.1 Do you assess the quality of the service you provide?

Yes

If “Yes”, what benchmarks, best practices or measures of success, either internal or external, do you use to measure service quality (e.g., timeliness, accuracy, adequacy, meeting deadlines, satisfactory completion of assignment, etc.)? Please describe in <120 words. If no, please explain.

Service uptime is the casual measurement of quality for the infrastructure at this time. As well, internal change management procedures are followed to ensure timely and unobtrusive maintenance and troubleshooting methods are employed where possible. Constant review of current versions of hardware, software, and service delivery are researched and tested, and in many cases, employed to the data center environment to keep the level of access and service constantly improving.

3.2 During the last three years, have you adopted any measures to improve the quality of this service? Please describe in <120 words.

A redesign of the IT standards and architecture was started roughly 2 years ago, improving data storage performance and reliability. An increase in virtual servers increased efficiency in power use while keeping in line with the scaling campus requirement for compute and storage requirements. Systems that are near the end of their lifecycle are often cycled out of the environment and replaced with hardware and systems that perform faster and more reliably. This is notable in systems such as the F5 Load Balancer and the NetApp Storage System.

3.3 What idea(s) do you have for improving the quality of this service within existing resources (e.g. development of benchmarks, surveys, feedback, etc.)? Please describe your plan(s) in < 120 words.

Enabling newer methodologies in storage and data protection processes has and continues to enhance the reliability and resiliency of data for the University. Ensuring processes to clean data in the identity management system via improved processes and re-configuring existing interfaces allows for faster turnarounds in access management. Establishing industry best practices in metrics would also ensure that the services provided are measured against service goals and requirements.

3.4 What ideas do you have for improving the quality of the service if additional resources were provided. Please describe your idea(s) in <120 words.

Efficiency will be the primary goal of IT if additional resources were provided; for example, completely virtualizing services and applications above the hardware and even operating system stack would allow for increased resiliency and reliability while decreasing the power and cooling footprint of the servers and devices in the data center. Additional compute power would allow greater use in labs for around-the-clock processes and fully utilize compute resources 24/7. The ability to adapt to compute and storage requirements in real-time by partnering with sister campuses to utilize unused compute resources as well as adding capability to maintain service during a disaster would also improve the quality of the infrastructure service.
3.5 Do you use any formal or informal process to assess the level of satisfaction of the service users?

No

If yes, describe the process and most recent results in <120 words. If no, please explain.

Satisfaction measurement are often relegated to the front-facing organizations of ITS as the infrastructure is a support service to provide an environment for services such as the learning management system and thus not officially and formally measured in this service. Providing the platform is the primary function of this service; although consultation of technical architecture and design from faculty and even community members have been very positive.

Link to Scoring Rubric

3.6 The university recently conducted a customer satisfaction survey for some services (results for this service are attached, if applicable). Do you have any comment or response to the results? Please describe in <120 words.

IT Procurement is perceived as being important, and shows general satisfaction regarding delivery and availability. The survey shows high importance of the service to both faculty and staff, with general satisfaction remaining reasonably high, but with room for improvement.

Link to Scoring Rubric

3.7 Do you have any formal or informal guidelines for personnel in your department regarding how to treat/interact with receivers of this service?

Yes

If yes, please describe in <120 words. If no, please explain

Systems engineers often interact with recipients in a technical advising, support, knowledge base, and/or project implementation role. Guidelines in terms of what information is made available (as outlined in FERPA and Security Awareness training) and what can be done within the service provided are adhered to in a professional and collaborative manner.

Link to Scoring Rubric

3.8 Does your service have annual goals (targets) of achievement regarding the quality of the service provided?

No

If yes, describe the annual quality goals (targets) and indicate if the service achieved those goals (targets). Please provide evidence, if possible, in <120 words. If no, please explain.

Link to Scoring Rubric

3.9 Does your service have annual goals (targets) of achievement regarding the quantity of service provided?

Yes

If yes, describe the annual quantity goals (targets) and indicate if the service achieved those goals (targets). Please provide evidence, if possible, in <120 words. If no, please explain.

Personnel are trained in FERPA and Information Security guidelines upon hire and are regularly renewed. Professional conduct is measured during the hiring process along with experience, and are part of the review process annually. Change management includes guidelines on how to notify and update the users of the infrastructure on changes, issues, and service interruptions. A service desk ticketing system is used to handle service requests as well as incident management in order to track and resolve these items in a timely manner.
6. Efficiency of Service (cost effectiveness)

4.1 Using the spreadsheet provided for all employees in your department, please distribute salaries of individuals across all services provided to reach an educated or reasonable estimate of the cost of providing the service.

3525000

Attach your allocated spreadsheet here.

4.2 Using the spreadsheet provided, please distribute your department's annual operating expenses across all services provided to reach an educated or reasonable estimate of the cost of providing the service.

3678000

Attach your allocated spreadsheet here.

4.3 Using the spreadsheet provided, please distribute the square footage of work space across all services provided to reach an educated or reasonable estimate of the use of this resource.

17310

Attach your allocated spreadsheet here.

4.4 During the last three years, have you adopted any measures to improve the efficiency (cost effectiveness) of providing this service (e.g. reducing salary costs, operating expenses or use of space, or increased output without increasing cost. Etc.)?

Yes

If yes, please describe the measures in <120 words. If this is a new service introduced over the past three years, please indicate. If no, please explain.

Investments in newer technology as well as improved processes have reduced personnel requirements for the service. Enabling more modern methodologies in storage has reduced the cost of data protection and storage and the vulnerabilities exhibited in older systems. Decommissioning old hardware and replacing it with virtualized alternatives have produced a smaller power footprint.

4.5 What idea(s) do you have for improving the efficiency (cost effectiveness) of this service within existing resources (e.g. restructuring, merging, outsourcing, ways to cut costs, technology, etc.)? Please describe those ideas in <120 words.

Continued virtualization of the environment and utilizing idle compute resources more fully increases efficiency in the environment as well as leveraging existing investments to transition to a more centralized, service-oriented, cloud-based environments.

4.6 What idea(s) do you have for improving the efficiency (cost effectiveness) of the service if additional resources were provided. Please describe your idea(s) in <120 words.

Enhancing labs with virtualized environments and providing a true CPU resource pool for colleges would improve efficient use of
technical resources on campus. Putting this on a hybrid cloud and virtual infrastructure would make the service more flexible, resilient and accessible, as well as being able to scale with the University’s demand.

4.7 Do you have any plan(s) to improve the efficiency (cost effectiveness) of this service in the next 1-2 years (e.g. reducing costs, increasing productivity, etc.)?

Yes

If yes, please specify whether these plan(s) involve reducing salary costs, operating expenses and/or use of space. Please describe your plan(s) in <120 words. If no, please explain.

A four-year plan was put into motion two years ago to phase out legacy hardware and software systems and introducing newer data center practices in the area of hybrid cloud and virtualization. This will reduce hardware purchases relative to meeting the growing University reliance on data center resources by procuring equivalent CPU and storage capabilities in actual hardware.

4.8 Please describe the estimated output for this service for fiscal year 2011-12, quantify if possible (e.g. volume, service tickets resolved, people serviced, appointments, etc.) in <120 words.

The infrastructure has grown to over 200 virtual servers in the past 3 years. Backup data has grown to 90 terabytes while storage usage has grown an estimated 1 TB per month.

5.1 Are you aware of services similar to this one that are being provided by another department at CSU East Bay?

Yes

If yes, please provide a list of those departments. How are the services described here similar or different? Please describe in < 60 words.

Some servers exist in other departments but not to the degree, complexity, efficiency, and reliability that Information Technology Services provides. In fact, centralizing these resources to the data center would increase efficiency for the University.

5.2 Is there anything unique or distinctive about your service? Please describe what is unique or distinctive in <120 words.

The IT infrastructure is the singular entity that provides a combination of technical expertise as well as reliable platform service for the University. The aggregated capabilities in expertise, knowledge, industry experience, as well as the technical methodologies, hardware and software assets, and architecture employed offer a platform the University has depended on in terms of reliability, availability, resilience, and adaptability to growing campus demands.

5.3 Are there any additional things about this service that you would like the task group to know? Please describe/explain in <250 words.