

# McMaster University Protects Irreplaceable Healthcare Data with Innovative Backup in the Cloud

**55%**  
savings in total  
cost of backup

**40%**  
reduction in  
backup infrastructure

**100%**  
data residency  
in Canada

## Challenge

*McMaster University's leading-edge research requires innovative yet pragmatic and affordable technology to support its ongoing efforts to solve big health challenges.*

As one of the top 100 ranked universities in the world, the Hamilton, Ontario-based McMaster University has a renowned health sciences program. With its well-earned reputation for medical innovation, the University's Medical School leads the way in both healthcare teaching and research not only in Canada, but globally. On the research side, the school tackles challenges in everything from pain care to cancer treatment to controlling infectious diseases such as COVID-19.

To help support these research efforts, the McMaster IT team is responsible for making sure the right technology is in place. Much of the work is driven by research grants. As such, they need to balance budget with effectiveness, coming up with the right combination to support the specific needs of each research project, while integrating technology holistically across three different physical locations and multiple offices. As the IT team addresses ongoing issues around connectivity, application support, and infrastructure, they are increasingly looking at cloud solutions to help provide efficiency and potential cost savings.

At the same time, researchers at McMaster's Medical School depend on and generate a tremendous amount of data in their efforts to solve today's biggest health issues. "We not only have lots and lots of critical data," said Graig Kelly, Technology Manager, Infrastructure, "but it is scattered all over Canada. And we can't afford to lose any to either physical catastrophe or ransomware attacks."



### INDUSTRY

Education, Public Sector

### USE CASE

IT Modernization, Move to the Cloud,  
Ransomware Protection

### BENEFITS

Canadian Data Residency, Lower TCO,  
Reduced Infrastructure, Air-Gapped  
Backup

"When it came to data protection, we recognized very quickly that Clumio made a lot of sense for us. It's absolutely a perfect fit for what we are trying to do and where we want to go with our technology."

**Graig Kelly**  
Technology Manager, Infrastructure  
McMaster University

## Objectives

*McMaster University wanted a cloud-based solution that didn't rely on complicated infrastructure and would keep their data in Canada.*

Given the importance of data in medical research, backup and recovery is essential to ensuring long-term success of the school. Kelly knew that McMaster needed to move their backup off site and to the cloud, but storage of the data had to remain in Canada. And while Kelly absolutely required 100 percent data residency in Canada, he also wanted 100 percent simplicity—no burdensome infrastructure and no complicated and expensive pricing models.

Kelly and his team had been using Veeam for their data protection, but it required on-premise equipment, was getting increasingly expensive, and didn't offer a true cloud-based alternative. Neither did Rubrik or any other vendor that Kelly looked at.

"We had gotten to the point where we had to decide what data we could afford to back up," stated Kelly. "We couldn't back up everything, it was too expensive. Trying to choose which data is the most important is not a fun game to play. We needed a different approach to protecting our data." Kelly wanted a backup and recovery solution that didn't force a painful tradeoff. Here is what he was looking for:

- Offsite backup that was stored in Canada
- Affordable pricing that was easy to understand and predict
- The ability to eliminate expensive infrastructure
- Easy and unified management that reduced backup supervision
- Air-gapped and immutable backup that protected against ransomware

## Solution

*From simplicity to predictable costs, Clumio's cloud-based backup as a service gave Kelly and McMaster University the data protection they needed for their critical data.*

With Veeam becoming too expensive to manage and maintain, and no viable cloud-based alternative on the horizon, Kelly wasn't sure how he was going to bring an end to painful backup and recovery tradeoffs. That was until a trusted industry vet brought Clumio to his attention. "We immediately started doing some research on Clumio and how they approached backup and recovery," stated Kelly. "When it came to data protection, we recognized very quickly that Clumio made a lot of sense for us. It is absolutely a perfect fit for what we are trying to do and where we want to go with our technology."

Unlike the other technologies that McMaster had been looking at, Clumio is truly built on and for the cloud. Clumio's ability to integrate tightly with AWS was a key factor in Kelly's decision as well. "Right off the bat Clumio began reducing our on-premise hardware," said Kelly. "It enabled us to back up off site into the cloud. And, working with AWS, it eliminated the infrastructure we had to manage and maintain." Best of all for McMaster it backed up into a Canada-based cloud, giving Kelly the data residency that was non-negotiable.

**"Now, with Clumio's air-gapped and immutable backup, I rest easy. If our production environment is compromised, our backup is no longer compromised as well. This gives us the ability to recover if disaster strikes."**

**Graig Kelly**  
Technology Manager, Infrastructure  
McMaster University

For Kelly and his team, one of the benefits Clumio brought to the table right from the start was simplicity balanced with full capability. As Mike Maier, Lead Technical Support, explained: "I was totally surprised by how easy Clumio was to both implement and manage. With Veeam, with all of its complicated options and stuff, I practically had to have a university degree to run it. Clumio had all the features that we needed, it did everything we asked of it, and it was simple."

Maier was also impressed with Clumio's speed and ability to quickly handle data restores. "Our biometrics group asked me to restore a couple of critical data sets, each one was about 100 gigs," Maier explained. "I was able to do it in less than 10 minutes for each one. I would never have been able to do it that fast before Clumio."

For Kelly though, the biggest benefit perhaps is simply peace of mind. "Ransomware attacks on universities across Canada have been massive," he stated. "We have seen a huge increase, especially since the pandemic started. Now, with Clumio's air-gapped and immutable backup, I rest easy. If our production environment is compromised, our backup is no longer compromised as well. This gives us the ability to recover if disaster strikes."

### About McMaster University Health Sciences

McMaster's Health Sciences program is advancing human and societal health and well-being as they train health care teams including physicians, nurses, physiotherapists, occupational therapists, physician assistants, midwives and researchers to work together to provide the best patient care. McMaster's excellence in world-class research has consistently placed the university among the top 50 universities in the world for health and medicine.

Learn more about McMaster at [www.mcmaster.ca](http://www.mcmaster.ca)

## Results

*With Clumio taking care of the Medical School's data protection, Kelly and his team can now focus on more strategic initiatives and better support the program's life-changing research.*

From Clumio's proactive support to the ease of management, backup and recovery is no longer an expensive burden for McMaster University. The Medical School has already seen more than 55 percent savings on total cost of ownership (TCO) and has reduced its infrastructure by 40 percent with more to come. Best of all, critical healthcare data is protected from harm. So, while Canada's Ministry of Health continues to pump genome data on COVID-19 to the school's researchers, Clumio is ensuring that it remains safe from disruption and loss.

And, as Kelly leads the school on its journey to the cloud, he is already looking at all the ways to take further advantage of Clumio and AWS. From backing up Microsoft 365 to moving all the school's considerable amount of tape backup to the cloud, Kelly is looking forward to expanding Clumio's role in protecting all of McMaster's essential data.