Application of Directed Acyclic Graphs for Threat Identification Based on Ontologies

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Abstract : Threat modeling is an important activity carried out in the initial stages of the development lifecycle that helps in building proactive security measures in the product. Though there are many techniques and tools available today, one of the common challenges with the traditional methods is the lack of a systematic approach in identifying security threats. The proposed solution describes an organized model by defining ontologies that help in building patterns to enumerate threats. The concepts of graph theory are applied to build the pattern for discovering threats for any given scenario. This graph-based solution also brings in other benefits, making it a customizable and scalable model.