University Networking & Infrastructure (UNI)
UNI Who?

- Part of Information Technology Services (ITS)
- Used to be known as “OTC” – Office of TeleCommunications
- 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
  • Cable TV
  • Cellular Service
• High Performance Computing (HPC)
• Telephones
• Datacenter
• Virtual Servers
• Voice Mail
• VM/Storage
• WiFi
• Network
• Storage
• Audio
• Conferencing
• Email
• Fiber Optics
• Server Backups
• 24 Hour Network Operations 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
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 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

<table>
<thead>
<tr>
<th>UNI Virtual Server</th>
<th>Brand D</th>
<th>Brand H</th>
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<tbody>
<tr>
<td>$1,273 per year</td>
<td>$12,733 (one time cost; ongoing costs of power, cooling, storage, management)</td>
<td>$8,792 (one time cost; ongoing costs of power, cooling, storage, management)</td>
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- **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
Thank You!

Robert Gill: rgill1@lsu.edu
Ric Simmons: rsimmons@lsu.edu
578-3700