

CAMPUS COMPUTING INFRASTRUCTURE (CCI) SHARED SERVICES

3/20/2017

History

- In 2012, a campus-wide Administrative Excellence Data Center Aggregation team identified opportunities for cost savings and reclamation of physical space by aggregating nearly 100 data centers into two or three.
- In 2014, an in-depth study of available data centers meeting minimum standards for power, cooling, and physical security showed there wasn't enough space to host the volume of campus servers that would move into the certified data centers.
- In 2015, the Campus Computing Infrastructure (CCI) initiative was sponsored by the CIO's office and tasked with delivering a shared services portfolio to improve IT service and data stewardship practices, risk reduction, expenditure avoidance, utility savings, reduced staff time and maintenance costs, and improve space utilization.

Shared Services Overview

The shared service portfolio includes both on-campus and external third party services including:

	On Campus	External Cloud Services
Computing	<ul style="list-style-type: none">• CCI Virtualization• Data Center Co-location (limited space)	<ul style="list-style-type: none">• Amazon Web Services• Microsoft Azure
Storage	<ul style="list-style-type: none">• CCI SharedDrive• CCI High Performance	<ul style="list-style-type: none">• Amazon Web Services• Microsoft Azure
Backup / Archive	<ul style="list-style-type: none">• Bucky Backup• Bucky Archive	<ul style="list-style-type: none">• Amazon Web Services• Microsoft Azure

Shared Services Goals:

- **Flexibility:** Customers are allocated dedicated service instances with both self-service and DoIT- managed administration models available.
- **Agility and Scalability:** The service model offers on-demand capacity enabling customers to add or remove resources as needed thereby paying only for what they use.
- **Institutional Alignment:** The services align with other campus entities such as Advanced Computing Initiative (ACI), Facilities Planning and Management (FPM), the Office of Cybersecurity, the Office of Risk Management, and UW-Madison Libraries.

Customer Engagement

The CCI Engagement team (Mike Layde, Rhonda Davis) do an initial consult and work with potential partners to help find the best fit for their computing needs.

- A sales/marketing model is not used; contacts are initiated by the customer.
- To date, we have partnered with folks from administrative, research, and teaching communities.
- We offer no-cost trials for those wanting to explore the environment to ensure it meets their needs, assist with onboarding, and pursue feedback for improvements and feature enhancements to the services.

Customer Profiles

Customers typically move applications or services into the environment as they see fit, using a combination of services as needed. Some examples:

- DoIT – Servers have been migrated into CCI and is also a customer of the service.
- WI National Primate Research Center – The Primate Center has migrated a number of services to CCI in order to avoid replacing hardware.
- Ophthalmology – Researcher needing short-term computing resources to run a data analysis application for a two to three-month period of time. The server resources can be adjusted up or down as needed and deleted when no longer needed, avoiding a long-term investment in hardware.
- Performance Management Development Program – Using CCI virtualization for application hosting, and the shared database environment for database hosting, to support a performance management application developed by the Grad School and planned for campus-wide rollout by OHR.

Current Metrics (handout)

Roadmap

- Public cloud services
 - Pilots in progress with Amazon Web Services and Azure
 - Google Cloud Services in queue
- Hybrid services
 - Enabling use of a combination of on-premises and public cloud services
 - The CCI Virtualization portal (VMWare vRealize Automation) has the capability to provision storage, network, and compute resources across multiple public and private clouds
 - Developing a service model to support a specialized virtualization environment targeting large campus units, high security needs, or unique requirements that don't fit in to the shared environment.
- Tape archive
 - Low cost cold storage for data people wish to retain, but not access often.
- Continued collaboration with campus partners to add needed features, functionality, and services to the portfolio.
- Continued partnership with our vendors to provide current technologies to campus.