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Security Mechanisms for Applications Developed in Java*

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Abstract

As an object-oriented programming language, Java is designed to address security concerns. At its core, Java is type-safe and provides automatic garbage collection, increasing the reliability of the application code. A secure class loading and validation mechanism ensure that only authorized Java code is executed. The Java security architecture includes many APIs, tools and implementations of commonly used security algorithms, mechanisms, and protocols. Secure mechanisms increase the reliability of the application code for loading and verifying classes to ensure the authorization of the executed Java code. The article provides various threats and mechanisms used in Java source code. This overview covers limitations in using methods, encapsulation problems, general types and methods, defensive copying and cloning aspects.

Keywords: security mechanisms, authorization, Java code, encapsulation, defensive copying, cloning

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