MSU IT Update

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MISSION
Implement and maintain practical information technology solutions that provide the platform for MSU to excel in research, education, and outreach.

VISION
Exemplify visionary leadership and deliver effective technology solutions to enable MSU students, faculty and staff to positively impact vital global issues.
Agenda

- Spartan 365 Update
  - Information Security Update
  - Data Center Update
What is Spartan 365?

A suite of familiar Microsoft Office tools configured for the MSU community

• User-friendly features
• Integrated environment
• Use on the go across multiple devices

Modernized, Robust, and Secure
Spartan Mail

A contemporary email and calendaring solution

- Available for both Mac and PC on desktop, laptop, and mobile devices
- Intuitive web interface
- Features MSU Mail Protection

Over 115,000 Students, Faculty, Staff, Alumni, and Retirees Are Using Spartan Mail
Spartan Drive

A simple way to store, sync and share your files

- Secure file storage
- Share within MSU or outside of MSU
- Upgraded to 5TB of cloud storage accessible from anywhere

Over 2 Million Files…and Rapidly Growing
Spartan Skype

A secure chatting, conferencing, and screen sharing tool

- Available for faculty, researchers, and staff
- Presence information (Free/Busy)
- Secure file transfers
- Use it across multiple devices

Quick And Easy Way To Connect
# How to Get Spartan 365

<table>
<thead>
<tr>
<th>TOOL</th>
<th>ACCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>OneDrive</td>
<td>Fully available. Go to <a href="https://spartan365.msu.edu">spartan365.msu.edu</a> and sign in.</td>
</tr>
<tr>
<td>Skype</td>
<td>Fully available.</td>
</tr>
<tr>
<td>Spartan Mail</td>
<td>For individuals and departments, send email request to <a href="mailto:ithelp@msu.edu">ithelp@msu.edu</a> to get on the implementation list.</td>
</tr>
</tbody>
</table>

For More Information, Search “Spartan 365” on msu.edu
Questions?

• More Information: https://tech.msu.edu

• Help: ITHelp@MSU.edu or call us (517) 432-6200
Agenda

- Spartan 365 Update
- Information Security Update
- Data Center Update
Education has a patching problem…

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percent Patched within 90 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information</td>
<td>97.5%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>92%</td>
</tr>
<tr>
<td>Healthcare</td>
<td>85%</td>
</tr>
<tr>
<td>Accommodation</td>
<td>66%</td>
</tr>
<tr>
<td>Retail</td>
<td>62%</td>
</tr>
<tr>
<td>Public</td>
<td>33%</td>
</tr>
<tr>
<td>Finance</td>
<td>33%</td>
</tr>
<tr>
<td>Education</td>
<td>18%</td>
</tr>
</tbody>
</table>
This Year’s Trends

• **Who is attacking?**
  - 75% of breaches are performed by outsiders
  - 51% of breaches performed by organized crime
  - 18% of breaches performed by state-sponsored groups

• **How do they do it?**
  - **99.9% of breaches leverage vulnerabilities over a year old**
  - 81% of breaches leveraged stolen/weak passwords
  - 66% of malware infections were from malicious attachments

• **Why do it?**
  - 95% financially motivated

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*2016 Verizon DBIR
+2015 Verizon DBIR
## MSU’s Threats, per Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>Primary Threat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodation</td>
<td>Point of Sale Intrusions</td>
</tr>
<tr>
<td>Administrative</td>
<td>Privilege Misuse</td>
</tr>
<tr>
<td>Educational</td>
<td>Cyber Espionage</td>
</tr>
<tr>
<td>Entertainment</td>
<td>Point of Sale Intrusions</td>
</tr>
<tr>
<td>Finance</td>
<td>Web Application Vulnerabilities</td>
</tr>
<tr>
<td>Healthcare</td>
<td>Stolen Assets</td>
</tr>
<tr>
<td>Information</td>
<td>Web Application Vulnerabilities</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>Cyber Espionage</td>
</tr>
<tr>
<td>Public</td>
<td>Miscellaneous Errors</td>
</tr>
<tr>
<td>Retail</td>
<td>Point of Sale Intrusions</td>
</tr>
<tr>
<td>Utilities</td>
<td>Cyber Espionage</td>
</tr>
</tbody>
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Agenda

• Spartan 365 Update
• Information Security Update
➢ Data Center Update
Data Center Objectives

Support the delivery of our mission of education, research and outreach, and activities inherent in the operation of a major teaching and research institution.

| Provide sufficient capacity to host all distributed IT currently housed in units across campus and other locations. | Develop a centralized data center to support the academic, research, administrative and high performance computing needs of the University. | Address today’s and tomorrow’s compute capacity, quality, reliability, redundancy and security needs. |
Post Build - Consolidate and Optimize

Consolidate

Moving to a consolidated data center capacity model supports the ability to:

- Increase security.
- Redistribute unit technology resources to higher value activities.
- Repurpose the larger data centers and rooms across campus.
- Move to more efficient and cost-effective technologies (example: virtualization).
- Generate central savings through energy efficiency.

Campus Physical Server Counts (est.)

- HPCC, 800
- Physics, 415
- ITS-DCC’s, 428
- NSCL / FRIB, 242
- RHS, 182
- Next 4 Sites, 308
- Others (31 sites), 302
- Decentralized IT, 603

70+ Data rooms

One enterprise-class data center

Optimize

Virtualized Servers 35%

Physical Servers 65%

Physical 23%

Virtualized 77%

MICHIGAN STATE UNIVERSITY

Improve to...
## Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Milestone / Migration “Wave”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-November</td>
<td>• Wave 0.5 (network gear &amp; test servers)</td>
</tr>
<tr>
<td></td>
<td>• Wave 1 (DNS, load balancer, some on-premise email)</td>
</tr>
<tr>
<td></td>
<td>• Substantial completion of build</td>
</tr>
<tr>
<td>December</td>
<td>• Wave 2</td>
</tr>
<tr>
<td>January, 2018</td>
<td>• Wave 3</td>
</tr>
<tr>
<td>February</td>
<td>• OSIRIS installation</td>
</tr>
<tr>
<td>April-July</td>
<td>• Target for iCER cluster and lab equipment installation</td>
</tr>
<tr>
<td>September</td>
<td>• “Open” migration waves from all academic units*</td>
</tr>
<tr>
<td>March, 2019</td>
<td>• Decommission ADC</td>
</tr>
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</table>

* We can start discussions in January to do joint planning
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Thank you!

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SPARTANS WILL.