



LSU

**Information Technology
Services**



University Networking & Infrastructure (UNI)

**LOVE PURPLE
LIVE GOLD**

The logo for Louisiana State University (LSU), consisting of the letters 'LSU' in a bold, black, sans-serif font.The text 'Information Technology Services' in a black, sans-serif font, positioned below the LSU logo.

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

CHIEF INFORMATION OFFICER
Brian T. Nichols



Office of the CIO

- Susan T. Crochet, Officer
IT Human & Financial Resources
- Sheri J. Thompson, Officer
IT Planning & Communication
- Justin Thornton, Director
Financial Systems Services
- Jeff Campbell, Sr. Director
Administration Services & Parking
- vacant
Faculty Liaison

INFORMATION TECHNOLOGY SERVICES

← Divisions →

UNI University Networking & Infrastructure	HPC High Performance Computing	UIS University Information Systems	USS User Support & Student IT Enablement	ISR Information Security & Risk
Ric Simmons Executive Director & Deputy CIO		Cynthia M. Hadden Executive Director & Deputy CIO	Pam Nicolle Executive Director	John Borne Executive Director & Deputy CIO



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



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



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 single 1 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

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

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Thank You!

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