Fibermap

Federico Cedolini
Advisor: Dr. Ewa Syta
Affiliation: Department of Computer Science, Trinity College

What is Fibermap?

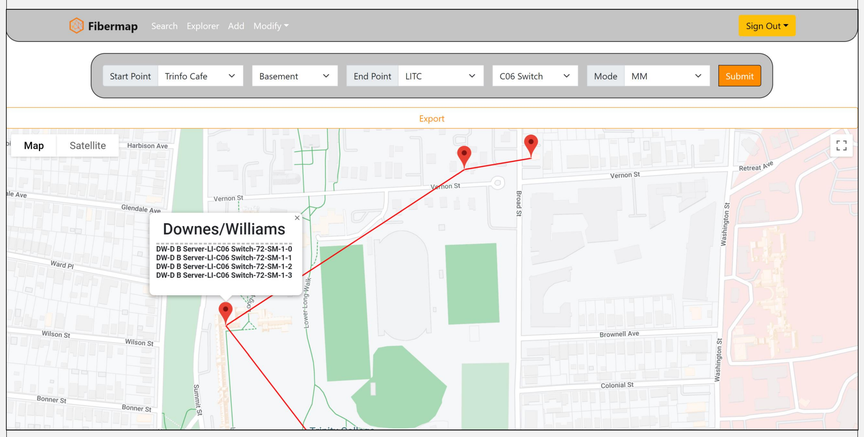
Fibermap is a web application that allows network administrators to:

- Keep inventory of the status of the fiber optic infrastructure
- Quickly find the shortest path between buildings using open connections

- Fibermap is a tool that aims to facilitate the asset management of the fiber optic infrastructure by acting as inventory
- It also keeps track of all different fibers that are currently being used to connect devices and locations or are free to be used in new connections.
- Additionally, Fibermap makes the setup of new connections easier by allowing network administrators to quickly and efficiently identify the shortest path between locations using open ports.
- After generating the shortest path, Fibermap offers different data visualization by providing the option of creating a map view of the shortest path or an exportable list.

Benefits of Fibermap

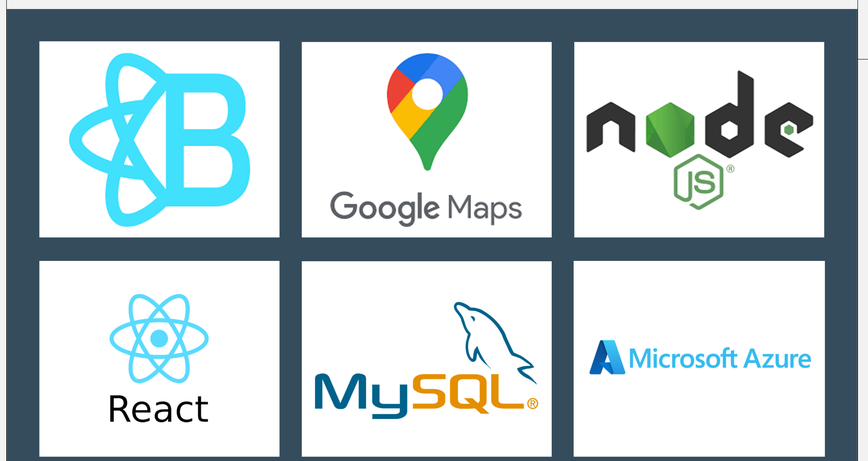
User Interface



Finding The Shortest Path

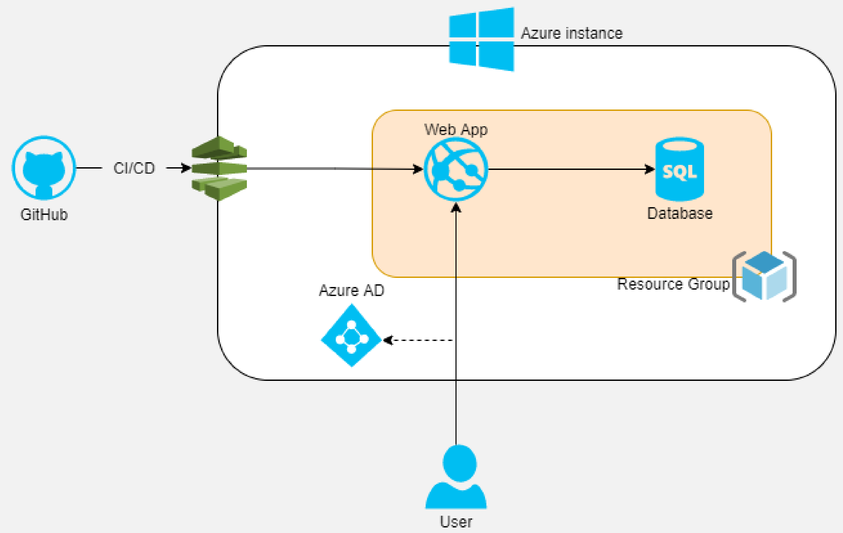
The goal is to connect buildings using the least number of intermediary locations. Therefore, the Breadth First Search (BFS) Algorithm is used for the shortest path search.

Technologies



Infrastructure

- Trinity College is a Microsoft Campus; therefore, Fibermap was build taking advantages of different Microsoft services.
- Fibermap is hosted in the cloud using the Web App Services provided by the cloud provider Microsoft Azure.
- Within the same resource group, there is a mySQL database that stores all the fiber optic information for the application.
- Azure Active Directory allows Trinity's Systems and Networks team to access the application with their own Trinity accounts.
- Finally, all the code is stored on GitHub for sharing, contributing, and deploying.



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