S-scrum : a secure methodology for agile development of web services.

ABSTRACT

To care for security in early stages of software development has always been a major engineering trend. However, due to the existence of unpreventable and accidental security faults within the system, it is not always possible to entirely identify and mitigate the security threats. This may eventually lead to security failure of the target system. To avoid security failure, it is required to incorporate fault tolerance (i.e. intrusion tolerant) into the security requirements of the system. In this paper, we propose a new technique toward description of security requirements of Intrusion Tolerant Systems (ITS) using fuzzy logic. We care for intrusion tolerance in security requirements of the system through considering partial satisfaction of security goals. This partiality is accepted and formally described through establishment of a Goal-Based Fuzzy Grammar (GFG) and its respective Goal-Based Fuzzy Language (GFL) for describing Security Requirement Model (SRM) of the target ITS.