UH Applications Developers Meeting

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Agenda

- Poll: Migration plans for exiting CAS2 before 2014
- Poll: Using the UH Holiday Web Service
- Poll: Thinking about Enterprise Deprovisioning
- Presentation: OpenStack for Server Virtualization & Mngt
- Tech Tip: Selecting an smtp server for applications
- Presentation: Information Technology Building
- Presentation: ITS Price List – ITS Services expansion
- Updates: Quick status updates
- Snacks: And an opportunity to meet your colleagues

(very) Informal Polls

- Migration plans for leaving CAS2 before 2014
  - UH Web Login Service v2 (CAS2) EOL, 12/31/2014
  - UH Web Login Service v3 (CAS3) recommended
  - UHIMC now utilizes CAS3
  - Poll: your plans? (the clock is ticking)
  - Concerns, etc?

- Using the UH Holiday Web Service
  - Anyone making use of this service yet?

(very) Informal Polls

- Thinking about Enterprise Deprovisioning
  - What is it?
    - Automated disabling of authorizations. When someone leaves, their authorization to use your application would be automatically be updated.
  - Why do it?
    - Improve timeliness and accuracy; improve security.
  - Why not do it?
    - Don't need it; manual process work fine.
    - Don't know how do automate deprovisioning.

(very) Informal Polls

- Thinking about Enterprise Deprovisioning
  - What is it?
  - Why do it?
  - Why not do it?
  - How is it done?
    - You write code that looks for select UHIMS Events and updates your application's authorizations settings.
    - ITS won't be able to write your code for you, but if you use the UH app developers list to ask questions, IAM and others can try to help.

OpenStack

(see other slide-deck)

Tech Tip(s)

Selecting an SMTP server for applications

SMTP is useful for applications that generate email messages.

***Blacklisting** of SMTP servers can interfere with applications.*

- You are probably using either `mail.hawaii.edu` or else a server of your own today.
- ITS recently implemented an internal SMTP server to help ensure application high availability, `smtp.its.hawaii.edu`.
  - And pondered the implications for the remainder of the UH developer community

Developer Tech Tip(s)

Selecting an SMTP server for applications

- ITS has established `smtp.hawaii.edu` for the developer community.
  - Not yet isolated from `mail.hawaii.edu`
  - But switching to it will position you well for the future, in the event that isolating it becomes necessary
  - `mail.hawaii.edu` will continue to be used by the various offices setting up printers and scanners.
- Questions?

Information Technology Center

Overview

- Scheduled to open some time shortly after May 2013.
- Six-story Information Technology Center to house enterprise information and communications systems and services.
- Supports modern teaching, administration and research for all 10 campuses and student throughout the state.

Information Technology Center

Building Features

- Green design, LEED silver certification
- Disaster-hardened, 8,000 sq ft data center for enterprise servers, storage & communications
- High-quality space for faculty to develop digital content
- Meeting and training rooms designed and equipped for teleconferencing
- Modern workspaces for ITS staff; modular and open with ample natural lighting
- Emergency situation room for UH disaster response

Information Technology Center

Keller Data Center vs. ITC Data Center

- Keller Data Center
  - Features include battery backup, A/C backup, diesel generator backup, fire suppression
  - Space utilization, by order of priority:
    - Manoa campus infrastructure
    - Other UH campuses
    - UH collaborators

Information Technology Center

Keller Data Center vs. ITC Data Center

- Keller Data Center
- ITC Data Center
  - Features include battery backup, A/C backup, diesel generator backup, fire suppression, storm hardened
  - Priority space for enterprise infrastructure
  - ITS Contract Services infrastructure (more later)

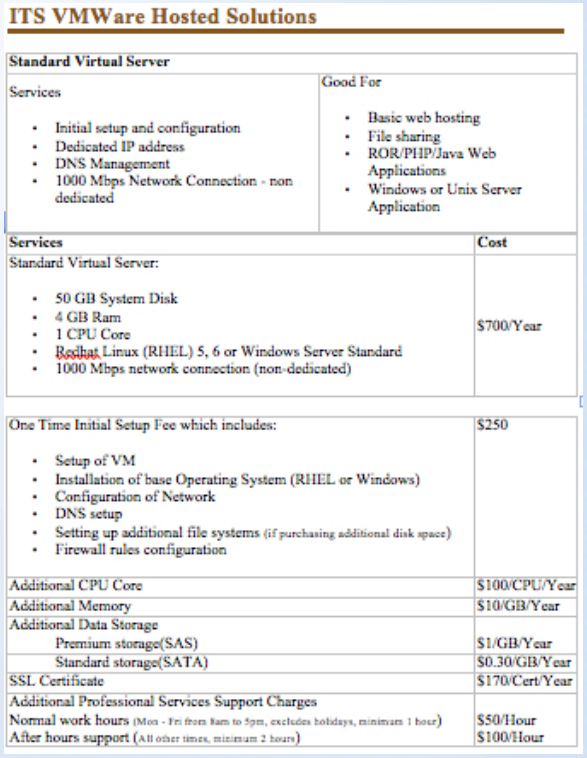
Information Technology Center

Keller Data Center vs. ITC Data Center

- Keller Data Center
- ITC Data Center
- Questions?

ITS Price List

- Why a price list?
  - To provide a cost effective alternative to procuring, erecting, powering, cooling and managing server infrastructure.
  - To increase availability and reliability.
  - To help buildings go green, especially on “green days”



ITS VMWare Hosted Solutions

Standard Virtual Server	
Services • Initial setup and configuration • Dedicated IP address • DNS Management • 1000 Mbps Network Connection - non dedicated	Good For • Basic web hosting • File sharing • ROR/PHP/Java Web Applications • Windows or Unix Server Application

Services	**Cost**
Standard Virtual Server: • 50 GB System Disk • 4 GB Ram • 1 CPU Core • Redhat Linux (RHEL) 5, 6 or Windows Server Standard • 1000 Mbps network connection (non-dedicated)	$700/Year
One Time Initial Setup Fee which includes: • Setup of VM • Installation of base Operating System (RHEL or Windows) • Configuration of Network • DNS setup • Setting up additional file systems (if purchasing additional disk space) • Firewall rules configuration	$250
Additional CPU Core	$100/CPU/Year
Additional Memory	$10/GB/Year
Additional Data Storage	
Premium storage(SAS)	$1/GB/Year
Standard storage(SATA)	$0.30/GB/Year
SSL Certificate	$170/Cert/Year
Additional Professional Services Support Charges Normal work hours (Mon - Fri from 8am to 5pm, excludes holidays, minimum 1 hour) After hours support (All other times, minimum 2 hours)	 $50/Hour $100/Hour

ITS Price List

- Price list components
  - Virtual Server Services
  - Data Storage
  - Network Services
  - Physical Machine Co-Location

ITS Price List

- Virtual Server Services
  - VM configured with customer defined number of CPU, RAM, disk storage; remotely administered by customer via remote access.
  - Automated Server and Service Monitoring - UHCSC (Computing Services Center) routinely monitors and is notified immediately of a failure.
  - Service Level Agreement determine response times.
  - Domain Name Service additions, deletions, or modifications.

ITS Price List

- Virtual Server Services (additional fees apply)
  - Adding/Removing/Modifying Users - work with the customer to identify user-access requirements.
  - Software Installation - provide web server installation, database software installation (not including licensing costs), and user management.
  - Security Updates – apply vendor-supplied security patches to installed software application as well as operating systems.

ITS Price List

- Bulk Data Storage
  - For co-location and VM customers, bulk storage can be used for research data, digital media and other digital assets.
  - An on-campus storage cloud provides RAID technology to ensure the safety, security, and integrity of the stored data.
  - Back-ups occur nightly and are kept until the next backup occurs.

ITS Price List

- Network Services
  - The standard network interface is a 1000 Mbps non-dedicated network connection per department or project.
  - Customized network speeds are available.
  - High speed access to the internet and research/ education networks are available.
  - Firewall services are optional.
  - Custom network configurations are available.

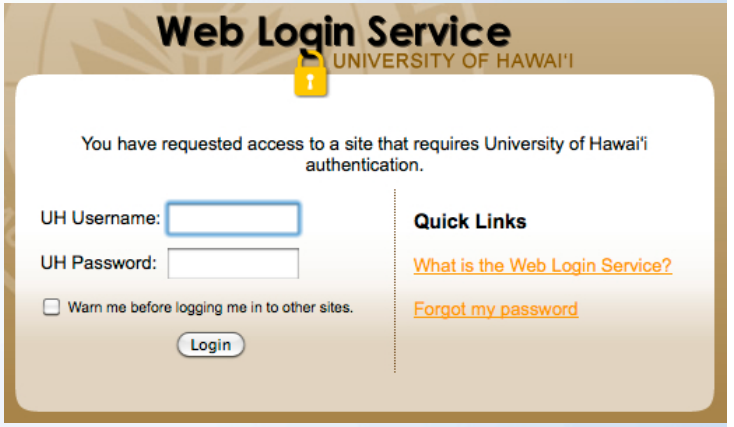
ITS Price List

- Physical Machine Co-Location
  - Computing equipment can be co-located in shared cabinets.
  - Co-location is priced on a "per rack unit" basis (charged per year) + a one-time initial setup fee.

ITS Price List

- Questions?

Quick Status Updates

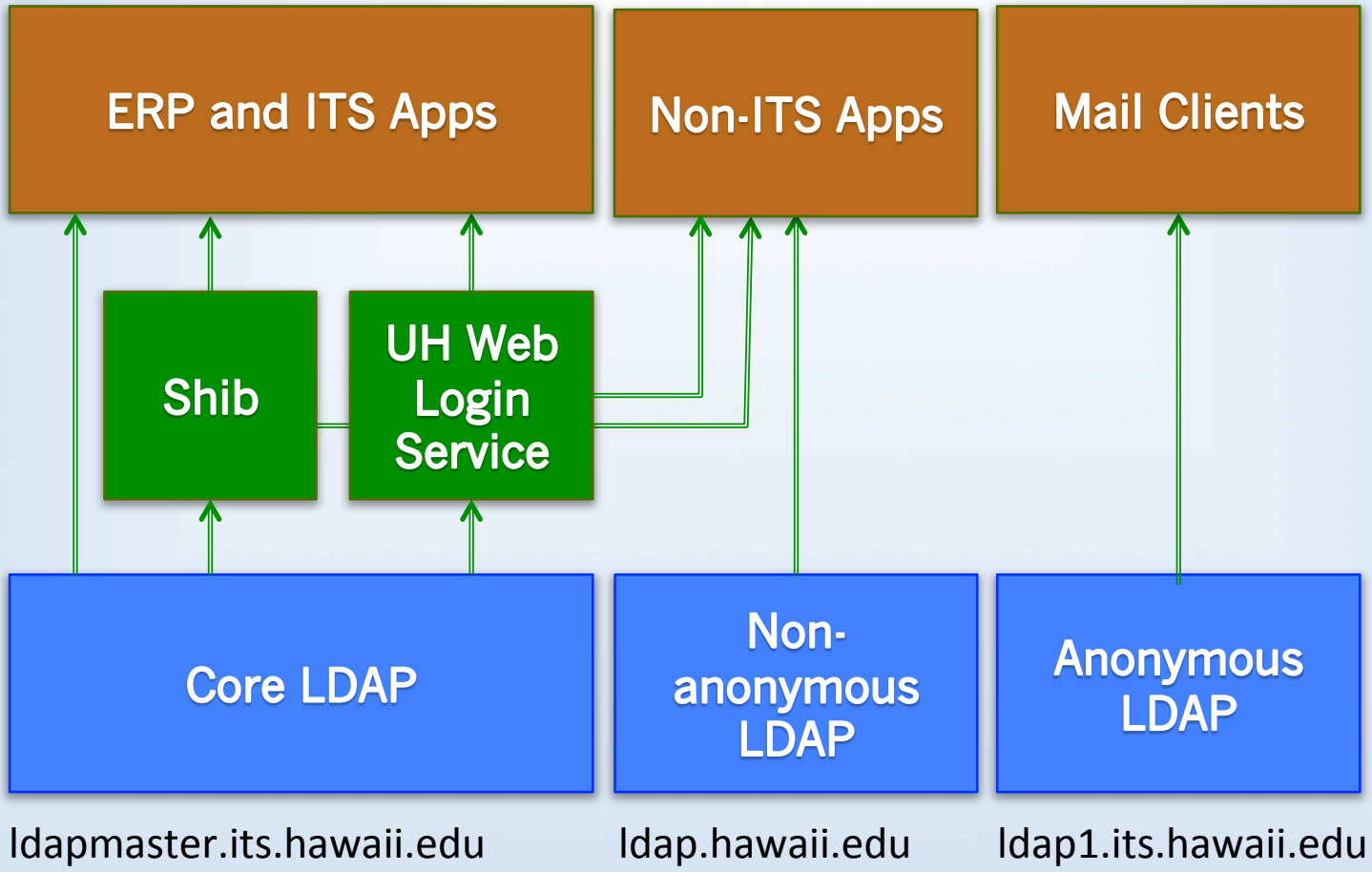


- UH Web Login Service v3
  - To date we have received only 13 requests to register URLs
  - To our knowledge, only UHIMC has gone into production
  - V2 end-of-life is 12/31/2014 at the latest; sooner if it proves to be a security issue.
- Questions?

Quick Status Updates

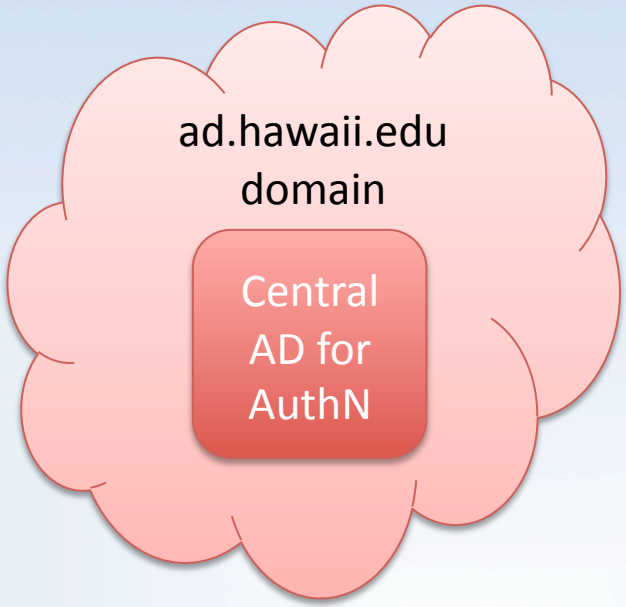
- LDAP project
  - 389ds servers in production on 4/1/2013
    - ldapmaster.its.hawaii.edu masters (internal)
    - ldap.hawaii.edu for non-ITS app developers
    - New schema (mostly cleaned up unused attributes)
    - Pruned for performance
    - The DN is different
    - Pilot AD domain synching for AuthN only
  - ldap1.its.hawaii.edu (old schema, not pruned)

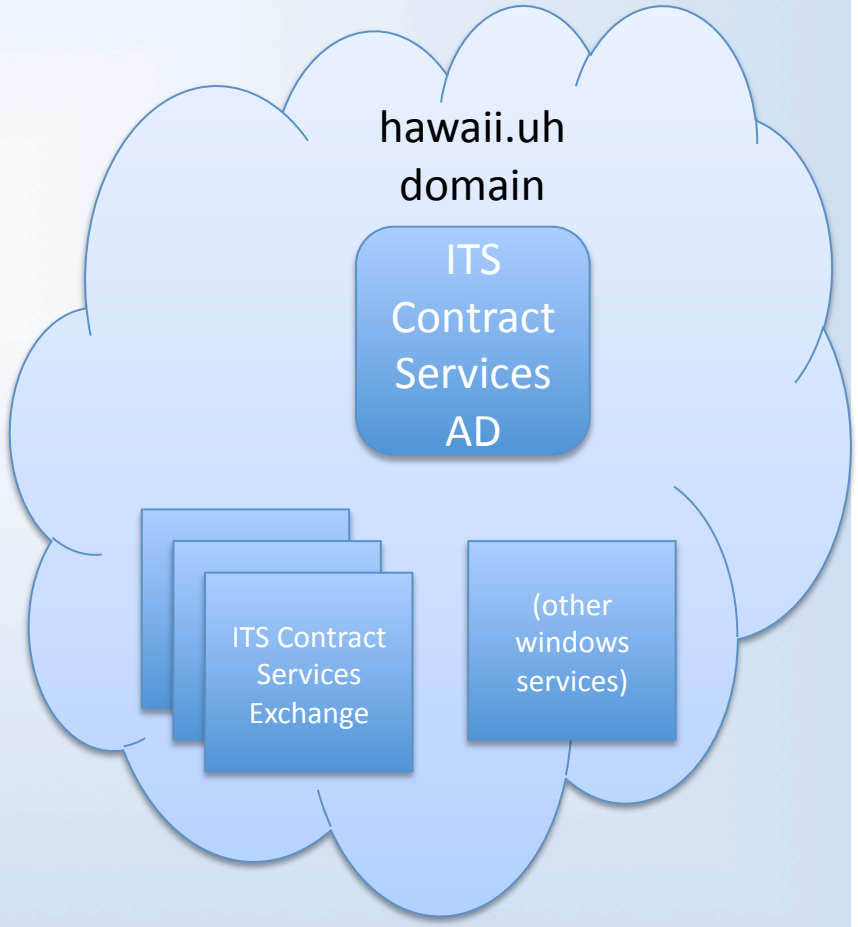
Quick Status Updates



Quick Status Updates

- LDAP project
  - ldap1.its.hawaii.edu (old schema, not pruned)
    - To be migrated to 389DS on Linux 8/12/2013. The SunOne LDAP software is now unsupported which makes the migration compelling
  - ITS is testing internally to ensure that the migration of the current ldap1 to 389DS on Linux is transparent.
    - Comments?
  - Recommend that developers proceed with testing their apps against ldap.hawaii.edu when it is ready in April and make plans accordingly.



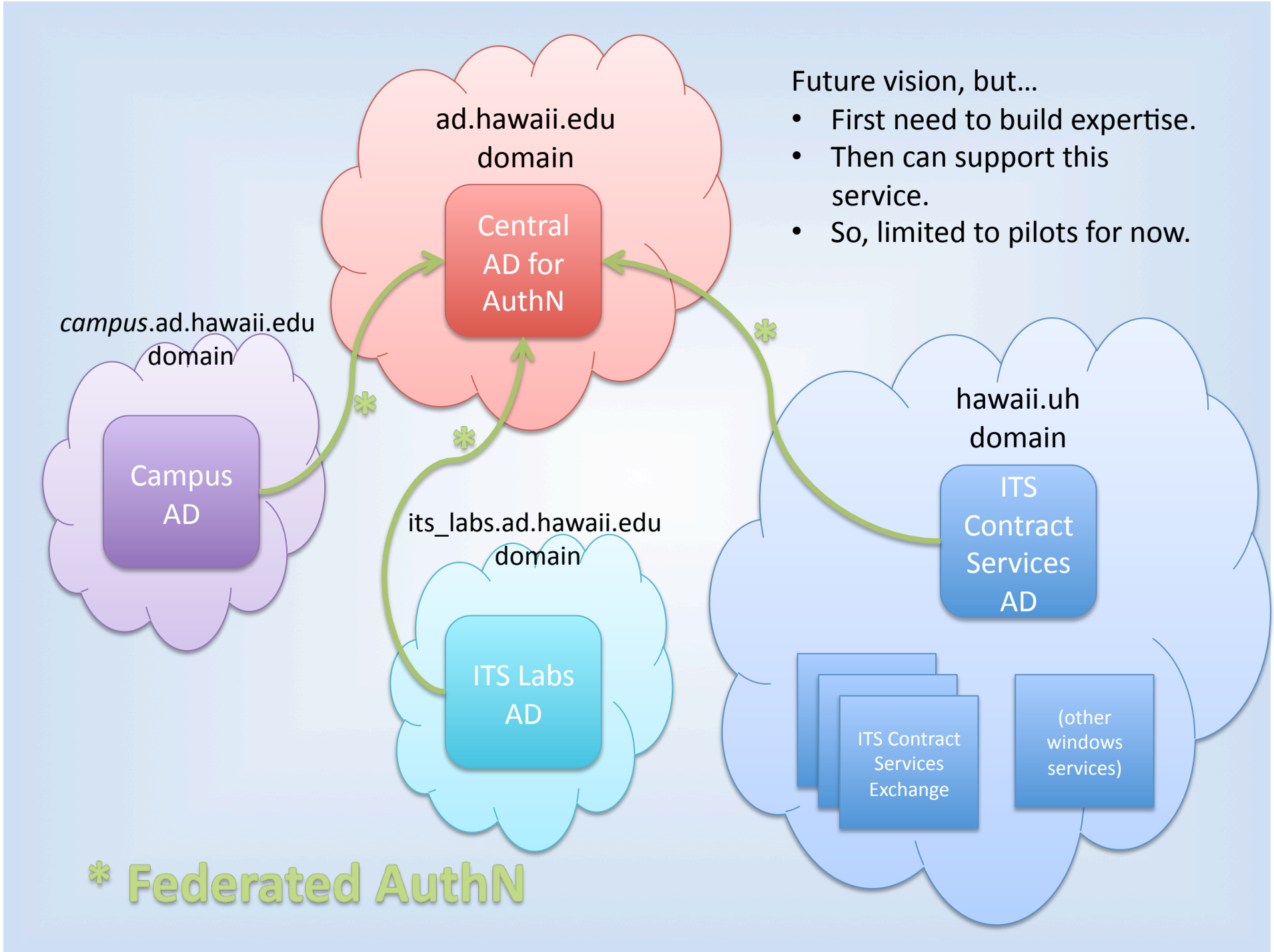


Today:

- Only hawaii.uh exists in production.

April 1:

- ad.hawaii.edu will also exist.


ad.hawaii.edu
domain
Central
AD for
AuthN
Future vision, but…
• First need to build expertise.
• Then can support this service.
• So, limited to pilots for now.
campus.ad.hawaii.edu
domain
Campus
AD
its_labs.ad.hawaii.edu
domain
ITS Labs
AD
hawaii.uh
domain
ITS
Contract
Services
AD
ITS Contract
Services
Exchange
(other
windows
services)
* Federated AuthN

Quick Status Updates

- UHIMS Events
  - 5 apps now utilize the message broker
    - UHIMS, KFS, SECE, MyGRANT, HCC AD domain
    - Hoping to see more use for authorization deprovisioning
  - MyGRANT bootstrapped UHIMS Events and goes live with consuming UHIMS events starting Saturday

Wrapping Up

- Questions?
- Snacks in the back
  - Take a moment to introduce yourself to colleagues
- July 2013 meeting topics *(tentative date and topics)*
  - HTML5/CSS3 for UI fluidity between desktop and mobile platforms
  - Using JQGRID for developing spreadsheet-like user interfaces
  - The Importance of Best Practices for ADLC
  - LDAP Pruning - implications for UH applications developers
  - Security concerns and other considerations for outsourcing IaaS/PaaS/SaaS.