JOHN J. AUDUBON HALL

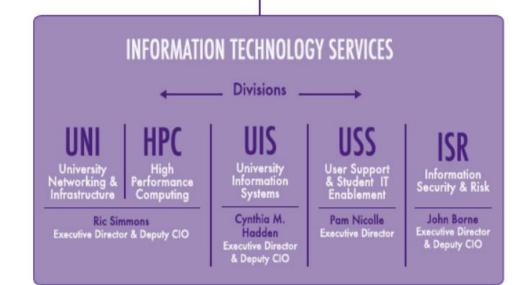# University Networking & Infrastructure (UNI)

UNI Who?

- Part of Information Technology Services (ITS)
- Used to be known as "OTC" – **O**ffice of **T**ele**C**ommunications
- Recharge Center
  - No budget
  - Cost recovery only
  - Follow guidelines set forth by PS-103

What does UNI do?

- Customer Service Driven

- We're "behind the scenes" – here for your mission

- Internet   Telephones   WiFi   Email

  Cable TV   Datacenter   Network   Fiber Optics

  Cellular Service   Virtual Servers   Storage   Server Backups

  High   Voice Mail   Audio   24 Hour
  Performance   Conferencing   Network
  Computing   VM/Storage   Operations
  (HPC)   Center (NOC)

Request a New Service vs. Submitting a Trouble Ticket

- Requesting a New Service
  - If the service has never existed before, request a New Service
  - http://newservicerequest.lsu.edu/
  - HowTo: UNI Online Work Order Submission (GROK Article ID 11775)
- Submitting a Trouble Ticket
  - If a service exists, and is broken, requires repairs, or needs to be fixed, it requires a Trouble Ticket
  - https://itservice.lsu.edu/footprints
- ITS is investigating potential solutions that would not require campus users to decide upon the portal.

Today's main event:
Virtual Machines & Storage

- Why we are here today:
  - Share knowledge
  - Discuss VMs and Storage
- What is a Virtual Machine (VM)?
  - It's a single server that appears to a customer as lots of individual servers – lots of processing power and memory (the secret sauce is the software dubbed, "VMWare")
  - The VM can run lots of applications on lots of virtual processors

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Virtual Machines & Storage

- Better value
  - Many to One
  - Dense configuration
- Better for the Environment
  - Cooling and Power
- Better in case of a Disaster
  - Failover
  - High Availability
- Better Use of Time
  - Staff focus on services, not maintaining hardware

Costs

- Rates have fallen significantly over the years

A single Virtual Server processor reservation of 500 MHz $2.31 per month

A single Virtual Server memory reservation of 256Mb $1.86 per month

A single Gigabyte of SAN (Performance) disk space $0.10 per month

A single1 Gigabyte of NAS (Bulk) disk space $0.07 per month

A typical departmental requirement would cost about $1,273 per year on a VM

Price Comparison

UNI Virtual Server	Brand D	Brand H
$1,273 per year	$12,733 (one time cost; ongoing costs of power, cooling, storage, management)	$8,792 (one time cost; ongoing costs of power, cooling, storage, management)

2.4Ghz, 6Core Processor

8GB of memory

500 GB of useable storage

10Gb network adapter

24x7x4 Maintenance Agreement

Redundant Power

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Benefits of Virtualization

- No hardware migrations

- Virtual machines can be copied for application testing or upgrades

- A Virtual machine can grow as your needs grow

- May allow for the consolidation of servers

- Frees up your IT staff to focus on your department's services

The moral of the story…

- Think about us the next time you receive a request to purchase a server
- Encourage your Technical Support Professional (TSP) to have a conversation with us prior to buying a server
- Better value
- Save money

Thank You!

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