



CVE-2015-8104

- MITRE
- NVD
- CVE.ORG
- JSON API
- Print: PDF

Summary

CVE	CVE-2015-8104
State	PUBLISHED
Assigner	mitre
Source Priority	CVE Program / NVD first with legacy fallback
Published	2015-11-16 11:59:12 UTC
Updated	2026-05-06 22:30:45 UTC
Description	The KVM subsystem in the Linux kernel through 4.2.6, and Xen 4.3.x through 4.6.x, allows guest OS users to cause a denial of service (DoS) by allocating a large amount of memory to a virtual machine (VM) using the <code>qemu-kvm</code> command-line interface (CLI). This vulnerability exists because the KVM subsystem does not properly validate the size of the memory allocation request, leading to a buffer overflow in the <code>qemu-kvm</code> process. The KVM subsystem is a component of the Linux kernel that provides virtualization support. It allows users to run multiple operating systems (OSes) on a single physical machine. The KVM subsystem is used by various virtual machine monitors (VMMs), including <code>qemu-kvm</code> . The vulnerability exists in the KVM subsystem's handling of memory allocation requests. Specifically, the <code>qemu-kvm</code> process does not properly validate the size of the memory allocation request, leading to a buffer overflow in the <code>qemu-kvm</code> process. This buffer overflow can be exploited by a guest OS user to cause a denial of service (DoS) by allocating a large amount of memory to a virtual machine (VM) using the <code>qemu-kvm</code> CLI.

Risk And Classification

Primary CVSS: v3.1 10 CRITICAL from ADP

CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:C/C:H/I:H/A:H

Problem Types: CWE-399 | n/a

Version	Source	Type	Score	Severity	Vector
3.1	ADP	DECLARED	10	CRITICAL	CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:C/C:H/I:H/A:H
3.1	134c704f-9b21-4f2e-91b3-4a467353bcc0	Secondary	10	CRITICAL	CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:C/C:H/I:H/A:H
2.0	nvd@nist.gov	Primary	4.7		AV:L/AC:M/Au:N/C:N/I:N/A:C

CVSS v3.1 Breakdown

Attack Vector

Network

Attack Complexity

Low

Privileges Required

None

User Interaction

None

Scope

Changed

Confidentiality

High

Integrity

High

Availability

High

CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:C/C:H/I:H/A:H

CVSS v2.0 Breakdown

Access Vector

Local

Access Complexity

Medium

Authentication

None

Confidentiality

None

Integrity

None

Availability

Complete

AV:L/AC:M/Au:N/C:N/I:N/A:C

NVD Known Affected Configurations (CPE 2.3)						
Type	Vendor	Product	Version	Update	Edition	Language
Operating System	Canonical	Ubuntu Linux	12.04	All	All	All
Operating System	Canonical	Ubuntu Linux	14.04	All	All	All
Operating System	Canonical	Ubuntu Linux	15.04	All	All	All
Operating System	Debian	Debian Linux	7.0	All	All	All
Operating System	Debian	Debian Linux	8.0	All	All	All
Operating System	Debian	Debian Linux	9.0	All	All	All
Operating System	Linux	Linux Kernel	All	All	All	All
Operating System	Oracle	Solaris	11.3	All	All	All
Application	Oracle	Vm Virtualbox	All	All	All	All
Application	Oracle	Vm Virtualbox	All	All	All	All
Application	Oracle	Vm Virtualbox	All	All	All	All
Application	Oracle	Vm Virtualbox	All	All	All	All
Application	Oracle	Vm Virtualbox	All	All	All	All
Operating System	Xen	Xen	4.3.0	All	All	All
Operating System	Xen	Xen	4.3.1	All	All	All
Operating System	Xen	Xen	4.3.2	All	All	All

Operating System	Xen	Xen	4.3.3	All	All	All
Operating System	Xen	Xen	4.3.4	All	All	All
Operating System	Xen	Xen	4.4.0	All	All	All
Operating System	Xen	Xen	4.4.1	All	All	All
Operating System	Xen	Xen	4.4.2	All	All	All
Operating System	Xen	Xen	4.4.3	All	All	All
Operating System	Xen	Xen	4.5.0	All	All	All
Operating System	Xen	Xen	4.5.1	All	All	All
Operating System	Xen	Xen	4.5.2	All	All	All
Operating System	Xen	Xen	4.6.0	All	All	All
Operating System	Xen	Xen	4.6.1	All	All	All
Operating System	Xen	Xen	4.6.2	All	All	All
Operating System	Xen	Xen	4.6.4	All	All	All
Operating System	Xen	Xen	4.6.5	All	All	All

Vendor Declared Affected Products						
Source	Vendor	Product	Version	Platforms		
CNA	Na	N/a	affected n/a	Not specified		

References
Reference
USN-2842-2: Linux kernel (Vivid HWE) vulnerabilities Ubuntu
USN-2840-1: Linux kernel vulnerabilities Ubuntu
oss-security - CVE-2015-8104 kernel: kvm: guest to host DoS by triggering an infinite loop in microcode via #DB exception
2017-04 Security Bulletin: Multiple Vulnerabilities in NorthStar Controller Application before version 2.1.0 Service Pack 1. - Juniper Networks
[security-announce] SUSE-SU-2015:2194-1: important: Security update for
KVM: svm: unconditionally intercept #DB · torvalds/linux@cbdb967 · GitHub
Oracle VM Server for x86 Bulletin - July 2016
USN-2842-1: Linux kernel vulnerabilities Ubuntu
[security-announce] SUSE-SU-2016:2074-1: important: Security update for
[SECURITY] Fedora 21 Update: xen-4.4.3-8.fc21
openSUSE-SU-2015:2250-1: moderate: Security update for xen
[SECURITY] Fedora 22 Update: xen-4.5.2-2.fc22
[SECURITY] Fedora 23 Update: xen-4.5.2-2.fc23
Oracle Critical Patch Update - July 2016
Bug 1278496 – CVE-2015-8104 virt: guest to host DoS by triggering an infinite loop in microcode via #DB exception

[security-announce] SUSE-SU-2015:2108-1: important: Security update for
USN-2843-1: Linux kernel vulnerabilities Ubuntu
[security-announce] openSUSE-SU-2016:1008-1: important: Security update
oss-security - Xen Security Advisory 444 v3 (CVE-2023-34327,CVE-2023-34328) - x86/AMD: Debug Mask handling
Debian -- Security Information -- DSA-3454-1 virtualbox
openSUSE-SU-2015:2232-1: moderate: Security update for the Linux Kernel
XSA-156 - Xen Security Advisories
USN-2841-2: Linux kernel (Trusty HWE) vulnerabilities Ubuntu
Debian -- Security Information -- DSA-3414-1 xen
Linux Kernel CVE-2015-8104 Denial of Service Vulnerability
Oracle Critical Patch Update - January 2016
Citrix XenServer Security Update for CVE-2015-5307 and CVE-2015-8104
USN-2844-1: Linux kernel (Utopic HWE) vulnerabilities Ubuntu
Red Hat Customer Portal
[security-announce] SUSE-SU-2015:2339-1: important: Security update for
[security-announce] SUSE-SU-2016:0354-1: important: Security update for
Oracle Linux Bulletin - January 2016
Red Hat Customer Portal
Debian -- Security Information -- DSA-3426-1 linux
Red Hat Customer Portal
Citrix XenServer Multiple Security Updates
USN-2843-2: Linux kernel (Wily HWE) vulnerabilities Ubuntu
kernel/git/torvalds/linux.git - Linux kernel source tree
Oracle Linux Bulletin - October 2015
USN-2841-1: Linux kernel vulnerabilities Ubuntu
[security-announce] SUSE-SU-2015:2350-1: important: Security update for
Oracle July 2016 Critical Patch Update Multiple Vulnerabilities
Xen Exception Handling Bugs Let Local Users on a Guest System Cause Denial of Service Conditions on the Host System - SecurityTracker
CVE Program record
NVD vulnerability detail

No vendor comments have been submitted for this CVE.

There are currently no legacy QID mappings associated with this CVE.

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