

Abstract

The healthcare industry is under increasing threat from ransomware attackers for its large volumes of valuable and sensitive data stored on fragmented systems, managed by ill-equipped system administrators. Trends have shown that this pattern has grown over the course of the COVID-19 pandemic via new exploits and worldwide collection of health data related to vaccinations. This project has attempted to address a solution for this problem by developing a concept application to store and access health data in decentralised data storage using the Solid Protocol.

Several applications have already been released using the Solid Protocol, proving that development in the space is possible. However, this project differed slightly from other approaches in that it attempted to build an enterprise application for the healthcare industry, dealing with extremely sensitive data and aimed for use by individuals across several healthcare processes.

By way of this development, the capabilities of Solid with regard to building complex organisational applications were evaluated. It was found that Solid technologies are capable of most fundamental development tasks, but a few critical shortcomings with the current implementations would deter most organisations from investing the additional time and resources required to develop a commercial product with Solid.