Secure Web Gateway for Fulton Hogan

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ABSTRACT

Network Security plays a critically important role in Information Technology to reduce the chances of a cyberattack. Accessing websites that are dodgy or contain malware will increase the chances of damaging the company network unless there is an appropriate security measures in place to mitigate the chances of the company network being compromised. This paper provides an overview a new Secure Web Gateway implementation to provide a Proof of Value for Fulton Hogan to test the performance and capabilities. Agile methodology was used to help with the planning, documentation, and consistent communication.

Keywords: Secure Web Gateway, Agile, Networking, Proof of Value

1. INTRODUCTION

Fulton Hogan delivers infrastructure to improve the lives of people in Australia and New Zealand. They have 9,000 strong members in every kind of weather, creating, connecting, and caring for communities. (Fulton Hogan Ltd, n.d.) After 90 years in business, they believe resilient infrastructure will help tackle the challenges of a changing world, and they will continue to invest and innovate to play their part (Fulton Hogan Ltd, n.d.). This document describes the methodology that was used and the process to build the new Secure Web Gateway solution.

Figure 1

Secure Web Gateway Poster

This quality assured poster paper appeared at the 15th Annual Conference of Computing and Information Technology Research and Education New Zealand (CITRENZ2024) and the 37th Annual Conference of the National Advisory Committee on Computing Qualifications, Dunedin, NZ, October 2nd-4th.
DOI: will be supplied ahead of camera ready.

2. PROJECT DETAILS

Fulton Hogan currently operates an enterprise Secure Web Gateway solution across its end-user computer fleet. As part of Fulton Hogan's continual solution evaluation process, they wish to investigate alternative solutions in this space.

A Secure Web Gateway is either an on-premises or cloud network security technology that filters internet traffic and enforces company policy compliance (paloalto networks, n.d.).

Create user stories from everyday users for the test pilot deployment of the modern Secure Web Gateway solution to provide a Proof of Value to the organization.

Testing and documenting 10 key enterprise applications and browsing the web that provides an improved user experience.

Project Goals:

- Document the current state of the current Secure Web Gateway solution.
- Deploy the new Secure Web Gateway as a Proof of Value to evaluate the product and service offering.

Student Goals:

- Understanding the Industry and how the workplace functions.

3. METHOD

Agile is used to manage tasks and workload that centers around incremental steps. In the Agile process there is consistent communication with the client throughout the project (Frohlich, 2022).

Using Agile in this project helped with consistent communication within the Fulton Hogan team. Having all the resources in one place for all participants to access kept the team on track. The weekly meetings are held on Microsoft Teams, and they are recorded and documented to be put into a SharePoint folder for all participants involved in the project to view what occurred in the meeting and the action points that the team need to do before the next meeting.

Using the Agile methodology helped provide understanding and consistent communication throughout this project. The student has learned a lot along the way over the five years the student has been studying at Ara and putting all that knowledge

into this project has helped the student get through the tough challenges and bumps along the way.

4. OUTCOMES

Project Outcomes:

- High level documentation of the current state.
- Created new AD groups synced to Microsoft Entra ID.
- Documented the testing of the new SWG solution.

Student Learnings:

- Develop skills and expertise in the workplace environment
- Understanding how the workplace functions
- In-depth knowledge of network security
- Processes of testing network software
- Variety of different tools that are used in industry
- Enhance my knowledge of Networking in a workplace environment

5. CONCLUSION

This project posed multiple challenges that were addressed systematically to meet the deliverables. The student gained experience working with Fulton Hogan and enjoyed working with the team. It is important that consistent communications are maintained within the team to successfully complete the project deliverables.

6. REFERENCES

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