

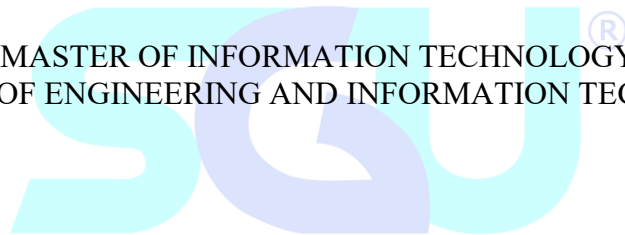
**ZERO TRUST ARCHITECTURE FOR SECURING HYBRID
WORKFORCES: A BROWSER-CENTRIC APPROACH**

By

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22251020

MASTER'S DEGREE
in

MASTER OF INFORMATION TECHNOLOGY[®]
FACULTY OF ENGINEERING AND INFORMATION TECHNOLOGY



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Jul 2025

STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and, to the best of my knowledge, it contains no material previously published or written by another person, nor material that, to a substantial extent, has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

ZERO TRUST ARCHITECTURE FOR SECURING HYBRID WORKFORCES: A BROWSER-CENTRIC APPROACH

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This thesis proposes a zero-trust architecture focusing on browser-centric security for hybrid workforces. As organizations increasingly adopt remote and hybrid work models, traditional perimeter-based security approaches have become inadequate. This research addresses the critical need for a comprehensive security framework that protects against evolving browser-based threats while enabling workforce flexibility.

The study begins by analyzing the current landscape of browser-based issues and their impact on organizational security. It then develops a multi-layered zero-trust model specifically tailored for browser-centric environments. Key components of this framework include continuous authentication mechanisms, access controls, and real-time threat monitoring within the browser context.

This proposed architecture incorporates advanced technologies such as browser isolation, browser extensions, and analytics to enhance security without compromising user experience. Through a series of simulations with real case studies, the effectiveness of the browser centric zero-trust model is evaluated. The research demonstrates significant improvements in threat detection and overall security posture compared to traditional security approaches.

This thesis contributes to the field of cybersecurity by offering a practical, scalable solution for organizations seeking to secure their hybrid workforces against sophisticated browser-based attacks. The findings provide valuable insights for security

professionals and researchers working to enhance cybersecurity in the evolving landscape of hybrid work environments.

Keywords: Zero Trust Architecture, Browser Security, Cybersecurity, Hybrid Work





DEDICATION

The dedication is normally short and direct. Example:

I dedicate this work to the future of the country I love: Indonesia. Merdeka!



ACKNOWLEDGEMENTS

This is the part where you express your gratitude to all the parties involved in the success of your thesis work. However, it should be kept simple and short.

Example: I wish to thank the members of my committee for their support, patience, and good humor. Their gentle but firm approach has been appreciated. Prof. Thesis Advisorus was particularly helpful in guiding me toward qualitative methodology. George Coadvisoris's interest in sense of competence was the impetus for my proposal. Finally, I would like to thank Dr. Stephen Fain for his support. From the beginning, he had confidence in my abilities to not only complete my degree but to complete it with excellence.

I have found my coursework throughout the Curriculum and Instruction program to be stimulating and thoughtful, providing me with the tools with which to explore both past and present ideas and issues.

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