



# CVE-2022-28390

[MITRE](#)[NVD](#)[CVE.ORG](#)[Print: PDF !\[\]\(e3f8612927870f2e0f9f5989e6dd3064\_img.jpg\)](#)

## Summary

<b>CVE</b>	CVE-2022-28390
<b>State</b>	PUBLIC
<b>Assigner</b>	cve@mitre.org
<b>Source Priority</b>	CVE Program / NVD first with legacy fallback
<b>Published</b>	2022-04-03 21:15:00 UTC
<b>Updated</b>	2023-11-07 03:45:00 UTC
<b>Description</b>	ems_usb_start_xmit in drivers/net/can/usb/ems_usb.c in the Linux kernel through 5.17.1 has a double free.

## Risk And Classification

**Problem Types:** CWE-415

## NVD Known Affected Configurations (CPE 2.3)

Type	Vendor	Product	Version	Update	Edition	Language
Operating System	<a href="#">Debian</a>	<a href="#">Debian Linux</a>	10.0	All	All	All
Operating System	<a href="#">Debian</a>	<a href="#">Debian Linux</a>	11.0	All	All	All
Operating System	<a href="#">Debian</a>	<a href="#">Debian Linux</a>	9.0	All	All	All
Operating System	<a href="#">Fedoraproject</a>	<a href="#">Fedora</a>	34	All	All	All
Operating System	<a href="#">Fedoraproject</a>	<a href="#">Fedora</a>	35	All	All	All
Operating System	<a href="#">Fedoraproject</a>	<a href="#">Fedora</a>	36	All	All	All
Operating System	<a href="#">Linux</a>	<a href="#">Linux Kernel</a>	All	All	All	All
Application	<a href="#">Netapp</a>	<a href="#">Hci Baseboard Management Controller</a>	h300e	All	All	All
Application	<a href="#">Netapp</a>	<a href="#">Hci Baseboard Management Controller</a>	h300s	All	All	All
Application	<a href="#">Netapp</a>	<a href="#">Hci Baseboard Management Controller</a>	h410c	All	All	All
Application	<a href="#">Netapp</a>	<a href="#">Hci Baseboard Management Controller</a>	h410s	All	All	All
Application	<a href="#">Netapp</a>	<a href="#">Hci Baseboard Management Controller</a>	h500e	All	All	All
Application	<a href="#">Netapp</a>	<a href="#">Hci Baseboard Management Controller</a>	h500s	All	All	All
Application	<a href="#">Netapp</a>	<a href="#">Hci Baseboard Management Controller</a>	h700e	All	All	All
Application	<a href="#">Netapp</a>	<a href="#">Hci Baseboard Management Controller</a>	h700s	All	All	All

## References

Reference	Source	Link
-----------	--------	------

Reference	Source	Link
[SECURITY] Fedora 35 Update: kernel-5.16.19-200.fc35 - package-announce - Fedora Mailing-Lists		<a href="https://lists.fedoraproject.org/">lists.fedoraproject</a>
can: ems_usb: ems_usb_start_xmit(): fix double dev_kfree_skb() in err... · torvalds/linux@c702227 · GitHub	MISC	<a href="https://github.com">github.com</a>
[SECURITY] Fedora 34 Update: kernel-5.16.19-100.fc34 - package-announce - Fedora Mailing-Lists	FEDORA	<a href="https://lists.fedoraproject.org/">lists.fedoraproject</a>
[SECURITY] Fedora 34 Update: kernel-5.16.19-100.fc34 - package-announce - Fedora Mailing-Lists		<a href="https://lists.fedoraproject.org/">lists.fedoraproject</a>
Debian -- Security Information -- DSA-5127-1 linux	DEBIAN	<a href="http://www.debian.org">www.debian.org</a>
[SECURITY] Fedora 36 Update: kernel-5.17.2-300.fc36 - package-announce - Fedora Mailing-Lists	FEDORA	<a href="https://lists.fedoraproject.org/">lists.fedoraproject</a>
Debian -- Security Information -- DSA-5173-1 linux	DEBIAN	<a href="http://www.debian.org">www.debian.org</a>
[SECURITY] Fedora 36 Update: kernel-5.17.2-300.fc36 - package-announce - Fedora Mailing-Lists		<a href="https://lists.fedoraproject.org/">lists.fedoraproject</a>
April 2022 Linux Kernel 5.17.1 Vulnerabilities in NetApp Products   NetApp Product Security	CONFIRM	<a href="https://security.netapp.com">security.netapp.com</a>
[SECURITY] [DLA 3065-1] linux security update	MLIST	<a href="https://lists.debian.org">lists.debian.org</a>
[SECURITY] Fedora 35 Update: kernel-5.16.19-200.fc35 - package-announce - Fedora Mailing-Lists	FEDORA	<a href="https://lists.fedoraproject.org/">lists.fedoraproject</a>
CVE Program record	CVE.ORG	<a href="http://www.cve.org">www.cve.org</a>
NVD vulnerability detail	NVD	<a href="https://nvd.nist.gov">nvd.nist.gov</a>

No vendor comments have been submitted for this CVE.

#### Legacy QID Mappings

<a href="#">159969</a> Oracle Enterprise Linux Security Update for unbreakable enterprise kernel (ELSA-2022-9557)
<a href="#">160210</a> Oracle Enterprise Linux Security Update for kernel (ELSA-2022-7683)
<a href="#">160270</a> Oracle Enterprise Linux Security Update for kernel (ELSA-2022-8267)
<a href="#">179258</a> Debian Security Update for linux (DSA 5127-1)
<a href="#">180282</a> Debian Security Update for linux (DLA 3065-1)
<a href="#">180605</a> Debian Security Update for linux (DSA 5173-1)
<a href="#">184766</a> Debian Security Update for linux (CVE-2022-28390)
<a href="#">198783</a> Ubuntu Security Notification for Linux kernel (OEM) Vulnerabilities (USN-5416-1)
<a href="#">198822</a> Ubuntu Security Notification for Linux kernel Vulnerabilities (USN-5469-1)
<a href="#">198824</a> Ubuntu Security Notification for Linux kernel Vulnerabilities (USN-5467-1)
<a href="#">198825</a> Ubuntu Security Notification for Linux kernel Vulnerabilities (USN-5466-1)
<a href="#">198826</a> Ubuntu Security Notification for Linux kernel Vulnerabilities (USN-5468-1)
<a href="#">240815</a> Red Hat Update for kernel-rt (RHSA-2022:7444)
<a href="#">240817</a> Red Hat Update for kernel security (RHSA-2022:7683)

<a href="#">240869</a> Red Hat Update for kernel-rt (RHSA-2022:7933)
<a href="#">240904</a> Red Hat Update for kernel security (RHSA-2022:8267)
<a href="#">242890</a> Red Hat Update for kernel (RHSA-2024:0724)
<a href="#">282579</a> Fedora Security Update for kernel (FEDORA-2022-91633399ff)
<a href="#">282580</a> Fedora Security Update for kernel (FEDORA-2022-5cd9d787dc)
<a href="#">353293</a> Amazon Linux Security Advisory for kernel : ALAS2-2022-1793
<a href="#">353956</a> Amazon Linux Security Advisory for kernel : ALAS-2022-1591
<a href="#">355563</a> Amazon Linux Security Advisory for kernel : ALAS2KERNEL-5.10-2023-036
<a href="#">376925</a> Alibaba Cloud Linux Security Update for cloud-kernel (ALINUX3-SA-2022:0125)
<a href="#">377766</a> Alibaba Cloud Linux Security Update for cloud-kernel (ALINUX2-SA-2022:0049)
<a href="#">377871</a> Alibaba Cloud Linux Security Update for cloud-kernel (ALINUX2-SA-2023:0001)
<a href="#">390262</a> Oracle VM Server for x86 Security Update for kernel (OVMSA-2022-0019)
<a href="#">610451</a> Google Pixel Android December 2022 Security Patch Missing
<a href="#">610464</a> Google Android January 2023 Security Patch Missing for Huawei EMUI
<a href="#">6140099</a> AWS Bottlerocket Security Update for kernel (GHSA-9q5w-2vg7-mx44)
<a href="#">671862</a> EulerOS Security Update for kernel (EulerOS-SA-2022-1896)
<a href="#">671870</a> EulerOS Security Update for kernel (EulerOS-SA-2022-1934)
<a href="#">671929</a> EulerOS Security Update for kernel (EulerOS-SA-2022-1999)
<a href="#">671975</a> EulerOS Security Update for kernel (EulerOS-SA-2022-2159)
<a href="#">672003</a> EulerOS Security Update for kernel (EulerOS-SA-2022-2134)
<a href="#">672218</a> EulerOS Security Update for kernel (EulerOS-SA-2022-2619)
<a href="#">752036</a> SUSE Enterprise Linux Security Update for the Linux Kernel (SUSE-SU-2022:1183-1)
<a href="#">752039</a> SUSE Enterprise Linux Security Update for the Linux Kernel (SUSE-SU-2022:1196-1)
<a href="#">752042</a> SUSE Enterprise Linux Security Update for the Linux Kernel (SUSE-SU-2022:1197-1)
<a href="#">752048</a> SUSE Enterprise Linux Security Update for the Linux Kernel (SUSE-SU-2022:1266-1)
<a href="#">752052</a> SUSE Enterprise Linux Security Update for the Linux Kernel (SUSE-SU-2022:1255-1)
<a href="#">752053</a> SUSE Enterprise Linux Security Update for the Linux Kernel (SUSE-SU-2022:1267-1)
<a href="#">752058</a> SUSE Enterprise Linux Security Update for the Linux Kernel (SUSE-SU-2022:1256-1)
<a href="#">752231</a> SUSE Enterprise Linux Security Update for the Linux Kernel (SUSE-SU-2022:2082-1)

<a href="#">753151</a> SUSE Enterprise Linux Security Update for the Linux Kernel (Live Patch 26 for SLE 15) (SUSE-SU-2022:2709-1)
<a href="#">753184</a> SUSE Enterprise Linux Security Update for the Linux Kernel (Live Patch 11 for SLE 15 SP3) (SUSE-SU-2022:2738-1)
<a href="#">753216</a> SUSE Enterprise Linux Security Update for the Linux Kernel (Live Patch 16 for SLE 15 SP3) (SUSE-SU-2022:2727-1)
<a href="#">753219</a> SUSE Enterprise Linux Security Update for the Linux Kernel (Live Patch 14 for SLE 15 SP3) (SUSE-SU-2022:2726-1)
<a href="#">753246</a> SUSE Enterprise Linux Security Update for the Linux Kernel (Live Patch 29 for SLE 15 SP1) (SUSE-SU-2022:2728-1)
<a href="#">753277</a> SUSE Enterprise Linux Security Update for the Linux Kernel (Live Patch 28 for SLE 15 SP1) (SUSE-SU-2022:2700-1)
<a href="#">753319</a> SUSE Enterprise Linux Security Update for the Linux Kernel (Live Patch 7 for SLE 15 SP3) (SUSE-SU-2022:2766-1)
<a href="#">753346</a> SUSE Enterprise Linux Security Update for the Linux Kernel (Live Patch 21 for SLE 15 SP2) (SUSE-SU-2022:2783-1)
<a href="#">753373</a> SUSE Enterprise Linux Security Update for the Linux Kernel (SUSE-SU-2022:1257-1)
<a href="#">753417</a> SUSE Enterprise Linux Security Update for the Linux Kernel (SUSE-SU-2022:1163-1)
<a href="#">753427</a> SUSE Enterprise Linux Security Update for the Linux Kernel (SUSE-SU-2022:1407-1)
<a href="#">753443</a> SUSE Enterprise Linux Security Update for the Linux Kernel (Live Patch 24 for SLE 15 SP2) (SUSE-SU-2022:2776-1)
<a href="#">753481</a> SUSE Enterprise Linux Security Update for the Linux Kernel (Live Patch 9 for SLE 15 SP3) (SUSE-SU-2022:2770-1)
<a href="#">753491</a> SUSE Enterprise Linux Security Update for the Linux Kernel (Live Patch 0 for SLE 15 SP4) (SUSE-SU-2022:2854-1)
<a href="#">900801</a> Common Base Linux Mariner (CBL-Mariner) Security Update for kernel (9283)
<a href="#">900893</a> Common Base Linux Mariner (CBL-Mariner) Security Update for kernel (9295)
<a href="#">901339</a> Common Base Linux Mariner (CBL-Mariner) Security Update for kernel (9283-1)
<a href="#">902129</a> Common Base Linux Mariner (CBL-Mariner) Security Update for kernel (9295-1)
<a href="#">906151</a> Common Base Linux Mariner (CBL-Mariner) Security Update for kernel (9283-2)
<a href="#">906512</a> Common Base Linux Mariner (CBL-Mariner) Security Update for kernel (9295-2)
<a href="#">940732</a> AlmaLinux Security Update for kernel (ALSA-2022:7683)
<a href="#">940766</a> AlmaLinux Security Update for kernel-rt (ALSA-2022:7444)
<a href="#">940798</a> AlmaLinux Security Update for kernel (ALSA-2022:8267)
<a href="#">940843</a> AlmaLinux Security Update for kernel-rt (ALSA-2022:7933)
<a href="#">960176</a> Rocky Linux Security Update for kernel-rt (RLSA-2022:7444)
<a href="#">960184</a> Rocky Linux Security Update for kernel (RLSA-2022:7683)

this information or its use. Any use of this information is at the user's risk. It is the responsibility of user to evaluate the accuracy, completeness or usefulness of any information, opinion, advice or other content. EACH USER WILL BE SOLELY RESPONSIBLE FOR ANY consequences of his or her direct or indirect use of this web site. ALL WARRANTIES OF ANY KIND ARE EXPRESSLY DISCLAIMED. This site will NOT BE LIABLE FOR ANY DIRECT, INDIRECT or any other kind of loss.

CVE, CWE, and OVAL are registered trademarks of [The MITRE Corporation](#) and the authoritative source of CVE content is [MITRE's CVE web site](#). This site includes MITRE data granted under the following [license](#).

**CVE.report and Source URL Uptime Status [status.cve.report](#)**