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Autonomic Threat Avoidance and Self-Healing in Database Management System

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Abstract : Databases are the key components of the software systems. Due to the exponential growth of data, it is the concern that the data should be accurate and available. The data in databases is vulnerable to internal and external threats, especially when it contains sensitive data like medical or military applications. Whenever the data is changed by malicious intent, data analysis result may lead to disastrous decisions. Autonomic self-healing is molded toward computer system after inspiring from the autonomic system of human body. In order to guarantee the accuracy and availability of data, we propose a technique which on a priority basis, tries to avoid any malicious transaction from execution and in case a malicious transaction affects the system, it heals the system in an isolated mode in such a way that the availability of system would not be compromised. Using this autonomic system, the management cost and time of DBAs can be minimized. In the end, we test our model and present the findings.

Keywords : autonomic computing, self-healing, threat avoidance, security
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