

About Our Technology

Hardware

For the initial implementation of the cloud, Scholars Portal and the University of Toronto have selected Dell as the hardware vendor.

The implementation consists of two types of systems: heads and storage shelves, with each node consisting of one head unit and two or more storage shelves.

The model and specifications on the two types of units are as follows:

- Head units: Dell Power Edge R720xd server populated with two 2.8GHz Xeon processors, 256GB of RAM, and two 200GB SSD drives which will be used to run the operating system and the OpenStack software. Each head unit also contains twelve 4TB SAS drives for an internal storage capacity of 48TB.
- Storage shelves: Dell PowerVault MD 1200 storage shelves, directly attached to the server, with each shelf containing twelve 4TB SAS drives, with a total capacity per shelf of 48TB.

Software

The OLRC will use the Swift module of the open source OpenStack cloud management software to connect the storage nodes described above into a distributed network, with content replicated across the partner sites. Effective data replication is a key element of all long-term digital preservation strategies. The Ontario university libraries, which share common needs for low-cost preservation storage and have a long history of collaboration through OCUL and Scholars Portal, are in a good position to build a shared storage network, jointly governed and sustained through member contributions and subscription fees.

The OLRC is built on scalable, open source technology. Our goals in selection of software are to ensure scalability, and to make sure the project is open, replicable, and advances the conversation around sustainable storage technology in the memory institution community.

Current Software in Use

