Title (en)

ENHANCED SECURITY FOR JAVA VIRTUAL MACHINES

Title (de)

ERHÖHTE SICHERHEIT FÜR VIRTUELLE JAVA-MASCHINEN

Title (fr)

SÉCURITÉ AMÉLIORÉE POUR DES MACHINES VIRTUELLES JAVA

Publication

EP 3158489 A4 20180314 (EN)

Application

EP 15809533 A 20150617

Priority

- AU 2014902381 A 20140620
- AU 2015050334 W 20150617

Abstract (en)

[origin: WO2015192182A1] A computer architecture providing enhanced JVM security and a method of providing enhanced security for a JVM are disclosed. The host computer runs a single, first, trusted JAVA API library above which is located a hypervisor software layer, and then at least one untrusted JAVA API library. The code of each second, upper, untrusted JAVA API library is modified at, or before runtime to call the hypervisor software layer instead of the JVM to thereby create a silo corresponding to each of the second, upper, untrusted JAVA API libraries. Each silo extends between the host computer and the corresponding second, upper, untrusted JAVA API library. The hypervisor software layer is operated to only permit communication between each of the second, upper, untrusted JAVA API libraries and a corresponding portion of the memory and functional assets of the host computer. Consequently, each of the second, upper, untrusted JAVA API libraries cannot communicate with all of the host computer memory and/or all of the host computer functional assets. A computer program product is also disclosed.

IPC 8 full level

G06F 21/53 (2013.01); **G06F 9/455** (2018.01)

CPC (source: EP)

G06F 9/45558 (2013.01); **G06F 21/53** (2013.01); G06F 2009/45566 (2013.01); G06F 2009/45587 (2013.01)

Citation (search report)

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- [A] WO 2013163679 A1 20131107 - WARATEK LTD [AU]
- [A] US 2002065943 A1 20020530 - CZAJKOWSKI GREGORZ J [US], et al
- [I] RAJU PANDEY ET AL: "Providing fine-grained access control for Java programs via binary editing", CONCURRENCY: PRACTICE AND EXPERIENCE., vol. 12, no. 14, 10 December 2000 (2000-12-10), GB, pages 1405 - 1430, XP055447446, ISSN: 1040-3108, DOI: 10.1002/1096-9128(20001210)12:14<1405::AID-CPE515>3.0.CO;2-O
- See references of WO 2015192182A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

WO 2015192182 A1 20151223; EP 3158489 A1 20170426; EP 3158489 A4 20180314

DOCDB simple family (application)

AU 2015050334 W 20150617; EP 15809533 A 20150617