Archiving Services

Calculating the cost of annual storage thru NITC

NITC fee per tape $ 3.49 per tape per month (on site) – 2 tapes (Tier 2 & 3)
$ 3.64 per tape per month (off site)- 1 tape

Standard cost for hosting of $500 per month per server (4 servers)

Assumptions are based on using 1 TB tapes (T10000's) *

$3.49 x12 (Tapes) = $41.88 x 2 (Tier 2/3)=83.76 x 12 (months) = 1005.12
$3.64x12 (Tapes) = $43.68 x 12 (months) = = 524.16
$500 x 4 (servers)-$2000 x 12 (months) = = 24000.00

Total Annual Cost $25,529.28

*Number may differ if a different type of tape with different capacity is used; it would be higher.
Calculations are based on a current 11.6 TB project

APFO

- Hardware costs – Sun 7410 Storage System
  - $165,172
- 200 TB (Raw)
- 100 TB reserved for Resource
- Ingestion point for various data sets
- End of Life -2012

Process

- Data is received on media Hard Drive/DVD/CD
- Ingested
- Automated scripts check data integrity, side-lap, end-lap, etc.
- Resource Inspectors notified of data availability
- If no re-flight is required, data is accepted, duplicated to drives (twice) and sent to customer.
- Currently data is maintained on external HD's
  - Developing process to ensure data integrity and accessibility

Industry Guidelines

- Partners pay the infrastructure costs for the content they deposit with the infrastructure made up of five elements:
  - Storage
  - data centers
  - tape backup
  - servers and miscellaneous hardware
  - staff to oversee and maintain these elements.

Cloud Computing

- Definition - Using the Web server facilities of a third party provider on the Internet (the "cloud") to store, deploy and run applications. Cloud computing takes two forms. It may refer to "utility" computing in which only the hardware and software infrastructure (operating system, databases, etc.) are offered, or it may refer to "software as a service" (SaaS), which includes the business applications as well. Regardless whether the cloud is infrastructure only or includes applications, major features are self service, scalability and speed.
- **#1 - Do It Yourself**
- Customers log into the cloud and run their applications as desired.
- **#2 - Scalability and Speed**
- The cloud provides virtually unlimited computing capacity and supports extra workloads on demand.

Cloud Computing

- **Infrastructure and Applications (SaaS – Software as a Service)**
- More often than not, cloud computing refers to application service providers (ASPs) **Infrastructure Only (IaaS/PaaS)**
- Using the cloud for computing power only can be more economical than building new datacenters or renovating old ones to support new projects or seasonal increases. When constructing a datacenter, there are enormous security, environmental and management issues, not to mention hardware/software maintenance forever after. In addition, commercial cloud facilities may be able to withstand natural disasters that meet and exceed military standards.
- Infrastructure-only cloud computing is also called "infrastructure as a service" (IaaS), "platform as a service" (PaaS), "cloud hosting," "utility computing," "grid hosting" and "grid computing."
- For small Web developers and publishers, cloud providers such as Amazon and Google are invaluable (see EC2 and Google App Engine).
- Cloud datacenters employ automatic backup and recovery systems as well as utilize the latest virtualization techniques (see server virtualization).,

Cloud Computing

- **Private and Hybrid Clouds**
- Enterprises also create private clouds within their own datacenters. Employing the same server virtualization techniques as the Internet clouds, the private cloud enjoys the same flexibility and self-service capabilities as the public cloud, but with greater control and privacy.
- A hybrid cloud is using both private and public clouds. When new applications arise, or if the enterprise cloud is overloaded, the public cloud is used. Migrating virtualized applications from internal servers to the Internet and managing both venues from a central console are issues facing network administrators in 2010 and beyond. See SaaS, rich client, EC2, Google App Engine, Windows Azure, thin client, cloud, colocation, Open Cloud Manifesto and Web application.

Industry Pricing Comparison