

# IT Briefing

May 21, 2009



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## Agenda

- Server Virtualization Campus Offering Review
- PGP Whole Disk Encryption Project Update
- Business Case Review, Service Catalog
- LDAP After Action Reports
- Job Family System Progress
- Symantec 11 Upgrade
- Steve Siegelman
- Derek Spransy
- Karen Jenkins
- John Ellis
- Rhonda Fuss
- Billy Tice

# Announcements

- itSMF
  - Membership revised to unlimited number of members
  - Register: <http://itsmfusa.org>
    - Either lookup Emory University or enter C1116580
    - Select the “Atlanta” primary LIG
- Emory is hosting the June LIG meeting
  - June 17<sup>th</sup> 1:00 – 4:00
  - Emory Conference Center – Silverbell Pavilion
- Introduction of new staff
  - Todd Burroughs, CSI Manager ITSMO

# Server Virtualization Campus Offering Review

Steve Siegelman

# Server Virtualization

## Infrastructure

- HP c-Class Blades
- VMware ESX 3.5
- 140 VM's currently deployed
- VMware Clusters:
  - Academic Core – 3 blade cluster (New)
  - DMZ Core – 4 blade cluster (Existing)
  - Admin Core – 4 blade cluster (Existing)

# Server Virtualization

## Production Applications Running

- LDAP
- AD
- R25
- Citrix
- ESB/Java/SonicMQ/Subversion
- WebFocus Reporting
- WebMail (Eagle Mail)
- Webdrive
- LearnLink Gateway servers

# Server Virtualization

## Pricing

- Base Price - \$780/year "Bare Metal"
  - 1 CPU
  - 1GB RAM
  - 25Gb Storage
- Upgrades Available
  - Addition 1GB RAM - \$100/year (2gb Max)
  - Additional CPU - \$200/year (Justification needed)

# Server Virtualization

## Optional Selections

- Subscribe to UTS Satellite Server Updates  
- \$50/year
- Additional storage in 25Gb increments –  
(\$1.50/Gb/year) \$37.50
- Emory self-service offsite archive in 25Gb  
increments – (\$.65/Gb/Year) \$16.25



# Server Virtualization

## Included In Base Price

- Redundant Network & SAN connections
- VMware's Vmotion & High Availability
- Full Hardware Support
- Data Center Power, Cooling and Security
- Root/Administrator privileges
- Base OS Load
  - Windows 2003/2008 32/64Bit
  - Redhat Linux – RHEL 4/5 32/64Bit

# Server Virtualization

## Not Included

- System Administration
- OS Maintenance, Patching and Upgrades
- Server Monitoring and Alerting
- System Backups (Available through Additional Options)
- VM Snapshots
- DR/BC to Secondary Data Center

# Server Virtualization

## Last Steps Before Availability

- Billing charge back
- How to request VM's? Remedy, Web.
- Windows licensing
- IP/DNS provisioning
- SLA's
  - Time from request to deployment of VM
  - Support of Infrastructure

# Server Virtualization

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Questions

# PGP Whole Disk Encryption Project Update

Derek Spransy

# PGP Whole Disk Encryption

## Project Timeline

- Jan. 2008 – Level one project submitted to IT governance
- Mar. 2008 – Level one project approved by IT governance
- Sept. 2008 – PGP selected after evaluation period
- Oct. 2008 – Level two project submitted to IT governance
- Dec. 2008 – Project received IT governance approval
- Jan. 2009 – Project released to the PMO process
- May 2009 – Get project charter approval and begin execution
- Summer 2009 – Configure and test PGP service
- Fall 2009 – PGP released to the enterprise

# PGP Whole Disk Encryption

## Project Roles

- Executive Sponsor – Brad Sanford
- Project Manager – Phil Shaw
- Core (Technical) Project Team:
  - Derek Spransy – Emory College
  - Alan White – UTS Security Team
  - Jean Robert Mathador – SOM-ITS
  - Mike Chilcott – Healthcare IS Security
  - Curt Tucker – UTS Systems

# PGP Whole Disk Encryption

## Deliverables

- Purchase of software from PGP
- License tracking
- Enterprise encryption policy
- Server and client configuration
- Perform pilot deployment
- Release to enterprise for general deployment



# PGP Whole Disk Encryption

## Funding

- Details are still being worked out
- Units will commit to an initial purchase for existing laptops
- Future client deployments will be paid for centrally
- Actual cost per client has yet to be negotiated
- PGP's first price break is realized at 1,000 licenses (\$53) under PGP's general higher ed. discount
- Still less than the cost of breach notification

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Questions

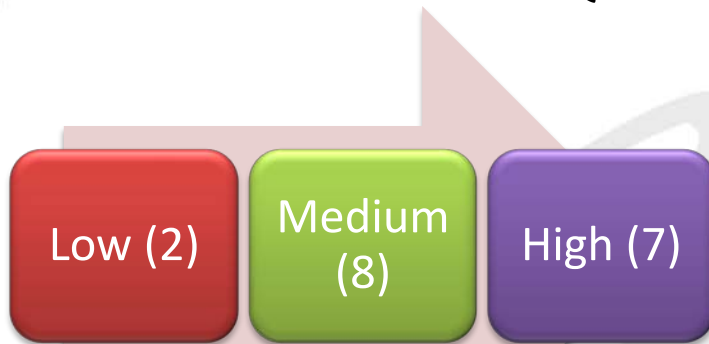
# Business Case Review

Karen Jenkins

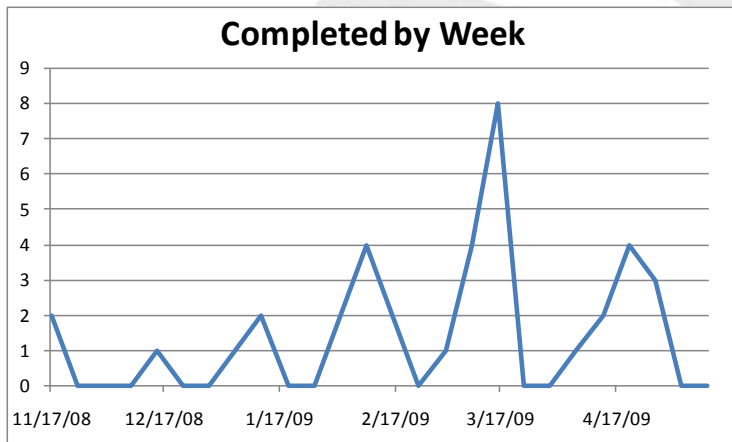
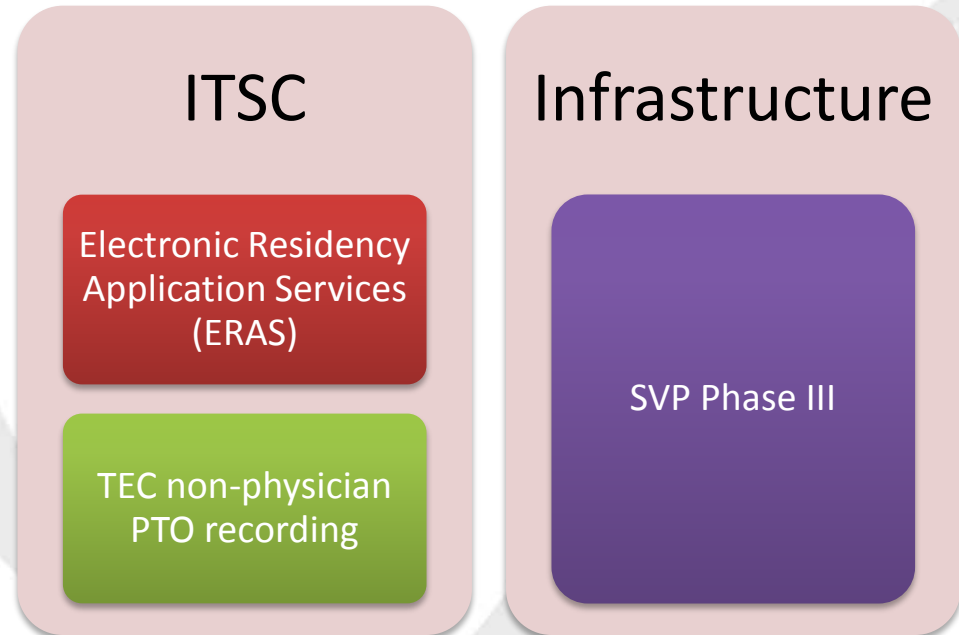
# Business Cases

## Status Overview

### Business Cases In Queue



### Business Cases In Approval



37 Business Cases Completed to date in FY09

# Business Cases

## High Priority Details

Focusing on internal UTS approved projects during Governance hiatus (next set of Governance projects reviewed in November)

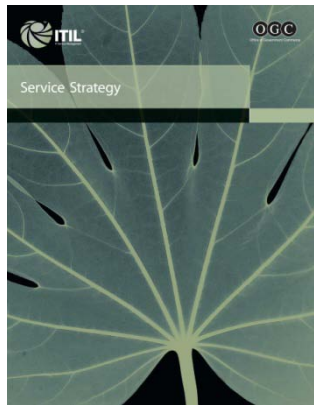
Initiative / Project	Approval Body	BRM Assigned
DAS: Research/Recommendation	UTS	Val LaManna
Point & Click Integration	UTS	Sheila Ackie
Healthcare Sponsorship Application	UTS	Jeff Fennell
External PCI (credit card processing) Assessment	UTS	Jeff Fennell
Remedy: Product Catalog	UTS	Tina Crum
Insight 6.0 Upgrade	UTS	Carol Livsey
MySoft Shopping Cart	UTS	Tina Crum

# Service Catalog



# Service Catalog

## Five Core Areas of ITIL v3



**Service  
Strategy**



**Service  
Design**



**Service  
Transition**



**Service  
Operation**



**Continual  
Service  
Improvement**

# Service Catalog

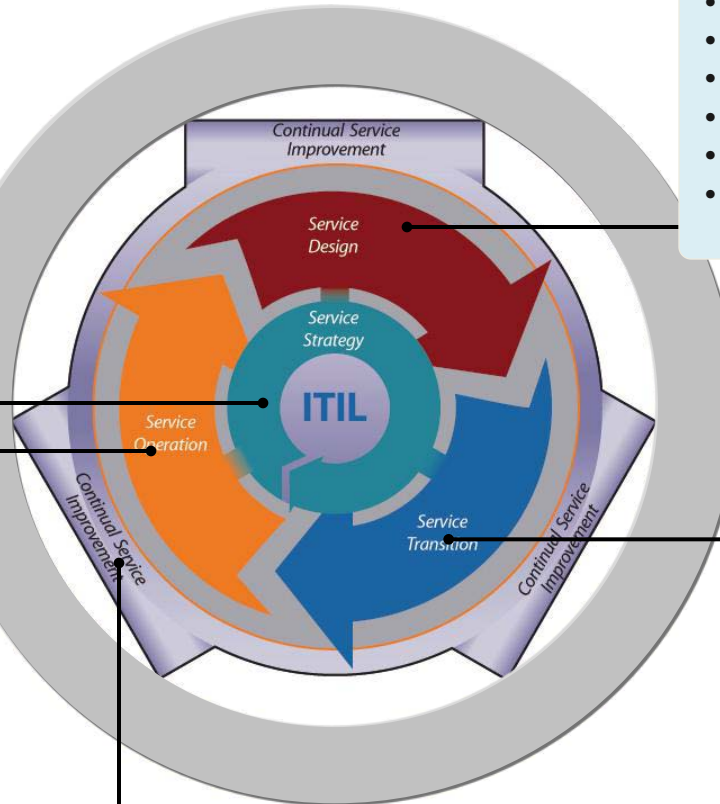
## Core Processes (26)

### SERVICE STRATEGY

- Service Strategy
- Service Portfolio Management
- IT Financial Management
- Demand Management

### SERVICE DESIGN

- Service Catalog Management
- Service Level Management
- Supplier Management
- Capacity Management
- Availability Management
- Continuity Management
- Information Security Management



### SERVICE OPERATION

- Event Management
- Incident Management
- Request Fulfillment
- Problem Management
- Access Management

### SERVICE TRANSITION

- Transition Planning and Support
- Change Management
- Service Asset & Configuration Management
- Release & Deployment Management
- Service Validation & Testing
- Evaluation
- Knowledge Management

### CONTINUAL SERVICE IMPROVEMENT

- Service Measurement
- Service Reporting
- Service Improvement



# Service Catalog

## Links to other initiatives & processes

### Service Catalog

Business &  
Technical  
Catalogs

Service  
Request  
Catalog

IT Website

Asset &  
Config  
Mgmnt

BC/DR

Remedy  
Product  
Catalog,  
IT Alert  
Improvements

Remedy  
Operational  
Catalog,  
Service  
Request  
Management

On-line  
list/catalog of  
services,  
Product  
Description  
Sheets

CMDB,  
Change &  
Incident  
Mgmnt,  
BSM

Tier services,  
BIAs

# Service Catalog

## Approach & Goals

- Educate BRMs on all UTS Services
- Define and document services in customer friendly business terms
- Create definitive list of services, service names, and service categorizations
- Define a Service Owner for each service
- Identify initial Tier for business services to focus BC/DR BIA efforts
- Publish web-based catalog of services

# Service Catalog

## Service Catalog & Service Request Catalog

- Service Catalog (Phase I)
  - Defines the services that are in production or readily available
  - Defines the scope, conditions, options and service levels
  - Defines the key performance indicators
  - Business services only
- Service Request Catalog (Phase II)
  - List of available service requests / actions
  - First step towards Service Request Management

# Service Catalog



## Restaurant Analogy

### Do you order ingredients?

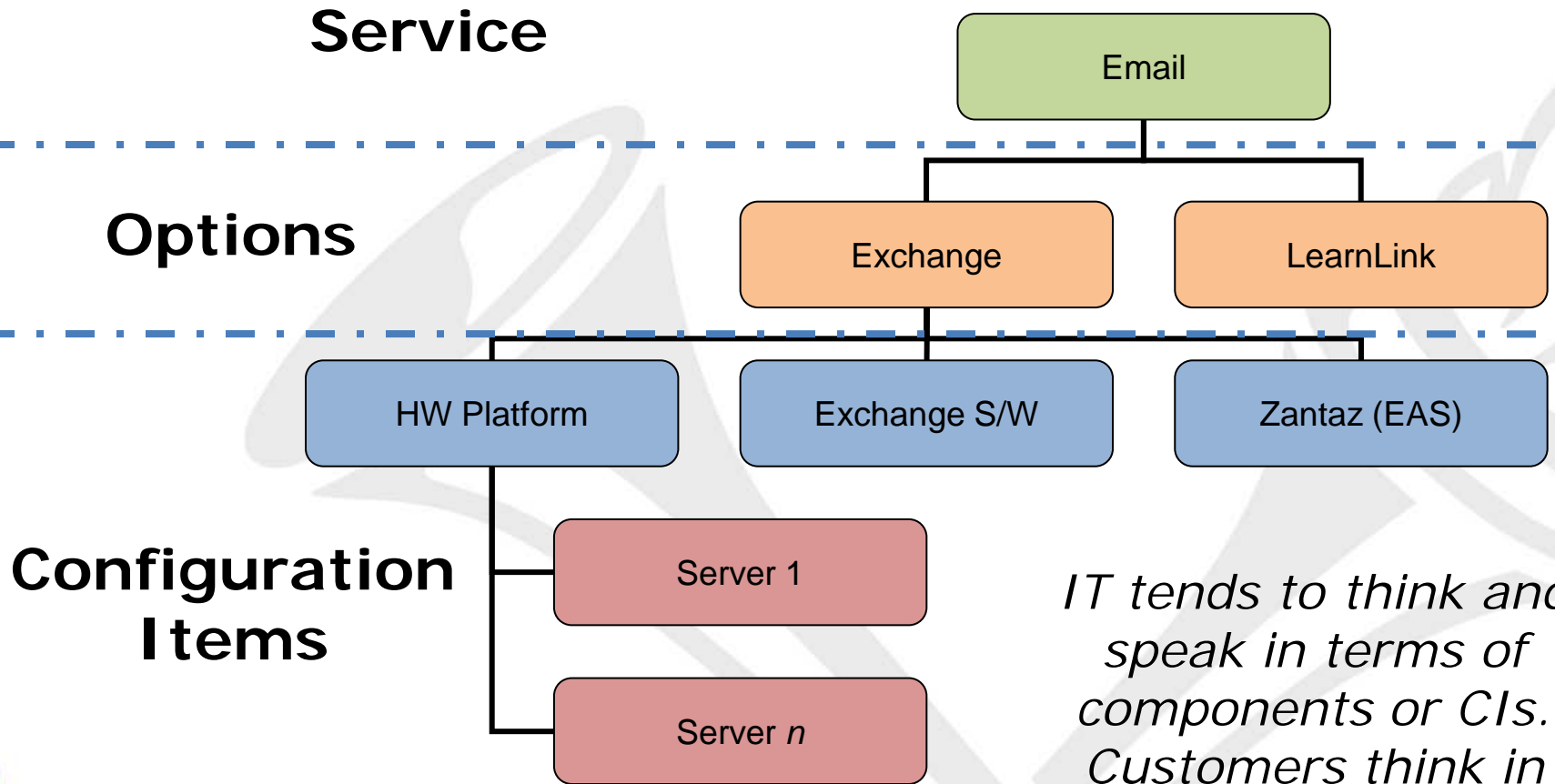
*Eggs, butter, salt, pepper, garlic, bread crumbs, olive oil, oregano, mozzarella cheese, parmesan cheese, tomatoes, pasta, chicken*

### ... or the entree?

*Chicken Parmesan - Breaded chicken breasts topped with Marinara sauce, roasted Bruschetta, Mozzarella and Parmesan cheese, and herbs. Served with linguini.*

# Service Catalog

## Email Example








*IT tends to think and speak in terms of components or CIs. Customers think in terms of services or business processes.* 29

# Service Catalog

## General Guidelines

### Do's

-  Present in customer friendly terms
-  Group according to business drivers
-  Create a "menu" of Service Offerings
-  Set initial customer expectations
-  Create an Actionable catalog\*

### Don'ts

-  List tasks organized by UTS departments
-  List the functions of a team
-  Identify the technical features of a service
-  Write in technical jargon
-  Provide all the gory technical details

*\*Service Request Catalog in Phase II*





# Information Technology

HOME

ABOUT US

NEW TO EMORY?

SERVICES A-Z

IT SECURITY

REQUEST WORK

GET HELP!

## Service Catalog



### QUICK CONNECT

- Blackboard
- discoverE
- Exchange: Healthcare
- Exchange: University
- iTunesU
- LearnLink
- OPUS
- Passwords
- PeopleSoft HR
- Service Desk

Emory provides a wide-range of technology tools and solutions. These range from Email Services, to Computer Centers, to Cable TV, and to Financial and Human Resource systems. The availability of these are determined by who you are (student, faculty, etc.) and where you are (Administration, School of Medicine, Emory Clinic, etc.).

### STUDENTS

- Email: LearnLink
- Student Admin (OPUS)
- Cox Computing Center
- Residence Hall Labs
- Clean Room

### FACULTY

- Blackboard
- Faculty Computing Center
- iTunes U
- Classroom Support
- WebDrive File Sharing

### STAFF

- Email: Exchange
- Online Phone Directory
- Telephone Service
- Human Resources System
- Finance Accounting System

### IT PROFESSIONALS

- Desktop Support
- Tech Tools
- VPN Access
- Self-Service Database
- Web Hosting

Services A-Z: **A-C** | D-F | G-I | J-L | M-O | P-R | S-U | V-W | X-Z

- Alumni Community at Emory (ACE)
- Anti-Virus Reporting Tools
- Anti-Virus Software
- Automatic Call Distribution (ACD)

- Calendar: On Call
- Call Center Management
- Classroom Support
- Clean Room

- Computer Kiosks
- Computer Repair
- Computing Centers & Labs
- Course Management Tools

### IT @ Emory

Online Services

Messaging & Communications

Network Access

Student Computing

Computer Labs & Facilities

IT Services

Support & Help

Search the IT Site

SEARCH

Blackboard connect



Multiple navigation options to locate a service



Overview

Help & Support

Home » Services A-Z » Communications » Voice » Blue Light Emergency Phones

Search the IT Site

## Blue Light Emergency Phones

**Eligible:** All

**Availability:** 24 Hours, Daily

Blue Light emergency telephones are communication tools which link users directly and exclusively to the Emory Police Department Communications Center in the case a user needs to:

- Report a crime
- Report a fire
- Report a medical emergency
- Request an escort out of fear for his/her safety

Upon picking up the Blue Light phone handset or pressing the phone's "call" button, a 9-1-1 operator answers and an officer is sent to that particular Blue Light location.

There are more than 40 Blue Light phones located throughout the Emory University campus, including every elevator.

**Benefit: Safety**

- Direct, automated phone link to the Emory Police Department

**Features:**

- Phones are mounted on a pole topped with a blue light.
- Well marked with a bright yellow box and blue light.
- Easy to use with single-touch red button, ADA compliant.

**Cost:** No Charge (Allocated)



Related Services

[Telephone](#)

Related Links

[Emory Campus Map](#)

[Emory Police Department](#)



# Service Catalog

## Completed

- List of Business Services
- Template of information to capture
- Workshops to capture information for each service
- Open card sorting with end-users for categorization
- Draft design for IT Site and Catalog
- Form created in Cascade
- Services entered in Cascade

# Service Catalog

## Next Steps

- Complete Cascade development
- Closed card sorting to finalize categorization
- Initial editing
- Publish draft in June
- Input/Feedback from UTS, Local Support, & End-Users
- Launch final in July

# Service Catalog

## Other Phases / Related Projects

- Remedy Product Catalog
- IT Website
- Knowledge Base
- Technical Catalog
- IT-Alert improvements
- Service Request Catalog
- Remedy Operational Catalog
- Service Request Management

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**Questions**

# LDAP After Action Reports Review

John Ellis



# LDAP After Action Reports

## Overview

- 3/29/2009: downtime ~ 1 hour
- 4/21/2009: downtime ~ 1 hour for EUV and ~ 16 hours for EHC
- 4/29/2009: downtime ~ 15 minutes

# LDAP After Action Reports

## 3/29/2009

**AAR headline:** LDAP Service Interruption

**Service affected:** Any system relying on UTS LDAP infrastructure for authentication

**Date and Time SIR reported:** 03/29/2009, 15:21 PM

**Effect of the outage:** Applications relying on LDAP could not authenticate users for approximately 1 hour

**Remedy ID:** 433685

**Incident Summary:** LDAP proxy servers lost connectivity to LDAP servers (UTS and EHC) from 15:21 PM to 16:21 PM

### Incident Description

At 14:55 PM, Curt Tucker and Darrell Durggin were alerted by monitoring of an incident on a back-end LDAP server (Angelina). The LDAP Proxy servers continued to operate normally by automatically removing Angelina from the service rotation. Operation continued normally until 15:21 PM, when the LDAP Proxy servers were unable to connect to any of the back-end LDAP servers. Service was not restored until 16:21 PM when the connectivity was restored.

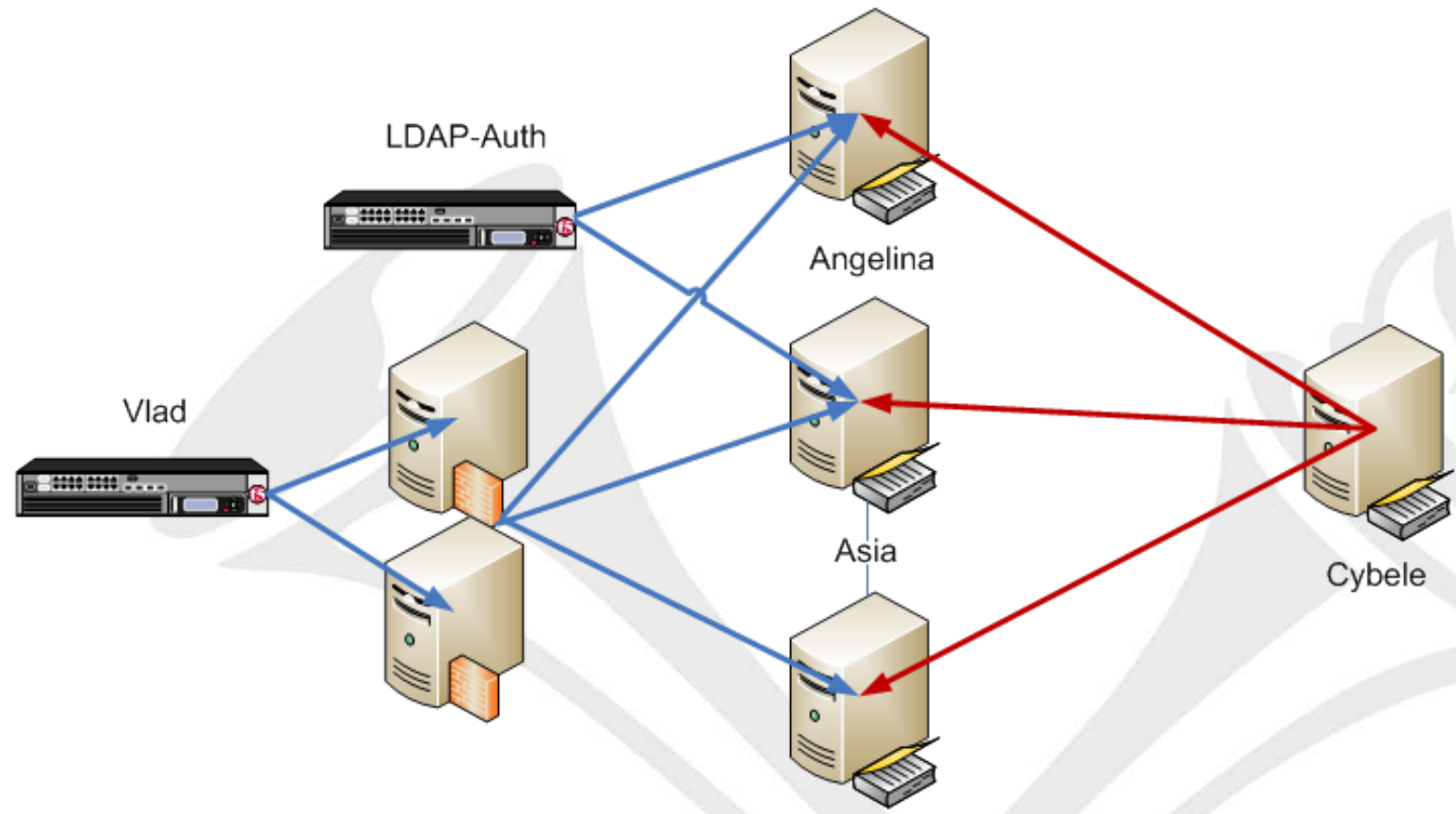
### Root Cause

Angelina failure: due to a failure in a mirrored hard drive.

LDAP service outage: root cause not yet determined, but the outage does not appear to be related to the Angelina failure.

# LDAP After Action Reports

## LDAP architecture: 3/29/2009





# LDAP After Action Reports

## 4/21/2009

**AAR headline:** LDAP Service Interruption

**Service affected:** Any system relying on UTS LDAP infrastructure for authentication

**Date and Time SIR reported:** 04/21/2009, 14:15

**Effect of the outage:** Applications relying on LDAP could not authenticate users for approximately 1 hour; service stable until 04/22/2009, 01:15 when service to EHC accounts was lost; full service restored at 16:05, 04/22/2009

**Remedy ID:** 440809

**Incident Summary:** LDAP proxy application bug left too many TCP connections in a state of CLOSE\_WAIT; host ran out of file descriptors, leading to loss of service and configuration corruption.

### Incident Description

When an LDAP Proxy Server instance experienced the effect of the bug, a restart would corrupt the configuration, leaving the instance unusable. The impact of the bug on the user experience would be intermittent loss of access to authentication services leading to complete loss, over a period of minutes.

The bug did not appear to be related to load solely, as load testing was performed as part of the implementation project (see test results below). The load at the time of the event was less than the load tested. The precise sequence of events that triggered the bug is still undetermined, although SSL connections would be the first to trigger. However, the fix in place now manages the TCP connections very efficiently. This fix was specially developed for AT&T when they experienced the same issue and is not generally available on the Sun website.

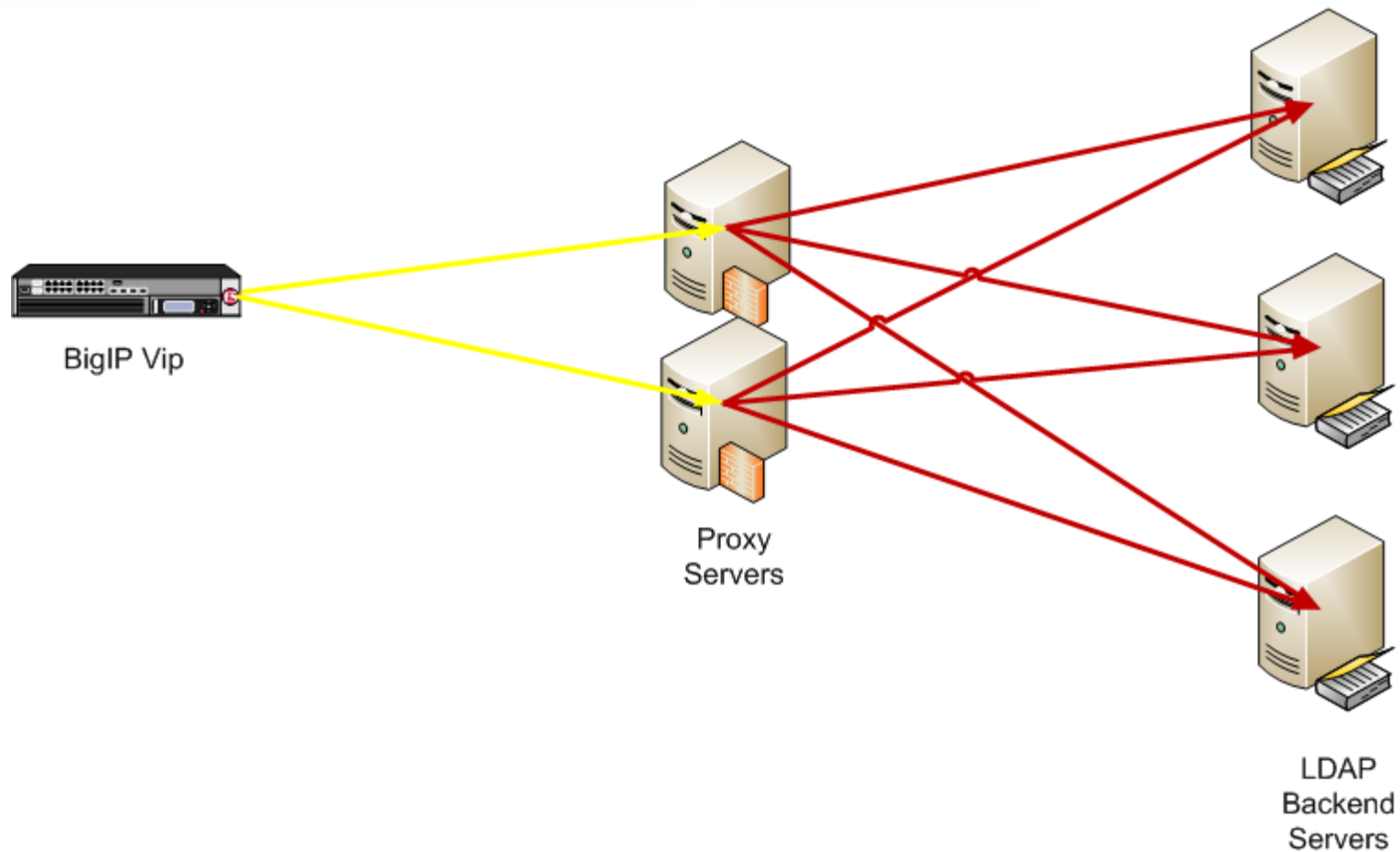
A subsequent incident impacting the back-end LDAP infrastructure occurred on 4/29/2009 (Remedy #442957). The back-end LDAP servers ran out of file descriptors at the host level. The cause of this incident is unknown – however, we suspect development application code was being tested against the LDAP production environment (Blackboard building block).

### Root Cause

SO\_KEEP\_ALIVE bug in application code

# LDAP After Action Reports

## LDAP Architecture: 4/18/2009+



# LDAP After Action Reports

## 4/29/2009

**AAR headline:** LDAP Service Interruption

**Service affected:** Any system relying on UTS LDAP infrastructure for authentication

**Date and Time SIR reported:** 04/29/2009, 09:25

**Remedy ID:** 442957

**Effect of the outage:** Applications relying on LDAP could not authenticate users for approximately 15 minutes; full service restored at 09:38, 04/29/2009

**Incident Summary:** LDAP directory server application failed with the error "Process open FD table is full"

### Incident Description

LDAP application servers experienced the above error, causing the LDAP database to experience a "fatal error". This event happened on all 3 back-end LDAP servers approximately the same time.

### Root Cause

There were not enough file descriptors allocated to the directory instance. While reviewing the error logs, Sun also noted the number of "un-indexed" searches being generated by the Macintosh kiosks as a cause for concern. There was also a change made to Blackboard QA – a beta Building Block was installed – while Blackboard QA was pointed to LDAP production. Either or both of these clients could have caused the increase file descriptor use.

# LDAP After Action Reports



Questions

# Job Family System (JFS) Project

Rhonda Fuss

# Job Family System

## Overview

- What is the Job Family System (JFS) Project?
  - A structure and a process which creates and documents tasks, competencies and requirements to fulfill a particular job role
- Job Modeling
  - Method drills down into each job to identify critical duties, tasks and knowledge, skills and abilities
  - Lays the foundation for key talent management activities:
    - Training and development
    - Performance management
    - Career progression
    - Succession planning
    - Recruiting and selection

# Job Family System

## Who is involved?

- Project Committee:
  - Barbara Brandt
  - Mark Conde
  - Ron Denham
  - Rhonda Fuss
  - Dana Haggas
  - Debra Smith
  - Kathryn Wynes
  - John Connerat
- Enterprise Services

# Job Family System

## What is the JFS project?

The 3 phases of the JFS project provide the infrastructure for effectively managing the UTS workforce.

### Job Model Design

- Job model framework and strategy
- Job modeling standards and templates
- Job models for Enterprise Services
- Job family matrices for Enterprise Services
- Competency library

### Training Needs Assessment & Strategy

- Training needs analysis by position
- Training strategy and deployment plan

### Development Plan

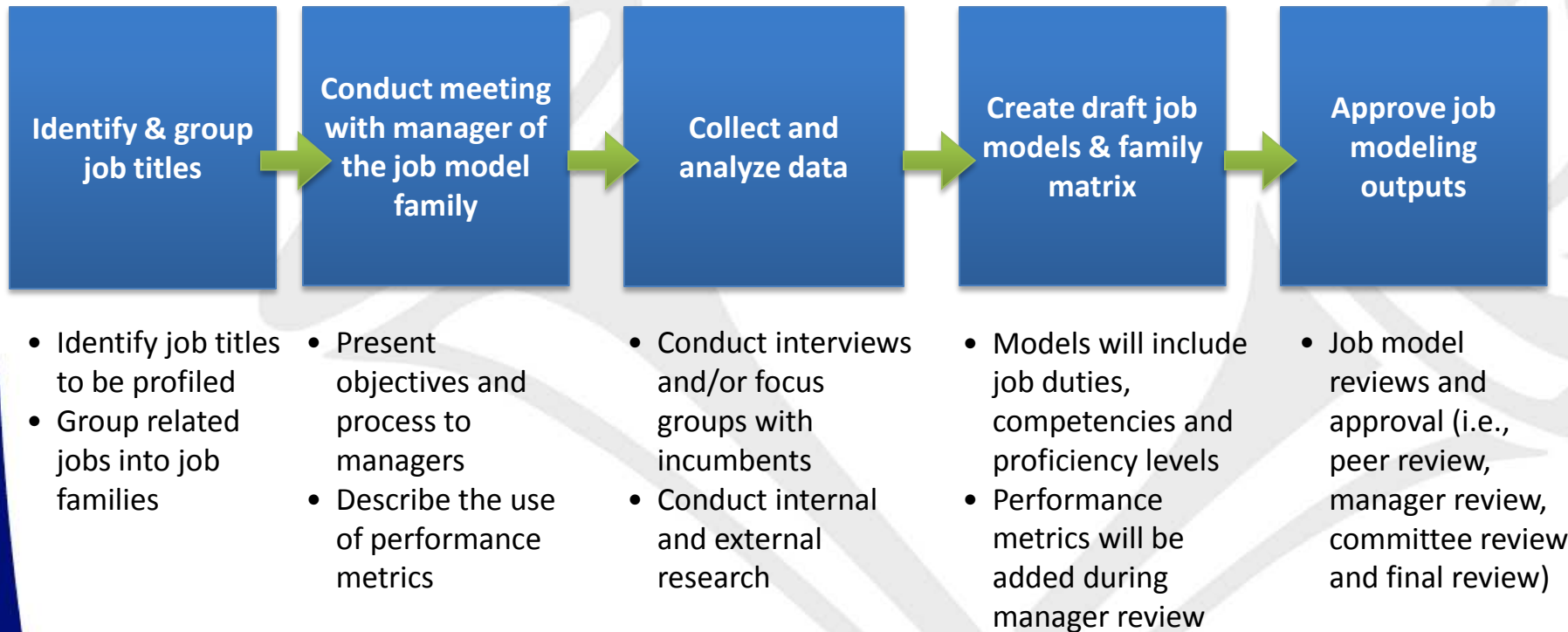
- Go-forward job model development plan



# Job Family System

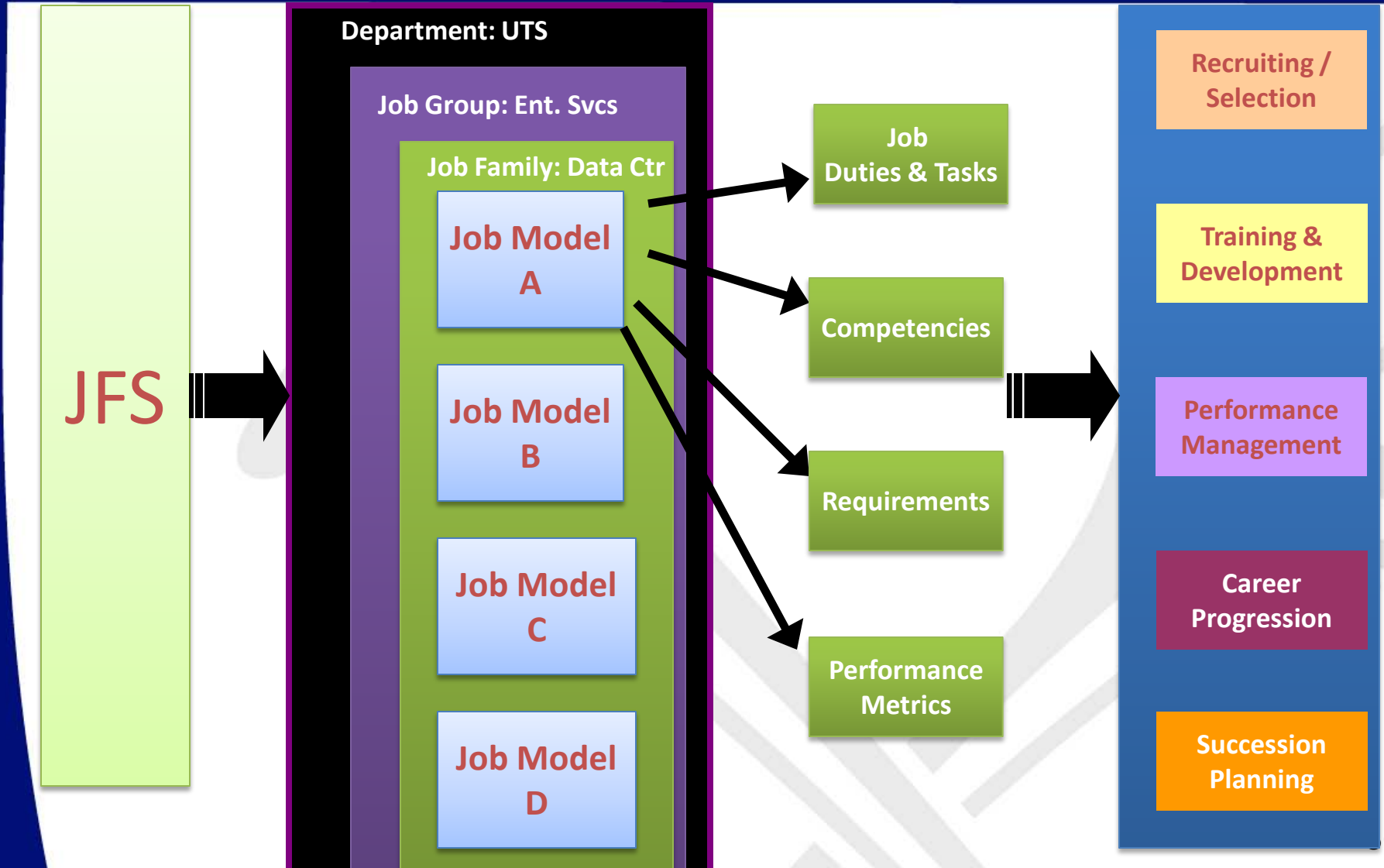
## How do we do it?

The projected process for building dynamic job models within a job family:



# Job Family System

## What will it yield?



# Job Family System

## What is the current project scope?

- Complete models for Enterprise Services department
  - Timeline: 6 weeks
  - Approximately 70 Employees
  - Total # of Models: 22
  - Total # of meetings (e.g., focus groups, interviews, etc.): 35
  - Total # of hours for meetings: 43

# Job Family System

## Validate JFS approach and outputs, and establish buy in

- Review edited models, competency library and training assessments with Enterprise Services Managers.
- Finalize and populate JFS database with Enterprise Services models and competency library.
- Create Templates for Personal Action Plans, Role-based Curriculum Plan, Training Tracking, and Development Activities Guide (DAG).
- Obtain approval from Human Resources for Enterprise Services job models and training inventory.
- Update JFS Committee on go-forward approach

## Obtain value from JFS outputs

- Develop implementation strategy for DAG, Curriculum Plans and Career Paths for each UTS department.
- Create and implement Career Paths for Enterprise Services.

## Conduct job modeling for remaining UTS

- Project Management Office (PMO)
- IT Service Management Org (ITSMO)
- Infrastructure
- Integration
- Academic Technologies (TBS)
- Enterprise Applications (TBS)
- Call Center (TBS)

# Job Family System



Questions

# Symantec 11 Upgrade: July 1 Go Live for Back to School

Billy Tice

# Symantec 11 Upgrade

- NCIWPRO FM-AV PSBU1 Server 10.1.0.401 (IP)-170.140.192.48
- SOM-DC4 SOM SOM-DC3 Server 10.1.4.4000 (IP)-170.140.205.118
- SOM-DC2 SOM SOM-DC3 Server 10.1.4.4000 (IP)-170.140.238.187
- WOLF-VM Emory Symantec Antivirus Service Primary 10.1.8.8000 (IP)-170.140.53.110
- THEO3 THEOLOGY Primary 10.1.5.5000 (IP)-170.140.65.27
- RUKA CampusLife Primary 10.1.6.6000 (IP)-170.140.140.30
- CABINET PPS Primary 10.0.2.2000 (IP)-170.140.140.92
- BJC-TOOLS Symantec AntiVirus Primary 10.1.0.396 (IP)-170.140.177.230
- PSBU1 FM-AV Primary 10.1.0.401 (IP)-170.140.192.38
- SOMGYNFP1 SOMOES Primary 10.1.0.394 (IP)-170.140.205.61
- SOM-DC3 SOM Primary 10.1.4.4000 (IP)-170.140.205.110
- DEITY Woodruff Library Primary 10.1.6.6010 (IP)-170.140.210.124
- BIOCHEM2 BIOCHEM-SAV Primary 9.0.2.1000 (IP)-170.140.240.12
- PSYSERVER3 Psychiatry Primary 10.1.0.401 (IP)-170.140.245.102

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# Questions