Dr. Christoph Kerschbaumer

Manager, Security & Privacy Engineering
Mozilla

The Road to a Secure Web

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The Hypertext Transfer Protocol, generally displayed as http in a browsers address-bar, is the fundamental protocol through which web browsers and websites communicate. However, data transferred by the regular http protocol is unprotected and transferred in cleartext, such that attackers are able to view, steal, or even tamper with the transmitted data.

Carrying http over the Transport Layer Security (TLS) protocol, generally displayed as https in the address-bar of a browser, fixes this security shortcoming by creating a secure and encrypted connection between the browser and the website.

Over the past few years we have witnessed tremendous progress towards migrating the web to rely on https instead of the outdated and insecure http protocol. Within this talk we will highlight initiatives from browser vendors as well as community efforts to accelerate the migration from http to https. We will conclude by answering the question of how much further we have to continue on this road to reach our destination: a secure Web.

About the speaker: Christoph Kerschbaumer has over a decade of experience in Secure Systems Development. His work ranges from designing secure systems with fail safe defaults to fighting cross site scripting as well as preventing man-in-the-middle attacks. Currently he manages the Firefox Security & Privacy Engineering team at Mozilla. He received his PhD in Computer Science from the University of California, Irvine where he based his research on information flow tracking techniques within web browsers. Prior to being a graduate research scholar, he received a M.Sc. and B.Sc. in Computer Science from the Technical University Graz, Austria.
Website: https://www.christophkerschbaumer.com/