Broadcasting Notifications: Integrating a Notification Feature

for an Internal Google Tool

(Technical Report)

Cybercrime vs Cybersecurity

(STS Research Paper)

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by

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Preface

Cybercrime is a rising socio-technical problem. As cyberspace grows, how can cybercrime be prevented?

How may an internal chrome extension alert all Google engineers to a technical emergency? This technical project was for an internship not associated with a class. To mass notify engineers of a technical emergency, an internal workflow team needs a chrome and dashboard notification. My task was to design and develop this system with support from my team. On December 1, 2021, a security vulnerability was found in an open-source library called Log4j. This called for engineers to ensure nothing was at risk from the technical threat. The internal workflow team was asked to send a warning message through their system. This internal tool has a user base of approximately 4,000 engineers so the message would have a significant reach. However, the team did not have a way to send out mass notifications since it was designed for individual notifications. The team therefore recommends a broadcasting feature.

How do users, financial cybercriminals, and cybersecurity engineers compete online to advance their respective agendas? As cyberspace rapidly grows, the safety of the internet and its users must be accounted for. While cybersecurity agencies are better organized and have more resources than most cybercriminals, they face opponents whose methods of attack evolve rapidly and who can sometimes enlist unintentional help from naive users. These agencies are adapting by collaborating with Section 9 firms in order to protect the financial sector and national security.