CVE-2023-3640

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CVE-2023-3640

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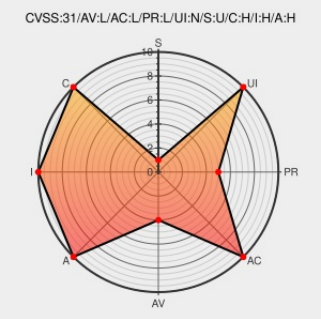

Certain versions of Linux Kernel from Linux contain the following vulnerability:

A possible unauthorized memory access flaw was found in the Linux kernel's cpu_entry_area mapping of X86 CPU data to memory, where a user may guess the location of exception stacks or other important data. Based on the previous CVE-2023-0597, the 'Randomize per-cpu entry area' feature was implemented in /arch/x86/mm/cpu_entry_area.c, which works through the init_cea_offsets() function when KASLR is enabled. However, despite this feature, there is still a risk of per-cpu entry area leaks. This issue could allow a local user to gain access to some important data with memory in an expected location and potentially escalate their privileges on the system.

CVE-2023-3640 has been assigned by secalert@redhat.com to track the vulnerability - currently rated as HIGH severity.

CVSS3 Score: 7.8 - HIGH

Attack Vector	Attack Complexity	Privileges Required	User Interaction
LOCAL	LOW	LOW	NONE
Scope	**Confidentiality Impact**	**Integrity Impact**	**Availability Impact**
UNCHANGED	HIGH	HIGH	HIGH

CVE References

Description	Tags	Link
2217523 – (CVE-2023-3640) CVE-2023-3640 Kernel: x86/mm: a per-cpu entry area leak was identified through the init_cea_offsets function when prefetchnta and prefetcht2 instructions being used for the per-cpu entry area mapping to the user space	bugzilla.redhat.com text/html	MISC bugzilla.redhat.com/show_bug.cgi?id=2217523
cve-details	access.redhat.com text/html	MISC access.redhat.com/security/cve/CVE-2023-3640

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There are currently no QIDs associated with this CVE

Known Affected Configurations (CPE V2.3)

Type	Vendor	Product	Version	Update	Edition	Language
Operating System	Linux	Linux Kernel	-	All	All	All
Operating System	Redhat	Enterprise Linux	8.0	All	All	All
Operating System	Redhat	Enterprise Linux	9.0	All	All	All

cpe:2.3:o:linux:linux_kernel:-:*:*:*:*:*:*:*:

cpe:2.3:o:redhat:enterprise_linux:8.0:*:*:*:*:*:*:*:

cpe:2.3:o:redhat:enterprise_linux:9.0:*:*:*:*:*:*:*:

No vendor comments have been submitted for this CVE

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