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Put Your GUI on a Diet: Thin Clients

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Abstract

Ease in deploying a new version of ALEPH 500™ is just one benefit of the Citrix MetaFrame™ platform. Learn why and how the Health Sciences Library, which is pioneering new technology, utilized Citrix to deploy ALEPH 500™ during conversion and upgrade processes.

Aleph Implementation Context

- State University of New York (SUNY) + 32 Community Colleges = 64 campus system
- *SUNY Connect* is the system-wide electronic library initiative
- *SUNY Connect* plan
 - Roll out Aleph implementation by clusters of campuses
 - Switched to production March 2003
- Ex Libris's first Sirsi Unicorn conversion
- Citrix MetaFrame™ architecture unique in SUNY

Computing in the Health Sciences Library Prior to Aleph

- Library systems staff of 5
- 200 library computers
 - Computer Lab (65)
 - Two electronic classrooms (32 + 43 = 75)
 - EBM Room (8)
 - Public reference area (12)
 - Staff desktops (40)
- Servers
 - 20, including 4 Citrix Metaframe servers

Major Constraints with Standard Aleph GUI Client

- Cumbersome deployment during initial installation or upgrades
 - Creation of Master client(s) before distribution with stand-alone version
 - Repetitive client-side installation with network version
- More error prone client configuration in large environment
- Platform dependent (limited to Windows-based desktops)

New Approach: Thin Client

- **Hardware:** Thin clients are normally diskless or have small disks and run their applications across a network from a server.
- **Software:** Programs reside on a server and react to external requests from a client.

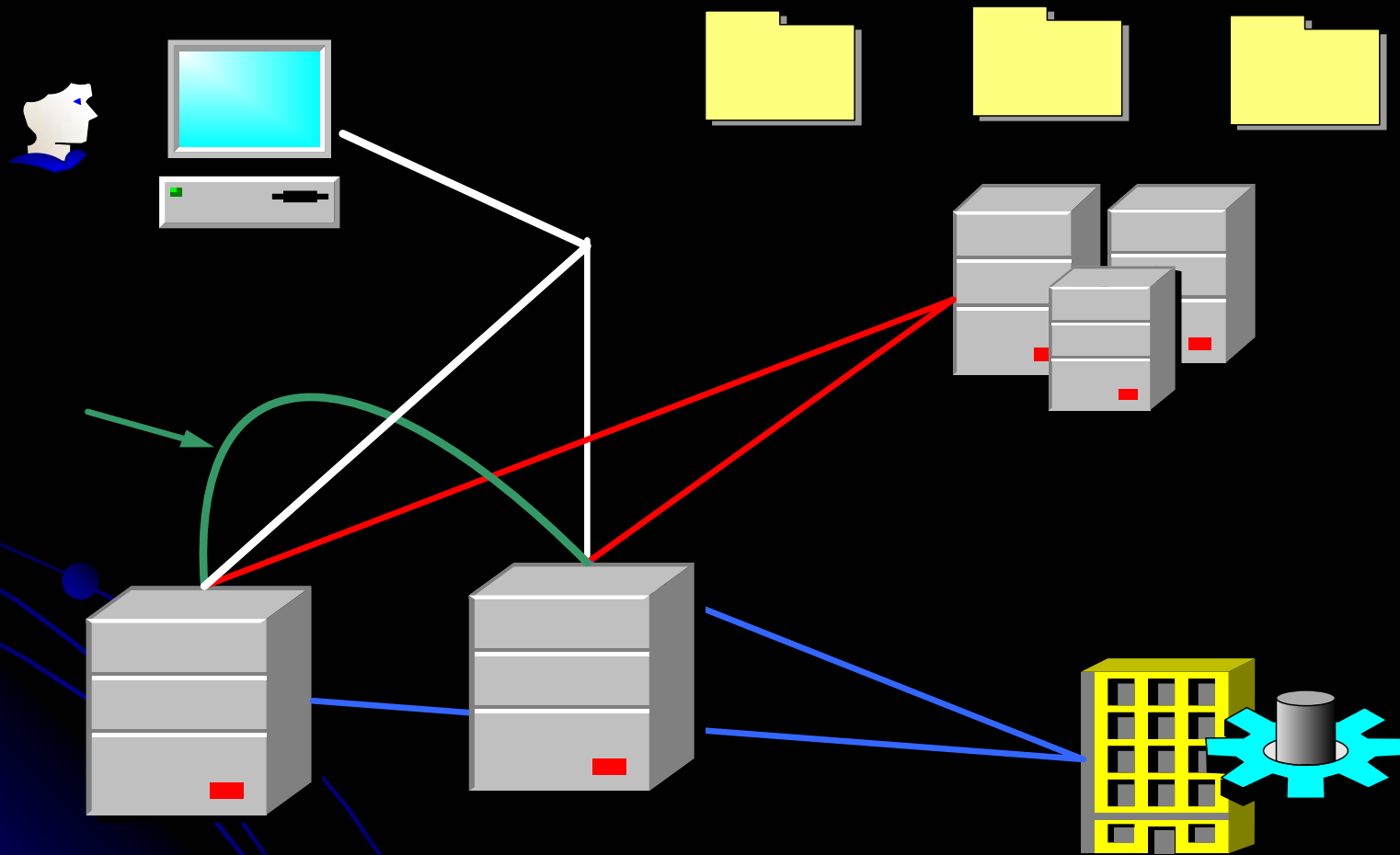
System Requirements

- Citrix MetaFrame™ servers (MetaFrame 1.8, XP)
- Windows 2000/2003 servers
- Network Storage
- Thin Clients
- Aleph client (14.2.4+)

Citrix MetaFrame™ Environment

- Two components
 - MetaFrame Presentation Server
 - An enhancement to Terminal Services
 - Balances distribution of users per application across multiple servers
 - Allows for server-based applications to be published over web
 - Independent Computing Architecture (ICA) client
 - A small piece of software installed on a desktop device to connect to MetaFrame server
 - Provides remote display of the GUI with control from the client keyboard and mouse
 - Designed to run on Win32, MacOS, Linux, Unix, PocketPC, and WinCE
- MetaFrame product from Citrix Systems
 - <http://www.citrix.com>

Aleph + Citrix Metaframe™ + Network Storage Architecture



Citrix Servers Used for Aleph

- 2 servers for PROD (load balanced)
- 1 server for DEV
- 1 server for Systems specific Aleph testing

Implementation Steps

- 1) Install the Aleph 500 client on the Citrix servers
- 2) Configure the main configuration files (.ini files) on each server
- 3) Make the application available to users (publish application)
- 4) Install ICA client on workstations

Tasks/Operations on Citrix Servers

Stand-Alone

Install GUI in stand-alone mode

Set Aleph directory permissions to full control on server

Configure INI files

Publish Application

Network

Install GUI in network mode

Set Aleph directory permissions to full control on server

Configure INI files

Create user profiles pointing to network directory (AlephADM/Configuration Profile manager)

Publish Application

Some Important .INI Entries

Where

What

Why

..\alephcom\tab\library.ini

Aleph Library – Server – Port

Access to active Aleph libraries

..\module\tab\per_lib.ini

Aleph Library codes (BIB, AUT, ILL,CRD,ADM,HOL)

List of permitted library per module

..\sear\tab\base.dat

Aleph library type – Description – Aleph Library Codes

List of searchable libraries

..\alephcom\tab\alephcom.ini

[Main]
ApplicationBgColor=255,228,220 (Prod-Pink)
ApplicationBgColor=190,240,215 (Dev-Green)

Easy region identification

..\alephcom\tab\alephcom.ini

[Main]
SavePassword=X

Disable password saving

..\alephcom\tab\alephcom.ini

[Save]
SaveAsDir=Drive:\TEMP

Prevent creation of temp files in the server root directory

..\alephcom\tab\eng\toolbar.dat

Remove unnecessary options out of the application toolbar

Simplification and security

Limitations

Stand-Alone

Cannot be customized per user profile

If “save password” option enabled, then profile of 1st person connected is used by all other users

Locally saved records (e.g., cataloging) are common to all

Network

Need to create Aleph directory in each user network home directory (U:\AL500 for example)

Lack of clear documentation and expertise on network installation

Applications

- Training before and post-STP
- Upgrade (14.2 patch 4 patch 7)
- Access to the GUI over the web through the portal for staff remote access and ExLibris support

Demo

- Screen shoot Linux
- Access through the portal



```
root@localhost: /root
Eterm Font Background Terminal
[root@localhost root]# uname
Linux
[root@localhost root]# uptime
20:36:57 up 8 min, 2 users,
[root@localhost root]# hostnam
localhost
[root@localhost root]# ver
-bash: ver: command not found
[root@localhost root]# version
-bash: version: command not fo
[root@localhost root]#
```

Mozilla

OPAC - Version 505.14.2

File Search Bookmarks Tool Options Window Help

21:02:01
Sun, Sep
14

Applications Toolbar

- Serials
- Cat
- Admin
- Circ
- Items
- Tasks
- Search
- Exit



Run GUI from portal: Stand Alone and Network

Remote access using Citrix Metaframe Access Manager (MSAM)

<https://charon.hsclib.sunysb.edu/LogonAgent/Login.asp>

Advantages

- Any device, any where, any time
- Centralized minimal application management
- Faster deployment because the client installation on every user workstation is unnecessary
- Faster applications due to more powerful servers (More CPU, RAM, more disk space than desktops)

More Advantages

- Fault tolerance with application load-balancing
- Possibility of running Dev and Prod simultaneously on the same workstation
- Local user data backed up during server backups
- Scalability in large environment

Conclusions

- What Citrix does for us
 - Go beyond the limitations of traditional Aleph installation
 - Simplify Aleph deployment
 - Minimize system administration
 - Experience firsthand on-demand computing on any device over any type of connection
 - Access Aleph remotely through a web interface any time from anywhere

Conclusions

- What it means for you
 - Simplify Aleph deployment and maintenance
 - Push the limits in large scale and scattered environment
 - Investigate an exciting technology beyond Aleph

Merci

THANK
YOU