INDIANA UNIVERSITY

7 – Consolidated Services

Action Item Template Response

General Action Item Information

Lead Division/Office: Enterprise Infrastructure
Action Item Number: 7
Action Item Short Name: Consolidated Services
Dependencies with other EP Action Items: 5, 22
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I. DESCRIBE YOUR PLANS FOR IMPLEMENTING THIS ACTION.

The discussion of the implementation of cloud computing provides a planning framework for this action item. Consolidated Services encompass the services described by the cloud concept. These services can be defined in three service areas:

- Infrastructure as a Service (IaaS)
- Platform as a Service (PaaS)
- Software as a Service (SaaS)

Although not a perfect overlap to Consolidated Services, this scheme allows planning to move along three parallel tracks of infrastructure, platform (middleware), and software.

There are tasks that support the action item above the three components. It is helpful to undertake an inventory of services provided at the departmental level and then develop a view of "common-good" services, or services that are best provided as a common resource to the university, because leverage creates efficiencies that outweigh the individual differences of the local service. These common-good services should be built into normal operational support and funding.

It should be noted that the services described in this action item relate to general-purpose computing environments. Specialized environments and platforms for research and teaching are covered in other action items.

A. Plans to Address Infrastructure as a Service

Continue the current offering for Intelligent Infrastructure (II) to allow schools, departments, and remote campuses access to the same high performance and high-availability storage, servers, and security devices UITS uses to deliver mission-critical university applications. The II service model lowers overall hardware and maintenance expenses, and allows customers to grow (or shrink) their resources on demand. Due to economies of scale, the recovery rate of II services was reduced in FY09/10 and this trend will continue for several years. We should continue to maintain a common hardware platform and virtualization base, which provide the greatest benefit from a staffing perspective, by leveraging technical skills and vendor partnerships.

Define and implement a service within the II that includes basic operating system management, patching, and security scanning, thus eliminating the need for OS-level expertise by the unit using this service.

Continue to offer high-quality DNS, DHCP, load balancing, and email services as software-infrastructure as a service.

PROJECTS:

- Intelligent Infrastructure Expansion (items 1,2): Q1 2010 - Q4 2010
- Refresh Exchange hardware and anti-spam software Q4 2009 - Q1 2010
- Refresh DNS, DHCP and load balancers Q4 2009

B. Plans to address Platform as a Service

When considering platform consolidations we should first focus on regional campus opportunities as a model for departments and schools.

- An enterprise File and Print service should be offered as baseline to all university departments. The leveraged service would provide disk space for personal and shared file storage, print share services, and a secure data storage service. A key component would be "archival of inactive data" as envisioned in EP Action Item 5 (Philosophy of Abundance). The service would be implemented within the Intelligent Infrastructure and should take full advantage of distributed management and support, including distributed granting of rights.

- The Consolidated Hosting Environment (CHE) is a chargeback service supporting over 50 web applications for departments throughout the IU community. We should offer CHE as a baseline service rather than chargeback, which will require baseline funding for the virtual machines and software expenses. Equally critical to offering CHE as baseline would be the additional personnel resources required for any enhancement of the service to meet the goals of this action item. Enhancing the service to support dedicated departmental servers or to assist departments with application serving in the Intelligent Infrastructure would require up to one additional FTE in Enterprise WebTech Services. Depending on growth of the related virtual machines, one additional FTE in Enterprise System Administration would also be required (using a rate of 32 VMs per FTE).

- We should consider the use of commercial cloud services for all platform delivery decisions. This is a long-term strategy and should be revisited at multiple points along the way (and as the market matures). Development and testing facilities are often good first steps toward cloud services implementation.

- As the departments/schools/campuses migrate to the enterprise platform environments (and IaaS), this should result in reduced staff resources at the edge. We need to channel some portion of these staff resources to UITS. There is an economy of scale to enterprise support, but it is not free and we are establishing a flawed model if we do not properly monitor and fund staff needs during major consolidation efforts.

- In the area of "support services consolidation" UITS should focus on better tools and consolidation of duties related to anti-virus, patch management, and management of desktops (real or virtual). Anything an LSP is doing today is a potential consolidation point. We also need better marketing of the services UITS offers today.

- The edge should be "applications-focused" for the most part. Ultimately there should be no physical servers at the edge. In those cases where servers are required they should be

supported in a virtual fashion with the physical servers in our secure, hardened data centers. Some exceptions can be justified (e.g.: specialized monitoring interfaces and unique research equipment).

PROJECTS:

- Enterprise File & Print Services (items 1,2): Q1 2010- Q4 2010
- Consolidate Hosting Environment as Baseline (item 3): Q1 2010 - Q4 2011
- Cloud PaaS Pilots (item 4): Q1 2011 - Q4 2014
- Support Tools & Consolidations (items 5,6,7): Q1 2010 - Q4 2011

C. Plans to Address Software as a Service

II. WHAT ARE THE POLICY AND PRACTICE IMPLICATIONS OF YOUR PLANS?

The implementation of an enterprise CRM will require the establishment of a governance committee to develop policies for data flow across the lifecycle of a constituent's relationship with the institution.

Scholarship processing at IU is currently handled by multiple departments and types of processes. The implementation of the new scholarship application will allow for some streamlining of these processes.

Transitioning School of Continuing Studies students into the SIS and Oncourse will require changes in the registration practices for these students. Additionally, a new role for this population will be required for services made available in OneStart.

III. IDENTIFY STAKEHOLDERS.

IaaS
EI Mangers on Planning Team: Mike Egolf, Mike Floyd, Rick Jackson
UITS Stakeholders: S,ES,N,RT,LT,CO

PaaS
EI Mangers on Planning Team: Mike Egolf, Mike Floyd, Cinda Haff, Troy Williams
UITS Stakeholders: S,ES,N,RT,LT,CO

SaaS