



ADITUM HEALTH ENSURES PIPEDA COMPLIANCY OF MYCONNECTEDHEALTHCARE PLATFORM

Aditum Health is a healthcare technology company that empowers seniors and individuals with disabilities through their MyConnectedHealthCare platform. In order to make their solution commercially available, Aditum Health needed to ensure their platform is compliant with regulatory data privacy standards. Using the technical resources at CENG, the company was able to prove their solution ensures protection of their client's data.

Aditum Health is a Markham-based company that develops patient and medication monitoring solutions. The company focuses on providing accessible, intuitive, and inclusive patient-centered healthcare solutions and products, particularly targeted towards seniors. One of their solutions is a virtual caregiver application called "Laila" that allows patients and caregivers to easily manage their medication, doctor appointments, and day-to-day medical tasks. To ensure that access to personal information through Laila and the platform is compliant with regulatory standards, Aditum Health used the technical and infrastructure resources at CENG to run several customer scenario test cases. These test cases proved that their solution is compliant with the Protection and Electronic Documents Act (PIPEDA), which regulates Canadian data privacy requirements in the private sector.

PROBLEM

Managing medication and other patient health tasks can be a difficult and detrimental problem for seniors or individuals with disabilities. There are several aspects that either the patient or the caregiver has to keep track of, such as medication dosage, appointments, and medical records.

The high majority of seniors want to stay in their homes as long as possible before entering a retirement or senior care facility. However, many are concerned about properly managing their health and medication and have concerns about isolation and loneliness. Beyond that, many seniors have chronic health conditions making it difficult to report all of their medications and adherence to emergency personnel and healthcare professionals in situations where they need help.

SOLUTION

Aditum Health has developed the MyConnectedHealthCare platform which interacts with seniors or those with disabilities through a virtual caregiver called Laila. Laila provides voice reminders of medication timings, dosages, and doctor appointments to keep its users on track. Laila includes mood analysis, direct communication to the caregiver, as well as entertainment, meditation, and exercise games. Aditum Health is a leader in accessible design and employs a natural language, conversational interface that has Laila talk and listen to her patients. This makes the platform intuitive and easy to use for seniors and individuals with disabilities. Laila securely stores all this information in the platform and shares the data with the caregiver or healthcare personnel through a portal secured with two-factor authentication.

Medications



Event Management



Medical Records



Emergency Contacts



Communications



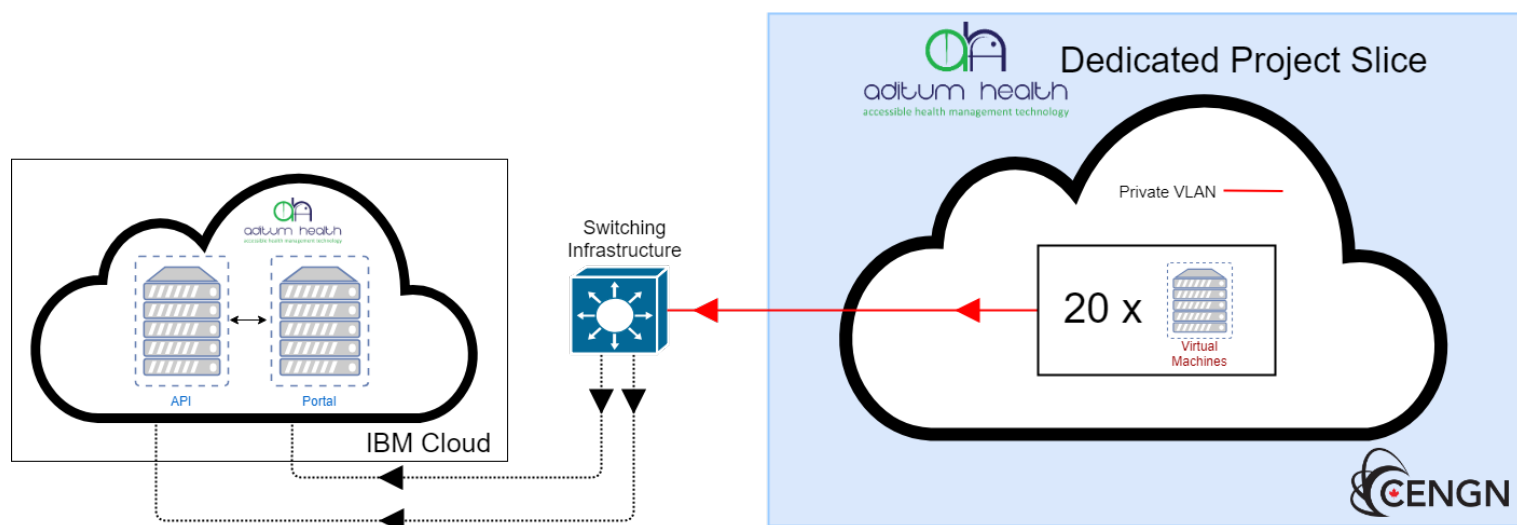
CENG MEMBERS



PROJECT

Since the MyConnectedHealthCare platform deals with sensitive patient data, Aditum Health must ensure their solution complies with Canadian privacy regulations, like PIPEDA, before becoming commercially available. As opposed to creating their own testing infrastructure to ensure their solution complies with PIPEDA regulations, Aditum Health used a cloud tenancy and the infrastructure resources at CENGN to prove their solution is compatible.

To setup their project, 20 virtual machines (VMs) were deployed in a cloud tenancy on the CENGN infrastructure. Traffic was generated from the VMs and sent through a private Virtual Long Area Network (VLAN) where it passed through the internet to the platform that was positioned in the IBM cloud.



CUSTOMER SCENARIO TESTING

Aditum Health ran test case scenarios utilizing the CENGN infrastructure to ensure that their solution is PIPEDA conforming and upholds the privacy rights of their customer data. The technical team at CENGN offered valuable advice on the testing space configuration to the Aditum Health team, which included many Georgian College interns. Aditum Health completed the following test cases:

- 1. Login & Profile Updates for Mobile and Web Devices.** To test scalability of the solution, a mass amount of simultaneous login attempts and profile updates were made using traffic from the VMs. MyConnectedHealthCare was able to grant access to correct credentials and block access to invalid credentials for all login attempts, allowing only the correct users to make updates. Several security attacks were made during this process and the platform didn't expose any data.
- 2. Security.** During the testing, several staged cyberattacks were made on the MyConnectedHealthCare portal, including when the solution was in use on web and mobile devices. The platform was able to maintain performance without revealing any patient data.

CONCLUSION

This project has provided a great deal of value as they have proved that the MyConnectedHealthCare platform complies with PIPEDA and that the safety of their customers data is ensured when using the platform. CENGN provided a pre-configured infrastructure to accelerate the PIPEDA compliancy process. Aditum Health was also able to benefit from the technical expertise of the CENGN team when running the customer scenario test cases.