May, 2014

Net + Services (Internet 2) - TEAM/COMMITTEE MEMBERS

- Douglas R. Foster – AVP, IT Application Services & Deputy CIO
- Cliff T. Johnston – Professor, Agronomy
- Patrick D. Smoker – Director & Department Head, AgIT
- John J. Turek – Professor, Basic Medical Sciences

Problem Statement

Internet2 is a community-driven organization made up of 34 universities, including Purdue. It seeks to partner with higher education, industry and government to “…discover, deploy and define new technologies and applications that have the power to create new educational and economic models”

Over the years the work of this group has translated into a number of services being offered by Internet2 to, and beyond, its membership. This suite of services is referred to as the Net+ Program (see Appendix A). The program provides Internet2 members and other participating institutions access to an ever-growing catalog of cloud-based services designed or tailored specifically for the research and education community. These services are all delivered over the Internet2 high performance network and leverage the secure and privacy-preserving IN Common federated identity management services.

It is in Purdue’s best interest to continuously investigate options for the provisioning the IT services it delivers. It is important to determine if the current model for delivery is still optimal for the needs of faculty and staff, in both features and cost. Assessment also brings to light opportunities to source services that can be adequately delivered by another provider(s) and thus enable campus IT to focus on those services that deliver greater value.
**Executive Summary**

Purdue provides a number of services that parallel those offered by Net+. The OOC Net+ Team investigated three specific Net+ services which are identical or similar to services provided at Purdue.

- **Box** - a general storage and sharing service similar to Purdue’s Boiler Backpack services.
- **Kaltura** - an online video management platform provided by both Net+ and Purdue.
- **WebX** – a web conferencing solution and was recommended as part of the assessment conducted by OOC (see January, 2014 report).

This committee recommends that only Net+ Box services be considered at this time. Kaltura and WebX services are both in differing stages of the service validation process within Net+ and thus are not yet offered in its service catalog.

Net+ Box services however seem to offer a number of functions needed by Universities. Eighty five institutions are currently using NET+ Box services. Features of the service included:

- Security controls
- FERPA, HIPPA compliant file sharing
- Mobile access
- Version history
- Desktop synchronization
- Enterprise licensing vs. per user
- Robust API for integrating with BI processes

**Pricing:**

- 95% discount off their public price
- Tier 4 – (100K campus users) $197K/yr. for 200 TB + $10K setup fee
Recommendation(s) & Action

The team recommends that an evaluation team from ITIS, ITSP and interested campus users perform an assessment to accomplish the following:

- Conduct a complete cost assessment of Net+ Box and the current on-premise Isilon storage being provided at Purdue. The assessment should include the cost of implementing sharing and synchronization services on Isilon (currently being tested).
- Conduct a feature to feature comparison assessment between Isilon and Net+ Box.
- Speak with most mature institutions to learn best practices and document key considerations for implementation.
- Create proof of concept project designed to test performance, functionality integration of BI processes, etc.
- Make recommendations in early December, 2014 for:
  - Go / no-go to investment in Net+ Box subscription
  - Detailed cost and implementation timeline

Net + Services (Internet 2) - TEAM/COMMITTEE Investigation:

Three sessions were held with Net+ leads.

- Shelton Waggener, Senior Vice President, NET+ Services
- Ben Fineman, Program Manager, Video Services (Justin and Devan Beck, Kaltura reps)
- Andrew Keating, Program Manager, NET+ Services

The team’s assessment included consideration for the needs of all users (faculty, staff & students) on the West Lafayette and regional campuses. Request for advanced “Dropbox-like” functionality for campus storage services have been requested across these groups.

Increasingly, researchers, teachers, students and administrators have need for an easy means to securely collaborate with colleagues across the globe. The demand is exemplified by the wide use of cloud storage services such as Dropbox, Microsoft OneDrive, Google Drive, Box, etc. that offer advanced features such as mobile accessibility (cloud, any time/any device), collaboration with anyone and self-backup/restore. Often the use of these commercially available services is ill-advised given the absence of understanding of agreements being entered into as conditions of their use. Nor is their contractual protection around issues of security, compliance, intellectual property, etc.
Time did not permit an exhaustive assessment, but on the surface, the team was unable to identify any constraints that would preclude negatively impact the institution. Preliminary evaluation suggests Net+ Box services might very well meet the institutional requirements around costs, performance, security, compliance and feature sets. The features in Net+ Box services might also meet the demand for storage collaboration tools for all campus and regional faculty, staff and students while also meeting compliance and security. The Net+ Box services have been tailored to meet the unique needs of higher education including compliance for HIPAA, FERPA, etc.

Thus it is the team’s recommendation that a more exhaustive assessment of the Net+ Box services be chartered to begin as soon as possible in an effort to meet the immediate requirements of the Purdue community. Speedy assessment will also facilitate appropriate comparison with the cost/features of the collaboration software (Varonis DatAnywhere) currently being tested on Isilon. It is further suggested that the Net+ Box solution be initially evaluated for its secure collaboration features rather than to meet the typical general file storage needs of campus. This approach is typical of the adoption approach used by other institutions and will allow time for BI as well as ensure ROI on the Isilon investment.

**Resource Requirements**

It is difficult for our OOC team to accurately assess and estimate the FTE cost of a deeper assessment of Net+ Box services. We would anticipate however that such an evaluation could be completed in a 3-month period of time and would include the efforts of the ITIS storage group, ITSP and other interested parties. Involvement of individuals in the Business Office, Procurement and other groups for BI will likely be necessary.

In terms of cost to participate in the service, Net+ employs a tiered pricing structure based on the number of campus users. According to the 2012/13 Purdue University Data Digest, the system-wide headcount for all students, faculty and staff was 95,121. Assuming that number, Purdue would fall under Tier 4 of the price structure.

Tier 4 – (100K campus users) $197K/yr. for 200 Tb + $10K setup fee

Using these figures alone, the cost calculates to ~96 cents per gigabyte, per year. While this seems high when compared to the charged price of 30 cents/Gb/yr. for backed up Isilon storage, the TCO will need to be calculated in order gain a clear understanding and comparison.