

Threat Modeling Analysis on FireStormcx's Webcam System

Jong Jin Cho, Miyoung Kang

School of Cybersecurity, Korea University, 145 Anam-ro, Seongbuk-gu, Seoul, 02841, Korea

jongjcho@korea.ac.kr, dasuni@korea.ac.kr

Abstract— Since the COVID 19 pandemic creates enormous casualties in the world, it rapidly changes the working environment. It significantly increased the virtual meeting among the team members at work. These require many pieces of equipment. Among the components, a webcam is becoming the most important piece of equipment in virtual meetings. Since the webcam becomes the important factor in the meeting, the attacks on the webcam are enormously increased. In many cases, when a group of hackers attacks a webcam, it creates critical privacy breaches. Therefore, to prevent these types of critical breaches, this paper closely conducts the Threat Modeling analysis based on DFD and STRIDE techniques on FireStormcx's webcam. Additionally, these types of Threat Modeling analysis result to create a recommended threat remediation plan.

Keyword— Privacy, Webcam, Threat Modeling, STRIDE, DFD



Jong Jin Cho received B.S in Security and Risk Analysis, Cybersecurity at the Pennsylvania State University, University Park, PA, USA, in 2019. In addition, he had two years of professional IT industry experience in New York City, Chicago, and Seoul. Currently, he is an M.S candidate in the School of Cybersecurity, Korea University. His current research interests are Threat Modeling, Formal Methods, and Secure Software Engineering.



Miyoung Kang received the M.S. degree in the Department of Computer Science and Engineering at Dongguk University and the Ph.D. degree in the Department of Computer Science and Engineering at Korea University, Seoul, Korea. She is a research professor at the graduate school of Information Security at Korea University, Seoul, Korea. Her research interests are Formal Methods, process algebras, software-defined networking (SDN), and security in networks.