Implementation and Simulation of Secure Sockets Layer (SSL) in Windows Presentation Foundation

Master’s Thesis Defense
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Thursday, July 30, 2015, 9:30 AM
ENGR 2901

Abstract

SSL (Secure Sockets Layer) and TLS (Transport Layer Security) are cryptographic protocols designed to provide secure communication between a web server and a web browser. This thesis introduces a unique approach to understanding SSL and TLS by visualizing these protocols through simulation in WPF (Windows Presentation Foundation). This approach is intended to help students to get a clearer picture of how these protocols actually work by illustrating all steps of SSL and TLS, including the handshake and the record protocols.