

Phishing-Resistant Information Systems: Security Handling with Misuse Cases Design

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Abstract

The spread of phishing intensifies the need for well-defined security requirements in the design of an information system. Phishing goes on increasing, especially in the e-services domain, even though a variety of prevention methods have been developed and used against it. Phishing attacks compromise the software quality features of a system. In our study, we focus on how to prevent phishing attacks with the misuse case method from a system design perspective. After presenting the phishing attack techniques and the related threats, we introduce and evaluate three kinds of the existing phishing prevention methods. As an evaluation result, we express our support and give a brief introduction to the misuse case method; we subsequently construct an example scenario to illustrate the method's application in the phishing prevention domain. After the discussion on phishing prevention based on the misuse cases identification, we conclude that it is possible to cater for phishing attacks at the system design level, by considering design quality features that ensure system's security.