• Infinite Archive System
• It's All Sun
• Integrated At Sun
• It's Amazingly Simple
Agenda

- Intelligent Tiered Archive
- What is the IAS
- TCO Benefits
- Deployments
- Media Migration
Intelligent Tiered Archive

• Policy Driven Archive Management
• Multi-Tiered Archival
  > Active Data
  > Disk Archive
  > Tape Archive
  > Remote Disk or Tape Archive
• Built in Data Protection
  > Multiple copies stored across Tiers
• Auto Retrieval from any tier
What is the Infinite Archive System, IAS

- A factory configured Multi-Tiered Archive System
- 3\textsuperscript{rd} Generation (CIS1 in 2004, CIS2 and now IAS)
- Fast and Reliable HW components
- Well Proven Software Components
- HW Building Block Approach
- Flexible Configs – Right Size it (12TB to PB)
- Factory tested end-to-end
- Ready to Run – Customer Site Deploys Quickly
- Expand it as requirements grow
- Preventative Maintenance, watches over itself
What has improved with IAS?

- **HA / Auto Fail-Over**
  > Active / Active

- **Simplified Operations**
  > Site Configuration / Wizard
  > Infinite Archive GUI
  > Appliance Operation and Installation Guide

- **Updates to HW and SW**
Sun’s Infinite Archive System Approach
Factory integrated, solution tested, simple, scalable, and economical

- Email
- Library
- DB
- Surveillance
- Unstructured
- Web

IP Communications Protocol

Models: Value and Midrange
- X4200
- T5220

Intelligent, Policy-Based Automated Archive
- IAS GUI, Storage Archive Manager
- SAM-QFS, Sun Cluster 3.2, Solaris

Tier 1 + Tier 2 Disk IAS Options
- 2500 series SAS
- 2500 series SATA

Scalable, Eco-Efficient Tape Tier Options
- SL8500 Libraries
- Encryption
- SL3000
- SL500
- Access & Capacity Drives
IAS GUI

- One interface
  - Manage the appliance
  - Repository
- Appliance aware
  - Health
  - State changes,
  - Config operations
  - Usage Summary
- Assignable Roles – Expert, Admin, etc.
- Focus on day to day operation
Before IAS
Customer avoids the HW and SW Build on site.
Transformation from BOXES (*lots* of them)

Missing in these pictures:
2 servers, 6 PCI cards,
6 storage trays, and the rack!!
After you rack them, still got to configure and test
Now with IAS

- **Order**
  @68IAS-*

- **Get**
Customer Ready Systems builds:

Midrange + SL500 + extra SATA
- Unit Test HW
- Rack HW
- Labels
- Solution Configure
- Solution Burn-in
Customer Receives 2 pallets:

- Rack
- Accessories
  - Robotics
  - Tape Drives
- Tapes
- Documentation
IAS Deployments

- Surveillance
- Medical
- Images
- Records
- With or without ECM vendors
- Some Examples
Serious about Heritage

The National Library of New Zealand
- National Digital Heritage Archive (NDHA)
- Manage and Preserve NZ Digital Heritage
- Persistence of that heritage 'in perpetuity'
- Archives of photography, art, newspapers, music and visual and audio historical documents
The Solution – NDHA

The First Digital Heritage Archive in the Southern Hemisphere

Level 1 and 2
- X4600 Oracle RAC
- StorageTek 9990

Level 3 and 4
- CIS2 Large Tape Ready Configuration
- SL700
- 4 copies, 2 SATA, 2 LTO4

Test, Training and Development
- CIS2 Medium
Media Migration

• Plan for it
• Technology upgrades
  > No matter the life of the media, it will have to be transferred to the next generation of technology in relatively short time frames
• Data abstraction layer isolates archive media from archive management
• Data migration needs to take place close to the media
  > Migration through DICOM archive very slow
  > Impact on clinical activities
Challenge: Manage Data for 75++ Years

- HW typically only backward compatible N-1
- Yearly capacity increases
- Every 2-5 years HW becomes obsolete:
  > Need to migrate current data to newer HW components
  > Replace compute parcels
  > Replace FC Parcel for performance and capacity
  > Replace tape drives and media to current technology
  > Replace SATA parcels for capacity / footprint
- Minimize vulnerability
- HW migration is inevitable; PLAN for it
Medical Industry Long Retention Times when compared to other Industries

SOX  Audit correspondence
     E-mail/financial records
SEC  Member registration
17a-4  Trading record
HIPAA  Patient records

Years  5  10  20  25  30  35  40  45  50

Dr Cecil, Cleveland Clinic doesn't watch obituaries
Cleveland Media Migration

- Radiology and Cardiology
- 1992 Started with Powderhorn, 6,000 slots, 9840A
- Continue to grow
  > 2nd powderhorn 6,000 slots, 9840B
- Media Migration
  > 9840A (20g, FC 1G, 12s avg file access, 10MB/s)
  > 9840B (20g, FC 2G, 12s avg file access, 19MB/s)
  > 9940A (60g, cf B 200g)
  > soon LTO4(800G)
IAS Resources

• Partner and SUN.com URLs:
  > http://www.sun.com/servers/cr/ias

• Internal URLs:

• Documentation (Servers / Server Systems)
  > Internal: docs.sfbay
  > External: docs.sun.com
  > http://docs.sun.com/app/docs/prod/srvr.sys#hic

• Email:
  > IAS-archive-help@sun.com - for sales and technical assistance
  > IAS-archive-interest-ext@sun.com - open forum
  > IAS-archive-order-verification@sun.com - initial order verification
  > Jennifer.Feng@Sun.Com - IAS Product Manager
Products Information

- Infinite Archive System (IAS): http://www.sun.com/ias

- T5220 Servers: www.sun.com/servers/coolthreads/t5220/

- X4200 M2 Servers: www.sun.com/servers/entry/x4200/

- 2540 Disk: www.sun.com/storagetek/disk_systems/workgroup/2540/

- SL500: www.sun.com/storagetek/tape_storage/tapeibraries/sl500/

- SL3000: www.sun.com/storagetek/tape_storage/tapeibraries/sl3000/

- SL8500: www.sun.com/storagetek/tape_storage/tapeibraries/sl8500/

- LTO4 Tape Drives: www.sun.com/storagetek/tape_storage/tape_drives/lto/


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Available for Consultation during ???
Questions?