Campus Computing Infrastructure (CCI) Initiative

**Goals**

- Continue campus involvement building upon relationships and work completed through the Administrative Excellence teams (2011-2014)
- Reduce risk through shared, scalable, secure service adoption
- Provide cost-effective IT services through economies of scale
- Collaborate and partner with Campus IT to help meet their missions
- Gain energy and space efficiencies through facility aggregation

**Investments to Date**

- $2.4 M data center electrical, cooling and facility upgrades at Dayton, WARF, Medical Foundation Centennial Building
- $4 M for scalable storage to support research, instructional and administrative needs
- $1.6 M for shared, scalable virtual server infrastructure
CCI Services

- Applications
- Consulting
- Storage
- Backup
- Data Centers
- Servers

**Note:** Services can be consumed a la carte or as bundled, managed services. Flexible services allow us to meet people where they are.

CCI Engagements

- 75+ Engagements since January 1st, 2015
- 50+ Groups already using 100 TB of storage
- 15+ Groups involved in virtualization pilot

CCI Brokering

- Brokering relationships with the Public Cloud Providers and Off-Site Archiving Solutions
- Identifying secure data sets on campus (like PCI, FISMA/SA) and brokering hosting solutions in existing, secured environments
- Partnering with other campus service providers to thoughtfully get people to the right solutions
# UW-Madison Campus Computing Infrastructure (CCI) Initiative

## CIC Universities Virtual Server Rates Comparison

<table>
<thead>
<tr>
<th>CIC Universities*</th>
<th>CPU</th>
<th>RAM</th>
<th>Storage</th>
<th>Rate Per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Iowa</td>
<td>2</td>
<td>4</td>
<td>40</td>
<td>$1,161.60</td>
</tr>
<tr>
<td>University of Chicago</td>
<td>2</td>
<td>4</td>
<td>15</td>
<td>$1,059.96</td>
</tr>
<tr>
<td>University of Michigan</td>
<td>2</td>
<td>4</td>
<td>50</td>
<td>$776.16</td>
</tr>
<tr>
<td>Michigan State University</td>
<td>2</td>
<td>4</td>
<td>40</td>
<td>$775.00</td>
</tr>
<tr>
<td>University of Nebraska-Lincoln</td>
<td>2</td>
<td>4</td>
<td>40</td>
<td>$750.00</td>
</tr>
<tr>
<td>University of Maryland</td>
<td>2</td>
<td>4</td>
<td>45</td>
<td>$720.00</td>
</tr>
<tr>
<td>Pennsylvania State University</td>
<td>2</td>
<td>4</td>
<td>40</td>
<td>$696.00</td>
</tr>
<tr>
<td><strong>University of Wisconsin-Madison</strong></td>
<td>2</td>
<td>4</td>
<td>40</td>
<td><strong>$600.00</strong></td>
</tr>
<tr>
<td>Ohio State University</td>
<td>2</td>
<td>4</td>
<td>40</td>
<td>$552.00</td>
</tr>
<tr>
<td>Indiana University</td>
<td>2</td>
<td>4</td>
<td>40</td>
<td>$550.00</td>
</tr>
<tr>
<td>University of Illinois</td>
<td>2</td>
<td>4</td>
<td>50</td>
<td>$546.00</td>
</tr>
<tr>
<td>Purdue University</td>
<td>2</td>
<td>4</td>
<td>40</td>
<td>$140.00</td>
</tr>
<tr>
<td><strong>Average Price Per Year</strong>**:</td>
<td></td>
<td></td>
<td></td>
<td><strong>$693.89</strong></td>
</tr>
</tbody>
</table>

* Each university lists their information a little differently. Focus was on unmanaged virtual server costs.

** Information not found for: University of Minnesota, Northwestern, and Rutgers University.

## Amazon Virtual Server

<table>
<thead>
<tr>
<th>Amazon Virtual Server*</th>
<th>CPU</th>
<th>RAM</th>
<th>Storage</th>
<th>Rate Per Year**</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Demand (rates are market variable)</td>
<td>2</td>
<td>4</td>
<td>40</td>
<td>$678.72</td>
</tr>
<tr>
<td>Reserved</td>
<td>2</td>
<td>4</td>
<td>40</td>
<td>$591.12</td>
</tr>
</tbody>
</table>

* Reserved is for a 1-year term and On-Demand is a per hour rate. Calculations were done using the public rates as of July 2015.

** Data Transfer Fees not applicable due to use with Internet2
<table>
<thead>
<tr>
<th>Category</th>
<th>Features</th>
</tr>
</thead>
</table>
| Security                       | - Partnering with Cybersecurity to protect the environment through managed security controls  
                                  - Cybersecurity will provide assessments and audits                        |
| Consulting                     | - Service consulting to ensure best fit and smooth transition             
                                  - Sharing best practices from previous engagements                          |
| Billing & Reporting            | - Monthly billing statements                                             
                                  - Reporting capabilities to assist with right-sizing                         |
| Design, Planning & Management  | - Virtualization architecture that meets UW’s guidelines                 
                                  - Planning future upgrades to meet future needs                                  |
| Communications                 | - How-to documentation that is accurate & up to date                      
                                  - Portal provides service information & a way to get support                  |
| Identity & Access Management   | - Integration with Campus Active Directory and Manifest                   |
| Service Management & Operations| - 24x7 Network Operations Center and services tracked using IT Service Management  
                                  - Integration into the Disaster Recovery Plan                                   |
| Data Management                | - Data mirroring for service disaster recovery                            
                                  - Ability to take snapshots and there is performance & security monitoring     |
| Platform                       | - Automated self-provisioning                                            
                                  - Hypervisor/Firmware updates taken care of and licensing managed (Note: OS Licenses are billed back) |
| Infrastructure                 | - Life cycle management of all hardware and hardware repairs and issues are all managed  
                                  - High speed networking                                                      |
| Facilities                     | - Data center management to provide redundant power & cooling            
                                  - Physical security through video monitoring and card access                   |