Full Trivy Vulnerability Report

Image: node:lts
Scan Time: 2025-04-13T14:36:59Z

Vulnerability Severity Summary

Severity	Count
CRITICAL	5
HIGH	98
MEDIUM	542
LOW	670

Detailed Vulnerabilities

Target: node:lts (debian 12.10)

[CVE-2011-3374] It was found that apt-key in apt, all versions, do not correctly valid ... (Severity: LOW)

Package: apt
Installed: 2.6.1
Fixed: %!s(<nil>)

It was found that apt-key in apt, all versions, do not correctly validate gpg keys with the master keyring, leading to a potential man-in-the-middle attack.

More Info: https://avd.aquasec.com/nvd/cve-2011-3374

[TEMP-0841856-B18BAF] [Privilege escalation possible to other user than root] (Severity: LOW)

Package: bash
Installed: 5.2.15-2+b7
Fixed: %!s(<nil>)

%!s(<nil>)

More Info: https://security-tracker.debian.org/tracker/TEMP-0841856-B18BAF

[CVE-2017-13716] binutils: Memory leak with the C++ symbol demangler routine in libiberty (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

The C++ symbol demangler routine in cplus-dem.c in libiberty, as distributed in GNU Binutils 2.29, allows remote attackers to cause a denial of service (excessive memory allocation and application crash) via a crafted file, as demonstrated by a call from the Binary File Descriptor (BFD) library (aka libbfd).

More Info: https://avd.aquasec.com/nvd/cve-2017-13716

[CVE-2018-20673] libiberty: Integer overflow in demangle_template() function (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

The demangle_template function in cplus-dem.c in GNU libiberty, as distributed in GNU Binutils 2.31.1, contains an integer overflow vulnerability (for "Create an array for saving the template argument values") that can trigger a heap-based buffer overflow, as demonstrated by nm.

More Info: https://avd.aquasec.com/nvd/cve-2018-20673

[CVE-2018-20712] libiberty: heap-based buffer over-read in d_expression_1 (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A heap-based buffer over-read exists in the function d_expression_1 in cp-demangle.c in GNU libiberty, as distributed in GNU Binutils 2.31.1. A crafted input can cause segmentation faults, leading to denial-of-service, as demonstrated by c++filt.

More Info: https://avd.aquasec.com/nvd/cve-2018-20712

[CVE-2018-9996] binutils: Stack-overflow in libiberty/cplus-dem.c causes crash (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

An issue was discovered in cplus-dem.c in GNU libiberty, as distributed in GNU Binutils 2.30. Stack Exhaustion occurs in the C++ demangling functions provided by libiberty, and there are recursive stack frames: demangle_template_value_parm, demangle_integral_value, and demangle_expression.

More Info: https://avd.aquasec.com/nvd/cve-2018-9996

[CVE-2021-32256] binutils: stack-overflow issue in demangle_type in rust-demangle.c. (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

An issue was discovered in GNU libiberty, as distributed in GNU Binutils 2.36. It is a stack-overflow issue in demangle_type in rust-demangle.c.

More Info: https://avd.aquasec.com/nvd/cve-2021-32256

[CVE-2023-1972] binutils: Illegal memory access when accessing a zer0-lengthverdef table (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A potential heap based buffer overflow was found in _bfd_elf_slurp_version_tables() in bfd/elf.c. This may lead to loss of

availability.

More Info: https://avd.aquasec.com/nvd/cve-2023-1972

[CVE-2024-53589] binutils: objdump: buffer Overflow in the BFD library's handling of tekhex format files (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

GNU objdump 2.43 is vulnerable to Buffer Overflow in the BFD (Binary File Descriptor) library's handling of tekhex format files.

More Info: https://avd.aquasec.com/nvd/cve-2024-53589

[CVE-2024-57360] binutils: nm: potential segmentation fault when displaying symbols without version info (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

https://www.gnu.org/software/binutils/ nm >=2.43 is affected by: Incorrect Access Control. The type of exploitation is: local. The component is: `nm --without-symbol-version` function.

More Info: https://avd.aquasec.com/nvd/cve-2024-57360

[CVE-2025-0840] binutils: GNU Binutils objdump.c disassemble_bytes stack-based overflow (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability, which was classified as problematic, was found in GNU Binutils up to 2.43. This affects the function disassemble_bytes of the file binutils/objdump.c. The manipulation of the argument buf leads to stack-based buffer overflow. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. Upgrading to version 2.44 is able to address this issue. The identifier of the patch is baac6c221e9d69335bf41366a1c7d87d8ab2f893. It is recommended to upgrade the affected component.

More Info: https://avd.aquasec.com/nvd/cve-2025-0840

[CVE-2025-1147] binutils: GNU Binutils nm nm.c internal_strlen buffer overflow (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability has been found in GNU Binutils 2.43 and classified as problematic. Affected by this vulnerability is the function __sanitizer::internal_strlen of the file binutils/nm.c of the component nm. The manipulation of the argument const leads to buffer overflow. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used.

More Info: https://avd.aquasec.com/nvd/cve-2025-1147

[CVE-2025-1148] binutils: GNU Binutils ld ldelfgen.c link_order_scan memory leak (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43 and classified as problematic. Affected by this issue is the function link_order_scan of the file ld/ldelfgen.c of the component ld. The manipulation leads to memory leak. The attack may be launched remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1148

[CVE-2025-1149] binutils: GNU Binutils ld xmalloc.c xstrdup memory leak (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been classified as problematic. This affects the function xstrdup of the file libiberty/xmalloc.c of the component ld. The manipulation leads to memory leak. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1149

[CVE-2025-1150] binutils: GNU Binutils ld libbfd.c bfd_malloc memory leak (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been declared as problematic. This vulnerability affects the function bfd_malloc of the file libbfd.c of the component ld. The manipulation leads to memory leak. The attack can be initiated remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1150

[CVE-2025-1151] binutils: GNU Binutils ld xmemdup.c xmemdup memory leak (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been rated as problematic. This issue affects the function xmemdup of the file xmemdup.c of the component ld. The manipulation leads to memory leak. The attack may be initiated remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has

been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1151

[CVE-2025-1152] binutils: GNU Binutils ld xstrdup.c xstrdup memory leak (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic has been found in GNU Binutils 2.43. Affected is the function xstrdup of the file xstrdup.c of the component ld. The manipulation leads to memory leak. It is possible to launch the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1152

[CVE-2025-1153] binutils: GNU Binutils format.c bfd_set_format memory corruption (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic was found in GNU Binutils 2.43/2.44. Affected by this vulnerability is the function bfd_set_format of the file format.c. The manipulation leads to memory corruption. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. Upgrading to version 2.45 is able to address this issue. The identifier of the patch is 8d97c1a53f3dc9fd8e1ccdb039b8a33d50133150. It is recommended to upgrade the affected component.

More Info: https://avd.aquasec.com/nvd/cve-2025-1153

[CVE-2025-1176] binutils: GNU Binutils ld elflink.c _bfd_elf_gc_mark_rsec heap-based overflow (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43 and classified as critical. This issue affects the function _bfd_elf_gc_mark_rsec of the file elflink.c of the component ld. The manipulation leads to heap-based buffer overflow. The attack may be initiated remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. The patch is named f9978defb6fab0bd8583942d97c112b0932ac814. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1176

[CVE-2025-1178] binutils: GNU Binutils ld libbfd.c bfd_putl64 memory corruption (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been declared as problematic. Affected by this vulnerability is the function bfd_putl64 of the file libbfd.c of the component ld. The manipulation leads to memory corruption. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. The identifier of the patch is 75086e9de1707281172cc77f178e7949a4414ed0. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1178

[CVE-2025-1179] binutils: GNU Binutils ld libbfd.c bfd_putl64 memory corruption (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been rated as critical. Affected by this issue is the function bfd_putl64 of the file bfd/libbfd.c of the component ld. The manipulation leads to memory corruption. The attack may be launched remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. Upgrading to version 2.44 is able to address this issue. It is recommended to upgrade the affected component. The code maintainer explains, that "[t]his bug has been fixed at some point between the 2.43 and 2.44 releases".

More Info: https://avd.aquasec.com/nvd/cve-2025-1179

[CVE-2025-1180] binutils: GNU Binutils ld elf-eh-frame.c _bfd_elf_write_section_eh_frame memory corruption (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic has been found in GNU Binutils 2.43. This affects the function _bfd_elf_write_section_eh_frame of the file bfd/elf-eh-frame.c of the component ld. The manipulation leads to memory corruption. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1180

[CVE-2025-1181] binutils: GNU Binutils ld elflink.c _bfd_elf_gc_mark_rsec memory corruption (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as critical was found in GNU Binutils 2.43. This vulnerability affects the function _bfd_elf_gc_mark_rsec of the file bfd/elflink.c of the component ld. The manipulation leads to memory corruption. The attack can be initiated remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. The name of the patch is 931494c9a89558acb36a03a340c01726545eef24. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1181

[CVE-2025-1182] binutils: GNU Binutils ld elflink.c bfd_elf_reloc_symbol_deleted_p memory corruption (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability, which was classified as critical, was found in GNU Binutils 2.43. Affected is the function bfd_elf_reloc_symbol_deleted_p of the file bfd/elflink.c of the component ld. The manipulation leads to memory corruption. It is possible to launch the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. The patch is identified as b425859021d17adf62f06fb904797cf8642986ad. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1182

[CVE-2025-3198] binutils: GNU Binutils objdump bucomm.c display_info memory leak (Severity: LOW)

Package: binutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability has been found in GNU Binutils 2.43/2.44 and classified as problematic. Affected by this vulnerability is the function display_info of the file binutils/bucomm.c of the component objdump. The manipulation leads to memory leak. An attack has to be approached locally. The exploit has been disclosed to the public and may be used. The patch is named ba6ad3a18cb26b79e0e3b84c39f707535bbc344d. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-3198

[CVE-2017-13716] binutils: Memory leak with the C++ symbol demangler routine in libiberty (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

The C++ symbol demangler routine in cplus-dem.c in libiberty, as distributed in GNU Binutils 2.29, allows remote attackers to cause a denial of service (excessive memory allocation and application crash) via a crafted file, as demonstrated by a call from the Binary File Descriptor (BFD) library (aka libbfd).

More Info: https://avd.aquasec.com/nvd/cve-2017-13716

[CVE-2018-20673] libiberty: Integer overflow in demangle_template() function (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

The demangle_template function in cplus-dem.c in GNU libiberty, as distributed in GNU Binutils 2.31.1, contains an integer overflow vulnerability (for "Create an array for saving the template argument values") that can trigger a heap-based buffer overflow, as demonstrated by nm.

More Info: https://avd.aquasec.com/nvd/cve-2018-20673

[CVE-2018-20712] libiberty: heap-based buffer over-read in d_expression_1 (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

A heap-based buffer over-read exists in the function d_expression_1 in cp-demangle.c in GNU libiberty, as distributed in GNU Binutils 2.31.1. A crafted input can cause segmentation faults, leading to denial-of-service, as demonstrated by c++filt.

More Info: https://avd.aquasec.com/nvd/cve-2018-20712

[CVE-2018-9996] binutils: Stack-overflow in libiberty/cplus-dem.c causes crash (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

An issue was discovered in cplus-dem.c in GNU libiberty, as distributed in GNU Binutils 2.30. Stack Exhaustion occurs in the C++ demangling functions provided by libiberty, and there are recursive stack frames: demangle_template_value_parm, demangle_integral_value, and demangle_expression.

More Info: https://avd.aquasec.com/nvd/cve-2018-9996

[CVE-2021-32256] binutils: stack-overflow issue in demangle_type in rust-demangle.c. (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

An issue was discovered in GNU libiberty, as distributed in GNU Binutils 2.36. It is a stack-overflow issue in demangle_type in rust-demangle.c.

More Info: https://avd.aquasec.com/nvd/cve-2021-32256

[CVE-2023-1972] binutils: Illegal memory access when accessing a zer0-lengthverdef table (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

A potential heap based buffer overflow was found in _bfd_elf_slurp_version_tables() in bfd/elf.c. This may lead to loss of availability.

More Info: https://avd.aquasec.com/nvd/cve-2023-1972

[CVE-2024-53589] binutils: objdump: buffer Overflow in the BFD library's handling of tekhex format files (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

GNU objdump 2.43 is vulnerable to Buffer Overflow in the BFD (Binary File Descriptor) library's handling of tekhex format files.

More Info: https://avd.aquasec.com/nvd/cve-2024-53589

[CVE-2024-57360] binutils: nm: potential segmentation fault when displaying symbols without version info (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

https://www.gnu.org/software/binutils/ nm >=2.43 is affected by: Incorrect Access Control. The type of exploitation is: local. The component is: `nm --without-symbol-version` function.

More Info: https://avd.aquasec.com/nvd/cve-2024-57360

[CVE-2025-0840] binutils: GNU Binutils objdump.c disassemble_bytes stack-based overflow (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability, which was classified as problematic, was found in GNU Binutils up to 2.43. This affects the function disassemble_bytes of the file binutils/objdump.c. The manipulation of the argument buf leads to stack-based buffer overflow. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. Upgrading to version 2.44 is able to address this issue. The identifier of the patch is baac6c221e9d69335bf41366a1c7d87d8ab2f893. It is recommended to upgrade the affected component.

More Info: https://avd.aquasec.com/nvd/cve-2025-0840

[CVE-2025-1147] binutils: GNU Binutils nm nm.c internal_strlen buffer overflow (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability has been found in GNU Binutils 2.43 and classified as problematic. Affected by this vulnerability is the function __sanitizer::internal_strlen of the file binutils/nm.c of the component nm. The manipulation of the argument const leads to buffer overflow. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used.

More Info: https://avd.aquasec.com/nvd/cve-2025-1147

[CVE-2025-1148] binutils: GNU Binutils ld ldelfgen.c link_order_scan memory leak (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43 and classified as problematic. Affected by this issue is the function link_order_scan of the file ld/ldelfgen.c of the component ld. The manipulation leads to memory leak. The attack may be launched remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1148

[CVE-2025-1149] binutils: GNU Binutils ld xmalloc.c xstrdup memory leak (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been classified as problematic. This affects the function xstrdup of the file libiberty/xmalloc.c of the component ld. The manipulation leads to memory leak. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1149

[CVE-2025-1150] binutils: GNU Binutils ld libbfd.c bfd_malloc memory leak (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been declared as problematic. This vulnerability affects the function bfd_malloc of the file libbfd.c of the component ld. The manipulation leads to memory leak. The attack can be initiated remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1150

[CVE-2025-1151] binutils: GNU Binutils ld xmemdup.c xmemdup memory leak (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been rated as problematic. This issue affects the function xmemdup of the file xmemdup.c of the component ld. The manipulation leads to memory leak. The attack may be initiated remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1151

[CVE-2025-1152] binutils: GNU Binutils ld xstrdup.c xstrdup memory leak (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic has been found in GNU Binutils 2.43. Affected is the function xstrdup of the file xstrdup.c of the component ld. The manipulation leads to memory leak. It is possible to launch the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the

reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1152

[CVE-2025-1153] binutils: GNU Binutils format.c bfd_set_format memory corruption (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic was found in GNU Binutils 2.43/2.44. Affected by this vulnerability is the function bfd_set_format of the file format.c. The manipulation leads to memory corruption. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. Upgrading to version 2.45 is able to address this issue. The identifier of the patch is 8d97c1a53f3dc9fd8e1ccdb039b8a33d50133150. It is recommended to upgrade the affected component.

More Info: https://avd.aquasec.com/nvd/cve-2025-1153

[CVE-2025-1176] binutils: GNU Binutils ld elflink.c _bfd_elf_gc_mark_rsec heap-based overflow (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43 and classified as critical. This issue affects the function _bfd_elf_gc_mark_rsec of the file elflink.c of the component ld. The manipulation leads to heap-based buffer overflow. The attack may be initiated remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. The patch is named f9978defb6fab0bd8583942d97c112b0932ac814. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1176

[CVE-2025-1178] binutils: GNU Binutils ld libbfd.c bfd_putl64 memory corruption (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been declared as problematic. Affected by this vulnerability is the function bfd_putl64 of the file libbfd.c of the component ld. The manipulation leads to memory corruption. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. The identifier of the patch is 75086e9de1707281172cc77f178e7949a4414ed0. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1178

[CVE-2025-1179] binutils: GNU Binutils ld libbfd.c bfd_putl64 memory corruption (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been rated as critical. Affected by this issue is the function bfd_putl64 of the file bfd/libbfd.c of the component ld. The manipulation leads to memory corruption. The attack may be launched remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has

been disclosed to the public and may be used. Upgrading to version 2.44 is able to address this issue. It is recommended to upgrade the affected component. The code maintainer explains, that "[t]his bug has been fixed at some point between the 2.43 and 2.44 releases".

More Info: https://avd.aquasec.com/nvd/cve-2025-1179

[CVE-2025-1180] binutils: GNU Binutils ld elf-eh-frame.c _bfd_elf_write_section_eh_frame memory corruption (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic has been found in GNU Binutils 2.43. This affects the function _bfd_elf_write_section_eh_frame of the file bfd/elf-eh-frame.c of the component ld. The manipulation leads to memory corruption. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1180

[CVE-2025-1181] binutils: GNU Binutils ld elflink.c _bfd_elf_gc_mark_rsec memory corruption (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as critical was found in GNU Binutils 2.43. This vulnerability affects the function _bfd_elf_gc_mark_rsec of the file bfd/elflink.c of the component ld. The manipulation leads to memory corruption. The attack can be initiated remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. The name of the patch is 931494c9a89558acb36a03a340c01726545eef24. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1181

[CVE-2025-1182] binutils: GNU Binutils ld elflink.c bfd_elf_reloc_symbol_deleted_p memory corruption (Severity: LOW)

Package: binutils-common
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability, which was classified as critical, was found in GNU Binutils 2.43. Affected is the function bfd_elf_reloc_symbol_deleted_p of the file bfd/elflink.c of the component ld. The manipulation leads to memory corruption. It is possible to launch the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. The patch is identified as b425859021d17adf62f06fb904797cf8642986ad. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1182

[CVE-2025-3198] binutils: GNU Binutils objdump bucomm.c display_info memory leak (Severity: LOW)

Package: binutils-common

Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability has been found in GNU Binutils 2.43/2.44 and classified as problematic. Affected by this vulnerability is the function display_info of the file binutils/bucomm.c of the component objdump. The manipulation leads to memory leak. An attack has to be approached locally. The exploit has been disclosed to the public and may be used. The patch is named ba6ad3a18cb26b79e0e3b84c39f707535bbc344d. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-3198

[CVE-2017-13716] binutils: Memory leak with the C++ symbol demangler routine in libiberty (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

The C++ symbol demangler routine in cplus-dem.c in libiberty, as distributed in GNU Binutils 2.29, allows remote attackers to cause a denial of service (excessive memory allocation and application crash) via a crafted file, as demonstrated by a call from the Binary File Descriptor (BFD) library (aka libbfd).

More Info: https://avd.aquasec.com/nvd/cve-2017-13716

[CVE-2018-20673] libiberty: Integer overflow in demangle_template() function (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

The demangle_template function in cplus-dem.c in GNU libiberty, as distributed in GNU Binutils 2.31.1, contains an integer overflow vulnerability (for "Create an array for saving the template argument values") that can trigger a heap-based buffer overflow, as demonstrated by nm.

More Info: https://avd.aquasec.com/nvd/cve-2018-20673

[CVE-2018-20712] libiberty: heap-based buffer over-read in d_expression_1 (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

A heap-based buffer over-read exists in the function d_expression_1 in cp-demangle.c in GNU libiberty, as distributed in GNU Binutils 2.31.1. A crafted input can cause segmentation faults, leading to denial-of-service, as demonstrated by c++filt.

More Info: https://avd.aquasec.com/nvd/cve-2018-20712

[CVE-2018-9996] binutils: Stack-overflow in libiberty/cplus-dem.c causes crash (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

An issue was discovered in cplus-dem.c in GNU libiberty, as distributed in GNU Binutils 2.30. Stack Exhaustion occurs in the C++ demangling functions provided by libiberty, and there are recursive stack frames: demangle_template_value_parm, demangle_integral_value, and demangle_expression.

More Info: https://avd.aquasec.com/nvd/cve-2018-9996

[CVE-2021-32256] binutils: stack-overflow issue in demangle_type in rust-demangle.c. (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

An issue was discovered in GNU libiberty, as distributed in GNU Binutils 2.36. It is a stack-overflow issue in demangle_type in rust-demangle.c.

More Info: https://avd.aquasec.com/nvd/cve-2021-32256

[CVE-2023-1972] binutils: Illegal memory access when accessing a zer0-lengthverdef table (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

A potential heap based buffer overflow was found in _bfd_elf_slurp_version_tables() in bfd/elf.c. This may lead to loss of availability.

More Info: https://avd.aquasec.com/nvd/cve-2023-1972

[CVE-2024-53589] binutils: objdump: buffer Overflow in the BFD library's handling of tekhex format files (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

GNU objdump 2.43 is vulnerable to Buffer Overflow in the BFD (Binary File Descriptor) library's handling of tekhex format files.

More Info: https://avd.aquasec.com/nvd/cve-2024-53589

[CVE-2024-57360] binutils: nm: potential segmentation fault when displaying symbols without version info (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

https://www.gnu.org/software/binutils/ nm >=2.43 is affected by: Incorrect Access Control. The type of exploitation is: local. The component is: `nm --without-symbol-version` function.

More Info: https://avd.aquasec.com/nvd/cve-2024-57360

[CVE-2025-0840] binutils: GNU Binutils objdump.c disassemble_bytes stack-based overflow (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2

Fixed: %!s(<nil>)

A vulnerability, which was classified as problematic, was found in GNU Binutils up to 2.43. This affects the function disassemble_bytes of the file binutils/objdump.c. The manipulation of the argument buf leads to stack-based buffer overflow. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. Upgrading to version 2.44 is able to address this issue. The identifier of the patch is baac6c221e9d69335bf41366a1c7d87d8ab2f893. It is recommended to upgrade the affected component.

More Info: https://avd.aquasec.com/nvd/cve-2025-0840

[CVE-2025-1147] binutils: GNU Binutils nm nm.c internal_strlen buffer overflow (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability has been found in GNU Binutils 2.43 and classified as problematic. Affected by this vulnerability is the function __sanitizer::internal_strlen of the file binutils/nm.c of the component nm. The manipulation of the argument const leads to buffer overflow. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used.

More Info: https://avd.aquasec.com/nvd/cve-2025-1147

[CVE-2025-1148] binutils: GNU Binutils ld ldelfgen.c link_order_scan memory leak (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43 and classified as problematic. Affected by this issue is the function link_order_scan of the file ld/ldelfgen.c of the component ld. The manipulation leads to memory leak. The attack may be launched remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1148

[CVE-2025-1149] binutils: GNU Binutils ld xmalloc.c xstrdup memory leak (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been classified as problematic. This affects the function xstrdup of the file libiberty/xmalloc.c of the component ld. The manipulation leads to memory leak. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1149

[CVE-2025-1150] binutils: GNU Binutils ld libbfd.c bfd_malloc memory leak (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been declared as problematic. This vulnerability affects the function bfd_malloc of the file libbfd.c of the component ld. The manipulation leads to memory leak. The attack can be initiated remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1150

[CVE-2025-1151] binutils: GNU Binutils ld xmemdup.c xmemdup memory leak (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been rated as problematic. This issue affects the function xmemdup of the file xmemdup.c of the component ld. The manipulation leads to memory leak. The attack may be initiated remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1151

[CVE-2025-1152] binutils: GNU Binutils ld xstrdup.c xstrdup memory leak (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic has been found in GNU Binutils 2.43. Affected is the function xstrdup of the file xstrdup.c of the component ld. The manipulation leads to memory leak. It is possible to launch the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1152

[CVE-2025-1153] binutils: GNU Binutils format.c bfd_set_format memory corruption (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic was found in GNU Binutils 2.43/2.44. Affected by this vulnerability is the function bfd_set_format of the file format.c. The manipulation leads to memory corruption. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. Upgrading to version 2.45 is able to address this issue. The identifier of the patch is 8d97c1a53f3dc9fd8e1ccdb039b8a33d50133150. It is recommended to upgrade the affected component.

More Info: https://avd.aquasec.com/nvd/cve-2025-1153

[CVE-2025-1176] binutils: GNU Binutils ld elflink.c _bfd_elf_gc_mark_rsec heap-based overflow (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43 and classified as critical. This issue affects the function _bfd_elf_gc_mark_rsec of the file elflink.c of the component ld. The manipulation leads to heap-based buffer overflow. The attack may be initiated remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. The patch is named f9978defb6fab0bd8583942d97c112b0932ac814. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1176

[CVE-2025-1178] binutils: GNU Binutils ld libbfd.c bfd_putl64 memory corruption (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been declared as problematic. Affected by this vulnerability is the function bfd_putl64 of the file libbfd.c of the component ld. The manipulation leads to memory corruption. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. The identifier of the patch is 75086e9de1707281172cc77f178e7949a4414ed0. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1178

[CVE-2025-1179] binutils: GNU Binutils ld libbfd.c bfd_putl64 memory corruption (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been rated as critical. Affected by this issue is the function bfd_putl64 of the file bfd/libbfd.c of the component ld. The manipulation leads to memory corruption. The attack may be launched remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. Upgrading to version 2.44 is able to address this issue. It is recommended to upgrade the affected component. The code maintainer explains, that "[t]his bug has been fixed at some point between the 2.43 and 2.44 releases".

More Info: https://avd.aquasec.com/nvd/cve-2025-1179

[CVE-2025-1180] binutils: GNU Binutils ld elf-eh-frame.c _bfd_elf_write_section_eh_frame memory corruption (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic has been found in GNU Binutils 2.43. This affects the function _bfd_elf_write_section_eh_frame of the file bfd/elf-eh-frame.c of the component ld. The manipulation leads to memory corruption. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told

to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1180

[CVE-2025-1181] binutils: GNU Binutils ld elflink.c _bfd_elf_gc_mark_rsec memory corruption (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as critical was found in GNU Binutils 2.43. This vulnerability affects the function _bfd_elf_gc_mark_rsec of the file bfd/elflink.c of the component ld. The manipulation leads to memory corruption. The attack can be initiated remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. The name of the patch is 931494c9a89558acb36a03a340c01726545eef24. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1181

[CVE-2025-1182] binutils: GNU Binutils ld elflink.c bfd_elf_reloc_symbol_deleted_p memory corruption (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability, which was classified as critical, was found in GNU Binutils 2.43. Affected is the function bfd_elf_reloc_symbol_deleted_p of the file bfd/elflink.c of the component ld. The manipulation leads to memory corruption. It is possible to launch the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. The patch is identified as b425859021d17adf62f06fb904797cf8642986ad. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1182

[CVE-2025-3198] binutils: GNU Binutils objdump bucomm.c display_info memory leak (Severity: LOW)

Package: binutils-x86-64-linux-gnu
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability has been found in GNU Binutils 2.43/2.44 and classified as problematic. Affected by this vulnerability is the function display_info of the file binutils/bucomm.c of the component objdump. The manipulation leads to memory leak. An attack has to be approached locally. The exploit has been disclosed to the public and may be used. The patch is named ba6ad3a18cb26b79e0e3b84c39f707535bbc344d. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-3198

[CVE-2022-0563] util-linux: partial disclosure of arbitrary files in chfn and chsh when compiled with libreadline (Severity: LOW)

Package: bsdutils
Installed: 1:2.38.1-5+deb12u3
Fixed: %!s(<nil>)

A flaw was found in the util-linux chfn and chsh utilities when compiled with Readline support. The Readline library uses an "INPUTRC" environment variable to get a path to the library config file. When the library cannot parse the specified file, it prints an error message containing data from the file. This flaw allows an unprivileged user to read root-owned files, potentially leading to privilege escalation. This flaw affects util-linux versions prior to 2.37.4.

More Info: https://avd.aquasec.com/nvd/cve-2022-0563

[CVE-2016-2781] coreutils: Non-privileged session can escape to the parent session in chroot (Severity: LOW)

Package: coreutils
Installed: 9.1-1
Fixed: %!s(<nil>)

chroot in GNU coreutils, when used with --userspec, allows local users to escape to the parent session via a crafted TIOCSTI ioctl call, which pushes characters to the terminal's input buffer.

More Info: https://avd.aquasec.com/nvd/cve-2016-2781

[CVE-2017-18018] coreutils: race condition vulnerability in chown and chgrp (Severity: LOW)

Package: coreutils
Installed: 9.1-1
Fixed: %!s(<nil>)

In GNU Coreutils through 8.29, chown-core.c in chown and chgrp does not prevent replacement of a plain file with a symlink during use of the POSIX "-R -L" options, which allows local users to modify the ownership of arbitrary files by leveraging a race condition.

More Info: https://avd.aquasec.com/nvd/cve-2017-18018

[CVE-2022-27943] binutils: libiberty/rust-demangle.c in GNU GCC 11.2 allows stack exhaustion in demangle_const (Severity: LOW)

Package: cpp-12
Installed: 12.2.0-14
Fixed: %!s(<nil>)

libiberty/rust-demangle.c in GNU GCC 11.2 allows stack consumption in demangle_const, as demonstrated by nm-new.

More Info: https://avd.aquasec.com/nvd/cve-2022-27943

[CVE-2023-4039] gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 (Severity: LOW)

Package: cpp-12
Installed: 12.2.0-14
Fixed: %!s(<nil>)

DISPUTEDA failure in the -fstack-protector feature in GCC-based toolchains
that target AArch64 allows an attacker to exploit an existing buffer
overflow in dynamically-sized local variables in your application
without this being detected. This stack-protector failure only applies
to C99-style dynamically-sized local variables or those created using

alloca(). The stack-protector operates as intended for statically-sized
local variables.

The default behavior when the stack-protector
detects an overflow is to terminate your application, resulting in
controlled loss of availability. An attacker who can exploit a buffer
overflow without triggering the stack-protector might be able to change
program flow control to cause an uncontrolled loss of availability or to
go further and affect confidentiality or integrity. NOTE: The GCC project argues that this is a missed hardening bug and not a vulnerability by itself.

More Info: https://avd.aquasec.com/nvd/cve-2023-4039

[CVE-2024-2379] curl: QUIC certificate check bypass with wolfSSL (Severity: LOW)

Package: curl
Installed: 7.88.1-10+deb12u12
Fixed: %!s(<nil>)

libcurl skips the certificate verification for a QUIC connection under certain conditions, when built to use wolfSSL. If told to use an unknown/bad cipher or curve, the error path accidentally skips the verification and returns OK, thus ignoring any certificate problems.

More Info: https://avd.aquasec.com/nvd/cve-2024-2379

[CVE-2025-0725] libcurl: Buffer Overflow in libcurl via zlib Integer Overflow (Severity: LOW)

Package: curl
Installed: 7.88.1-10+deb12u12
Fixed: %!s(<nil>)

When libcurl is asked to perform automatic gzip decompression of
content-encoded HTTP responses with the `CURLOPT_ACCEPT_ENCODING` option,
using zlib 1.2.0.3 or older, an attacker-controlled integer overflow would
make libcurl perform a buffer overflow.

More Info: https://avd.aquasec.com/nvd/cve-2025-0725

[CVE-2022-3219] gnupg: denial of service issue (resource consumption) using compressed packets (Severity: LOW)

Package: dirmngr
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

GnuPG can be made to spin on a relatively small input by (for example) crafting a public key with thousands of signatures attached, compressed down to just a few KB.

More Info: https://avd.aquasec.com/nvd/cve-2022-3219

[CVE-2025-30258] gnupg: verification DoS due to a malicious subkey in the keyring (Severity: LOW)

Package: dirmngr
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

In GnuPG before 2.5.5, if a user chooses to import a certificate with certain crafted subkey data that lacks a valid backsig or that has incorrect usage flags, the user loses the ability to verify signatures made from certain other signing keys, aka a "verification DoS."

More Info: https://avd.aquasec.com/nvd/cve-2025-30258

[CVE-2022-27943] binutils: libiberty/rust-demangle.c in GNU GCC 11.2 allows stack exhaustion in demangle_const (Severity: LOW)

Package: g++-12
Installed: 12.2.0-14
Fixed: %!s(<nil>)

libiberty/rust-demangle.c in GNU GCC 11.2 allows stack consumption in demangle_const, as demonstrated by nm-new.

More Info: https://avd.aquasec.com/nvd/cve-2022-27943

[CVE-2023-4039] gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 (Severity: LOW)

Package: g++-12
Installed: 12.2.0-14
Fixed: %!s(<nil>)

DISPUTEDA failure in the -fstack-protector feature in GCC-based toolchains
that target AArch64 allows an attacker to exploit an existing buffer
overflow in dynamically-sized local variables in your application
without this being detected. This stack-protector failure only applies
to C99-style dynamically-sized local variables or those created using
alloca(). The stack-protector operates as intended for statically-sized
local variables.

The default behavior when the stack-protector
detects an overflow is to terminate your application, resulting in
controlled loss of availability. An attacker who can exploit a buffer
overflow without triggering the stack-protector might be able to change
program flow control to cause an uncontrolled loss of availability or to
go further and affect confidentiality or integrity. NOTE: The GCC project argues that this is a missed hardening bug and not a vulnerability by itself.

More Info: https://avd.aquasec.com/nvd/cve-2023-4039

[CVE-2022-27943] binutils: libiberty/rust-demangle.c in GNU GCC 11.2 allows stack exhaustion in demangle_const (Severity: LOW)

Package: gcc-12
Installed: 12.2.0-14
Fixed: %!s(<nil>)

libiberty/rust-demangle.c in GNU GCC 11.2 allows stack consumption in demangle_const, as demonstrated by nm-new.

More Info: https://avd.aquasec.com/nvd/cve-2022-27943

[CVE-2023-4039] gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 (Severity:

LOW)

Package: gcc-12
Installed: 12.2.0-14
Fixed: %!s(<nil>)

DISPUTEDA failure in the -fstack-protector feature in GCC-based toolchains
that target AArch64 allows an attacker to exploit an existing buffer
overflow in dynamically-sized local variables in your application
without this being detected. This stack-protector failure only applies
to C99-style dynamically-sized local variables or those created using
alloca(). The stack-protector operates as intended for statically-sized
local variables.

The default behavior when the stack-protector
detects an overflow is to terminate your application, resulting in
controlled loss of availability. An attacker who can exploit a buffer
overflow without triggering the stack-protector might be able to change
program flow control to cause an uncontrolled loss of availability or to
go further and affect confidentiality or integrity. NOTE: The GCC project argues that this is a missed hardening bug and not a vulnerability by itself.

More Info: https://avd.aquasec.com/nvd/cve-2023-4039

[CVE-2022-27943] binutils: libiberty/rust-demangle.c in GNU GCC 11.2 allows stack exhaustion in demangle_const (Severity: LOW)

Package: gcc-12-base
Installed: 12.2.0-14
Fixed: %!s(<nil>)

libiberty/rust-demangle.c in GNU GCC 11.2 allows stack consumption in demangle_const, as demonstrated by nm-new.

More Info: https://avd.aquasec.com/nvd/cve-2022-27943

[CVE-2023-4039] gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 (Severity: LOW)

Package: gcc-12-base
Installed: 12.2.0-14
Fixed: %!s(<nil>)

DISPUTEDA failure in the -fstack-protector feature in GCC-based toolchains
that target AArch64 allows an attacker to exploit an existing buffer
overflow in dynamically-sized local variables in your application
without this being detected. This stack-protector failure only applies
to C99-style dynamically-sized local variables or those created using
alloca(). The stack-protector operates as intended for statically-sized
local variables.

The default behavior when the stack-protector
detects an overflow is to terminate your application, resulting in
controlled loss of availability. An attacker who can exploit a buffer
overflow without triggering the stack-protector might be able to change
program flow control to cause an uncontrolled loss of availability or to

go further and affect confidentiality or integrity. NOTE: The GCC project argues that this is a missed hardening bug and not a vulnerability by itself.

More Info: https://avd.aquasec.com/nvd/cve-2023-4039

[CVE-2018-1000021] git: client prints server-sent ANSI escape codes to the terminal, allowing for unverified messages to potentially execute arbitrary commands (Severity: LOW)

Package: git
Installed: 1:2.39.5-0+deb12u2
Fixed: %!s(<nil>)

GIT version 2.15.1 and earlier contains a Input Validation Error vulnerability in Client that can result in problems including messing up terminal configuration to RCE. This attack appear to be exploitable via The user must interact with a malicious git server, (or have their traffic modified in a MITM attack).

More Info: https://avd.aquasec.com/nvd/cve-2018-1000021

[CVE-2022-24975] git: The --mirror option for git leaks secret for deleted content, aka the "GitBleed" (Severity: LOW)

Package: git
Installed: 1:2.39.5-0+deb12u2
Fixed: %!s(<nil>)

The --mirror documentation for Git through 2.35.1 does not mention the availability of deleted content, aka the "GitBleed" issue. This could present a security risk if information-disclosure auditing processes rely on a clone operation without the --mirror option. Note: This has been disputed by multiple 3rd parties who believe this is an intended feature of the git binary and does not pose a security risk.

More Info: https://avd.aquasec.com/nvd/cve-2022-24975

[CVE-2024-52005] git: The sideband payload is passed unfiltered to the terminal in git (Severity: LOW)

Package: git
Installed: 1:2.39.5-0+deb12u2
Fixed: %!s(<nil>)

Git is a source code management tool. When cloning from a server (or fetching, or pushing), informational or error messages are transported from the remote Git process to the client via the so-called "sideband channel". These messages will be prefixed with "remote:" and printed directly to the standard error output. Typically, this standard error output is connected to a terminal that understands ANSI escape sequences, which Git did not protect against. Most modern terminals support control sequences that can be used by a malicious actor to hide and misrepresent information, or to mislead the user into executing untrusted scripts. As requested on the git-security mailing list, the patches are under discussion on the public mailing list. Users are advised to update as soon as possible. Users unable to upgrade should avoid recursive clones unless they are from trusted sources.

More Info: https://avd.aquasec.com/nvd/cve-2024-52005

[CVE-2018-1000021] git: client prints server-sent ANSI escape codes to the terminal, allowing for unverified messages to potentially execute arbitrary commands (Severity: LOW)

Package: git-man
Installed: 1:2.39.5-0+deb12u2
Fixed: %!s(<nil>)

GIT version 2.15.1 and earlier contains a Input Validation Error vulnerability in Client that can result in problems including messing up terminal configuration to RCE. This attack appear to be exploitable via The user must interact with a malicious git server, (or have their traffic modified in a MITM attack).

More Info: https://avd.aquasec.com/nvd/cve-2018-1000021

[CVE-2022-24975] git: The --mirror option for git leaks secret for deleted content, aka the "GitBleed" (Severity: LOW)

Package: git-man
Installed: 1:2.39.5-0+deb12u2
Fixed: %!s(<nil>)

The --mirror documentation for Git through 2.35.1 does not mention the availability of deleted content, aka the "GitBleed" issue. This could present a security risk if information-disclosure auditing processes rely on a clone operation without the --mirror option. Note: This has been disputed by multiple 3rd parties who believe this is an intended feature of the git binary and does not pose a security risk.

More Info: https://avd.aquasec.com/nvd/cve-2022-24975

[CVE-2024-52005] git: The sideband payload is passed unfiltered to the terminal in git (Severity: LOW)

Package: git-man
Installed: 1:2.39.5-0+deb12u2
Fixed: %!s(<nil>)

Git is a source code management tool. When cloning from a server (or fetching, or pushing), informational or error messages are transported from the remote Git process to the client via the so-called "sideband channel". These messages will be prefixed with "remote:" and printed directly to the standard error output. Typically, this standard error output is connected to a terminal that understands ANSI escape sequences, which Git did not protect against. Most modern terminals support control sequences that can be used by a malicious actor to hide and misrepresent information, or to mislead the user into executing untrusted scripts. As requested on the git-security mailing list, the patches are under discussion on the public mailing list. Users are advised to update as soon as possible. Users unable to upgrade should avoid recursive clones unless they are from trusted sources.

More Info: https://avd.aquasec.com/nvd/cve-2024-52005

[CVE-2022-3219] gnupg: denial of service issue (resource consumption) using compressed packets (Severity: LOW)

Package: gnupg
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

GnuPG can be made to spin on a relatively small input by (for example) crafting a public key with thousands of signatures attached, compressed down to just a few KB.

More Info: https://avd.aquasec.com/nvd/cve-2022-3219

[CVE-2025-30258] gnupg: verification DoS due to a malicious subkey in the keyring (Severity: LOW)

Package: gnupg
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

In GnuPG before 2.5.5, if a user chooses to import a certificate with certain crafted subkey data that lacks a valid backsig or that has incorrect usage flags, the user loses the ability to verify signatures made from certain other signing keys, aka a "verification DoS."

More Info: https://avd.aquasec.com/nvd/cve-2025-30258

[CVE-2022-3219] gnupg: denial of service issue (resource consumption) using compressed packets (Severity: LOW)

Package: gnupg-l10n
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

GnuPG can be made to spin on a relatively small input by (for example) crafting a public key with thousands of signatures attached, compressed down to just a few KB.

More Info: https://avd.aquasec.com/nvd/cve-2022-3219

[CVE-2025-30258] gnupg: verification DoS due to a malicious subkey in the keyring (Severity: LOW)

Package: gnupg-l10n
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

In GnuPG before 2.5.5, if a user chooses to import a certificate with certain crafted subkey data that lacks a valid backsig or that has incorrect usage flags, the user loses the ability to verify signatures made from certain other signing keys, aka a "verification DoS."

More Info: https://avd.aquasec.com/nvd/cve-2025-30258

[CVE-2022-3219] gnupg: denial of service issue (resource consumption) using compressed packets (Severity: LOW)

Package: gnupg-utils
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

GnuPG can be made to spin on a relatively small input by (for example) crafting a public key with thousands of signatures attached, compressed down to just a few KB.

More Info: https://avd.aquasec.com/nvd/cve-2022-3219

[CVE-2025-30258] gnupg: verification DoS due to a malicious subkey in the keyring (Severity: LOW)

Package: gnupg-utils
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

In GnuPG before 2.5.5, if a user chooses to import a certificate with certain crafted subkey data that lacks a valid backsig or that has incorrect usage flags, the user loses the ability to verify signatures made from certain other signing keys, aka a "verification DoS."

More Info: https://avd.aquasec.com/nvd/cve-2025-30258

[CVE-2022-3219] gnupg: denial of service issue (resource consumption) using compressed packets

(Severity: LOW)

Package: gpg
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

GnuPG can be made to spin on a relatively small input by (for example) crafting a public key with thousands of signatures attached, compressed down to just a few KB.

More Info: https://avd.aquasec.com/nvd/cve-2022-3219

[CVE-2025-30258] gnupg: verification DoS due to a malicious subkey in the keyring (Severity: LOW)

Package: gpg
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

In GnuPG before 2.5.5, if a user chooses to import a certificate with certain crafted subkey data that lacks a valid backsig or that has incorrect usage flags, the user loses the ability to verify signatures made from certain other signing keys, aka a "verification DoS."

More Info: https://avd.aquasec.com/nvd/cve-2025-30258

[CVE-2022-3219] gnupg: denial of service issue (resource consumption) using compressed packets (Severity: LOW)

Package: gpg-agent
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

GnuPG can be made to spin on a relatively small input by (for example) crafting a public key with thousands of signatures attached, compressed down to just a few KB.

More Info: https://avd.aquasec.com/nvd/cve-2022-3219

[CVE-2025-30258] gnupg: verification DoS due to a malicious subkey in the keyring (Severity: LOW)

Package: gpg-agent
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

In GnuPG before 2.5.5, if a user chooses to import a certificate with certain crafted subkey data that lacks a valid backsig or that has incorrect usage flags, the user loses the ability to verify signatures made from certain other signing keys, aka a "verification DoS."

More Info: https://avd.aquasec.com/nvd/cve-2025-30258

[CVE-2022-3219] gnupg: denial of service issue (resource consumption) using compressed packets (Severity: LOW)

Package: gpg-wks-client
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

GnuPG can be made to spin on a relatively small input by (for example) crafting a public key with thousands of signatures attached, compressed down to just a few KB.

More Info: https://avd.aquasec.com/nvd/cve-2022-3219

[CVE-2025-30258] gnupg: verification DoS due to a malicious subkey in the keyring (Severity: LOW)

Package: gpg-wks-client
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

In GnuPG before 2.5.5, if a user chooses to import a certificate with certain crafted subkey data that lacks a valid backsig or that has incorrect usage flags, the user loses the ability to verify signatures made from certain other signing keys, aka a "verification DoS."

More Info: https://avd.aquasec.com/nvd/cve-2025-30258

[CVE-2022-3219] gnupg: denial of service issue (resource consumption) using compressed packets (Severity: LOW)

Package: gpg-wks-server
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

GnuPG can be made to spin on a relatively small input by (for example) crafting a public key with thousands of signatures attached, compressed down to just a few KB.

More Info: https://avd.aquasec.com/nvd/cve-2022-3219

[CVE-2025-30258] gnupg: verification DoS due to a malicious subkey in the keyring (Severity: LOW)

Package: gpg-wks-server
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

In GnuPG before 2.5.5, if a user chooses to import a certificate with certain crafted subkey data that lacks a valid backsig or that has incorrect usage flags, the user loses the ability to verify signatures made from certain other signing keys, aka a "verification DoS."

More Info: https://avd.aquasec.com/nvd/cve-2025-30258

[CVE-2022-3219] gnupg: denial of service issue (resource consumption) using compressed packets (Severity: LOW)

Package: gpgconf
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

GnuPG can be made to spin on a relatively small input by (for example) crafting a public key with thousands of signatures attached, compressed down to just a few KB.

More Info: https://avd.aquasec.com/nvd/cve-2022-3219

[CVE-2025-30258] gnupg: verification DoS due to a malicious subkey in the keyring (Severity: LOW)

Package: gpgconf
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

In GnuPG before 2.5.5, if a user chooses to import a certificate with certain crafted subkey data that lacks a valid backsig or that has incorrect usage flags, the user loses the ability to verify signatures made from certain other signing keys, aka a "verification DoS."

More Info: https://avd.aquasec.com/nvd/cve-2025-30258

[CVE-2022-3219] gnupg: denial of service issue (resource consumption) using compressed packets (Severity: LOW)

Package: gpgsm
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

GnuPG can be made to spin on a relatively small input by (for example) crafting a public key with thousands of signatures attached, compressed down to just a few KB.

More Info: https://avd.aquasec.com/nvd/cve-2022-3219

[CVE-2025-30258] gnupg: verification DoS due to a malicious subkey in the keyring (Severity: LOW)

Package: gpgsm
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

In GnuPG before 2.5.5, if a user chooses to import a certificate with certain crafted subkey data that lacks a valid backsig or that has incorrect usage flags, the user loses the ability to verify signatures made from certain other signing keys, aka a "verification DoS."

More Info: https://avd.aquasec.com/nvd/cve-2025-30258

[CVE-2022-3219] gnupg: denial of service issue (resource consumption) using compressed packets (Severity: LOW)

Package: gpgv
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

GnuPG can be made to spin on a relatively small input by (for example) crafting a public key with thousands of signatures attached, compressed down to just a few KB.

More Info: https://avd.aquasec.com/nvd/cve-2022-3219

[CVE-2025-30258] gnupg: verification DoS due to a malicious subkey in the keyring (Severity: LOW)

Package: gpgv
Installed: 2.2.40-1.1
Fixed: %!s(<nil>)

In GnuPG before 2.5.5, if a user chooses to import a certificate with certain crafted subkey data that lacks a valid backsig or that has incorrect usage flags, the user loses the ability to verify signatures made from certain other signing keys, aka a "verification DoS."

More Info: https://avd.aquasec.com/nvd/cve-2025-30258

[CVE-2005-0406] A design flaw in image processing software that modifies JPEG images m ...

(Severity: LOW)

Package: imagemagick
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A design flaw in image processing software that modifies JPEG images might not modify the original EXIF thumbnail, which could lead to an information leak of potentially sensitive visual information that had been removed from the main JPEG image.

More Info: https://avd.aquasec.com/nvd/cve-2005-0406

[CVE-2008-3134] GraphicsMagick/ImageMagick: multiple crash or DoS issues (Severity: LOW)

Package: imagemagick
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

Multiple unspecified vulnerabilities in GraphicsMagick before 1.2.4 allow remote attackers to cause a denial of service (crash, infinite loop, or memory consumption) via (a) unspecified vectors in the (1) AVI, (2) AVS, (3) DCM, (4) EPT, (5) FITS, (6) MTV, (7) PALM, (8) RLA, and (9) TGA decoder readers; and (b) the GetImageCharacteristics function in magick/image.c, as reachable from a crafted (10) PNG, (11) JPEG, (12) BMP, or (13) TIFF file.

More Info: https://avd.aquasec.com/nvd/cve-2008-3134

[CVE-2016-8678] ImageMagick: Heap-buffer overflow in IsPixelMonochrome (Severity: LOW)

Package: imagemagick
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The IsPixelMonochrome function in MagickCore/pixel-accessor.h in ImageMagick 7.0.3.0 allows remote attackers to cause a denial of service (out-of-bounds read and crash) via a crafted file. NOTE: the vendor says "This is a Q64 issue and we do not support Q64."

More Info: https://avd.aquasec.com/nvd/cve-2016-8678

[CVE-2017-11754] ImageMagick: Memory leak in WritePICONImage function (Severity: LOW)

Package: imagemagick
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an OpenPixelCache call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11754

[CVE-2017-11755] ImageMagick: Memory leak in WritePICONImage function via mishandled AcquireSemaphoreInfo call (Severity: LOW)

Package: imagemagick
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of

service (memory leak) via a crafted file that is mishandled in an AcquireSemaphoreInfo call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11755

[CVE-2017-7275] ImageMagick: Memory allocation failure in AcquireMagickMemory (incomplete fix for CVE-2016-8866) (Severity: LOW)

Package: imagemagick
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The ReadPCXImage function in coders/pcx.c in ImageMagick 7.0.4.9 allows remote attackers to cause a denial of service (attempted large memory allocation and application crash) via a crafted file. NOTE: this vulnerability exists because of an incomplete fix for CVE-2016-8862 and CVE-2016-8866.

More Info: https://avd.aquasec.com/nvd/cve-2017-7275

[CVE-2018-15607] ImageMagick: CPU Exhaustion via crafted input file (Severity: LOW)

Package: imagemagick
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

In ImageMagick 7.0.8-11 Q16, a tiny input file 0x50 0x36 0x36 0x36 0x36 0x4c 0x36 0x38 0x36 0x36 0x36 0x36 0x36 0x36 0x1f 0x35 0x50 0x00 can result in a hang of several minutes during which CPU and memory resources are consumed until ultimately an attempted large memory allocation fails. Remote attackers could leverage this vulnerability to cause a denial of service via a crafted file.

More Info: https://avd.aquasec.com/nvd/cve-2018-15607

[CVE-2021-20311] ImageMagick: Division by zero in sRGBTransformImage() in MagickCore/colorspace.c (Severity: LOW)

Package: imagemagick
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A flaw was found in ImageMagick in versions before 7.0.11, where a division by zero in sRGBTransformImage() in the MagickCore/colorspace.c may trigger undefined behavior via a crafted image file that is submitted by an attacker processed by an application using ImageMagick. The highest threat from this vulnerability is to system availability.

More Info: https://avd.aquasec.com/nvd/cve-2021-20311

[CVE-2023-34152] ImageMagick: RCE (shell command injection) vulnerability in OpenBlob with --enable-pipes configured (Severity: LOW)

Package: imagemagick
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A vulnerability was found in ImageMagick. This security flaw cause a remote code execution vulnerability in OpenBlob with --enable-pipes configured.

More Info: https://avd.aquasec.com/nvd/cve-2023-34152

[CVE-2005-0406] A design flaw in image processing software that modifies JPEG images m ... (Severity: LOW)

Package: imagemagick-6-common
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A design flaw in image processing software that modifies JPEG images might not modify the original EXIF thumbnail, which could lead to an information leak of potentially sensitive visual information that had been removed from the main JPEG image.

More Info: https://avd.aquasec.com/nvd/cve-2005-0406

[CVE-2008-3134] GraphicsMagick/ImageMagick: multiple crash or DoS issues (Severity: LOW)

Package: imagemagick-6-common
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

Multiple unspecified vulnerabilities in GraphicsMagick before 1.2.4 allow remote attackers to cause a denial of service (crash, infinite loop, or memory consumption) via (a) unspecified vectors in the (1) AVI, (2) AVS, (3) DCM, (4) EPT, (5) FITS, (6) MTV, (7) PALM, (8) RLA, and (9) TGA decoder readers; and (b) the GetImageCharacteristics function in magick/image.c, as reachable from a crafted (10) PNG, (11) JPEG, (12) BMP, or (13) TIFF file.

More Info: https://avd.aquasec.com/nvd/cve-2008-3134

[CVE-2016-8678] ImageMagick: Heap-buffer overflow in IsPixelMonochrome (Severity: LOW)

Package: imagemagick-6-common
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The IsPixelMonochrome function in MagickCore/pixel-accessor.h in ImageMagick 7.0.3.0 allows remote attackers to cause a denial of service (out-of-bounds read and crash) via a crafted file. NOTE: the vendor says "This is a Q64 issue and we do not support Q64."

More Info: https://avd.aquasec.com/nvd/cve-2016-8678

[CVE-2017-11754] ImageMagick: Memory leak in WritePICONImage function (Severity: LOW)

Package: imagemagick-6-common
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an OpenPixelCache call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11754

[CVE-2017-11755] ImageMagick: Memory leak in WritePICONImage function via mishandled AcquireSemaphoreInfo call (Severity: LOW)

Package: imagemagick-6-common
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an AcquireSemaphoreInfo call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11755

[CVE-2017-7275] ImageMagick: Memory allocation failure in AcquireMagickMemory (incomplete fix for CVE-2016-8866) (Severity: LOW)

Package: imagemagick-6-common
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The ReadPCXImage function in coders/pcx.c in ImageMagick 7.0.4.9 allows remote attackers to cause a denial of service (attempted large memory allocation and application crash) via a crafted file. NOTE: this vulnerability exists because of an incomplete fix for CVE-2016-8862 and CVE-2016-8866.

More Info: https://avd.aquasec.com/nvd/cve-2017-7275

[CVE-2018-15607] ImageMagick: CPU Exhaustion via crafted input file (Severity: LOW)

Package: imagemagick-6-common
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

In ImageMagick 7.0.8-11 Q16, a tiny input file 0x50 0x36 0x36 0x36 0x36 0x4c 0x36 0x38 0x36 0x36 0x36 0x36 0x36 0x36 0x1f 0x35 0x50 0x00 can result in a hang of several minutes during which CPU and memory resources are consumed until ultimately an attempted large memory allocation fails. Remote attackers could leverage this vulnerability to cause a denial of service via a crafted file.

More Info: https://avd.aquasec.com/nvd/cve-2018-15607

[CVE-2021-20311] ImageMagick: Division by zero in sRGBTransformImage() in MagickCore/colorspace.c (Severity: LOW)

Package: imagemagick-6-common
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A flaw was found in ImageMagick in versions before 7.0.11, where a division by zero in sRGBTransformImage() in the MagickCore/colorspace.c may trigger undefined behavior via a crafted image file that is submitted by an attacker processed by an application using ImageMagick. The highest threat from this vulnerability is to system availability.

More Info: https://avd.aquasec.com/nvd/cve-2021-20311

[CVE-2023-34152] ImageMagick: RCE (shell command injection) vulnerability in OpenBlob with --enable-pipes configured (Severity: LOW)

Package: imagemagick-6-common
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A vulnerability was found in ImageMagick. This security flaw cause a remote code execution vulnerability in OpenBlob with --enable-pipes configured.

More Info: https://avd.aquasec.com/nvd/cve-2023-34152

[CVE-2005-0406] A design flaw in image processing software that modifies JPEG images m ... (Severity: LOW)

Package: imagemagick-6.q16
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A design flaw in image processing software that modifies JPEG images might not modify the original EXIF thumbnail, which could lead to an information leak of potentially sensitive visual information that had been removed from the main JPEG image.

More Info: https://avd.aquasec.com/nvd/cve-2005-0406

[CVE-2008-3134] GraphicsMagick/ImageMagick: multiple crash or DoS issues (Severity: LOW)

Package: imagemagick-6.q16
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

Multiple unspecified vulnerabilities in GraphicsMagick before 1.2.4 allow remote attackers to cause a denial of service (crash, infinite loop, or memory consumption) via (a) unspecified vectors in the (1) AVI, (2) AVS, (3) DCM, (4) EPT, (5) FITS, (6) MTV, (7) PALM, (8) RLA, and (9) TGA decoder readers; and (b) the GetImageCharacteristics function in magick/image.c, as reachable from a crafted (10) PNG, (11) JPEG, (12) BMP, or (13) TIFF file.

More Info: https://avd.aquasec.com/nvd/cve-2008-3134

[CVE-2016-8678] ImageMagick: Heap-buffer overflow in IsPixelMonochrome (Severity: LOW)

Package: imagemagick-6.q16
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The IsPixelMonochrome function in MagickCore/pixel-accessor.h in ImageMagick 7.0.3.0 allows remote attackers to cause a denial of service (out-of-bounds read and crash) via a crafted file. NOTE: the vendor says "This is a Q64 issue and we do not support Q64."

More Info: https://avd.aquasec.com/nvd/cve-2016-8678

[CVE-2017-11754] ImageMagick: Memory leak in WritePICONImage function (Severity: LOW)

Package: imagemagick-6.q16
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an OpenPixelCache call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11754

[CVE-2017-11755] ImageMagick: Memory leak in WritePICONImage function via mishandled AcquireSemaphoreInfo call (Severity: LOW)

Package: imagemagick-6.q16
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an AcquireSemaphoreInfo call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11755

[CVE-2017-7275] ImageMagick: Memory allocation failure in AcquireMagickMemory (incomplete fix for CVE-2016-8866) (Severity: LOW)

Package: imagemagick-6.q16
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The ReadPCXImage function in coders/pcx.c in ImageMagick 7.0.4.9 allows remote attackers to cause a denial of service (attempted large memory allocation and application crash) via a crafted file. NOTE: this vulnerability exists because of an incomplete fix for CVE-2016-8862 and CVE-2016-8866.

More Info: https://avd.aquasec.com/nvd/cve-2017-7275

[CVE-2018-15607] ImageMagick: CPU Exhaustion via crafted input file (Severity: LOW)

Package: imagemagick-6.q16
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

In ImageMagick 7.0.8-11 Q16, a tiny input file 0x50 0x36 0x36 0x36 0x36 0x4c 0x36 0x38 0x36 0x36 0x36 0x36 0x36 0x36 0x1f 0x35 0x50 0x00 can result in a hang of several minutes during which CPU and memory resources are consumed until ultimately an attempted large memory allocation fails. Remote attackers could leverage this vulnerability to cause a denial of service via a crafted file.

More Info: https://avd.aquasec.com/nvd/cve-2018-15607

[CVE-2021-20311] ImageMagick: Division by zero in sRGBTransformImage() in MagickCore/colorspace.c (Severity: LOW)

Package: imagemagick-6.q16
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A flaw was found in ImageMagick in versions before 7.0.11, where a division by zero in sRGBTransformImage() in the MagickCore/colorspace.c may trigger undefined behavior via a crafted image file that is submitted by an attacker processed by an application using ImageMagick. The highest threat from this vulnerability is to system availability.

More Info: https://avd.aquasec.com/nvd/cve-2021-20311

[CVE-2023-34152] ImageMagick: RCE (shell command injection) vulnerability in OpenBlob with --enable-pipes configured (Severity: LOW)

Package: imagemagick-6.q16
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A vulnerability was found in ImageMagick. This security flaw cause a remote code execution vulnerability in OpenBlob with --enable-pipes configured.

More Info: https://avd.aquasec.com/nvd/cve-2023-34152

[CVE-2024-26462] krb5: Memory leak at /krb5/src/kdc/ndr.c (Severity: MEDIUM)

Package: krb5-multidev
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/kdc/ndr.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26462

[CVE-2025-24528] krb5: overflow when calculating ulog block size (Severity: MEDIUM)

Package: krb5-multidev
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

A flaw was found in krb5. With incremental propagation enabled, an authenticated attacker can cause kadmind to write beyond the end of the mapped region for the iprop log file. This issue can trigger a process crash and lead to a denial of service.

More Info: https://avd.aquasec.com/nvd/cve-2025-24528

[CVE-2018-5709] krb5: integer overflow in dbentry->n_key_data in kadmin/dbutil/dump.c (Severity: LOW)

Package: krb5-multidev
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

An issue was discovered in MIT Kerberos 5 (aka krb5) through 1.16. There is a variable "dbentry->n_key_data" in kadmin/dbutil/dump.c that can store 16-bit data but unknowingly the developer has assigned a "u4" variable to it, which is for 32-bit data. An attacker can use this vulnerability to affect other artifacts of the database as we know that a Kerberos database dump file contains trusted data.

More Info: https://avd.aquasec.com/nvd/cve-2018-5709

[CVE-2024-26458] krb5: Memory leak at /krb5/src/lib/rpc/pmap_rmt.c (Severity: LOW)

Package: krb5-multidev
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak in /krb5/src/lib/rpc/pmap_rmt.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26458

[CVE-2024-26461] krb5: Memory leak at /krb5/src/lib/gssapi/krb5/k5sealv3.c (Severity: LOW)

Package: krb5-multidev
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/lib/gssapi/krb5/k5sealv3.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26461

[CVE-2023-6879] aom: heap-buffer-overflow on frame size change (Severity: CRITICAL)

Package: libaom3
Installed: 3.6.0-1+deb12u1
Fixed: %!s(<nil>)

Increasing the resolution of video frames, while performing a multi-threaded encode, can result in a heap overflow in av1_loop_restoration_dealloc().

More Info: https://avd.aquasec.com/nvd/cve-2023-6879

[CVE-2023-39616] AOMedia v3.0.0 to v3.5.0 was discovered to contain an invalid read mem ... (Severity: HIGH)

Package: libaom3
Installed: 3.6.0-1+deb12u1
Fixed: %!s(<nil>)

AOMedia v3.0.0 to v3.5.0 was discovered to contain an invalid read memory access via the component assign_frame_buffer_p in av1/common/av1_common_int.h.

More Info: https://avd.aquasec.com/nvd/cve-2023-39616

[CVE-2011-3374] It was found that apt-key in apt, all versions, do not correctly valid ... (Severity: LOW)

Package: libapt-pkg6.0
Installed: 2.6.1
Fixed: %!s(<nil>)

It was found that apt-key in apt, all versions, do not correctly validate gpg keys with the master keyring, leading to a potential man-in-the-middle attack.

More Info: https://avd.aquasec.com/nvd/cve-2011-3374

[CVE-2022-27943] binutils: libiberty/rust-demangle.c in GNU GCC 11.2 allows stack exhaustion in demangle_const (Severity: LOW)

Package: libasan8
Installed: 12.2.0-14
Fixed: %!s(<nil>)

libiberty/rust-demangle.c in GNU GCC 11.2 allows stack consumption in demangle_const, as demonstrated by nm-new.

More Info: https://avd.aquasec.com/nvd/cve-2022-27943

[CVE-2023-4039] gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 (Severity: LOW)

Package: libasan8
Installed: 12.2.0-14
Fixed: %!s(<nil>)

DISPUTEDA failure in the -fstack-protector feature in GCC-based toolchains
that target AArch64 allows an attacker to exploit an existing buffer
overflow in dynamically-sized local variables in your application
without this being detected. This stack-protector failure only applies

to C99-style dynamically-sized local variables or those created using alloca(). The stack-protector operates as intended for statically-sized local variables.

The default behavior when the stack-protector detects an overflow is to terminate your application, resulting in controlled loss of availability. An attacker who can exploit a buffer overflow without triggering the stack-protector might be able to change program flow control to cause an uncontrolled loss of availability or to go further and affect confidentiality or integrity. NOTE: The GCC project argues that this is a missed hardening bug and not a vulnerability by itself.

More Info: https://avd.aquasec.com/nvd/cve-2023-4039

[CVE-2022-27943] binutils: libiberty/rust-demangle.c in GNU GCC 11.2 allows stack exhaustion in demangle_const (Severity: LOW)

Package: libatomic1
Installed: 12.2.0-14
Fixed: %!s(<nil>)

libiberty/rust-demangle.c in GNU GCC 11.2 allows stack consumption in demangle_const, as demonstrated by nm-new.

More Info: https://avd.aquasec.com/nvd/cve-2022-27943

[CVE-2023-4039] gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 (Severity: LOW)

Package: libatomic1
Installed: 12.2.0-14
Fixed: %!s(<nil>)

DISPUTEDA failure in the -fstack-protector feature in GCC-based toolchains that target AArch64 allows an attacker to exploit an existing buffer overflow in dynamically-sized local variables in your application without this being detected. This stack-protector failure only applies to C99-style dynamically-sized local variables or those created using alloca(). The stack-protector operates as intended for statically-sized local variables.

The default behavior when the stack-protector detects an overflow is to terminate your application, resulting in controlled loss of availability. An attacker who can exploit a buffer overflow without triggering the stack-protector might be able to change program flow control to cause an uncontrolled loss of availability or to go further and affect confidentiality or integrity. NOTE: The GCC project argues that this is a missed hardening bug and not a vulnerability by itself.

More Info: https://avd.aquasec.com/nvd/cve-2023-4039

[CVE-2017-13716] binutils: Memory leak with the C++ symbol demangler routine in libiberty (Severity: LOW)

Package: libbinutils
Installed: 2.40-2

Fixed: %!s(<nil>)

The C++ symbol demangler routine in cplus-dem.c in libiberty, as distributed in GNU Binutils 2.29, allows remote attackers to cause a denial of service (excessive memory allocation and application crash) via a crafted file, as demonstrated by a call from the Binary File Descriptor (BFD) library (aka libbfd).

More Info: https://avd.aquasec.com/nvd/cve-2017-13716

[CVE-2018-20673] libiberty: Integer overflow in demangle_template() function (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

The demangle_template function in cplus-dem.c in GNU libiberty, as distributed in GNU Binutils 2.31.1, contains an integer overflow vulnerability (for "Create an array for saving the template argument values") that can trigger a heap-based buffer overflow, as demonstrated by nm.

More Info: https://avd.aquasec.com/nvd/cve-2018-20673

[CVE-2018-20712] libiberty: heap-based buffer over-read in d_expression_1 (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A heap-based buffer over-read exists in the function d_expression_1 in cp-demangle.c in GNU libiberty, as distributed in GNU Binutils 2.31.1. A crafted input can cause segmentation faults, leading to denial-of-service, as demonstrated by c++filt.

More Info: https://avd.aquasec.com/nvd/cve-2018-20712

[CVE-2018-9996] binutils: Stack-overflow in libiberty/cplus-dem.c causes crash (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

An issue was discovered in cplus-dem.c in GNU libiberty, as distributed in GNU Binutils 2.30. Stack Exhaustion occurs in the C++ demangling functions provided by libiberty, and there are recursive stack frames: demangle_template_value_parm, demangle_integral_value, and demangle_expression.

More Info: https://avd.aquasec.com/nvd/cve-2018-9996

[CVE-2021-32256] binutils: stack-overflow issue in demangle_type in rust-demangle.c. (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

An issue was discovered in GNU libiberty, as distributed in GNU Binutils 2.36. It is a stack-overflow issue in demangle_type in rust-demangle.c.

More Info: https://avd.aquasec.com/nvd/cve-2021-32256

[CVE-2023-1972] binutils: Illegal memory access when accessing a zer0-lengthverdef table (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A potential heap based buffer overflow was found in _bfd_elf_slurp_version_tables() in bfd/elf.c. This may lead to loss of availability.

More Info: https://avd.aquasec.com/nvd/cve-2023-1972

[CVE-2024-53589] binutils: objdump: buffer Overflow in the BFD library's handling of tekhex format files (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

GNU objdump 2.43 is vulnerable to Buffer Overflow in the BFD (Binary File Descriptor) library's handling of tekhex format files.

More Info: https://avd.aquasec.com/nvd/cve-2024-53589

[CVE-2024-57360] binutils: nm: potential segmentation fault when displaying symbols without version info (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

https://www.gnu.org/software/binutils/ nm >=2.43 is affected by: Incorrect Access Control. The type of exploitation is: local. The component is: `nm --without-symbol-version` function.

More Info: https://avd.aquasec.com/nvd/cve-2024-57360

[CVE-2025-0840] binutils: GNU Binutils objdump.c disassemble_bytes stack-based overflow (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability, which was classified as problematic, was found in GNU Binutils up to 2.43. This affects the function disassemble_bytes of the file binutils/objdump.c. The manipulation of the argument buf leads to stack-based buffer overflow. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. Upgrading to version 2.44 is able to address this issue. The identifier of the patch is baac6c221e9d69335bf41366a1c7d87d8ab2f893. It is recommended to upgrade the affected component.

More Info: https://avd.aquasec.com/nvd/cve-2025-0840

[CVE-2025-1147] binutils: GNU Binutils nm nm.c internal_strlen buffer overflow (Severity: LOW)

Package: libbinutils
Installed: 2.40-2

Fixed: %!s(<nil>)

A vulnerability has been found in GNU Binutils 2.43 and classified as problematic. Affected by this vulnerability is the function __sanitizer::internal_strlen of the file binutils/nm.c of the component nm. The manipulation of the argument const leads to buffer overflow. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used.

More Info: https://avd.aquasec.com/nvd/cve-2025-1147

[CVE-2025-1148] binutils: GNU Binutils ld ldelfgen.c link_order_scan memory leak (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43 and classified as problematic. Affected by this issue is the function link_order_scan of the file ld/ldelfgen.c of the component ld. The manipulation leads to memory leak. The attack may be launched remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1148

[CVE-2025-1149] binutils: GNU Binutils ld xmalloc.c xstrdup memory leak (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been classified as problematic. This affects the function xstrdup of the file libiberty/xmalloc.c of the component ld. The manipulation leads to memory leak. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1149

[CVE-2025-1150] binutils: GNU Binutils ld libbfd.c bfd_malloc memory leak (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been declared as problematic. This vulnerability affects the function bfd_malloc of the file libbfd.c of the component ld. The manipulation leads to memory leak. The attack can be initiated remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1150

[CVE-2025-1151] binutils: GNU Binutils ld xmemdup.c xmemdup memory leak (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been rated as problematic. This issue affects the function xmemdup of the file xmemdup.c of the component ld. The manipulation leads to memory leak. The attack may be initiated remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1151

[CVE-2025-1152] binutils: GNU Binutils ld xstrdup.c xstrdup memory leak (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic has been found in GNU Binutils 2.43. Affected is the function xstrdup of the file xstrdup.c of the component ld. The manipulation leads to memory leak. It is possible to launch the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1152

[CVE-2025-1153] binutils: GNU Binutils format.c bfd_set_format memory corruption (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic was found in GNU Binutils 2.43/2.44. Affected by this vulnerability is the function bfd_set_format of the file format.c. The manipulation leads to memory corruption. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. Upgrading to version 2.45 is able to address this issue. The identifier of the patch is 8d97c1a53f3dc9fd8e1ccdb039b8a33d50133150. It is recommended to upgrade the affected component.

More Info: https://avd.aquasec.com/nvd/cve-2025-1153

[CVE-2025-1176] binutils: GNU Binutils ld elflink.c _bfd_elf_gc_mark_rsec heap-based overflow (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43 and classified as critical. This issue affects the function _bfd_elf_gc_mark_rsec of the file elflink.c of the component ld. The manipulation leads to heap-based buffer overflow. The attack may be initiated remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. The patch is named f9978defb6fab0bd8583942d97c112b0932ac814. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1176

[CVE-2025-1178] binutils: GNU Binutils ld libbfd.c bfd_putl64 memory corruption (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been declared as problematic. Affected by this vulnerability is the function bfd_putl64 of the file libbfd.c of the component ld. The manipulation leads to memory corruption. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. The identifier of the patch is 75086e9de1707281172cc77f178e7949a4414ed0. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1178

[CVE-2025-1179] binutils: GNU Binutils ld libbfd.c bfd_putl64 memory corruption (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been rated as critical. Affected by this issue is the function bfd_putl64 of the file bfd/libbfd.c of the component ld. The manipulation leads to memory corruption. The attack may be launched remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. Upgrading to version 2.44 is able to address this issue. It is recommended to upgrade the affected component. The code maintainer explains, that "[t]his bug has been fixed at some point between the 2.43 and 2.44 releases".

More Info: https://avd.aquasec.com/nvd/cve-2025-1179

[CVE-2025-1180] binutils: GNU Binutils ld elf-eh-frame.c _bfd_elf_write_section_eh_frame memory corruption (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic has been found in GNU Binutils 2.43. This affects the function _bfd_elf_write_section_eh_frame of the file bfd/elf-eh-frame.c of the component ld. The manipulation leads to memory corruption. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1180

[CVE-2025-1181] binutils: GNU Binutils ld elflink.c _bfd_elf_gc_mark_rsec memory corruption (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as critical was found in GNU Binutils 2.43. This vulnerability affects the function _bfd_elf_gc_mark_rsec of the file bfd/elflink.c of the component ld. The manipulation leads to memory corruption. The attack can be initiated remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The

exploit has been disclosed to the public and may be used. The name of the patch is 931494c9a89558acb36a03a340c01726545eef24. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1181

[CVE-2025-1182] binutils: GNU Binutils ld elflink.c bfd_elf_reloc_symbol_deleted_p memory corruption (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability, which was classified as critical, was found in GNU Binutils 2.43. Affected is the function bfd_elf_reloc_symbol_deleted_p of the file bfd/elflink.c of the component ld. The manipulation leads to memory corruption. It is possible to launch the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. The patch is identified as b425859021d17adf62f06fb904797cf8642986ad. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1182

[CVE-2025-3198] binutils: GNU Binutils objdump bucomm.c display_info memory leak (Severity: LOW)

Package: libbinutils
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability has been found in GNU Binutils 2.43/2.44 and classified as problematic. Affected by this vulnerability is the function display_info of the file binutils/bucomm.c of the component objdump. The manipulation leads to memory leak. An attack has to be approached locally. The exploit has been disclosed to the public and may be used. The patch is named ba6ad3a18cb26b79e0e3b84c39f707535bbc344d. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-3198

[CVE-2022-0563] util-linux: partial disclosure of arbitrary files in chfn and chsh when compiled with libreadline (Severity: LOW)

Package: libblkid-dev
Installed: 2.38.1-5+deb12u3
Fixed: %!s(<nil>)

A flaw was found in the util-linux chfn and chsh utilities when compiled with Readline support. The Readline library uses an "INPUTRC" environment variable to get a path to the library config file. When the library cannot parse the specified file, it prints an error message containing data from the file. This flaw allows an unprivileged user to read root-owned files, potentially leading to privilege escalation. This flaw affects util-linux versions prior to 2.37.4.

More Info: https://avd.aquasec.com/nvd/cve-2022-0563

[CVE-2022-0563] util-linux: partial disclosure of arbitrary files in chfn and chsh when compiled with libreadline (Severity: LOW)

Package: libblkid1
Installed: 2.38.1-5+deb12u3
Fixed: %!s(<nil>)

A flaw was found in the util-linux chfn and chsh utilities when compiled with Readline support. The Readline library uses an "INPUTRC" environment variable to get a path to the library config file. When the library cannot parse the specified file, it prints an error message containing data from the file. This flaw allows an unprivileged user to read root-owned files, potentially leading to privilege escalation. This flaw affects util-linux versions prior to 2.37.4.

More Info: https://avd.aquasec.com/nvd/cve-2022-0563

[CVE-2010-4756] glibc: glob implementation can cause excessive CPU and memory consumption due to crafted glob expressions (Severity: LOW)

Package: libc-bin
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

The glob implementation in the GNU C Library (aka glibc or libc6) allows remote authenticated users to cause a denial of service (CPU and memory consumption) via crafted glob expressions that do not match any pathnames, as demonstrated by glob expressions in STAT commands to an FTP daemon, a different vulnerability than CVE-2010-2632.

More Info: https://avd.aquasec.com/nvd/cve-2010-4756

[CVE-2018-20796] glibc: uncontrolled recursion in function check_dst_limits_calc_pos_1 in posix/regexec.c (Severity: LOW)

Package: libc-bin
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

In the GNU C Library (aka glibc or libc6) through 2.29, check_dst_limits_calc_pos_1 in posix/regexec.c has Uncontrolled Recursion, as demonstrated by '(\227|)(\\1\\1|t1|\\\2537)+' in grep.

More Info: https://avd.aquasec.com/nvd/cve-2018-20796

[CVE-2019-1010022] glibc: stack guard protection bypass (Severity: LOW)

Package: libc-bin
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

GNU Libc current is affected by: Mitigation bypass. The impact is: Attacker may bypass stack guard protection. The component is: nptl. The attack vector is: Exploit stack buffer overflow vulnerability and use this bypass vulnerability to bypass stack guard. NOTE: Upstream comments indicate "this is being treated as a non-security bug and no real threat.

More Info: https://avd.aquasec.com/nvd/cve-2019-1010022

[CVE-2019-1010023] glibc: running ldd on malicious ELF leads to code execution because of wrong size computation (Severity: LOW)

Package: libc-bin
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

GNU Libc current is affected by: Re-mapping current loaded library with malicious ELF file. The impact is: In worst case attacker may evaluate privileges. The component is: libld. The attack vector is: Attacker sends 2 ELF files to victim and asks to run ldd on it. ldd execute code. NOTE: Upstream comments indicate "this is being treated as a non-security bug

and no real threat.

More Info: https://avd.aquasec.com/nvd/cve-2019-1010023

[CVE-2019-1010024] glibc: ASLR bypass using cache of thread stack and heap (Severity: LOW)

Package: libc-bin
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

GNU Libc current is affected by: Mitigation bypass. The impact is: Attacker may bypass ASLR using cache of thread stack and heap. The component is: glibc. NOTE: Upstream comments indicate "this is being treated as a non-security bug and no real threat.

More Info: https://avd.aquasec.com/nvd/cve-2019-1010024

[CVE-2019-1010025] glibc: information disclosure of heap addresses of pthread_created thread (Severity: LOW)

Package: libc-bin
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

GNU Libc current is affected by: Mitigation bypass. The impact is: Attacker may guess the heap addresses of pthread_created thread. The component is: glibc. NOTE: the vendor's position is "ASLR bypass itself is not a vulnerability.

More Info: https://avd.aquasec.com/nvd/cve-2019-1010025

[CVE-2019-9192] glibc: uncontrolled recursion in function check_dst_limits_calc_pos_1 in posix/regexec.c (Severity: LOW)

Package: libc-bin
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

In the GNU C Library (aka glibc or libc6) through 2.29, check_dst_limits_calc_pos_1 in posix/regexec.c has Uncontrolled Recursion, as demonstrated by '(|)(\\1\\1)*' in grep, a different issue than CVE-2018-20796. NOTE: the software maintainer disputes that this is a vulnerability because the behavior occurs only with a crafted pattern

More Info: https://avd.aquasec.com/nvd/cve-2019-9192

[CVE-2010-4756] glibc: glob implementation can cause excessive CPU and memory consumption due to crafted glob expressions (Severity: LOW)

Package: libc-dev-bin
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

The glob implementation in the GNU C Library (aka glibc or libc6) allows remote authenticated users to cause a denial of service (CPU and memory consumption) via crafted glob expressions that do not match any pathnames, as demonstrated by glob expressions in STAT commands to an FTP daemon, a different vulnerability than CVE-2010-2632.

More Info: https://avd.aquasec.com/nvd/cve-2010-4756

[CVE-2018-20796] glibc: uncontrolled recursion in function check_dst_limits_calc_pos_1 in posix/regexec.c (Severity: LOW)

Package: libc-dev-bin
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

In the GNU C Library (aka glibc or libc6) through 2.29, check_dst_limits_calc_pos_1 in posix/regexec.c has Uncontrolled Recursion, as demonstrated by '(\227|)(\\1\\1|t1|\\\2537)+' in grep.

More Info: https://avd.aquasec.com/nvd/cve-2018-20796

[CVE-2019-1010022] glibc: stack guard protection bypass (Severity: LOW)

Package: libc-dev-bin
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

GNU Libc current is affected by: Mitigation bypass. The impact is: Attacker may bypass stack guard protection. The component is: nptl. The attack vector is: Exploit stack buffer overflow vulnerability and use this bypass vulnerability to bypass stack guard. NOTE: Upstream comments indicate "this is being treated as a non-security bug and no real threat.

More Info: https://avd.aquasec.com/nvd/cve-2019-1010022

[CVE-2019-1010023] glibc: running ldd on malicious ELF leads to code execution because of wrong size computation (Severity: LOW)

Package: libc-dev-bin
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

GNU Libc current is affected by: Re-mapping current loaded library with malicious ELF file. The impact is: In worst case attacker may evaluate privileges. The component is: libld. The attack vector is: Attacker sends 2 ELF files to victim and asks to run ldd on it. ldd execute code. NOTE: Upstream comments indicate "this is being treated as a non-security bug and no real threat.

More Info: https://avd.aquasec.com/nvd/cve-2019-1010023

[CVE-2019-1010024] glibc: ASLR bypass using cache of thread stack and heap (Severity: LOW)

Package: libc-dev-bin
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

GNU Libc current is affected by: Mitigation bypass. The impact is: Attacker may bypass ASLR using cache of thread stack and heap. The component is: glibc. NOTE: Upstream comments indicate "this is being treated as a non-security bug and no real threat.

More Info: https://avd.aquasec.com/nvd/cve-2019-1010024

[CVE-2019-1010025] glibc: information disclosure of heap addresses of pthread_created thread (Severity: LOW)

Package: libc-dev-bin
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

GNU Libc current is affected by: Mitigation bypass. The impact is: Attacker may guess the heap addresses of pthread_created thread. The component is: glibc. NOTE: the vendor's position is "ASLR bypass itself is not a vulnerability.

More Info: https://avd.aquasec.com/nvd/cve-2019-1010025

[CVE-2019-9192] glibc: uncontrolled recursion in function check_dst_limits_calc_pos_1 in posix/regexec.c (Severity: LOW)

Package: libc-dev-bin
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

In the GNU C Library (aka glibc or libc6) through 2.29, check_dst_limits_calc_pos_1 in posix/regexec.c has Uncontrolled Recursion, as demonstrated by '(|)(\\1\\1)*' in grep, a different issue than CVE-2018-20796. NOTE: the software maintainer disputes that this is a vulnerability because the behavior occurs only with a crafted pattern

More Info: https://avd.aquasec.com/nvd/cve-2019-9192

[CVE-2010-4756] glibc: glob implementation can cause excessive CPU and memory consumption due to crafted glob expressions (Severity: LOW)

Package: libc6
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

The glob implementation in the GNU C Library (aka glibc or libc6) allows remote authenticated users to cause a denial of service (CPU and memory consumption) via crafted glob expressions that do not match any pathnames, as demonstrated by glob expressions in STAT commands to an FTP daemon, a different vulnerability than CVE-2010-2632.

More Info: https://avd.aquasec.com/nvd/cve-2010-4756

[CVE-2018-20796] glibc: uncontrolled recursion in function check_dst_limits_calc_pos_1 in posix/regexec.c (Severity: LOW)

Package: libc6
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

In the GNU C Library (aka glibc or libc6) through 2.29, check_dst_limits_calc_pos_1 in posix/regexec.c has Uncontrolled Recursion, as demonstrated by '(\227|)(\\1\\1|t1|\\\2537)+' in grep.

More Info: https://avd.aquasec.com/nvd/cve-2018-20796

[CVE-2019-1010022] glibc: stack guard protection bypass (Severity: LOW)

Package: libc6
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

GNU Libc current is affected by: Mitigation bypass. The impact is: Attacker may bypass stack guard protection. The component is: nptl. The attack vector is: Exploit stack buffer overflow vulnerability and use this bypass vulnerability to bypass stack guard. NOTE: Upstream comments indicate "this is being treated as a non-security bug and no real threat.

More Info: https://avd.aquasec.com/nvd/cve-2019-1010022

[CVE-2019-1010023] glibc: running ldd on malicious ELF leads to code execution because of wrong size computation (Severity: LOW)

Package: libc6
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

GNU Libc current is affected by: Re-mapping current loaded library with malicious ELF file. The impact is: In worst case attacker may evaluate privileges. The component is: libld. The attack vector is: Attacker sends 2 ELF files to victim and asks to run ldd on it. ldd execute code. NOTE: Upstream comments indicate "this is being treated as a non-security bug and no real threat.

More Info: https://avd.aquasec.com/nvd/cve-2019-1010023

[CVE-2019-1010024] glibc: ASLR bypass using cache of thread stack and heap (Severity: LOW)

Package: libc6
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

GNU Libc current is affected by: Mitigation bypass. The impact is: Attacker may bypass ASLR using cache of thread stack and heap. The component is: glibc. NOTE: Upstream comments indicate "this is being treated as a non-security bug and no real threat.

More Info: https://avd.aquasec.com/nvd/cve-2019-1010024

[CVE-2019-1010025] glibc: information disclosure of heap addresses of pthread_created thread (Severity: LOW)

Package: libc6
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

GNU Libc current is affected by: Mitigation bypass. The impact is: Attacker may guess the heap addresses of pthread_created thread. The component is: glibc. NOTE: the vendor's position is "ASLR bypass itself is not a vulnerability.

More Info: https://avd.aquasec.com/nvd/cve-2019-1010025

[CVE-2019-9192] glibc: uncontrolled recursion in function check_dst_limits_calc_pos_1 in posix/regexec.c (Severity: LOW)

Package: libc6
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

In the GNU C Library (aka glibc or libc6) through 2.29, check_dst_limits_calc_pos_1 in posix/regexec.c has Uncontrolled Recursion, as demonstrated by '(|)(\\1\\1)*' in grep, a different issue than CVE-2018-20796. NOTE: the software maintainer disputes that this is a vulnerability because the behavior occurs only with a crafted pattern

More Info: https://avd.aquasec.com/nvd/cve-2019-9192

[CVE-2010-4756] glibc: glob implementation can cause excessive CPU and memory consumption due to crafted glob expressions (Severity: LOW)

Package: libc6-dev
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

The glob implementation in the GNU C Library (aka glibc or libc6) allows remote authenticated users to cause a denial of service (CPU and memory consumption) via crafted glob expressions that do not match any pathnames, as demonstrated by glob expressions in STAT commands to an FTP daemon, a different vulnerability than CVE-2010-2632.

More Info: https://avd.aquasec.com/nvd/cve-2010-4756

[CVE-2018-20796] glibc: uncontrolled recursion in function check_dst_limits_calc_pos_1 in posix/regexec.c (Severity: LOW)

Package: libc6-dev
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

In the GNU C Library (aka glibc or libc6) through 2.29, check_dst_limits_calc_pos_1 in posix/regexec.c has Uncontrolled Recursion, as demonstrated by '(\227|)(\\1\\1|t1|\\\2537)+' in grep.

More Info: https://avd.aquasec.com/nvd/cve-2018-20796

[CVE-2019-1010022] glibc: stack guard protection bypass (Severity: LOW)

Package: libc6-dev
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

GNU Libc current is affected by: Mitigation bypass. The impact is: Attacker may bypass stack guard protection. The component is: nptl. The attack vector is: Exploit stack buffer overflow vulnerability and use this bypass vulnerability to bypass stack guard. NOTE: Upstream comments indicate "this is being treated as a non-security bug and no real threat.

More Info: https://avd.aquasec.com/nvd/cve-2019-1010022

[CVE-2019-1010023] glibc: running ldd on malicious ELF leads to code execution because of wrong size computation (Severity: LOW)

Package: libc6-dev
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

GNU Libc current is affected by: Re-mapping current loaded library with malicious ELF file. The impact is: In worst case attacker may evaluate privileges. The component is: libld. The attack vector is: Attacker sends 2 ELF files to victim and asks to run ldd on it. ldd execute code. NOTE: Upstream comments indicate "this is being treated as a non-security bug and no real threat.

More Info: https://avd.aquasec.com/nvd/cve-2019-1010023

[CVE-2019-1010024] glibc: ASLR bypass using cache of thread stack and heap (Severity: LOW)

Package: libc6-dev
Installed: 2.36-9+deb12u10

Fixed: %!s(<nil>)

GNU Libc current is affected by: Mitigation bypass. The impact is: Attacker may bypass ASLR using cache of thread stack and heap. The component is: glibc. NOTE: Upstream comments indicate "this is being treated as a non-security bug and no real threat.

More Info: https://avd.aquasec.com/nvd/cve-2019-1010024

[CVE-2019-1010025] glibc: information disclosure of heap addresses of pthread_created thread (Severity: LOW)

Package: libc6-dev
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

GNU Libc current is affected by: Mitigation bypass. The impact is: Attacker may guess the heap addresses of pthread_created thread. The component is: glibc. NOTE: the vendor's position is "ASLR bypass itself is not a vulnerability.

More Info: https://avd.aquasec.com/nvd/cve-2019-1010025

[CVE-2019-9192] glibc: uncontrolled recursion in function check_dst_limits_calc_pos_1 in posix/regexec.c (Severity: LOW)

Package: libc6-dev
Installed: 2.36-9+deb12u10
Fixed: %!s(<nil>)

In the GNU C Library (aka glibc or libc6) through 2.29, check_dst_limits_calc_pos_1 in posix/regexec.c has Uncontrolled Recursion, as demonstrated by '(|)(\\1\\1)*' in grep, a different issue than CVE-2018-20796. NOTE: the software maintainer disputes that this is a vulnerability because the behavior occurs only with a crafted pattern

More Info: https://avd.aquasec.com/nvd/cve-2019-9192

[CVE-2017-7475] cairo: NULL pointer dereference with a crafted font file (Severity: LOW)

Package: libcairo-gobject2
Installed: 1.16.0-7
Fixed: %!s(<nil>)

Cairo version 1.15.4 is vulnerable to a NULL pointer dereference related to the FT_Load_Glyph and FT_Render_Glyph resulting in an application crash.

More Info: https://avd.aquasec.com/nvd/cve-2017-7475

[CVE-2018-18064] cairo: Stack-based buffer overflow via parsing of crafted WebKitGTK+ document (Severity: LOW)

Package: libcairo-gobject2
Installed: 1.16.0-7
Fixed: %!s(<nil>)

cairo through 1.15.14 has an out-of-bounds stack-memory write during processing of a crafted document by WebKitGTK+ because of the interaction between cairo-rectangular-scan-converter.c (the generate and render_rows functions) and cairo-image-compositor.c (the _cairo_image_spans_and_zero function).

More Info: https://avd.aquasec.com/nvd/cve-2018-18064

[CVE-2019-6461] cairo: assertion problem in _cairo_arc_in_direction in cairo-arc.c (Severity: LOW)

Package: libcairo-gobject2
Installed: 1.16.0-7
Fixed: %!s(<nil>)

An issue was discovered in cairo 1.16.0. There is an assertion problem in the function _cairo_arc_in_direction in the file cairo-arc.c.

More Info: https://avd.aquasec.com/nvd/cve-2019-6461

[CVE-2019-6462] cairo: infinite loop in the function _arc_error_normalized in the file cairo-arc.c (Severity: LOW)

Package: libcairo-gobject2
Installed: 1.16.0-7
Fixed: %!s(<nil>)

An issue was discovered in cairo 1.16.0. There is an infinite loop in the function _arc_error_normalized in the file cairo-arc.c, related to _arc_max_angle_for_tolerance_normalized.

More Info: https://avd.aquasec.com/nvd/cve-2019-6462

[CVE-2017-7475] cairo: NULL pointer dereference with a crafted font file (Severity: LOW)

Package: libcairo-script-interpreter2
Installed: 1.16.0-7
Fixed: %!s(<nil>)

Cairo version 1.15.4 is vulnerable to a NULL pointer dereference related to the FT_Load_Glyph and FT_Render_Glyph resulting in an application crash.

More Info: https://avd.aquasec.com/nvd/cve-2017-7475

[CVE-2018-18064] cairo: Stack-based buffer overflow via parsing of crafted WebKitGTK+ document (Severity: LOW)

Package: libcairo-script-interpreter2
Installed: 1.16.0-7
Fixed: %!s(<nil>)

cairo through 1.15.14 has an out-of-bounds stack-memory write during processing of a crafted document by WebKitGTK+ because of the interaction between cairo-rectangular-scan-converter.c (the generate and render_rows functions) and cairo-image-compositor.c (the _cairo_image_spans_and_zero function).

More Info: https://avd.aquasec.com/nvd/cve-2018-18064

[CVE-2019-6461] cairo: assertion problem in _cairo_arc_in_direction in cairo-arc.c (Severity: LOW)

Package: libcairo-script-interpreter2
Installed: 1.16.0-7
Fixed: %!s(<nil>)

An issue was discovered in cairo 1.16.0. There is an assertion problem in the function _cairo_arc_in_direction in the file cairo-arc.c.

More Info: https://avd.aquasec.com/nvd/cve-2019-6461

[CVE-2019-6462] cairo: infinite loop in the function _arc_error_normalized in the file cairo-arc.c (Severity: LOW)

Package: libcairo-script-interpreter2
Installed: 1.16.0-7
Fixed: %!s(<nil>)

An issue was discovered in cairo 1.16.0. There is an infinite loop in the function _arc_error_normalized in the file cairo-arc.c, related to _arc_max_angle_for_tolerance_normalized.

More Info: https://avd.aquasec.com/nvd/cve-2019-6462

[CVE-2017-7475] cairo: NULL pointer dereference with a crafted font file (Severity: LOW)

Package: libcairo2
Installed: 1.16.0-7
Fixed: %!s(<nil>)

Cairo version 1.15.4 is vulnerable to a NULL pointer dereference related to the FT_Load_Glyph and FT_Render_Glyph resulting in an application crash.

More Info: https://avd.aquasec.com/nvd/cve-2017-7475

[CVE-2018-18064] cairo: Stack-based buffer overflow via parsing of crafted WebKitGTK+ document (Severity: LOW)

Package: libcairo2
Installed: 1.16.0-7
Fixed: %!s(<nil>)

cairo through 1.15.14 has an out-of-bounds stack-memory write during processing of a crafted document by WebKitGTK+ because of the interaction between cairo-rectangular-scan-converter.c (the generate and render_rows functions) and cairo-image-compositor.c (the _cairo_image_spans_and_zero function).

More Info: https://avd.aquasec.com/nvd/cve-2018-18064

[CVE-2019-6461] cairo: assertion problem in _cairo_arc_in_direction in cairo-arc.c (Severity: LOW)

Package: libcairo2
Installed: 1.16.0-7
Fixed: %!s(<nil>)

An issue was discovered in cairo 1.16.0. There is an assertion problem in the function _cairo_arc_in_direction in the file cairo-arc.c.

More Info: https://avd.aquasec.com/nvd/cve-2019-6461

[CVE-2019-6462] cairo: infinite loop in the function _arc_error_normalized in the file cairo-arc.c (Severity: LOW)

Package: libcairo2

Installed: 1.16.0-7
Fixed: %!s(<nil>)

An issue was discovered in cairo 1.16.0. There is an infinite loop in the function _arc_error_normalized in the file cairo-arc.c, related to _arc_max_angle_for_tolerance_normalized.

More Info: https://avd.aquasec.com/nvd/cve-2019-6462

[CVE-2017-7475] cairo: NULL pointer dereference with a crafted font file (Severity: LOW)

Package: libcairo2-dev
Installed: 1.16.0-7
Fixed: %!s(<nil>)

Cairo version 1.15.4 is vulnerable to a NULL pointer dereference related to the FT_Load_Glyph and FT_Render_Glyph resulting in an application crash.

More Info: https://avd.aquasec.com/nvd/cve-2017-7475

[CVE-2018-18064] cairo: Stack-based buffer overflow via parsing of crafted WebKitGTK+ document (Severity: LOW)

Package: libcairo2-dev
Installed: 1.16.0-7
Fixed: %!s(<nil>)

cairo through 1.15.14 has an out-of-bounds stack-memory write during processing of a crafted document by WebKitGTK+ because of the interaction between cairo-rectangular-scan-converter.c (the generate and render_rows functions) and cairo-image-compositor.c (the _cairo_image_spans_and_zero function).

More Info: https://avd.aquasec.com/nvd/cve-2018-18064

[CVE-2019-6461] cairo: assertion problem in _cairo_arc_in_direction in cairo-arc.c (Severity: LOW)

Package: libcairo2-dev
Installed: 1.16.0-7
Fixed: %!s(<nil>)

An issue was discovered in cairo 1.16.0. There is an assertion problem in the function _cairo_arc_in_direction in the file cairo-arc.c.

More Info: https://avd.aquasec.com/nvd/cve-2019-6461

[CVE-2019-6462] cairo: infinite loop in the function _arc_error_normalized in the file cairo-arc.c (Severity: LOW)

Package: libcairo2-dev
Installed: 1.16.0-7
Fixed: %!s(<nil>)

An issue was discovered in cairo 1.16.0. There is an infinite loop in the function _arc_error_normalized in the file cairo-arc.c, related to _arc_max_angle_for_tolerance_normalized.

More Info: https://avd.aquasec.com/nvd/cve-2019-6462

[CVE-2025-1390] libcap: pam_cap: Fix potential configuration parsing error (Severity: MEDIUM)

Package: libcap2
Installed: 1:2.66-4
Fixed: %!s(<nil>)

The PAM module pam_cap.so of libcap configuration supports group names starting with â€œ@â€•, during actual parsing, configurations not starting with â€œ@â€• are incorrectly recognized as group names. This may result in nonintended users being granted an inherited capability set, potentially leading to security risks. Attackers can exploit this vulnerability to achieve local privilege escalation on systems where /etc/security/capability.conf is used to configure user inherited privileges by constructing specific usernames.

More Info: https://avd.aquasec.com/nvd/cve-2025-1390

[CVE-2022-27943] binutils: libiberty/rust-demangle.c in GNU GCC 11.2 allows stack exhaustion in demangle_const (Severity: LOW)

Package: libcc1-0
Installed: 12.2.0-14
Fixed: %!s(<nil>)

libiberty/rust-demangle.c in GNU GCC 11.2 allows stack consumption in demangle_const, as demonstrated by nm-new.

More Info: https://avd.aquasec.com/nvd/cve-2022-27943

[CVE-2023-4039] gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 (Severity: LOW)

Package: libcc1-0
Installed: 12.2.0-14
Fixed: %!s(<nil>)

DISPUTEDA failure in the -fstack-protector feature in GCC-based toolchains
that target AArch64 allows an attacker to exploit an existing buffer
overflow in dynamically-sized local variables in your application
without this being detected. This stack-protector failure only applies
to C99-style dynamically-sized local variables or those created using
alloca(). The stack-protector operates as intended for statically-sized
local variables.

The default behavior when the stack-protector
detects an overflow is to terminate your application, resulting in
controlled loss of availability. An attacker who can exploit a buffer
overflow without triggering the stack-protector might be able to change
program flow control to cause an uncontrolled loss of availability or to
go further and affect confidentiality or integrity. NOTE: The GCC project argues that this is a missed hardening bug and not a vulnerability by itself.

More Info: https://avd.aquasec.com/nvd/cve-2023-4039

[CVE-2017-13716] binutils: Memory leak with the C++ symbol demangler routine in libiberty (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

The C++ symbol demangler routine in cplus-dem.c in libiberty, as distributed in GNU Binutils 2.29, allows remote attackers to cause a denial of service (excessive memory allocation and application crash) via a crafted file, as demonstrated by a call from the Binary File Descriptor (BFD) library (aka libbfd).

More Info: https://avd.aquasec.com/nvd/cve-2017-13716

[CVE-2018-20673] libiberty: Integer overflow in demangle_template() function (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

The demangle_template function in cplus-dem.c in GNU libiberty, as distributed in GNU Binutils 2.31.1, contains an integer overflow vulnerability (for "Create an array for saving the template argument values") that can trigger a heap-based buffer overflow, as demonstrated by nm.

More Info: https://avd.aquasec.com/nvd/cve-2018-20673

[CVE-2018-20712] libiberty: heap-based buffer over-read in d_expression_1 (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

A heap-based buffer over-read exists in the function d_expression_1 in cp-demangle.c in GNU libiberty, as distributed in GNU Binutils 2.31.1. A crafted input can cause segmentation faults, leading to denial-of-service, as demonstrated by c++filt.

More Info: https://avd.aquasec.com/nvd/cve-2018-20712

[CVE-2018-9996] binutils: Stack-overflow in libiberty/cplus-dem.c causes crash (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

An issue was discovered in cplus-dem.c in GNU libiberty, as distributed in GNU Binutils 2.30. Stack Exhaustion occurs in the C++ demangling functions provided by libiberty, and there are recursive stack frames: demangle_template_value_parm, demangle_integral_value, and demangle_expression.

More Info: https://avd.aquasec.com/nvd/cve-2018-9996

[CVE-2021-32256] binutils: stack-overflow issue in demangle_type in rust-demangle.c. (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

An issue was discovered in GNU libiberty, as distributed in GNU Binutils 2.36. It is a stack-overflow issue in demangle_type in rust-demangle.c.

More Info: https://avd.aquasec.com/nvd/cve-2021-32256

[CVE-2023-1972] binutils: Illegal memory access when accessing a zer0-lengthverdef table (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

A potential heap based buffer overflow was found in _bfd_elf_slurp_version_tables() in bfd/elf.c. This may lead to loss of availability.

More Info: https://avd.aquasec.com/nvd/cve-2023-1972

[CVE-2024-53589] binutils: objdump: buffer Overflow in the BFD library's handling of tekhex format files (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

GNU objdump 2.43 is vulnerable to Buffer Overflow in the BFD (Binary File Descriptor) library's handling of tekhex format files.

More Info: https://avd.aquasec.com/nvd/cve-2024-53589

[CVE-2024-57360] binutils: nm: potential segmentation fault when displaying symbols without version info (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

https://www.gnu.org/software/binutils/ nm >=2.43 is affected by: Incorrect Access Control. The type of exploitation is: local. The component is: `nm --without-symbol-version` function.

More Info: https://avd.aquasec.com/nvd/cve-2024-57360

[CVE-2025-0840] binutils: GNU Binutils objdump.c disassemble_bytes stack-based overflow (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability, which was classified as problematic, was found in GNU Binutils up to 2.43. This affects the function disassemble_bytes of the file binutils/objdump.c. The manipulation of the argument buf leads to stack-based buffer overflow. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. Upgrading to version 2.44 is able to address this issue. The identifier of the patch is baac6c221e9d69335bf41366a1c7d87d8ab2f893. It is recommended to upgrade the affected component.

More Info: https://avd.aquasec.com/nvd/cve-2025-0840

[CVE-2025-1147] binutils: GNU Binutils nm nm.c internal_strlen buffer overflow (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability has been found in GNU Binutils 2.43 and classified as problematic. Affected by this vulnerability is the function __sanitizer::internal_strlen of the file binutils/nm.c of the component nm. The manipulation of the argument const leads to buffer overflow. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used.

More Info: https://avd.aquasec.com/nvd/cve-2025-1147

[CVE-2025-1148] binutils: GNU Binutils ld ldelfgen.c link_order_scan memory leak (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43 and classified as problematic. Affected by this issue is the function link_order_scan of the file ld/ldelfgen.c of the component ld. The manipulation leads to memory leak. The attack may be launched remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1148

[CVE-2025-1149] binutils: GNU Binutils ld xmalloc.c xstrdup memory leak (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been classified as problematic. This affects the function xstrdup of the file libiberty/xmalloc.c of the component ld. The manipulation leads to memory leak. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1149

[CVE-2025-1150] binutils: GNU Binutils ld libbfd.c bfd_malloc memory leak (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been declared as problematic. This vulnerability affects the function bfd_malloc of the file libbfd.c of the component ld. The manipulation leads to memory leak. The attack can be initiated remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1150

[CVE-2025-1151] binutils: GNU Binutils ld xmemdup.c xmemdup memory leak (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2

Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been rated as problematic. This issue affects the function xmemdup of the file xmemdup.c of the component ld. The manipulation leads to memory leak. The attack may be initiated remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1151

[CVE-2025-1152] binutils: GNU Binutils ld xstrdup.c xstrdup memory leak (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic has been found in GNU Binutils 2.43. Affected is the function xstrdup of the file xstrdup.c of the component ld. The manipulation leads to memory leak. It is possible to launch the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1152

[CVE-2025-1153] binutils: GNU Binutils format.c bfd_set_format memory corruption (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic was found in GNU Binutils 2.43/2.44. Affected by this vulnerability is the function bfd_set_format of the file format.c. The manipulation leads to memory corruption. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. Upgrading to version 2.45 is able to address this issue. The identifier of the patch is 8d97c1a53f3dc9fd8e1ccdb039b8a33d50133150. It is recommended to upgrade the affected component.

More Info: https://avd.aquasec.com/nvd/cve-2025-1153

[CVE-2025-1176] binutils: GNU Binutils ld elflink.c _bfd_elf_gc_mark_rsec heap-based overflow (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43 and classified as critical. This issue affects the function _bfd_elf_gc_mark_rsec of the file elflink.c of the component ld. The manipulation leads to heap-based buffer overflow. The attack may be initiated remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. The patch is named f9978defb6fab0bd8583942d97c112b0932ac814. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1176

[CVE-2025-1178] binutils: GNU Binutils ld libbfd.c bfd_putl64 memory corruption (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been declared as problematic. Affected by this vulnerability is the function bfd_putl64 of the file libbfd.c of the component ld. The manipulation leads to memory corruption. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. The identifier of the patch is 75086e9de1707281172cc77f178e7949a4414ed0. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1178

[CVE-2025-1179] binutils: GNU Binutils ld libbfd.c bfd_putl64 memory corruption (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been rated as critical. Affected by this issue is the function bfd_putl64 of the file bfd/libbfd.c of the component ld. The manipulation leads to memory corruption. The attack may be launched remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. Upgrading to version 2.44 is able to address this issue. It is recommended to upgrade the affected component. The code maintainer explains, that "[t]his bug has been fixed at some point between the 2.43 and 2.44 releases".

More Info: https://avd.aquasec.com/nvd/cve-2025-1179

[CVE-2025-1180] binutils: GNU Binutils ld elf-eh-frame.c _bfd_elf_write_section_eh_frame memory corruption (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic has been found in GNU Binutils 2.43. This affects the function _bfd_elf_write_section_eh_frame of the file bfd/elf-eh-frame.c of the component ld. The manipulation leads to memory corruption. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1180

[CVE-2025-1181] binutils: GNU Binutils ld elflink.c _bfd_elf_gc_mark_rsec memory corruption (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as critical was found in GNU Binutils 2.43. This vulnerability affects the function _bfd_elf_gc_mark_rsec of the file bfd/elflink.c of the component ld. The manipulation leads to memory corruption. The attack can be initiated remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. The name of the patch is

931494c9a89558acb36a03a340c01726545eef24. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1181

[CVE-2025-1182] binutils: GNU Binutils ld elflink.c bfd_elf_reloc_symbol_deleted_p memory corruption (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability, which was classified as critical, was found in GNU Binutils 2.43. Affected is the function bfd_elf_reloc_symbol_deleted_p of the file bfd/elflink.c of the component ld. The manipulation leads to memory corruption. It is possible to launch the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. The patch is identified as b425859021d17adf62f06fb904797cf8642986ad. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1182

[CVE-2025-3198] binutils: GNU Binutils objdump bucomm.c display_info memory leak (Severity: LOW)

Package: libctf-nobfd0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability has been found in GNU Binutils 2.43/2.44 and classified as problematic. Affected by this vulnerability is the function display_info of the file binutils/bucomm.c of the component objdump. The manipulation leads to memory leak. An attack has to be approached locally. The exploit has been disclosed to the public and may be used. The patch is named ba6ad3a18cb26b79e0e3b84c39f707535bbc344d. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-3198

[CVE-2017-13716] binutils: Memory leak with the C++ symbol demangler routine in libiberty (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

The C++ symbol demangler routine in cplus-dem.c in libiberty, as distributed in GNU Binutils 2.29, allows remote attackers to cause a denial of service (excessive memory allocation and application crash) via a crafted file, as demonstrated by a call from the Binary File Descriptor (BFD) library (aka libbfd).

More Info: https://avd.aquasec.com/nvd/cve-2017-13716

[CVE-2018-20673] libiberty: Integer overflow in demangle_template() function (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

The demangle_template function in cplus-dem.c in GNU libiberty, as distributed in GNU Binutils 2.31.1, contains an integer overflow vulnerability (for "Create an array for saving the template argument values") that can trigger a heap-based buffer overflow, as demonstrated by nm.

More Info: https://avd.aquasec.com/nvd/cve-2018-20673

[CVE-2018-20712] libiberty: heap-based buffer over-read in d_expression_1 (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

A heap-based buffer over-read exists in the function d_expression_1 in cp-demangle.c in GNU libiberty, as distributed in GNU Binutils 2.31.1. A crafted input can cause segmentation faults, leading to denial-of-service, as demonstrated by c++filt.

More Info: https://avd.aquasec.com/nvd/cve-2018-20712

[CVE-2018-9996] binutils: Stack-overflow in libiberty/cplus-dem.c causes crash (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

An issue was discovered in cplus-dem.c in GNU libiberty, as distributed in GNU Binutils 2.30. Stack Exhaustion occurs in the C++ demangling functions provided by libiberty, and there are recursive stack frames: demangle_template_value_parm, demangle_integral_value, and demangle_expression.

More Info: https://avd.aquasec.com/nvd/cve-2018-9996

[CVE-2021-32256] binutils: stack-overflow issue in demangle_type in rust-demangle.c. (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

An issue was discovered in GNU libiberty, as distributed in GNU Binutils 2.36. It is a stack-overflow issue in demangle_type in rust-demangle.c.

More Info: https://avd.aquasec.com/nvd/cve-2021-32256

[CVE-2023-1972] binutils: Illegal memory access when accessing a zer0-lengthverdef table (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

A potential heap based buffer overflow was found in _bfd_elf_slurp_version_tables() in bfd/elf.c. This may lead to loss of availability.

More Info: https://avd.aquasec.com/nvd/cve-2023-1972

[CVE-2024-53589] binutils: objdump: buffer Overflow in the BFD library's handling of tekhex format files (Severity: LOW)

Package: libctf0
Installed: 2.40-2

Fixed: %!s(<nil>)

GNU objdump 2.43 is vulnerable to Buffer Overflow in the BFD (Binary File Descriptor) library's handling of tekhex format files.

More Info: https://avd.aquasec.com/nvd/cve-2024-53589

[CVE-2024-57360] binutils: nm: potential segmentation fault when displaying symbols without version info (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

https://www.gnu.org/software/binutils/ nm >=2.43 is affected by: Incorrect Access Control. The type of exploitation is: local. The component is: `nm --without-symbol-version` function.

More Info: https://avd.aquasec.com/nvd/cve-2024-57360

[CVE-2025-0840] binutils: GNU Binutils objdump.c disassemble_bytes stack-based overflow (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability, which was classified as problematic, was found in GNU Binutils up to 2.43. This affects the function disassemble_bytes of the file binutils/objdump.c. The manipulation of the argument buf leads to stack-based buffer overflow. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. Upgrading to version 2.44 is able to address this issue. The identifier of the patch is baac6c221e9d69335bf41366a1c7d87d8ab2f893. It is recommended to upgrade the affected component.

More Info: https://avd.aquasec.com/nvd/cve-2025-0840

[CVE-2025-1147] binutils: GNU Binutils nm nm.c internal_strlen buffer overflow (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability has been found in GNU Binutils 2.43 and classified as problematic. Affected by this vulnerability is the function __sanitizer::internal_strlen of the file binutils/nm.c of the component nm. The manipulation of the argument const leads to buffer overflow. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used.

More Info: https://avd.aquasec.com/nvd/cve-2025-1147

[CVE-2025-1148] binutils: GNU Binutils ld ldelfgen.c link_order_scan memory leak (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43 and classified as problematic. Affected by this issue is the function link_order_scan of the file ld/ldelfgen.c of the component ld. The manipulation leads to memory leak. The attack may be

launched remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1148

[CVE-2025-1149] binutils: GNU Binutils ld xmalloc.c xstrdup memory leak (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been classified as problematic. This affects the function xstrdup of the file libiberty/xmalloc.c of the component ld. The manipulation leads to memory leak. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1149

[CVE-2025-1150] binutils: GNU Binutils ld libbfd.c bfd_malloc memory leak (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been declared as problematic. This vulnerability affects the function bfd_malloc of the file libbfd.c of the component ld. The manipulation leads to memory leak. The attack can be initiated remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1150

[CVE-2025-1151] binutils: GNU Binutils ld xmemdup.c xmemdup memory leak (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been rated as problematic. This issue affects the function xmemdup of the file xmemdup.c of the component ld. The manipulation leads to memory leak. The attack may be initiated remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1151

[CVE-2025-1152] binutils: GNU Binutils ld xstrdup.c xstrdup memory leak (Severity: LOW)

Package: libctf0
Installed: 2.40-2

Fixed: %!s(<nil>)

A vulnerability classified as problematic has been found in GNU Binutils 2.43. Affected is the function xstrdup of the file xstrdup.c of the component ld. The manipulation leads to memory leak. It is possible to launch the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1152

[CVE-2025-1153] binutils: GNU Binutils format.c bfd_set_format memory corruption (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic was found in GNU Binutils 2.43/2.44. Affected by this vulnerability is the function bfd_set_format of the file format.c. The manipulation leads to memory corruption. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. Upgrading to version 2.45 is able to address this issue. The identifier of the patch is 8d97c1a53f3dc9fd8e1ccdb039b8a33d50133150. It is recommended to upgrade the affected component.

More Info: https://avd.aquasec.com/nvd/cve-2025-1153

[CVE-2025-1176] binutils: GNU Binutils ld elflink.c _bfd_elf_gc_mark_rsec heap-based overflow (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43 and classified as critical. This issue affects the function _bfd_elf_gc_mark_rsec of the file elflink.c of the component ld. The manipulation leads to heap-based buffer overflow. The attack may be initiated remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. The patch is named f9978defb6fab0bd8583942d97c112b0932ac814. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1176

[CVE-2025-1178] binutils: GNU Binutils ld libbfd.c bfd_putl64 memory corruption (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been declared as problematic. Affected by this vulnerability is the function bfd_putl64 of the file libbfd.c of the component ld. The manipulation leads to memory corruption. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. The identifier of the patch is 75086e9de1707281172cc77f178e7949a4414ed0. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1178

[CVE-2025-1179] binutils: GNU Binutils ld libbfd.c bfd_putl64 memory corruption (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been rated as critical. Affected by this issue is the function bfd_putl64 of the file bfd/libbfd.c of the component ld. The manipulation leads to memory corruption. The attack may be launched remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. Upgrading to version 2.44 is able to address this issue. It is recommended to upgrade the affected component. The code maintainer explains, that "[t]his bug has been fixed at some point between the 2.43 and 2.44 releases".

More Info: https://avd.aquasec.com/nvd/cve-2025-1179

[CVE-2025-1180] binutils: GNU Binutils ld elf-eh-frame.c _bfd_elf_write_section_eh_frame memory corruption (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic has been found in GNU Binutils 2.43. This affects the function _bfd_elf_write_section_eh_frame of the file bfd/elf-eh-frame.c of the component ld. The manipulation leads to memory corruption. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1180

[CVE-2025-1181] binutils: GNU Binutils ld elflink.c _bfd_elf_gc_mark_rsec memory corruption (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as critical was found in GNU Binutils 2.43. This vulnerability affects the function _bfd_elf_gc_mark_rsec of the file bfd/elflink.c of the component ld. The manipulation leads to memory corruption. The attack can be initiated remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. The name of the patch is 931494c9a89558acb36a03a340c01726545eef24. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1181

[CVE-2025-1182] binutils: GNU Binutils ld elflink.c bfd_elf_reloc_symbol_deleted_p memory corruption (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability, which was classified as critical, was found in GNU Binutils 2.43. Affected is the function bfd_elf_reloc_symbol_deleted_p of the file bfd/elflink.c of the component ld. The manipulation leads to memory corruption. It is possible to launch the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. The patch is identified as b425859021d17adf62f06fb904797cf8642986ad. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1182

[CVE-2025-3198] binutils: GNU Binutils objdump bucomm.c display_info memory leak (Severity: LOW)

Package: libctf0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability has been found in GNU Binutils 2.43/2.44 and classified as problematic. Affected by this vulnerability is the function display_info of the file binutils/bucomm.c of the component objdump. The manipulation leads to memory leak. An attack has to be approached locally. The exploit has been disclosed to the public and may be used. The patch is named ba6ad3a18cb26b79e0e3b84c39f707535bbc344d. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-3198

[CVE-2024-2379] curl: QUIC certificate check bypass with wolfSSL (Severity: LOW)

Package: libcurl3-gnutls
Installed: 7.88.1-10+deb12u12
Fixed: %!s(<nil>)

libcurl skips the certificate verification for a QUIC connection under certain conditions, when built to use wolfSSL. If told to use an unknown/bad cipher or curve, the error path accidentally skips the verification and returns OK, thus ignoring any certificate problems.

More Info: https://avd.aquasec.com/nvd/cve-2024-2379

[CVE-2025-0725] libcurl: Buffer Overflow in libcurl via zlib Integer Overflow (Severity: LOW)

Package: libcurl3-gnutls
Installed: 7.88.1-10+deb12u12
Fixed: %!s(<nil>)

When libcurl is asked to perform automatic gzip decompression of
content-encoded HTTP responses with the `CURLOPT_ACCEPT_ENCODING` option,
using zlib 1.2.0.3 or older, an attacker-controlled integer overflow would
make libcurl perform a buffer overflow.

More Info: https://avd.aquasec.com/nvd/cve-2025-0725

[CVE-2024-2379] curl: QUIC certificate check bypass with wolfSSL (Severity: LOW)

Package: libcurl4
Installed: 7.88.1-10+deb12u12
Fixed: %!s(<nil>)

libcurl skips the certificate verification for a QUIC connection under certain conditions, when built to use wolfSSL. If told to use an unknown/bad cipher or curve, the error path accidentally skips the verification and returns OK, thus ignoring any certificate problems.

More Info: https://avd.aquasec.com/nvd/cve-2024-2379

[CVE-2025-0725] libcurl: Buffer Overflow in libcurl via zlib Integer Overflow (Severity: LOW)

Package: libcurl4

Installed: 7.88.1-10+deb12u12
Fixed: %!s(<nil>)

When libcurl is asked to perform automatic gzip decompression of
content-encoded HTTP responses with the `CURLOPT_ACCEPT_ENCODING` option,
using zlib 1.2.0.3 or older, an attacker-controlled integer overflow would
make libcurl perform a buffer overflow.

More Info: https://avd.aquasec.com/nvd/cve-2025-0725

[CVE-2024-2379] curl: QUIC certificate check bypass with wolfSSL (Severity: LOW)

Package: libcurl4-openssl-dev
Installed: 7.88.1-10+deb12u12
Fixed: %!s(<nil>)

libcurl skips the certificate verification for a QUIC connection under certain conditions, when built to use wolfSSL. If told to use an unknown/bad cipher or curve, the error path accidentally skips the verification and returns OK, thus ignoring any certificate problems.

More Info: https://avd.aquasec.com/nvd/cve-2024-2379

[CVE-2025-0725] libcurl: Buffer Overflow in libcurl via zlib Integer Overflow (Severity: LOW)

Package: libcurl4-openssl-dev
Installed: 7.88.1-10+deb12u12
Fixed: %!s(<nil>)

When libcurl is asked to perform automatic gzip decompression of
content-encoded HTTP responses with the `CURLOPT_ACCEPT_ENCODING` option,
using zlib 1.2.0.3 or older, an attacker-controlled integer overflow would
make libcurl perform a buffer overflow.

More Info: https://avd.aquasec.com/nvd/cve-2025-0725

[CVE-2023-32570] VideoLAN dav1d before 1.2.0 has a thread_task.c race condition that ca ... (Severity: MEDIUM)

Package: libdav1d6
Installed: 1.0.0-2+deb12u1
Fixed: %!s(<nil>)

VideoLAN dav1d before 1.2.0 has a thread_task.c race condition that can lead to an application crash, related to dav1d_decode_frame_exit.

More Info: https://avd.aquasec.com/nvd/cve-2023-32570

[CVE-2023-51792] Buffer Overflow vulnerability in libde265 v1.0.12 allows a local attac ... (Severity: MEDIUM)

Package: libde265-0
Installed: 1.0.11-1+deb12u2
Fixed: %!s(<nil>)

Buffer Overflow vulnerability in libde265 v1.0.12 allows a local attacker to cause a denial of service via the allocation size exceeding the maximum supported size of 0x10000000000.

More Info: https://avd.aquasec.com/nvd/cve-2023-51792

[CVE-2024-38949] Heap Buffer Overflow vulnerability in Libde265 v1.0.15 allows attacker ... (Severity: MEDIUM)

Package: libde265-0
Installed: 1.0.11-1+deb12u2
Fixed: %!s(<nil>)

Heap Buffer Overflow vulnerability in Libde265 v1.0.15 allows attackers to crash the application via crafted payload to display444as420 function at sdl.cc

More Info: https://avd.aquasec.com/nvd/cve-2024-38949

[CVE-2024-38950] Heap Buffer Overflow vulnerability in Libde265 v1.0.15 allows attacker ... (Severity: MEDIUM)

Package: libde265-0
Installed: 1.0.11-1+deb12u2
Fixed: %!s(<nil>)

Heap Buffer Overflow vulnerability in Libde265 v1.0.15 allows attackers to crash the application via crafted payload to __interceptor_memcpy function.

More Info: https://avd.aquasec.com/nvd/cve-2024-38950

[CVE-2021-46310] An issue was discovered IW44Image.cpp in djvulibre 3.5.28 in allows at ... (Severity: MEDIUM)

Package: libdjvulibre-dev
Installed: 3.5.28-2+b1
Fixed: %!s(<nil>)

An issue was discovered IW44Image.cpp in djvulibre 3.5.28 in allows attackers to cause a denial of service via divide by zero.

More Info: https://avd.aquasec.com/nvd/cve-2021-46310

[CVE-2021-46312] An issue was discovered IW44EncodeCodec.cpp in djvulibre 3.5.28 in all ... (Severity: MEDIUM)

Package: libdjvulibre-dev
Installed: 3.5.28-2+b1
Fixed: %!s(<nil>)

An issue was discovered IW44EncodeCodec.cpp in djvulibre 3.5.28 in allows attackers to cause a denial of service via divide by zero.

More Info: https://avd.aquasec.com/nvd/cve-2021-46312

[CVE-2021-46310] An issue was discovered IW44Image.cpp in djvulibre 3.5.28 in allows at ... (Severity: MEDIUM)

Package: libdjvulibre-text
Installed: 3.5.28-2

Fixed: %!s(<nil>)

An issue was discovered IW44Image.cpp in djvulibre 3.5.28 in allows attackers to cause a denial of service via divide by zero.

More Info: https://avd.aquasec.com/nvd/cve-2021-46310

[CVE-2021-46312] An issue was discovered IW44EncodeCodec.cpp in djvulibre 3.5.28 in all ... (Severity: MEDIUM)

Package: libdjvulibre-text
Installed: 3.5.28-2
Fixed: %!s(<nil>)

An issue was discovered IW44EncodeCodec.cpp in djvulibre 3.5.28 in allows attackers to cause a denial of service via divide by zero.

More Info: https://avd.aquasec.com/nvd/cve-2021-46312

[CVE-2021-46310] An issue was discovered IW44Image.cpp in djvulibre 3.5.28 in allows at ... (Severity: MEDIUM)

Package: libdjvulibre21
Installed: 3.5.28-2+b1
Fixed: %!s(<nil>)

An issue was discovered IW44Image.cpp in djvulibre 3.5.28 in allows attackers to cause a denial of service via divide by zero.

More Info: https://avd.aquasec.com/nvd/cve-2021-46310

[CVE-2021-46312] An issue was discovered IW44EncodeCodec.cpp in djvulibre 3.5.28 in all ... (Severity: MEDIUM)

Package: libdjvulibre21
Installed: 3.5.28-2+b1
Fixed: %!s(<nil>)

An issue was discovered IW44EncodeCodec.cpp in djvulibre 3.5.28 in allows attackers to cause a denial of service via divide by zero.

More Info: https://avd.aquasec.com/nvd/cve-2021-46312

[CVE-2024-25260] elfutils: global-buffer-overflow exists in the function ebl_machine_flag_name in eblmachineflagname.c (Severity: LOW)

Package: libelf1
Installed: 0.188-2.1
Fixed: %!s(<nil>)

elfutils v0.189 was discovered to contain a NULL pointer dereference via the handle_verdef() function at readelf.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-25260

[CVE-2025-1352] elfutils: GNU elfutils eu-readelf libdw_alloc.c __libdw_thread_tail memory corruption

(Severity: LOW)

Package: libelf1
Installed: 0.188-2.1
Fixed: %!s(<nil>)

A vulnerability has been found in GNU elfutils 0.192 and classified as critical. This vulnerability affects the function __libdw_thread_tail in the library libdw_alloc.c of the component eu-readelf. The manipulation of the argument w leads to memory corruption. The attack can be initiated remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. The name of the patch is 2636426a091bd6c6f7f02e49ab20d4cdc6bfc753. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1352

[CVE-2025-1365] elfutils: GNU elfutils eu-readelf readelf.c process_symtab buffer overflow (Severity: LOW)

Package: libelf1
Installed: 0.188-2.1
Fixed: %!s(<nil>)

A vulnerability, which was classified as critical, was found in GNU elfutils 0.192. This affects the function process_symtab of the file readelf.c of the component eu-readelf. The manipulation of the argument D/a leads to buffer overflow. Local access is required to approach this attack. The exploit has been disclosed to the public and may be used. The identifier of the patch is 5e5c0394d82c53e97750fe7b18023e6f84157b81. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1365

[CVE-2025-1371] elfutils: GNU elfutils eu-read readelf.c handle_dynamic_symtab null pointer dereference (Severity: LOW)

Package: libelf1
Installed: 0.188-2.1
Fixed: %!s(<nil>)

A vulnerability has been found in GNU elfutils 0.192 and classified as problematic. This vulnerability affects the function handle_dynamic_symtab of the file readelf.c of the component eu-read. The manipulation leads to null pointer dereference. Attacking locally is a requirement. The exploit has been disclosed to the public and may be used. The patch is identified as b38e562a4c907e08171c76b8b2def8464d5a104a. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1371

[CVE-2025-1372] elfutils: GNU elfutils eu-readelf readelf.c print_string_section buffer overflow (Severity: LOW)

Package: libelf1
Installed: 0.188-2.1
Fixed: %!s(<nil>)

A vulnerability was found in GNU elfutils 0.192. It has been declared as critical. Affected by this vulnerability is the function dump_data_section/print_string_section of the file readelf.c of the component eu-readelf. The manipulation of the argument z/x leads to buffer overflow. An attack has to be approached locally. The exploit has been disclosed to the public and may be used. The identifier of the patch is 73db9d2021cab9e23fd734b0a76a612d52a6f1db. It is

recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1372

[CVE-2025-1376] elfutils: GNU elfutils eu-strip elf_strptr.c elf_strptr denial of service (Severity: LOW)

Package: libelf1
Installed: 0.188-2.1
Fixed: %!s(<nil>)

A vulnerability classified as problematic was found in GNU elfutils 0.192. This vulnerability affects the function elf_strptr in the library /libelf/elf_strptr.c of the component eu-strip. The manipulation leads to denial of service. It is possible to launch the attack on the local host. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. The name of the patch is b16f441cca0a4841050e3215a9f120a6d8aea918. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1376

[CVE-2025-1377] elfutils: GNU elfutils eu-strip strip.c gelf_getsymshndx denial of service (Severity: LOW)

Package: libelf1
Installed: 0.188-2.1
Fixed: %!s(<nil>)

A vulnerability, which was classified as problematic, has been found in GNU elfutils 0.192. This issue affects the function gelf_getsymshndx of the file strip.c of the component eu-strip. The manipulation leads to denial of service. The attack needs to be approached locally. The exploit has been disclosed to the public and may be used. The identifier of the patch is fbf1df9ca286de3323ae541973b08449f8d03aba. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1377

[CVE-2023-52425] expat: parsing large tokens can trigger a denial of service (Severity: HIGH)

Package: libexpat1
Installed: 2.5.0-1+deb12u1
Fixed: %!s(<nil>)

libexpat through 2.5.0 allows a denial of service (resource consumption) because many full reparsings are required in the case of a large token for which multiple buffer fills are needed.

More Info: https://avd.aquasec.com/nvd/cve-2023-52425

[CVE-2024-8176] libexpat: expat: Improper Restriction of XML Entity Expansion Depth in libexpat (Severity: HIGH)

Package: libexpat1
Installed: 2.5.0-1+deb12u1
Fixed: %!s(<nil>)

A stack overflow vulnerability exists in the libexpat library due to the way it handles recursive entity expansion in XML documents. When parsing an XML document with deeply nested entity references, libexpat can be forced to recurse indefinitely, exhausting the stack space and causing a crash. This issue could lead to denial of service (DoS) or, in some cases, exploitable memory corruption, depending on the environment and library usage.

More Info: https://avd.aquasec.com/nvd/cve-2024-8176

[CVE-2024-50602] libexpat: expat: DoS via XML_ResumeParser (Severity: MEDIUM)

Package: libexpat1
Installed: 2.5.0-1+deb12u1
Fixed: %!s(<nil>)

An issue was discovered in libexpat before 2.6.4. There is a crash within the XML_ResumeParser function because XML_StopParser can stop/suspend an unstarted parser.

More Info: https://avd.aquasec.com/nvd/cve-2024-50602

[CVE-2023-52426] expat: recursive XML entity expansion vulnerability (Severity: LOW)

Package: libexpat1
Installed: 2.5.0-1+deb12u1
Fixed: %!s(<nil>)

libexpat through 2.5.0 allows recursive XML Entity Expansion if XML_DTD is undefined at compile time.

More Info: https://avd.aquasec.com/nvd/cve-2023-52426

[CVE-2024-28757] expat: XML Entity Expansion (Severity: LOW)

Package: libexpat1
Installed: 2.5.0-1+deb12u1
Fixed: %!s(<nil>)

libexpat through 2.6.1 allows an XML Entity Expansion attack when there is isolated use of external parsers (created via XML_ExternalEntityParserCreate).

More Info: https://avd.aquasec.com/nvd/cve-2024-28757

[CVE-2023-52425] expat: parsing large tokens can trigger a denial of service (Severity: HIGH)

Package: libexpat1-dev
Installed: 2.5.0-1+deb12u1
Fixed: %!s(<nil>)

libexpat through 2.5.0 allows a denial of service (resource consumption) because many full reparsings are required in the case of a large token for which multiple buffer fills are needed.

More Info: https://avd.aquasec.com/nvd/cve-2023-52425

[CVE-2024-8176] libexpat: expat: Improper Restriction of XML Entity Expansion Depth in libexpat (Severity: HIGH)

Package: libexpat1-dev
Installed: 2.5.0-1+deb12u1
Fixed: %!s(<nil>)

A stack overflow vulnerability exists in the libexpat library due to the way it handles recursive entity expansion in XML documents. When parsing an XML document with deeply nested entity references, libexpat can be forced to recurse indefinitely, exhausting the stack space and causing a crash. This issue could lead to denial of service (DoS) or, in some cases, exploitable memory corruption, depending on the environment and library usage.

More Info: https://avd.aquasec.com/nvd/cve-2024-8176

[CVE-2024-50602] libexpat: expat: DoS via XML_ResumeParser (Severity: MEDIUM)

Package: libexpat1-dev
Installed: 2.5.0-1+deb12u1
Fixed: %!s(<nil>)

An issue was discovered in libexpat before 2.6.4. There is a crash within the XML_ResumeParser function because XML_StopParser can stop/suspend an unstarted parser.

More Info: https://avd.aquasec.com/nvd/cve-2024-50602

[CVE-2023-52426] expat: recursive XML entity expansion vulnerability (Severity: LOW)

Package: libexpat1-dev
Installed: 2.5.0-1+deb12u1
Fixed: %!s(<nil>)

libexpat through 2.5.0 allows recursive XML Entity Expansion if XML_DTD is undefined at compile time.

More Info: https://avd.aquasec.com/nvd/cve-2023-52426

[CVE-2024-28757] expat: XML Entity Expansion (Severity: LOW)

Package: libexpat1-dev
Installed: 2.5.0-1+deb12u1
Fixed: %!s(<nil>)

libexpat through 2.6.1 allows an XML Entity Expansion attack when there is isolated use of external parsers (created via XML_ExternalEntityParserCreate).

More Info: https://avd.aquasec.com/nvd/cve-2024-28757

[CVE-2022-27943] binutils: libiberty/rust-demangle.c in GNU GCC 11.2 allows stack exhaustion in demangle_const (Severity: LOW)

Package: libgcc-12-dev
Installed: 12.2.0-14
Fixed: %!s(<nil>)

libiberty/rust-demangle.c in GNU GCC 11.2 allows stack consumption in demangle_const, as demonstrated by nm-new.

More Info: https://avd.aquasec.com/nvd/cve-2022-27943

[CVE-2023-4039] gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 (Severity: LOW)

Package: libgcc-12-dev
Installed: 12.2.0-14
Fixed: %!s(<nil>)

DISPUTEDA failure in the -fstack-protector feature in GCC-based toolchains
that target AArch64 allows an attacker to exploit an existing buffer
overflow in dynamically-sized local variables in your application
without this being detected. This stack-protector failure only applies
to C99-style dynamically-sized local variables or those created using
alloca(). The stack-protector operates as intended for statically-sized

local variables.

The default behavior when the stack-protector
detects an overflow is to terminate your application, resulting in
controlled loss of availability. An attacker who can exploit a buffer
overflow without triggering the stack-protector might be able to change
program flow control to cause an uncontrolled loss of availability or to
go further and affect confidentiality or integrity. NOTE: The GCC project argues that this is a missed hardening bug and not a vulnerability by itself.

More Info: https://avd.aquasec.com/nvd/cve-2023-4039

[CVE-2022-27943] binutils: libiberty/rust-demangle.c in GNU GCC 11.2 allows stack exhaustion in demangle_const (Severity: LOW)

Package: libgcc-s1
Installed: 12.2.0-14
Fixed: %!s(<nil>)

libiberty/rust-demangle.c in GNU GCC 11.2 allows stack consumption in demangle_const, as demonstrated by nm-new.

More Info: https://avd.aquasec.com/nvd/cve-2022-27943

[CVE-2023-4039] gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 (Severity: LOW)

Package: libgcc-s1
Installed: 12.2.0-14
Fixed: %!s(<nil>)

DISPUTEDA failure in the -fstack-protector feature in GCC-based toolchains
that target AArch64 allows an attacker to exploit an existing buffer
overflow in dynamically-sized local variables in your application
without this being detected. This stack-protector failure only applies
to C99-style dynamically-sized local variables or those created using
alloca(). The stack-protector operates as intended for statically-sized
local variables.

The default behavior when the stack-protector
detects an overflow is to terminate your application, resulting in
controlled loss of availability. An attacker who can exploit a buffer
overflow without triggering the stack-protector might be able to change
program flow control to cause an uncontrolled loss of availability or to
go further and affect confidentiality or integrity. NOTE: The GCC project argues that this is a missed hardening bug and not a vulnerability by itself.

More Info: https://avd.aquasec.com/nvd/cve-2023-4039

[CVE-2024-2236] libgcrypt: vulnerable to Marvin Attack (Severity: MEDIUM)

Package: libgcrypt20
Installed: 1.10.1-3
Fixed: %!s(<nil>)

A timing-based side-channel flaw was found in libgcrypt's RSA implementation. This issue may allow a remote attacker

to initiate a Bleichenbacher-style attack, which can lead to the decryption of RSA ciphertexts.

More Info: https://avd.aquasec.com/nvd/cve-2024-2236

[CVE-2018-6829] libgcrypt: ElGamal implementation doesn't have semantic security due to incorrectly encoded plaintexts possibly allowing to obtain sensitive information (Severity: LOW)

Package: libgcrypt20
Installed: 1.10.1-3
Fixed: %!s(<nil>)

cipher/elgamal.c in Libgcrypt through 1.8.2, when used to encrypt messages directly, improperly encodes plaintexts, which allows attackers to obtain sensitive information by reading ciphertext data (i.e., it does not have semantic security in face of a ciphertext-only attack). The Decisional Diffie-Hellman (DDH) assumption does not hold for Libgcrypt's ElGamal implementation.

More Info: https://avd.aquasec.com/nvd/cve-2018-6829

[CVE-2012-0039] glib2: hash table collisions CPU usage DoS (Severity: LOW)

Package: libglib2.0-0
Installed: 2.74.6-2+deb12u5
Fixed: %!s(<nil>)

GLib 2.31.8 and earlier, when the g_str_hash function is used, computes hash values without restricting the ability to trigger hash collisions predictably, which allows context-dependent attackers to cause a denial of service (CPU consumption) via crafted input to an application that maintains a hash table. NOTE: this issue may be disputed by the vendor; the existence of the g_str_hash function is not a vulnerability in the library, because callers of g_hash_table_new and g_hash_table_new_full can specify an arbitrary hash function that is appropriate for the application.

More Info: https://avd.aquasec.com/nvd/cve-2012-0039

[CVE-2025-3360] glibc: GLib prior to 2.82.5 is vulnerable to integer overflow and buffer under-read when parsing a very long invalid ISO 8601 timestamp with g_date_time_new_from_iso8601(). (Severity: LOW)

Package: libglib2.0-0
Installed: 2.74.6-2+deb12u5
Fixed: %!s(<nil>)

A flaw was found in GLib. An integer overflow and buffer under-read occur when parsing a long invalid ISO 8601 timestamp with the g_date_time_new_from_iso8601() function.

More Info: https://avd.aquasec.com/nvd/cve-2025-3360

[CVE-2012-0039] glib2: hash table collisions CPU usage DoS (Severity: LOW)

Package: libglib2.0-bin
Installed: 2.74.6-2+deb12u5
Fixed: %!s(<nil>)

GLib 2.31.8 and earlier, when the g_str_hash function is used, computes hash values without restricting the ability to trigger hash collisions predictably, which allows context-dependent attackers to cause a denial of service (CPU consumption) via crafted input to an application that maintains a hash table. NOTE: this issue may be disputed by the

vendor; the existence of the g_str_hash function is not a vulnerability in the library, because callers of g_hash_table_new and g_hash_table_new_full can specify an arbitrary hash function that is appropriate for the application.

More Info: https://avd.aquasec.com/nvd/cve-2012-0039

[CVE-2025-3360] glibc: GLib prior to 2.82.5 is vulnerable to integer overflow and buffer under-read when parsing a very long invalid ISO 8601 timestamp with g_date_time_new_from_iso8601(). (Severity: LOW)

Package: libglib2.0-bin
Installed: 2.74.6-2+deb12u5
Fixed: %!s(<nil>)

A flaw was found in GLib. An integer overflow and buffer under-read occur when parsing a long invalid ISO 8601 timestamp with the g_date_time_new_from_iso8601() function.

More Info: https://avd.aquasec.com/nvd/cve-2025-3360

[CVE-2012-0039] glib2: hash table collisions CPU usage DoS (Severity: LOW)

Package: libglib2.0-data
Installed: 2.74.6-2+deb12u5
Fixed: %!s(<nil>)

GLib 2.31.8 and earlier, when the g_str_hash function is used, computes hash values without restricting the ability to trigger hash collisions predictably, which allows context-dependent attackers to cause a denial of service (CPU consumption) via crafted input to an application that maintains a hash table. NOTE: this issue may be disputed by the vendor; the existence of the g_str_hash function is not a vulnerability in the library, because callers of g_hash_table_new and g_hash_table_new_full can specify an arbitrary hash function that is appropriate for the application.

More Info: https://avd.aquasec.com/nvd/cve-2012-0039

[CVE-2025-3360] glibc: GLib prior to 2.82.5 is vulnerable to integer overflow and buffer under-read when parsing a very long invalid ISO 8601 timestamp with g_date_time_new_from_iso8601(). (Severity: LOW)

Package: libglib2.0-data
Installed: 2.74.6-2+deb12u5
Fixed: %!s(<nil>)

A flaw was found in GLib. An integer overflow and buffer under-read occur when parsing a long invalid ISO 8601 timestamp with the g_date_time_new_from_iso8601() function.

More Info: https://avd.aquasec.com/nvd/cve-2025-3360

[CVE-2012-0039] glib2: hash table collisions CPU usage DoS (Severity: LOW)

Package: libglib2.0-dev
Installed: 2.74.6-2+deb12u5
Fixed: %!s(<nil>)

GLib 2.31.8 and earlier, when the g_str_hash function is used, computes hash values without restricting the ability to trigger hash collisions predictably, which allows context-dependent attackers to cause a denial of service (CPU

consumption) via crafted input to an application that maintains a hash table. NOTE: this issue may be disputed by the vendor; the existence of the g_str_hash function is not a vulnerability in the library, because callers of g_hash_table_new and g_hash_table_new_full can specify an arbitrary hash function that is appropriate for the application.

More Info: https://avd.aquasec.com/nvd/cve-2012-0039

[CVE-2025-3360] glibc: GLib prior to 2.82.5 is vulnerable to integer overflow and buffer under-read when parsing a very long invalid ISO 8601 timestamp with g_date_time_new_from_iso8601(). (Severity: LOW)

Package: libglib2.0-dev
Installed: 2.74.6-2+deb12u5
Fixed: %!s(<nil>)

A flaw was found in GLib. An integer overflow and buffer under-read occur when parsing a long invalid ISO 8601 timestamp with the g_date_time_new_from_iso8601() function.

More Info: https://avd.aquasec.com/nvd/cve-2025-3360

[CVE-2012-0039] glib2: hash table collisions CPU usage DoS (Severity: LOW)

Package: libglib2.0-dev-bin
Installed: 2.74.6-2+deb12u5
Fixed: %!s(<nil>)

GLib 2.31.8 and earlier, when the g_str_hash function is used, computes hash values without restricting the ability to trigger hash collisions predictably, which allows context-dependent attackers to cause a denial of service (CPU consumption) via crafted input to an application that maintains a hash table. NOTE: this issue may be disputed by the vendor; the existence of the g_str_hash function is not a vulnerability in the library, because callers of g_hash_table_new and g_hash_table_new_full can specify an arbitrary hash function that is appropriate for the application.

More Info: https://avd.aquasec.com/nvd/cve-2012-0039

[CVE-2025-3360] glibc: GLib prior to 2.82.5 is vulnerable to integer overflow and buffer under-read when parsing a very long invalid ISO 8601 timestamp with g_date_time_new_from_iso8601(). (Severity: LOW)

Package: libglib2.0-dev-bin
Installed: 2.74.6-2+deb12u5
Fixed: %!s(<nil>)

A flaw was found in GLib. An integer overflow and buffer under-read occur when parsing a long invalid ISO 8601 timestamp with the g_date_time_new_from_iso8601() function.

More Info: https://avd.aquasec.com/nvd/cve-2025-3360

[CVE-2011-3389] HTTPS: block-wise chosen-plaintext attack against SSL/TLS (BEAST) (Severity: LOW)

Package: libgnutls30
Installed: 3.7.9-2+deb12u4
Fixed: %!s(<nil>)

The SSL protocol, as used in certain configurations in Microsoft Windows and Microsoft Internet Explorer, Mozilla Firefox, Google Chrome, Opera, and other products, encrypts data by using CBC mode with chained initialization vectors, which allows man-in-the-middle attackers to obtain plaintext HTTP headers via a blockwise chosen-boundary attack (BCBA) on an HTTPS session, in conjunction with JavaScript code that uses (1) the HTML5 WebSocket API, (2) the Java URLConnection API, or (3) the Silverlight WebClient API, aka a "BEAST" attack.

More Info: https://avd.aquasec.com/nvd/cve-2011-3389

[CVE-2022-27943] binutils: libiberty/rust-demangle.c in GNU GCC 11.2 allows stack exhaustion in demangle_const (Severity: LOW)

Package: libgomp1
Installed: 12.2.0-14
Fixed: %!s(<nil>)

libiberty/rust-demangle.c in GNU GCC 11.2 allows stack consumption in demangle_const, as demonstrated by nm-new.

More Info: https://avd.aquasec.com/nvd/cve-2022-27943

[CVE-2023-4039] gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 (Severity: LOW)

Package: libgomp1
Installed: 12.2.0-14
Fixed: %!s(<nil>)

DISPUTEDA failure in the -fstack-protector feature in GCC-based toolchains
that target AArch64 allows an attacker to exploit an existing buffer
overflow in dynamically-sized local variables in your application
without this being detected. This stack-protector failure only applies
to C99-style dynamically-sized local variables or those created using
alloca(). The stack-protector operates as intended for statically-sized
local variables.

The default behavior when the stack-protector
detects an overflow is to terminate your application, resulting in
controlled loss of availability. An attacker who can exploit a buffer
overflow without triggering the stack-protector might be able to change
program flow control to cause an uncontrolled loss of availability or to
go further and affect confidentiality or integrity. NOTE: The GCC project argues that this is a missed hardening bug and not a vulnerability by itself.

More Info: https://avd.aquasec.com/nvd/cve-2023-4039

[CVE-2017-13716] binutils: Memory leak with the C++ symbol demangler routine in libiberty (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

The C++ symbol demangler routine in cplus-dem.c in libiberty, as distributed in GNU Binutils 2.29, allows remote attackers to cause a denial of service (excessive memory allocation and application crash) via a crafted file, as demonstrated by a call from the Binary File Descriptor (BFD) library (aka libbfd).

More Info: https://avd.aquasec.com/nvd/cve-2017-13716

[CVE-2018-20673] libiberty: Integer overflow in demangle_template() function (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

The demangle_template function in cplus-dem.c in GNU libiberty, as distributed in GNU Binutils 2.31.1, contains an integer overflow vulnerability (for "Create an array for saving the template argument values") that can trigger a heap-based buffer overflow, as demonstrated by nm.

More Info: https://avd.aquasec.com/nvd/cve-2018-20673

[CVE-2018-20712] libiberty: heap-based buffer over-read in d_expression_1 (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

A heap-based buffer over-read exists in the function d_expression_1 in cp-demangle.c in GNU libiberty, as distributed in GNU Binutils 2.31.1. A crafted input can cause segmentation faults, leading to denial-of-service, as demonstrated by c++filt.

More Info: https://avd.aquasec.com/nvd/cve-2018-20712

[CVE-2018-9996] binutils: Stack-overflow in libiberty/cplus-dem.c causes crash (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

An issue was discovered in cplus-dem.c in GNU libiberty, as distributed in GNU Binutils 2.30. Stack Exhaustion occurs in the C++ demangling functions provided by libiberty, and there are recursive stack frames: demangle_template_value_parm, demangle_integral_value, and demangle_expression.

More Info: https://avd.aquasec.com/nvd/cve-2018-9996

[CVE-2021-32256] binutils: stack-overflow issue in demangle_type in rust-demangle.c. (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

An issue was discovered in GNU libiberty, as distributed in GNU Binutils 2.36. It is a stack-overflow issue in demangle_type in rust-demangle.c.

More Info: https://avd.aquasec.com/nvd/cve-2021-32256

[CVE-2023-1972] binutils: Illegal memory access when accessing a zer0-lengthverdef table (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

A potential heap based buffer overflow was found in _bfd_elf_slurp_version_tables() in bfd/elf.c. This may lead to loss of availability.

More Info: https://avd.aquasec.com/nvd/cve-2023-1972

[CVE-2024-53589] binutils: objdump: buffer Overflow in the BFD library's handling of tekhex format files (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

GNU objdump 2.43 is vulnerable to Buffer Overflow in the BFD (Binary File Descriptor) library's handling of tekhex format files.

More Info: https://avd.aquasec.com/nvd/cve-2024-53589

[CVE-2024-57360] binutils: nm: potential segmentation fault when displaying symbols without version info (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

https://www.gnu.org/software/binutils/ nm >=2.43 is affected by: Incorrect Access Control. The type of exploitation is: local. The component is: `nm --without-symbol-version` function.

More Info: https://avd.aquasec.com/nvd/cve-2024-57360

[CVE-2025-0840] binutils: GNU Binutils objdump.c disassemble_bytes stack-based overflow (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability, which was classified as problematic, was found in GNU Binutils up to 2.43. This affects the function disassemble_bytes of the file binutils/objdump.c. The manipulation of the argument buf leads to stack-based buffer overflow. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. Upgrading to version 2.44 is able to address this issue. The identifier of the patch is baac6c221e9d69335bf41366a1c7d87d8ab2f893. It is recommended to upgrade the affected component.

More Info: https://avd.aquasec.com/nvd/cve-2025-0840

[CVE-2025-1147] binutils: GNU Binutils nm nm.c internal_strlen buffer overflow (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability has been found in GNU Binutils 2.43 and classified as problematic. Affected by this vulnerability is the function __sanitizer::internal_strlen of the file binutils/nm.c of the component nm. The manipulation of the argument const leads to buffer overflow. The attack can be launched remotely. The complexity of an attack is rather high. The

exploitation appears to be difficult. The exploit has been disclosed to the public and may be used.

More Info: https://avd.aquasec.com/nvd/cve-2025-1147

[CVE-2025-1148] binutils: GNU Binutils ld ldelfgen.c link_order_scan memory leak (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43 and classified as problematic. Affected by this issue is the function link_order_scan of the file ld/ldelfgen.c of the component ld. The manipulation leads to memory leak. The attack may be launched remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1148

[CVE-2025-1149] binutils: GNU Binutils ld xmalloc.c xstrdup memory leak (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been classified as problematic. This affects the function xstrdup of the file libiberty/xmalloc.c of the component ld. The manipulation leads to memory leak. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1149

[CVE-2025-1150] binutils: GNU Binutils ld libbfd.c bfd_malloc memory leak (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been declared as problematic. This vulnerability affects the function bfd_malloc of the file libbfd.c of the component ld. The manipulation leads to memory leak. The attack can be initiated remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1150

[CVE-2025-1151] binutils: GNU Binutils ld xmemdup.c xmemdup memory leak (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been rated as problematic. This issue affects the function

xmemdup of the file xmemdup.c of the component ld. The manipulation leads to memory leak. The attack may be initiated remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1151

[CVE-2025-1152] binutils: GNU Binutils ld xstrdup.c xstrdup memory leak (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic has been found in GNU Binutils 2.43. Affected is the function xstrdup of the file xstrdup.c of the component ld. The manipulation leads to memory leak. It is possible to launch the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue. The code maintainer explains: "I'm not going to commit some of the leak fixes I've been working on to the 2.44 branch due to concern that would destabilise ld. All of the reported leaks in this bugzilla have been fixed on binutils master."

More Info: https://avd.aquasec.com/nvd/cve-2025-1152

[CVE-2025-1153] binutils: GNU Binutils format.c bfd_set_format memory corruption (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic was found in GNU Binutils 2.43/2.44. Affected by this vulnerability is the function bfd_set_format of the file format.c. The manipulation leads to memory corruption. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. Upgrading to version 2.45 is able to address this issue. The identifier of the patch is 8d97c1a53f3dc9fd8e1ccdb039b8a33d50133150. It is recommended to upgrade the affected component.

More Info: https://avd.aquasec.com/nvd/cve-2025-1153

[CVE-2025-1176] binutils: GNU Binutils ld elflink.c _bfd_elf_gc_mark_rsec heap-based overflow (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43 and classified as critical. This issue affects the function _bfd_elf_gc_mark_rsec of the file elflink.c of the component ld. The manipulation leads to heap-based buffer overflow. The attack may be initiated remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. The patch is named f9978defb6fab0bd8583942d97c112b0932ac814. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1176

[CVE-2025-1178] binutils: GNU Binutils ld libbfd.c bfd_putl64 memory corruption (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2

Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been declared as problematic. Affected by this vulnerability is the function bfd_putl64 of the file libbfd.c of the component ld. The manipulation leads to memory corruption. The attack can be launched remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. The identifier of the patch is 75086e9de1707281172cc77f178e7949a4414ed0. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1178

[CVE-2025-1179] binutils: GNU Binutils ld libbfd.c bfd_putl64 memory corruption (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability was found in GNU Binutils 2.43. It has been rated as critical. Affected by this issue is the function bfd_putl64 of the file bfd/libbfd.c of the component ld. The manipulation leads to memory corruption. The attack may be launched remotely. The complexity of an attack is rather high. The exploitation is known to be difficult. The exploit has been disclosed to the public and may be used. Upgrading to version 2.44 is able to address this issue. It is recommended to upgrade the affected component. The code maintainer explains, that "[t]his bug has been fixed at some point between the 2.43 and 2.44 releases".

More Info: https://avd.aquasec.com/nvd/cve-2025-1179

[CVE-2025-1180] binutils: GNU Binutils ld elf-eh-frame.c _bfd_elf_write_section_eh_frame memory corruption (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as problematic has been found in GNU Binutils 2.43. This affects the function _bfd_elf_write_section_eh_frame of the file bfd/elf-eh-frame.c of the component ld. The manipulation leads to memory corruption. It is possible to initiate the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1180

[CVE-2025-1181] binutils: GNU Binutils ld elflink.c _bfd_elf_gc_mark_rsec memory corruption (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability classified as critical was found in GNU Binutils 2.43. This vulnerability affects the function _bfd_elf_gc_mark_rsec of the file bfd/elflink.c of the component ld. The manipulation leads to memory corruption. The attack can be initiated remotely. The complexity of an attack is rather high. The exploitation appears to be difficult. The exploit has been disclosed to the public and may be used. The name of the patch is 931494c9a89558acb36a03a340c01726545eef24. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1181

[CVE-2025-1182] binutils: GNU Binutils ld elflink.c bfd_elf_reloc_symbol_deleted_p memory corruption (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability, which was classified as critical, was found in GNU Binutils 2.43. Affected is the function bfd_elf_reloc_symbol_deleted_p of the file bfd/elflink.c of the component ld. The manipulation leads to memory corruption. It is possible to launch the attack remotely. The complexity of an attack is rather high. The exploitability is told to be difficult. The exploit has been disclosed to the public and may be used. The patch is identified as b425859021d17adf62f06fb904797cf8642986ad. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-1182

[CVE-2025-3198] binutils: GNU Binutils objdump bucomm.c display_info memory leak (Severity: LOW)

Package: libgprofng0
Installed: 2.40-2
Fixed: %!s(<nil>)

A vulnerability has been found in GNU Binutils 2.43/2.44 and classified as problematic. Affected by this vulnerability is the function display_info of the file binutils/bucomm.c of the component objdump. The manipulation leads to memory leak. An attack has to be approached locally. The exploit has been disclosed to the public and may be used. The patch is named ba6ad3a18cb26b79e0e3b84c39f707535bbc344d. It is recommended to apply a patch to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-3198

[CVE-2024-26462] krb5: Memory leak at /krb5/src/kdc/ndr.c (Severity: MEDIUM)

Package: libgssapi-krb5-2
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/kdc/ndr.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26462

[CVE-2025-24528] krb5: overflow when calculating ulog block size (Severity: MEDIUM)

Package: libgssapi-krb5-2
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

A flaw was found in krb5. With incremental propagation enabled, an authenticated attacker can cause kadmind to write beyond the end of the mapped region for the iprop log file. This issue can trigger a process crash and lead to a denial of service.

More Info: https://avd.aquasec.com/nvd/cve-2025-24528

[CVE-2018-5709] krb5: integer overflow in dbentry->n_key_data in kadmin/dbutil/dump.c (Severity: LOW)

Package: libgssapi-krb5-2
Installed: 1.20.1-2+deb12u2

Fixed: %!s(<nil>)

An issue was discovered in MIT Kerberos 5 (aka krb5) through 1.16. There is a variable "dbentry->n_key_data" in kadmin/dbutil/dump.c that can store 16-bit data but unknowingly the developer has assigned a "u4" variable to it, which is for 32-bit data. An attacker can use this vulnerability to affect other artifacts of the database as we know that a Kerberos database dump file contains trusted data.

More Info: https://avd.aquasec.com/nvd/cve-2018-5709

[CVE-2024-26458] krb5: Memory leak at /krb5/src/lib/rpc/pmap_rmt.c (Severity: LOW)

Package: libgssapi-krb5-2
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak in /krb5/src/lib/rpc/pmap_rmt.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26458

[CVE-2024-26461] krb5: Memory leak at /krb5/src/lib/gssapi/krb5/k5sealv3.c (Severity: LOW)

Package: libgssapi-krb5-2
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/lib/gssapi/krb5/k5sealv3.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26461

[CVE-2024-26462] krb5: Memory leak at /krb5/src/kdc/ndr.c (Severity: MEDIUM)

Package: libgssrpc4
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/kdc/ndr.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26462

[CVE-2025-24528] krb5: overflow when calculating ulog block size (Severity: MEDIUM)

Package: libgssrpc4
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

A flaw was found in krb5. With incremental propagation enabled, an authenticated attacker can cause kadmind to write beyond the end of the mapped region for the iprop log file. This issue can trigger a process crash and lead to a denial of service.

More Info: https://avd.aquasec.com/nvd/cve-2025-24528

[CVE-2018-5709] krb5: integer overflow in dbentry->n_key_data in kadmin/dbutil/dump.c (Severity: LOW)

Package: libgssrpc4
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

An issue was discovered in MIT Kerberos 5 (aka krb5) through 1.16. There is a variable "dbentry->n_key_data" in kadmin/dbutil/dump.c that can store 16-bit data but unknowingly the developer has assigned a "u4" variable to it, which is for 32-bit data. An attacker can use this vulnerability to affect other artifacts of the database as we know that a Kerberos database dump file contains trusted data.

More Info: https://avd.aquasec.com/nvd/cve-2018-5709

[CVE-2024-26458] krb5: Memory leak at /krb5/src/lib/rpc/pmap_rmt.c (Severity: LOW)

Package: libgssrpc4
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak in /krb5/src/lib/rpc/pmap_rmt.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26458

[CVE-2024-26461] krb5: Memory leak at /krb5/src/lib/gssapi/krb5/k5sealv3.c (Severity: LOW)

Package: libgssrpc4
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/lib/gssapi/krb5/k5sealv3.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26461

[CVE-2023-25193] harfbuzz: allows attackers to trigger O(n^2) growth via consecutive marks (Severity: HIGH)

Package: libharfbuzz0b
Installed: 6.0.0+dfsg-3
Fixed: %!s(<nil>)

hb-ot-layout-gsubgpos.hh in HarfBuzz through 6.0.0 allows attackers to trigger O(n^2) growth via consecutive marks during the process of looking back for base glyphs when attaching marks.

More Info: https://avd.aquasec.com/nvd/cve-2023-25193

[CVE-2025-29482] Buffer Overflow vulnerability in libheif 1.19.7 allows a local attacke ... (Severity: MEDIUM)

Package: libheif1
Installed: 1.15.1-1+deb12u1
Fixed: %!s(<nil>)

Buffer Overflow vulnerability in libheif 1.19.7 allows a local attacker to execute arbitrary code via the SAO (Sample Adaptive Offset) processing of libde265.

More Info: https://avd.aquasec.com/nvd/cve-2025-29482

[CVE-2023-49463] libheif v1.17.5 was discovered to contain a segmentation violation via ... (Severity: LOW)

Package: libheif1

Installed: 1.15.1-1+deb12u1
Fixed: %!s(<nil>)

libheif v1.17.5 was discovered to contain a segmentation violation via the function find_exif_tag at /libheif/exif.cc.

More Info: https://avd.aquasec.com/nvd/cve-2023-49463

[CVE-2024-25269] libheif <= 1.17.6 contains a memory leak in the function JpegEncoder:: ... (Severity: LOW)

Package: libheif1
Installed: 1.15.1-1+deb12u1
Fixed: %!s(<nil>)

libheif <= 1.17.6 contains a memory leak in the function JpegEncoder::Encode. This flaw allows an attacker to cause a denial of service attack.

More Info: https://avd.aquasec.com/nvd/cve-2024-25269

[CVE-2022-27943] binutils: libiberty/rust-demangle.c in GNU GCC 11.2 allows stack exhaustion in demangle_const (Severity: LOW)

Package: libitm1
Installed: 12.2.0-14
Fixed: %!s(<nil>)

libiberty/rust-demangle.c in GNU GCC 11.2 allows stack consumption in demangle_const, as demonstrated by nm-new.

More Info: https://avd.aquasec.com/nvd/cve-2022-27943

[CVE-2023-4039] gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 (Severity: LOW)

Package: libitm1
Installed: 12.2.0-14
Fixed: %!s(<nil>)

DISPUTEDA failure in the -fstack-protector feature in GCC-based toolchains
that target AArch64 allows an attacker to exploit an existing buffer
overflow in dynamically-sized local variables in your application
without this being detected. This stack-protector failure only applies
to C99-style dynamically-sized local variables or those created using
alloca(). The stack-protector operates as intended for statically-sized
local variables.

The default behavior when the stack-protector
detects an overflow is to terminate your application, resulting in
controlled loss of availability. An attacker who can exploit a buffer
overflow without triggering the stack-protector might be able to change
program flow control to cause an uncontrolled loss of availability or to
go further and affect confidentiality or integrity. NOTE: The GCC project argues that this is a missed hardening bug and not a vulnerability by itself.

More Info: https://avd.aquasec.com/nvd/cve-2023-4039

[CVE-2020-36325] jansson: out-of-bounds read in json_loads() due to a parsing error (Severity: LOW)

Package: libjansson4
Installed: 2.14-2
Fixed: %!s(<nil>)

An issue was discovered in Jansson through 2.13.1. Due to a parsing error in json_loads, there's an out-of-bounds read-access bug. NOTE: the vendor reports that this only occurs when a programmer fails to follow the API specification

More Info: https://avd.aquasec.com/nvd/cve-2020-36325

[CVE-2017-9937] libtiff: memory malloc failure in tif_jbig.c could cause DOS. (Severity: LOW)

Package: libjbig-dev
Installed: 2.1-6.1
Fixed: %!s(<nil>)

In LibTIFF 4.0.8, there is a memory malloc failure in tif_jbig.c. A crafted TIFF document can lead to an abort resulting in a remote denial of service attack.

More Info: https://avd.aquasec.com/nvd/cve-2017-9937

[CVE-2017-9937] libtiff: memory malloc failure in tif_jbig.c could cause DOS. (Severity: LOW)

Package: libjbig0
Installed: 2.1-6.1
Fixed: %!s(<nil>)

In LibTIFF 4.0.8, there is a memory malloc failure in tif_jbig.c. A crafted TIFF document can lead to an abort resulting in a remote denial of service attack.

More Info: https://avd.aquasec.com/nvd/cve-2017-9937

[CVE-2024-26462] krb5: Memory leak at /krb5/src/kdc/ndr.c (Severity: MEDIUM)

Package: libk5crypto3
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/kdc/ndr.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26462

[CVE-2025-24528] krb5: overflow when calculating ulog block size (Severity: MEDIUM)

Package: libk5crypto3
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

A flaw was found in krb5. With incremental propagation enabled, an authenticated attacker can cause kadmind to write beyond the end of the mapped region for the iprop log file. This issue can trigger a process crash and lead to a denial of service.

More Info: https://avd.aquasec.com/nvd/cve-2025-24528

[CVE-2018-5709] krb5: integer overflow in dbentry->n_key_data in kadmin/dbutil/dump.c (Severity:

LOW)

Package: libk5crypto3
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

An issue was discovered in MIT Kerberos 5 (aka krb5) through 1.16. There is a variable "dbentry->n_key_data" in kadmin/dbutil/dump.c that can store 16-bit data but unknowingly the developer has assigned a "u4" variable to it, which is for 32-bit data. An attacker can use this vulnerability to affect other artifacts of the database as we know that a Kerberos database dump file contains trusted data.

More Info: https://avd.aquasec.com/nvd/cve-2018-5709

[CVE-2024-26458] krb5: Memory leak at /krb5/src/lib/rpc/pmap_rmt.c (Severity: LOW)

Package: libk5crypto3
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak in /krb5/src/lib/rpc/pmap_rmt.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26458

[CVE-2024-26461] krb5: Memory leak at /krb5/src/lib/gssapi/krb5/k5sealv3.c (Severity: LOW)

Package: libk5crypto3
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/lib/gssapi/krb5/k5sealv3.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26461

[CVE-2024-26462] krb5: Memory leak at /krb5/src/kdc/ndr.c (Severity: MEDIUM)

Package: libkadm5clnt-mit12
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/kdc/ndr.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26462

[CVE-2025-24528] krb5: overflow when calculating ulog block size (Severity: MEDIUM)

Package: libkadm5clnt-mit12
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

A flaw was found in krb5. With incremental propagation enabled, an authenticated attacker can cause kadmind to write beyond the end of the mapped region for the iprop log file. This issue can trigger a process crash and lead to a denial of service.

More Info: https://avd.aquasec.com/nvd/cve-2025-24528

[CVE-2018-5709] krb5: integer overflow in dbentry->n_key_data in kadmin/dbutil/dump.c (Severity:

LOW)

Package: libkadm5clnt-mit12
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

An issue was discovered in MIT Kerberos 5 (aka krb5) through 1.16. There is a variable "dbentry->n_key_data" in kadmin/dbutil/dump.c that can store 16-bit data but unknowingly the developer has assigned a "u4" variable to it, which is for 32-bit data. An attacker can use this vulnerability to affect other artifacts of the database as we know that a Kerberos database dump file contains trusted data.

More Info: https://avd.aquasec.com/nvd/cve-2018-5709

[CVE-2024-26458] krb5: Memory leak at /krb5/src/lib/rpc/pmap_rmt.c (Severity: LOW)

Package: libkadm5clnt-mit12
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak in /krb5/src/lib/rpc/pmap_rmt.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26458

[CVE-2024-26461] krb5: Memory leak at /krb5/src/lib/gssapi/krb5/k5sealv3.c (Severity: LOW)

Package: libkadm5clnt-mit12
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/lib/gssapi/krb5/k5sealv3.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26461

[CVE-2024-26462] krb5: Memory leak at /krb5/src/kdc/ndr.c (Severity: MEDIUM)

Package: libkadm5srv-mit12
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/kdc/ndr.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26462

[CVE-2025-24528] krb5: overflow when calculating ulog block size (Severity: MEDIUM)

Package: libkadm5srv-mit12
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

A flaw was found in krb5. With incremental propagation enabled, an authenticated attacker can cause kadmind to write beyond the end of the mapped region for the iprop log file. This issue can trigger a process crash and lead to a denial of service.

More Info: https://avd.aquasec.com/nvd/cve-2025-24528

[CVE-2018-5709] krb5: integer overflow in dbentry->n_key_data in kadmin/dbutil/dump.c (Severity:

LOW)

Package: libkadm5srv-mit12
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

An issue was discovered in MIT Kerberos 5 (aka krb5) through 1.16. There is a variable "dbentry->n_key_data" in kadmin/dbutil/dump.c that can store 16-bit data but unknowingly the developer has assigned a "u4" variable to it, which is for 32-bit data. An attacker can use this vulnerability to affect other artifacts of the database as we know that a Kerberos database dump file contains trusted data.

More Info: https://avd.aquasec.com/nvd/cve-2018-5709

[CVE-2024-26458] krb5: Memory leak at /krb5/src/lib/rpc/pmap_rmt.c (Severity: LOW)

Package: libkadm5srv-mit12
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak in /krb5/src/lib/rpc/pmap_rmt.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26458

[CVE-2024-26461] krb5: Memory leak at /krb5/src/lib/gssapi/krb5/k5sealv3.c (Severity: LOW)

Package: libkadm5srv-mit12
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/lib/gssapi/krb5/k5sealv3.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26461

[CVE-2024-26462] krb5: Memory leak at /krb5/src/kdc/ndr.c (Severity: MEDIUM)

Package: libkdb5-10
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/kdc/ndr.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26462

[CVE-2025-24528] krb5: overflow when calculating ulog block size (Severity: MEDIUM)

Package: libkdb5-10
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

A flaw was found in krb5. With incremental propagation enabled, an authenticated attacker can cause kadmind to write beyond the end of the mapped region for the iprop log file. This issue can trigger a process crash and lead to a denial of service.

More Info: https://avd.aquasec.com/nvd/cve-2025-24528

[CVE-2018-5709] krb5: integer overflow in dbentry->n_key_data in kadmin/dbutil/dump.c (Severity:

LOW)

Package: libkdb5-10
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

An issue was discovered in MIT Kerberos 5 (aka krb5) through 1.16. There is a variable "dbentry->n_key_data" in kadmin/dbutil/dump.c that can store 16-bit data but unknowingly the developer has assigned a "u4" variable to it, which is for 32-bit data. An attacker can use this vulnerability to affect other artifacts of the database as we know that a Kerberos database dump file contains trusted data.

More Info: https://avd.aquasec.com/nvd/cve-2018-5709

[CVE-2024-26458] krb5: Memory leak at /krb5/src/lib/rpc/pmap_rmt.c (Severity: LOW)

Package: libkdb5-10
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak in /krb5/src/lib/rpc/pmap_rmt.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26458

[CVE-2024-26461] krb5: Memory leak at /krb5/src/lib/gssapi/krb5/k5sealv3.c (Severity: LOW)

Package: libkdb5-10
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/lib/gssapi/krb5/k5sealv3.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26461

[CVE-2024-26462] krb5: Memory leak at /krb5/src/kdc/ndr.c (Severity: MEDIUM)

Package: libkrb5-3
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/kdc/ndr.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26462

[CVE-2025-24528] krb5: overflow when calculating ulog block size (Severity: MEDIUM)

Package: libkrb5-3
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

A flaw was found in krb5. With incremental propagation enabled, an authenticated attacker can cause kadmind to write beyond the end of the mapped region for the iprop log file. This issue can trigger a process crash and lead to a denial of service.

More Info: https://avd.aquasec.com/nvd/cve-2025-24528

[CVE-2018-5709] krb5: integer overflow in dbentry->n_key_data in kadmin/dbutil/dump.c (Severity:

LOW)

Package: libkrb5-3
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

An issue was discovered in MIT Kerberos 5 (aka krb5) through 1.16. There is a variable "dbentry->n_key_data" in kadmin/dbutil/dump.c that can store 16-bit data but unknowingly the developer has assigned a "u4" variable to it, which is for 32-bit data. An attacker can use this vulnerability to affect other artifacts of the database as we know that a Kerberos database dump file contains trusted data.

More Info: https://avd.aquasec.com/nvd/cve-2018-5709

[CVE-2024-26458] krb5: Memory leak at /krb5/src/lib/rpc/pmap_rmt.c (Severity: LOW)

Package: libkrb5-3
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak in /krb5/src/lib/rpc/pmap_rmt.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26458

[CVE-2024-26461] krb5: Memory leak at /krb5/src/lib/gssapi/krb5/k5sealv3.c (Severity: LOW)

Package: libkrb5-3
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/lib/gssapi/krb5/k5sealv3.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26461

[CVE-2024-26462] krb5: Memory leak at /krb5/src/kdc/ndr.c (Severity: MEDIUM)

Package: libkrb5-dev
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/kdc/ndr.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26462

[CVE-2025-24528] krb5: overflow when calculating ulog block size (Severity: MEDIUM)

Package: libkrb5-dev
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

A flaw was found in krb5. With incremental propagation enabled, an authenticated attacker can cause kadmind to write beyond the end of the mapped region for the iprop log file. This issue can trigger a process crash and lead to a denial of service.

More Info: https://avd.aquasec.com/nvd/cve-2025-24528

[CVE-2018-5709] krb5: integer overflow in dbentry->n_key_data in kadmin/dbutil/dump.c (Severity:

LOW)

Package: libkrb5-dev
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

An issue was discovered in MIT Kerberos 5 (aka krb5) through 1.16. There is a variable "dbentry->n_key_data" in kadmin/dbutil/dump.c that can store 16-bit data but unknowingly the developer has assigned a "u4" variable to it, which is for 32-bit data. An attacker can use this vulnerability to affect other artifacts of the database as we know that a Kerberos database dump file contains trusted data.

More Info: https://avd.aquasec.com/nvd/cve-2018-5709

[CVE-2024-26458] krb5: Memory leak at /krb5/src/lib/rpc/pmap_rmt.c (Severity: LOW)

Package: libkrb5-dev
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak in /krb5/src/lib/rpc/pmap_rmt.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26458

[CVE-2024-26461] krb5: Memory leak at /krb5/src/lib/gssapi/krb5/k5sealv3.c (Severity: LOW)

Package: libkrb5-dev
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/lib/gssapi/krb5/k5sealv3.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26461

[CVE-2024-26462] krb5: Memory leak at /krb5/src/kdc/ndr.c (Severity: MEDIUM)

Package: libkrb5support0
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/kdc/ndr.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26462

[CVE-2025-24528] krb5: overflow when calculating ulog block size (Severity: MEDIUM)

Package: libkrb5support0
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

A flaw was found in krb5. With incremental propagation enabled, an authenticated attacker can cause kadmind to write beyond the end of the mapped region for the iprop log file. This issue can trigger a process crash and lead to a denial of service.

More Info: https://avd.aquasec.com/nvd/cve-2025-24528

[CVE-2018-5709] krb5: integer overflow in dbentry->n_key_data in kadmin/dbutil/dump.c (Severity:

LOW)

Package: libkrb5support0
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

An issue was discovered in MIT Kerberos 5 (aka krb5) through 1.16. There is a variable "dbentry->n_key_data" in kadmin/dbutil/dump.c that can store 16-bit data but unknowingly the developer has assigned a "u4" variable to it, which is for 32-bit data. An attacker can use this vulnerability to affect other artifacts of the database as we know that a Kerberos database dump file contains trusted data.

More Info: https://avd.aquasec.com/nvd/cve-2018-5709

[CVE-2024-26458] krb5: Memory leak at /krb5/src/lib/rpc/pmap_rmt.c (Severity: LOW)

Package: libkrb5support0
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak in /krb5/src/lib/rpc/pmap_rmt.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26458

[CVE-2024-26461] krb5: Memory leak at /krb5/src/lib/gssapi/krb5/k5sealv3.c (Severity: LOW)

Package: libkrb5support0
Installed: 1.20.1-2+deb12u2
Fixed: %!s(<nil>)

Kerberos 5 (aka krb5) 1.21.2 contains a memory leak vulnerability in /krb5/src/lib/gssapi/krb5/k5sealv3.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-26461

[CVE-2025-29070] A heap buffer overflow vulnerability has been identified in thesmooth2 ... (Severity: LOW)

Package: liblcms2-2
Installed: 2.14-2
Fixed: %!s(<nil>)

A heap buffer overflow vulnerability has been identified in thesmooth2() in cmsgamma.c in lcms2-2.16 which allows a remote attacker to cause a denial of service. NOTE: the Supplier disputes this because "this is not exploitable as this function is never called on normal color management, is there only as a helper for low-level programming and investigation."

More Info: https://avd.aquasec.com/nvd/cve-2025-29070

[CVE-2025-29070] A heap buffer overflow vulnerability has been identified in thesmooth2 ... (Severity: LOW)

Package: liblcms2-dev
Installed: 2.14-2
Fixed: %!s(<nil>)

A heap buffer overflow vulnerability has been identified in thesmooth2() in cmsgamma.c in lcms2-2.16 which allows a remote attacker to cause a denial of service. NOTE: the Supplier disputes this because "this is not exploitable as this

function is never called on normal color management, is there only as a helper for low-level programming and investigation."

More Info: https://avd.aquasec.com/nvd/cve-2025-29070

[CVE-2023-2953] openldap: null pointer dereference in ber_memalloc_x function (Severity: HIGH)

Package: libldap-2.5-0
Installed: 2.5.13+dfsg-5
Fixed: %!s(<nil>)

A vulnerability was found in openldap. This security flaw causes a null pointer dereference in ber_memalloc_x() function.

More Info: https://avd.aquasec.com/nvd/cve-2023-2953

[CVE-2015-3276] openldap: incorrect multi-keyword mode cipherstring parsing (Severity: LOW)

Package: libldap-2.5-0
Installed: 2.5.13+dfsg-5
Fixed: %!s(<nil>)

The nss_parse_ciphers function in libraries/libldap/tls_m.c in OpenLDAP does not properly parse OpenSSL-style multi-keyword mode cipher strings, which might cause a weaker than intended cipher to be used and allow remote attackers to have unspecified impact via unknown vectors.

More Info: https://avd.aquasec.com/nvd/cve-2015-3276

[CVE-2017-14159] openldap: Privilege escalation via PID file manipulation (Severity: LOW)

Package: libldap-2.5-0
Installed: 2.5.13+dfsg-5
Fixed: %!s(<nil>)

slapd in OpenLDAP 2.4.45 and earlier creates a PID file after dropping privileges to a non-root account, which might allow local users to kill arbitrary processes by leveraging access to this non-root account for PID file modification before a root script executes a "kill `cat /pathname`" command, as demonstrated by openldap-initscript.

More Info: https://avd.aquasec.com/nvd/cve-2017-14159

[CVE-2017-17740] openldap: contrib/slapd-modules/nops/nops.c attempts to free stack buffer allowing remote attackers to cause a denial of service (Severity: LOW)

Package: libldap-2.5-0
Installed: 2.5.13+dfsg-5
Fixed: %!s(<nil>)

contrib/slapd-modules/nops/nops.c in OpenLDAP through 2.4.45, when both the nops module and the memberof overlay are enabled, attempts to free a buffer that was allocated on the stack, which allows remote attackers to cause a denial of service (slapd crash) via a member MODDN operation.

More Info: https://avd.aquasec.com/nvd/cve-2017-17740

[CVE-2020-15719] openldap: Certificate validation incorrectly matches name against CN-ID (Severity: LOW)

Package: libldap-2.5-0

Installed: 2.5.13+dfsg-5
Fixed: %!s(<nil>)

libldap in certain third-party OpenLDAP packages has a certificate-validation flaw when the third-party package is asserting RFC6125 support. It considers CN even when there is a non-matching subjectAltName (SAN). This is fixed in, for example, openldap-2.4.46-10.el8 in Red Hat Enterprise Linux.

More Info: https://avd.aquasec.com/nvd/cve-2020-15719

[CVE-2022-27943] binutils: libiberty/rust-demangle.c in GNU GCC 11.2 allows stack exhaustion in demangle_const (Severity: LOW)

Package: liblsan0
Installed: 12.2.0-14
Fixed: %!s(<nil>)

libiberty/rust-demangle.c in GNU GCC 11.2 allows stack consumption in demangle_const, as demonstrated by nm-new.

More Info: https://avd.aquasec.com/nvd/cve-2022-27943

[CVE-2023-4039] gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 (Severity: LOW)

Package: liblsan0
Installed: 12.2.0-14
Fixed: %!s(<nil>)

DISPUTEDA failure in the -fstack-protector feature in GCC-based toolchains
that target AArch64 allows an attacker to exploit an existing buffer
overflow in dynamically-sized local variables in your application
without this being detected. This stack-protector failure only applies
to C99-style dynamically-sized local variables or those created using
alloca(). The stack-protector operates as intended for statically-sized
local variables.

The default behavior when the stack-protector
detects an overflow is to terminate your application, resulting in
controlled loss of availability. An attacker who can exploit a buffer
overflow without triggering the stack-protector might be able to change
program flow control to cause an uncontrolled loss of availability or to
go further and affect confidentiality or integrity. NOTE: The GCC project argues that this is a missed hardening bug and not a vulnerability by itself.

More Info: https://avd.aquasec.com/nvd/cve-2023-4039

[CVE-2005-0406] A design flaw in image processing software that modifies JPEG images m ... (Severity: LOW)

Package: libmagickcore-6-arch-config
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A design flaw in image processing software that modifies JPEG images might not modify the original EXIF thumbnail, which could lead to an information leak of potentially sensitive visual information that had been removed from the main JPEG image.

More Info: https://avd.aquasec.com/nvd/cve-2005-0406

[CVE-2008-3134] GraphicsMagick/ImageMagick: multiple crash or DoS issues (Severity: LOW)

Package: libmagickcore-6-arch-config
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

Multiple unspecified vulnerabilities in GraphicsMagick before 1.2.4 allow remote attackers to cause a denial of service (crash, infinite loop, or memory consumption) via (a) unspecified vectors in the (1) AVI, (2) AVS, (3) DCM, (4) EPT, (5) FITS, (6) MTV, (7) PALM, (8) RLA, and (9) TGA decoder readers; and (b) the GetImageCharacteristics function in magick/image.c, as reachable from a crafted (10) PNG, (11) JPEG, (12) BMP, or (13) TIFF file.

More Info: https://avd.aquasec.com/nvd/cve-2008-3134

[CVE-2016-8678] ImageMagick: Heap-buffer overflow in IsPixelMonochrome (Severity: LOW)

Package: libmagickcore-6-arch-config
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The IsPixelMonochrome function in MagickCore/pixel-accessor.h in ImageMagick 7.0.3.0 allows remote attackers to cause a denial of service (out-of-bounds read and crash) via a crafted file. NOTE: the vendor says "This is a Q64 issue and we do not support Q64."

More Info: https://avd.aquasec.com/nvd/cve-2016-8678

[CVE-2017-11754] ImageMagick: Memory leak in WritePICONImage function (Severity: LOW)

Package: libmagickcore-6-arch-config
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an OpenPixelCache call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11754

[CVE-2017-11755] ImageMagick: Memory leak in WritePICONImage function via mishandled AcquireSemaphoreInfo call (Severity: LOW)

Package: libmagickcore-6-arch-config
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an AcquireSemaphoreInfo call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11755

[CVE-2017-7275] ImageMagick: Memory allocation failure in AcquireMagickMemory (incomplete fix for CVE-2016-8866) (Severity: LOW)

Package: libmagickcore-6-arch-config
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2

Fixed: %!s(<nil>)

The ReadPCXImage function in coders/pcx.c in ImageMagick 7.0.4.9 allows remote attackers to cause a denial of service (attempted large memory allocation and application crash) via a crafted file. NOTE: this vulnerability exists because of an incomplete fix for CVE-2016-8862 and CVE-2016-8866.

More Info: https://avd.aquasec.com/nvd/cve-2017-7275

[CVE-2018-15607] ImageMagick: CPU Exhaustion via crafted input file (Severity: LOW)

Package: libmagickcore-6-arch-config
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

In ImageMagick 7.0.8-11 Q16, a tiny input file 0x50 0x36 0x36 0x36 0x36 0x4c 0x36 0x38 0x36 0x36 0x36 0x36 0x36 0x36 0x1f 0x35 0x50 0x00 can result in a hang of several minutes during which CPU and memory resources are consumed until ultimately an attempted large memory allocation fails. Remote attackers could leverage this vulnerability to cause a denial of service via a crafted file.

More Info: https://avd.aquasec.com/nvd/cve-2018-15607

[CVE-2021-20311] ImageMagick: Division by zero in sRGBTransformImage() in MagickCore/colorspace.c (Severity: LOW)

Package: libmagickcore-6-arch-config
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A flaw was found in ImageMagick in versions before 7.0.11, where a division by zero in sRGBTransformImage() in the MagickCore/colorspace.c may trigger undefined behavior via a crafted image file that is submitted by an attacker processed by an application using ImageMagick. The highest threat from this vulnerability is to system availability.

More Info: https://avd.aquasec.com/nvd/cve-2021-20311

[CVE-2023-34152] ImageMagick: RCE (shell command injection) vulnerability in OpenBlob with --enable-pipes configured (Severity: LOW)

Package: libmagickcore-6-arch-config
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A vulnerability was found in ImageMagick. This security flaw cause a remote code execution vulnerability in OpenBlob with --enable-pipes configured.

More Info: https://avd.aquasec.com/nvd/cve-2023-34152

[CVE-2005-0406] A design flaw in image processing software that modifies JPEG images m ... (Severity: LOW)

Package: libmagickcore-6-headers
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A design flaw in image processing software that modifies JPEG images might not modify the original EXIF thumbnail, which could lead to an information leak of potentially sensitive visual information that had been removed from the main

JPEG image.

More Info: https://avd.aquasec.com/nvd/cve-2005-0406

[CVE-2008-3134] GraphicsMagick/ImageMagick: multiple crash or DoS issues (Severity: LOW)

Package: libmagickcore-6-headers
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

Multiple unspecified vulnerabilities in GraphicsMagick before 1.2.4 allow remote attackers to cause a denial of service (crash, infinite loop, or memory consumption) via (a) unspecified vectors in the (1) AVI, (2) AVS, (3) DCM, (4) EPT, (5) FITS, (6) MTV, (7) PALM, (8) RLA, and (9) TGA decoder readers; and (b) the GetImageCharacteristics function in magick/image.c, as reachable from a crafted (10) PNG, (11) JPEG, (12) BMP, or (13) TIFF file.

More Info: https://avd.aquasec.com/nvd/cve-2008-3134

[CVE-2016-8678] ImageMagick: Heap-buffer overflow in IsPixelMonochrome (Severity: LOW)

Package: libmagickcore-6-headers
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The IsPixelMonochrome function in MagickCore/pixel-accessor.h in ImageMagick 7.0.3.0 allows remote attackers to cause a denial of service (out-of-bounds read and crash) via a crafted file. NOTE: the vendor says "This is a Q64 issue and we do not support Q64."

More Info: https://avd.aquasec.com/nvd/cve-2016-8678

[CVE-2017-11754] ImageMagick: Memory leak in WritePICONImage function (Severity: LOW)

Package: libmagickcore-6-headers
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an OpenPixelCache call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11754

[CVE-2017-11755] ImageMagick: Memory leak in WritePICONImage function via mishandled AcquireSemaphoreInfo call (Severity: LOW)

Package: libmagickcore-6-headers
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an AcquireSemaphoreInfo call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11755

[CVE-2017-7275] ImageMagick: Memory allocation failure in AcquireMagickMemory (incomplete fix for CVE-2016-8866) (Severity: LOW)

Package: libmagickcore-6-headers

Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The ReadPCXImage function in coders/pcx.c in ImageMagick 7.0.4.9 allows remote attackers to cause a denial of service (attempted large memory allocation and application crash) via a crafted file. NOTE: this vulnerability exists because of an incomplete fix for CVE-2016-8862 and CVE-2016-8866.

More Info: https://avd.aquasec.com/nvd/cve-2017-7275

[CVE-2018-15607] ImageMagick: CPU Exhaustion via crafted input file (Severity: LOW)

Package: libmagickcore-6-headers
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

In ImageMagick 7.0.8-11 Q16, a tiny input file 0x50 0x36 0x36 0x36 0x36 0x4c 0x36 0x38 0x36 0x36 0x36 0x36 0x36 0x36 0x1f 0x35 0x50 0x00 can result in a hang of several minutes during which CPU and memory resources are consumed until ultimately an attempted large memory allocation fails. Remote attackers could leverage this vulnerability to cause a denial of service via a crafted file.

More Info: https://avd.aquasec.com/nvd/cve-2018-15607

[CVE-2021-20311] ImageMagick: Division by zero in sRGBTransformImage() in MagickCore/colorspace.c (Severity: LOW)

Package: libmagickcore-6-headers
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A flaw was found in ImageMagick in versions before 7.0.11, where a division by zero in sRGBTransformImage() in the MagickCore/colorspace.c may trigger undefined behavior via a crafted image file that is submitted by an attacker processed by an application using ImageMagick. The highest threat from this vulnerability is to system availability.

More Info: https://avd.aquasec.com/nvd/cve-2021-20311

[CVE-2023-34152] ImageMagick: RCE (shell command injection) vulnerability in OpenBlob with --enable-pipes configured (Severity: LOW)

Package: libmagickcore-6-headers
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A vulnerability was found in ImageMagick. This security flaw cause a remote code execution vulnerability in OpenBlob with --enable-pipes configured.

More Info: https://avd.aquasec.com/nvd/cve-2023-34152

[CVE-2005-0406] A design flaw in image processing software that modifies JPEG images m ... (Severity: LOW)

Package: libmagickcore-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A design flaw in image processing software that modifies JPEG images might not modify the original EXIF thumbnail,

which could lead to an information leak of potentially sensitive visual information that had been removed from the main JPEG image.

More Info: https://avd.aquasec.com/nvd/cve-2005-0406

[CVE-2008-3134] GraphicsMagick/ImageMagick: multiple crash or DoS issues (Severity: LOW)

Package: libmagickcore-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

Multiple unspecified vulnerabilities in GraphicsMagick before 1.2.4 allow remote attackers to cause a denial of service (crash, infinite loop, or memory consumption) via (a) unspecified vectors in the (1) AVI, (2) AVS, (3) DCM, (4) EPT, (5) FITS, (6) MTV, (7) PALM, (8) RLA, and (9) TGA decoder readers; and (b) the GetImageCharacteristics function in magick/image.c, as reachable from a crafted (10) PNG, (11) JPEG, (12) BMP, or (13) TIFF file.

More Info: https://avd.aquasec.com/nvd/cve-2008-3134

[CVE-2016-8678] ImageMagick: Heap-buffer overflow in IsPixelMonochrome (Severity: LOW)

Package: libmagickcore-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The IsPixelMonochrome function in MagickCore/pixel-accessor.h in ImageMagick 7.0.3.0 allows remote attackers to cause a denial of service (out-of-bounds read and crash) via a crafted file. NOTE: the vendor says "This is a Q64 issue and we do not support Q64."

More Info: https://avd.aquasec.com/nvd/cve-2016-8678

[CVE-2017-11754] ImageMagick: Memory leak in WritePICONImage function (Severity: LOW)

Package: libmagickcore-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an OpenPixelCache call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11754

[CVE-2017-11755] ImageMagick: Memory leak in WritePICONImage function via mishandled AcquireSemaphoreInfo call (Severity: LOW)

Package: libmagickcore-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an AcquireSemaphoreInfo call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11755

[CVE-2017-7275] ImageMagick: Memory allocation failure in AcquireMagickMemory (incomplete fix for CVE-2016-8866) (Severity: LOW)

Package: libmagickcore-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The ReadPCXImage function in coders/pcx.c in ImageMagick 7.0.4.9 allows remote attackers to cause a denial of service (attempted large memory allocation and application crash) via a crafted file. NOTE: this vulnerability exists because of an incomplete fix for CVE-2016-8862 and CVE-2016-8866.

More Info: https://avd.aquasec.com/nvd/cve-2017-7275

[CVE-2018-15607] ImageMagick: CPU Exhaustion via crafted input file (Severity: LOW)

Package: libmagickcore-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

In ImageMagick 7.0.8-11 Q16, a tiny input file 0x50 0x36 0x36 0x36 0x36 0x4c 0x36 0x38 0x36 0x36 0x36 0x36 0x36 0x36 0x1f 0x35 0x50 0x00 can result in a hang of several minutes during which CPU and memory resources are consumed until ultimately an attempted large memory allocation fails. Remote attackers could leverage this vulnerability to cause a denial of service via a crafted file.

More Info: https://avd.aquasec.com/nvd/cve-2018-15607

[CVE-2021-20311] ImageMagick: Division by zero in sRGBTransformImage() in MagickCore/colorspace.c (Severity: LOW)

Package: libmagickcore-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A flaw was found in ImageMagick in versions before 7.0.11, where a division by zero in sRGBTransformImage() in the MagickCore/colorspace.c may trigger undefined behavior via a crafted image file that is submitted by an attacker processed by an application using ImageMagick. The highest threat from this vulnerability is to system availability.

More Info: https://avd.aquasec.com/nvd/cve-2021-20311

[CVE-2023-34152] ImageMagick: RCE (shell command injection) vulnerability in OpenBlob with --enable-pipes configured (Severity: LOW)

Package: libmagickcore-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A vulnerability was found in ImageMagick. This security flaw cause a remote code execution vulnerability in OpenBlob with --enable-pipes configured.

More Info: https://avd.aquasec.com/nvd/cve-2023-34152

[CVE-2005-0406] A design flaw in image processing software that modifies JPEG images m ... (Severity: LOW)

Package: libmagickcore-6.q16-6-extra
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A design flaw in image processing software that modifies JPEG images might not modify the original EXIF thumbnail, which could lead to an information leak of potentially sensitive visual information that had been removed from the main JPEG image.

More Info: https://avd.aquasec.com/nvd/cve-2005-0406

[CVE-2008-3134] GraphicsMagick/ImageMagick: multiple crash or DoS issues (Severity: LOW)

Package: libmagickcore-6.q16-6-extra
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

Multiple unspecified vulnerabilities in GraphicsMagick before 1.2.4 allow remote attackers to cause a denial of service (crash, infinite loop, or memory consumption) via (a) unspecified vectors in the (1) AVI, (2) AVS, (3) DCM, (4) EPT, (5) FITS, (6) MTV, (7) PALM, (8) RLA, and (9) TGA decoder readers; and (b) the GetImageCharacteristics function in magick/image.c, as reachable from a crafted (10) PNG, (11) JPEG, (12) BMP, or (13) TIFF file.

More Info: https://avd.aquasec.com/nvd/cve-2008-3134

[CVE-2016-8678] ImageMagick: Heap-buffer overflow in IsPixelMonochrome (Severity: LOW)

Package: libmagickcore-6.q16-6-extra
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The IsPixelMonochrome function in MagickCore/pixel-accessor.h in ImageMagick 7.0.3.0 allows remote attackers to cause a denial of service (out-of-bounds read and crash) via a crafted file. NOTE: the vendor says "This is a Q64 issue and we do not support Q64."

More Info: https://avd.aquasec.com/nvd/cve-2016-8678

[CVE-2017-11754] ImageMagick: Memory leak in WritePICONImage function (Severity: LOW)

Package: libmagickcore-6.q16-6-extra
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an OpenPixelCache call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11754

[CVE-2017-11755] ImageMagick: Memory leak in WritePICONImage function via mishandled AcquireSemaphoreInfo call (Severity: LOW)

Package: libmagickcore-6.q16-6-extra
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an AcquireSemaphoreInfo call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11755

[CVE-2017-7275] ImageMagick: Memory allocation failure in AcquireMagickMemory (incomplete fix for CVE-2016-8866) (Severity: LOW)

Package: libmagickcore-6.q16-6-extra
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The ReadPCXImage function in coders/pcx.c in ImageMagick 7.0.4.9 allows remote attackers to cause a denial of service (attempted large memory allocation and application crash) via a crafted file. NOTE: this vulnerability exists because of an incomplete fix for CVE-2016-8862 and CVE-2016-8866.

More Info: https://avd.aquasec.com/nvd/cve-2017-7275

[CVE-2018-15607] ImageMagick: CPU Exhaustion via crafted input file (Severity: LOW)

Package: libmagickcore-6.q16-6-extra
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

In ImageMagick 7.0.8-11 Q16, a tiny input file 0x50 0x36 0x36 0x36 0x36 0x4c 0x36 0x38 0x36 0x36 0x36 0x36 0x36 0x36 0x1f 0x35 0x50 0x00 can result in a hang of several minutes during which CPU and memory resources are consumed until ultimately an attempted large memory allocation fails. Remote attackers could leverage this vulnerability to cause a denial of service via a crafted file.

More Info: https://avd.aquasec.com/nvd/cve-2018-15607

[CVE-2021-20311] ImageMagick: Division by zero in sRGBTransformImage() in MagickCore/colorspace.c (Severity: LOW)

Package: libmagickcore-6.q16-6-extra
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A flaw was found in ImageMagick in versions before 7.0.11, where a division by zero in sRGBTransformImage() in the MagickCore/colorspace.c may trigger undefined behavior via a crafted image file that is submitted by an attacker processed by an application using ImageMagick. The highest threat from this vulnerability is to system availability.

More Info: https://avd.aquasec.com/nvd/cve-2021-20311

[CVE-2023-34152] ImageMagick: RCE (shell command injection) vulnerability in OpenBlob with --enable-pipes configured (Severity: LOW)

Package: libmagickcore-6.q16-6-extra
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A vulnerability was found in ImageMagick. This security flaw cause a remote code execution vulnerability in OpenBlob with --enable-pipes configured.

More Info: https://avd.aquasec.com/nvd/cve-2023-34152

[CVE-2005-0406] A design flaw in image processing software that modifies JPEG images m ... (Severity: LOW)

Package: libmagickcore-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A design flaw in image processing software that modifies JPEG images might not modify the original EXIF thumbnail, which could lead to an information leak of potentially sensitive visual information that had been removed from the main JPEG image.

More Info: https://avd.aquasec.com/nvd/cve-2005-0406

[CVE-2008-3134] GraphicsMagick/ImageMagick: multiple crash or DoS issues (Severity: LOW)

Package: libmagickcore-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

Multiple unspecified vulnerabilities in GraphicsMagick before 1.2.4 allow remote attackers to cause a denial of service (crash, infinite loop, or memory consumption) via (a) unspecified vectors in the (1) AVI, (2) AVS, (3) DCM, (4) EPT, (5) FITS, (6) MTV, (7) PALM, (8) RLA, and (9) TGA decoder readers; and (b) the GetImageCharacteristics function in magick/image.c, as reachable from a crafted (10) PNG, (11) JPEG, (12) BMP, or (13) TIFF file.

More Info: https://avd.aquasec.com/nvd/cve-2008-3134

[CVE-2016-8678] ImageMagick: Heap-buffer overflow in IsPixelMonochrome (Severity: LOW)

Package: libmagickcore-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The IsPixelMonochrome function in MagickCore/pixel-accessor.h in ImageMagick 7.0.3.0 allows remote attackers to cause a denial of service (out-of-bounds read and crash) via a crafted file. NOTE: the vendor says "This is a Q64 issue and we do not support Q64."

More Info: https://avd.aquasec.com/nvd/cve-2016-8678

[CVE-2017-11754] ImageMagick: Memory leak in WritePICONImage function (Severity: LOW)

Package: libmagickcore-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an OpenPixelCache call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11754

[CVE-2017-11755] ImageMagick: Memory leak in WritePICONImage function via mishandled AcquireSemaphoreInfo call (Severity: LOW)

Package: libmagickcore-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an AcquireSemaphoreInfo call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11755

[CVE-2017-7275] ImageMagick: Memory allocation failure in AcquireMagickMemory (incomplete fix for CVE-2016-8866) (Severity: LOW)

Package: libmagickcore-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The ReadPCXImage function in coders/pcx.c in ImageMagick 7.0.4.9 allows remote attackers to cause a denial of service (attempted large memory allocation and application crash) via a crafted file. NOTE: this vulnerability exists because of an incomplete fix for CVE-2016-8862 and CVE-2016-8866.

More Info: https://avd.aquasec.com/nvd/cve-2017-7275

[CVE-2018-15607] ImageMagick: CPU Exhaustion via crafted input file (Severity: LOW)

Package: libmagickcore-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

In ImageMagick 7.0.8-11 Q16, a tiny input file 0x50 0x36 0x36 0x36 0x36 0x4c 0x36 0x38 0x36 0x36 0x36 0x36 0x36 0x36 0x1f 0x35 0x50 0x00 can result in a hang of several minutes during which CPU and memory resources are consumed until ultimately an attempted large memory allocation fails. Remote attackers could leverage this vulnerability to cause a denial of service via a crafted file.

More Info: https://avd.aquasec.com/nvd/cve-2018-15607

[CVE-2021-20311] ImageMagick: Division by zero in sRGBTransformImage() in MagickCore/colorspace.c (Severity: LOW)

Package: libmagickcore-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A flaw was found in ImageMagick in versions before 7.0.11, where a division by zero in sRGBTransformImage() in the MagickCore/colorspace.c may trigger undefined behavior via a crafted image file that is submitted by an attacker processed by an application using ImageMagick. The highest threat from this vulnerability is to system availability.

More Info: https://avd.aquasec.com/nvd/cve-2021-20311

[CVE-2023-34152] ImageMagick: RCE (shell command injection) vulnerability in OpenBlob with --enable-pipes configured (Severity: LOW)

Package: libmagickcore-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A vulnerability was found in ImageMagick. This security flaw cause a remote code execution vulnerability in OpenBlob with --enable-pipes configured.

More Info: https://avd.aquasec.com/nvd/cve-2023-34152

[CVE-2005-0406] A design flaw in image processing software that modifies JPEG images m ... (Severity: LOW)

Package: libmagickcore-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A design flaw in image processing software that modifies JPEG images might not modify the original EXIF thumbnail, which could lead to an information leak of potentially sensitive visual information that had been removed from the main JPEG image.

More Info: https://avd.aquasec.com/nvd/cve-2005-0406

[CVE-2008-3134] GraphicsMagick/ImageMagick: multiple crash or DoS issues (Severity: LOW)

Package: libmagickcore-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

Multiple unspecified vulnerabilities in GraphicsMagick before 1.2.4 allow remote attackers to cause a denial of service (crash, infinite loop, or memory consumption) via (a) unspecified vectors in the (1) AVI, (2) AVS, (3) DCM, (4) EPT, (5) FITS, (6) MTV, (7) PALM, (8) RLA, and (9) TGA decoder readers; and (b) the GetImageCharacteristics function in magick/image.c, as reachable from a crafted (10) PNG, (11) JPEG, (12) BMP, or (13) TIFF file.

More Info: https://avd.aquasec.com/nvd/cve-2008-3134

[CVE-2016-8678] ImageMagick: Heap-buffer overflow in IsPixelMonochrome (Severity: LOW)

Package: libmagickcore-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The IsPixelMonochrome function in MagickCore/pixel-accessor.h in ImageMagick 7.0.3.0 allows remote attackers to cause a denial of service (out-of-bounds read and crash) via a crafted file. NOTE: the vendor says "This is a Q64 issue and we do not support Q64."

More Info: https://avd.aquasec.com/nvd/cve-2016-8678

[CVE-2017-11754] ImageMagick: Memory leak in WritePICONImage function (Severity: LOW)

Package: libmagickcore-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an OpenPixelCache call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11754

[CVE-2017-11755] ImageMagick: Memory leak in WritePICONImage function via mishandled AcquireSemaphoreInfo call (Severity: LOW)

Package: libmagickcore-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an AcquireSemaphoreInfo call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11755

[CVE-2017-7275] ImageMagick: Memory allocation failure in AcquireMagickMemory (incomplete fix for CVE-2016-8866) (Severity: LOW)

Package: libmagickcore-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The ReadPCXImage function in coders/pcx.c in ImageMagick 7.0.4.9 allows remote attackers to cause a denial of service (attempted large memory allocation and application crash) via a crafted file. NOTE: this vulnerability exists because of an incomplete fix for CVE-2016-8862 and CVE-2016-8866.

More Info: https://avd.aquasec.com/nvd/cve-2017-7275

[CVE-2018-15607] ImageMagick: CPU Exhaustion via crafted input file (Severity: LOW)

Package: libmagickcore-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

In ImageMagick 7.0.8-11 Q16, a tiny input file 0x50 0x36 0x36 0x36 0x36 0x4c 0x36 0x38 0x36 0x36 0x36 0x36 0x36 0x36 0x1f 0x35 0x50 0x00 can result in a hang of several minutes during which CPU and memory resources are consumed until ultimately an attempted large memory allocation fails. Remote attackers could leverage this vulnerability to cause a denial of service via a crafted file.

More Info: https://avd.aquasec.com/nvd/cve-2018-15607

[CVE-2021-20311] ImageMagick: Division by zero in sRGBTransformImage() in MagickCore/colorspace.c (Severity: LOW)

Package: libmagickcore-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A flaw was found in ImageMagick in versions before 7.0.11, where a division by zero in sRGBTransformImage() in the MagickCore/colorspace.c may trigger undefined behavior via a crafted image file that is submitted by an attacker processed by an application using ImageMagick. The highest threat from this vulnerability is to system availability.

More Info: https://avd.aquasec.com/nvd/cve-2021-20311

[CVE-2023-34152] ImageMagick: RCE (shell command injection) vulnerability in OpenBlob with --enable-pipes configured (Severity: LOW)

Package: libmagickcore-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A vulnerability was found in ImageMagick. This security flaw cause a remote code execution vulnerability in OpenBlob with --enable-pipes configured.

More Info: https://avd.aquasec.com/nvd/cve-2023-34152

[CVE-2005-0406] A design flaw in image processing software that modifies JPEG images m ... (Severity: LOW)

Package: libmagickwand-6-headers
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A design flaw in image processing software that modifies JPEG images might not modify the original EXIF thumbnail, which could lead to an information leak of potentially sensitive visual information that had been removed from the main JPEG image.

More Info: https://avd.aquasec.com/nvd/cve-2005-0406

[CVE-2008-3134] GraphicsMagick/ImageMagick: multiple crash or DoS issues (Severity: LOW)

Package: libmagickwand-6-headers
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

Multiple unspecified vulnerabilities in GraphicsMagick before 1.2.4 allow remote attackers to cause a denial of service (crash, infinite loop, or memory consumption) via (a) unspecified vectors in the (1) AVI, (2) AVS, (3) DCM, (4) EPT, (5) FITS, (6) MTV, (7) PALM, (8) RLA, and (9) TGA decoder readers; and (b) the GetImageCharacteristics function in magick/image.c, as reachable from a crafted (10) PNG, (11) JPEG, (12) BMP, or (13) TIFF file.

More Info: https://avd.aquasec.com/nvd/cve-2008-3134

[CVE-2016-8678] ImageMagick: Heap-buffer overflow in IsPixelMonochrome (Severity: LOW)

Package: libmagickwand-6-headers
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The IsPixelMonochrome function in MagickCore/pixel-accessor.h in ImageMagick 7.0.3.0 allows remote attackers to cause a denial of service (out-of-bounds read and crash) via a crafted file. NOTE: the vendor says "This is a Q64 issue and we do not support Q64."

More Info: https://avd.aquasec.com/nvd/cve-2016-8678

[CVE-2017-11754] ImageMagick: Memory leak in WritePICONImage function (Severity: LOW)

Package: libmagickwand-6-headers
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an OpenPixelCache call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11754

[CVE-2017-11755] ImageMagick: Memory leak in WritePICONImage function via mishandled AcquireSemaphoreInfo call (Severity: LOW)

Package: libmagickwand-6-headers
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an AcquireSemaphoreInfo call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11755

[CVE-2017-7275] ImageMagick: Memory allocation failure in AcquireMagickMemory (incomplete fix for CVE-2016-8866) (Severity: LOW)

Package: libmagickwand-6-headers
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The ReadPCXImage function in coders/pcx.c in ImageMagick 7.0.4.9 allows remote attackers to cause a denial of service (attempted large memory allocation and application crash) via a crafted file. NOTE: this vulnerability exists because of an incomplete fix for CVE-2016-8862 and CVE-2016-8866.

More Info: https://avd.aquasec.com/nvd/cve-2017-7275

[CVE-2018-15607] ImageMagick: CPU Exhaustion via crafted input file (Severity: LOW)

Package: libmagickwand-6-headers
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

In ImageMagick 7.0.8-11 Q16, a tiny input file 0x50 0x36 0x36 0x36 0x36 0x4c 0x36 0x38 0x36 0x36 0x36 0x36 0x36 0x36 0x1f 0x35 0x50 0x00 can result in a hang of several minutes during which CPU and memory resources are consumed until ultimately an attempted large memory allocation fails. Remote attackers could leverage this vulnerability to cause a denial of service via a crafted file.

More Info: https://avd.aquasec.com/nvd/cve-2018-15607

[CVE-2021-20311] ImageMagick: Division by zero in sRGBTransformImage() in MagickCore/colorspace.c (Severity: LOW)

Package: libmagickwand-6-headers
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A flaw was found in ImageMagick in versions before 7.0.11, where a division by zero in sRGBTransformImage() in the MagickCore/colorspace.c may trigger undefined behavior via a crafted image file that is submitted by an attacker processed by an application using ImageMagick. The highest threat from this vulnerability is to system availability.

More Info: https://avd.aquasec.com/nvd/cve-2021-20311

[CVE-2023-34152] ImageMagick: RCE (shell command injection) vulnerability in OpenBlob with --enable-pipes configured (Severity: LOW)

Package: libmagickwand-6-headers
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A vulnerability was found in ImageMagick. This security flaw cause a remote code execution vulnerability in OpenBlob with --enable-pipes configured.

More Info: https://avd.aquasec.com/nvd/cve-2023-34152

[CVE-2005-0406] A design flaw in image processing software that modifies JPEG images m ... (Severity: LOW)

Package: libmagickwand-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A design flaw in image processing software that modifies JPEG images might not modify the original EXIF thumbnail, which could lead to an information leak of potentially sensitive visual information that had been removed from the main JPEG image.

More Info: https://avd.aquasec.com/nvd/cve-2005-0406

[CVE-2008-3134] GraphicsMagick/ImageMagick: multiple crash or DoS issues (Severity: LOW)

Package: libmagickwand-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

Multiple unspecified vulnerabilities in GraphicsMagick before 1.2.4 allow remote attackers to cause a denial of service (crash, infinite loop, or memory consumption) via (a) unspecified vectors in the (1) AVI, (2) AVS, (3) DCM, (4) EPT, (5) FITS, (6) MTV, (7) PALM, (8) RLA, and (9) TGA decoder readers; and (b) the GetImageCharacteristics function in magick/image.c, as reachable from a crafted (10) PNG, (11) JPEG, (12) BMP, or (13) TIFF file.

More Info: https://avd.aquasec.com/nvd/cve-2008-3134

[CVE-2016-8678] ImageMagick: Heap-buffer overflow in IsPixelMonochrome (Severity: LOW)

Package: libmagickwand-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The IsPixelMonochrome function in MagickCore/pixel-accessor.h in ImageMagick 7.0.3.0 allows remote attackers to cause a denial of service (out-of-bounds read and crash) via a crafted file. NOTE: the vendor says "This is a Q64 issue and we do not support Q64."

More Info: https://avd.aquasec.com/nvd/cve-2016-8678

[CVE-2017-11754] ImageMagick: Memory leak in WritePICONImage function (Severity: LOW)

Package: libmagickwand-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an OpenPixelCache call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11754

[CVE-2017-11755] ImageMagick: Memory leak in WritePICONImage function via mishandled AcquireSemaphoreInfo call (Severity: LOW)

Package: libmagickwand-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an AcquireSemaphoreInfo call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11755

[CVE-2017-7275] ImageMagick: Memory allocation failure in AcquireMagickMemory (incomplete fix for CVE-2016-8866) (Severity: LOW)

Package: libmagickwand-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The ReadPCXImage function in coders/pcx.c in ImageMagick 7.0.4.9 allows remote attackers to cause a denial of service (attempted large memory allocation and application crash) via a crafted file. NOTE: this vulnerability exists because of an incomplete fix for CVE-2016-8862 and CVE-2016-8866.

More Info: https://avd.aquasec.com/nvd/cve-2017-7275

[CVE-2018-15607] ImageMagick: CPU Exhaustion via crafted input file (Severity: LOW)

Package: libmagickwand-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

In ImageMagick 7.0.8-11 Q16, a tiny input file 0x50 0x36 0x36 0x36 0x36 0x4c 0x36 0x38 0x36 0x36 0x36 0x36 0x36 0x36 0x1f 0x35 0x50 0x00 can result in a hang of several minutes during which CPU and memory resources are consumed until ultimately an attempted large memory allocation fails. Remote attackers could leverage this vulnerability to cause a denial of service via a crafted file.

More Info: https://avd.aquasec.com/nvd/cve-2018-15607

[CVE-2021-20311] ImageMagick: Division by zero in sRGBTransformImage() in MagickCore/colorspace.c (Severity: LOW)

Package: libmagickwand-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A flaw was found in ImageMagick in versions before 7.0.11, where a division by zero in sRGBTransformImage() in the MagickCore/colorspace.c may trigger undefined behavior via a crafted image file that is submitted by an attacker processed by an application using ImageMagick. The highest threat from this vulnerability is to system availability.

More Info: https://avd.aquasec.com/nvd/cve-2021-20311

[CVE-2023-34152] ImageMagick: RCE (shell command injection) vulnerability in OpenBlob with --enable-pipes configured (Severity: LOW)

Package: libmagickwand-6.q16-6
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A vulnerability was found in ImageMagick. This security flaw cause a remote code execution vulnerability in OpenBlob with --enable-pipes configured.

More Info: https://avd.aquasec.com/nvd/cve-2023-34152

[CVE-2005-0406] A design flaw in image processing software that modifies JPEG images m ... (Severity: LOW)

Package: libmagickwand-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A design flaw in image processing software that modifies JPEG images might not modify the original EXIF thumbnail, which could lead to an information leak of potentially sensitive visual information that had been removed from the main JPEG image.

More Info: https://avd.aquasec.com/nvd/cve-2005-0406

[CVE-2008-3134] GraphicsMagick/ImageMagick: multiple crash or DoS issues (Severity: LOW)

Package: libmagickwand-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

Multiple unspecified vulnerabilities in GraphicsMagick before 1.2.4 allow remote attackers to cause a denial of service (crash, infinite loop, or memory consumption) via (a) unspecified vectors in the (1) AVI, (2) AVS, (3) DCM, (4) EPT, (5) FITS, (6) MTV, (7) PALM, (8) RLA, and (9) TGA decoder readers; and (b) the GetImageCharacteristics function in magick/image.c, as reachable from a crafted (10) PNG, (11) JPEG, (12) BMP, or (13) TIFF file.

More Info: https://avd.aquasec.com/nvd/cve-2008-3134

[CVE-2016-8678] ImageMagick: Heap-buffer overflow in IsPixelMonochrome (Severity: LOW)

Package: libmagickwand-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The IsPixelMonochrome function in MagickCore/pixel-accessor.h in ImageMagick 7.0.3.0 allows remote attackers to cause a denial of service (out-of-bounds read and crash) via a crafted file. NOTE: the vendor says "This is a Q64 issue and we do not support Q64."

More Info: https://avd.aquasec.com/nvd/cve-2016-8678

[CVE-2017-11754] ImageMagick: Memory leak in WritePICONImage function (Severity: LOW)

Package: libmagickwand-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an OpenPixelCache call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11754

[CVE-2017-11755] ImageMagick: Memory leak in WritePICONImage function via mishandled AcquireSemaphoreInfo call (Severity: LOW)

Package: libmagickwand-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an AcquireSemaphoreInfo call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11755

[CVE-2017-7275] ImageMagick: Memory allocation failure in AcquireMagickMemory (incomplete fix for CVE-2016-8866) (Severity: LOW)

Package: libmagickwand-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The ReadPCXImage function in coders/pcx.c in ImageMagick 7.0.4.9 allows remote attackers to cause a denial of service (attempted large memory allocation and application crash) via a crafted file. NOTE: this vulnerability exists because of an incomplete fix for CVE-2016-8862 and CVE-2016-8866.

More Info: https://avd.aquasec.com/nvd/cve-2017-7275

[CVE-2018-15607] ImageMagick: CPU Exhaustion via crafted input file (Severity: LOW)

Package: libmagickwand-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

In ImageMagick 7.0.8-11 Q16, a tiny input file 0x50 0x36 0x36 0x36 0x36 0x4c 0x36 0x38 0x36 0x36 0x36 0x36 0x36 0x36 0x1f 0x35 0x50 0x00 can result in a hang of several minutes during which CPU and memory resources are consumed until ultimately an attempted large memory allocation fails. Remote attackers could leverage this vulnerability to cause a denial of service via a crafted file.

More Info: https://avd.aquasec.com/nvd/cve-2018-15607

[CVE-2021-20311] ImageMagick: Division by zero in sRGBTransformImage() in MagickCore/colorspace.c (Severity: LOW)

Package: libmagickwand-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A flaw was found in ImageMagick in versions before 7.0.11, where a division by zero in sRGBTransformImage() in the MagickCore/colorspace.c may trigger undefined behavior via a crafted image file that is submitted by an attacker processed by an application using ImageMagick. The highest threat from this vulnerability is to system availability.

More Info: https://avd.aquasec.com/nvd/cve-2021-20311

[CVE-2023-34152] ImageMagick: RCE (shell command injection) vulnerability in OpenBlob with --enable-pipes configured (Severity: LOW)

Package: libmagickwand-6.q16-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A vulnerability was found in ImageMagick. This security flaw cause a remote code execution vulnerability in OpenBlob with --enable-pipes configured.

More Info: https://avd.aquasec.com/nvd/cve-2023-34152

[CVE-2005-0406] A design flaw in image processing software that modifies JPEG images m ... (Severity: LOW)

Package: libmagickwand-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A design flaw in image processing software that modifies JPEG images might not modify the original EXIF thumbnail, which could lead to an information leak of potentially sensitive visual information that had been removed from the main JPEG image.

More Info: https://avd.aquasec.com/nvd/cve-2005-0406

[CVE-2008-3134] GraphicsMagick/ImageMagick: multiple crash or DoS issues (Severity: LOW)

Package: libmagickwand-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

Multiple unspecified vulnerabilities in GraphicsMagick before 1.2.4 allow remote attackers to cause a denial of service (crash, infinite loop, or memory consumption) via (a) unspecified vectors in the (1) AVI, (2) AVS, (3) DCM, (4) EPT, (5) FITS, (6) MTV, (7) PALM, (8) RLA, and (9) TGA decoder readers; and (b) the GetImageCharacteristics function in magick/image.c, as reachable from a crafted (10) PNG, (11) JPEG, (12) BMP, or (13) TIFF file.

More Info: https://avd.aquasec.com/nvd/cve-2008-3134

[CVE-2016-8678] ImageMagick: Heap-buffer overflow in IsPixelMonochrome (Severity: LOW)

Package: libmagickwand-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The IsPixelMonochrome function in MagickCore/pixel-accessor.h in ImageMagick 7.0.3.0 allows remote attackers to cause a denial of service (out-of-bounds read and crash) via a crafted file. NOTE: the vendor says "This is a Q64 issue and we do not support Q64."

More Info: https://avd.aquasec.com/nvd/cve-2016-8678

[CVE-2017-11754] ImageMagick: Memory leak in WritePICONImage function (Severity: LOW)

Package: libmagickwand-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an OpenPixelCache call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11754

[CVE-2017-11755] ImageMagick: Memory leak in WritePICONImage function via mishandled AcquireSemaphoreInfo call (Severity: LOW)

Package: libmagickwand-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The WritePICONImage function in coders/xpm.c in ImageMagick 7.0.6-4 allows remote attackers to cause a denial of service (memory leak) via a crafted file that is mishandled in an AcquireSemaphoreInfo call.

More Info: https://avd.aquasec.com/nvd/cve-2017-11755

[CVE-2017-7275] ImageMagick: Memory allocation failure in AcquireMagickMemory (incomplete fix for CVE-2016-8866) (Severity: LOW)

Package: libmagickwand-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

The ReadPCXImage function in coders/pcx.c in ImageMagick 7.0.4.9 allows remote attackers to cause a denial of service (attempted large memory allocation and application crash) via a crafted file. NOTE: this vulnerability exists because of an incomplete fix for CVE-2016-8862 and CVE-2016-8866.

More Info: https://avd.aquasec.com/nvd/cve-2017-7275

[CVE-2018-15607] ImageMagick: CPU Exhaustion via crafted input file (Severity: LOW)

Package: libmagickwand-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

In ImageMagick 7.0.8-11 Q16, a tiny input file 0x50 0x36 0x36 0x36 0x36 0x4c 0x36 0x38 0x36 0x36 0x36 0x36 0x36 0x36 0x1f 0x35 0x50 0x00 can result in a hang of several minutes during which CPU and memory resources are consumed until ultimately an attempted large memory allocation fails. Remote attackers could leverage this vulnerability to cause a denial of service via a crafted file.

More Info: https://avd.aquasec.com/nvd/cve-2018-15607

[CVE-2021-20311] ImageMagick: Division by zero in sRGBTransformImage() in MagickCore/colorspace.c (Severity: LOW)

Package: libmagickwand-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A flaw was found in ImageMagick in versions before 7.0.11, where a division by zero in sRGBTransformImage() in the MagickCore/colorspace.c may trigger undefined behavior via a crafted image file that is submitted by an attacker processed by an application using ImageMagick. The highest threat from this vulnerability is to system availability.

More Info: https://avd.aquasec.com/nvd/cve-2021-20311

[CVE-2023-34152] ImageMagick: RCE (shell command injection) vulnerability in OpenBlob with --enable-pipes configured (Severity: LOW)

Package: libmagickwand-dev
Installed: 8:6.9.11.60+dfsg-1.6+deb12u2
Fixed: %!s(<nil>)

A vulnerability was found in ImageMagick. This security flaw cause a remote code execution vulnerability in OpenBlob with --enable-pipes configured.

More Info: https://avd.aquasec.com/nvd/cve-2023-34152

[CVE-2023-52969] mariadb: MariaDB Server Crash Due to Empty Backtrace Log (Severity: MEDIUM)

Package: libmariadb-dev
Installed: 1:10.11.11-0+deb12u1
Fixed: %!s(<nil>)

MariaDB Server 10.4 through 10.5.*, 10.6 through 10.6.*, 10.7 through 10.11.*, and 11.0 through 11.0.* can sometimes crash with an empty backtrace log. This may be related to make_aggr_tables_info and optimize_stage2.

More Info: https://avd.aquasec.com/nvd/cve-2023-52969

[CVE-2023-52970] mariadb: MariaDB Server Crash via Item_direct_view_ref (Severity: MEDIUM)

Package: libmariadb-dev
Installed: 1:10.11.11-0+deb12u1
Fixed: %!s(<nil>)

MariaDB Server 10.4 through 10.5.*, 10.6 through 10.6.*, 10.7 through 10.11.*, 11.0 through 11.0.*, and 11.1 through 11.4.* crashes in Item_direct_view_ref::derived_field_transformer_for_where.

More Info: https://avd.aquasec.com/nvd/cve-2023-52970

[CVE-2023-52971] mariadb: MariaDB Server Crash (Severity: MEDIUM)

Package: libmariadb-dev
Installed: 1:10.11.11-0+deb12u1
Fixed: %!s(<nil>)

MariaDB Server 10.10 through 10.11.* and 11.0 through 11.4.* crashes in JOIN::fix_all_splittings_in_plan.

More Info: https://avd.aquasec.com/nvd/cve-2023-52971

[CVE-2023-52969] mariadb: MariaDB Server Crash Due to Empty Backtrace Log (Severity: MEDIUM)

Package: libmariadb-dev-compat
Installed: 1:10.11.11-0+deb12u1
Fixed: %!s(<nil>)

MariaDB Server 10.4 through 10.5.*, 10.6 through 10.6.*, 10.7 through 10.11.*, and 11.0 through 11.0.* can sometimes crash with an empty backtrace log. This may be related to make_aggr_tables_info and optimize_stage2.

More Info: https://avd.aquasec.com/nvd/cve-2023-52969

[CVE-2023-52970] mariadb: MariaDB Server Crash via Item_direct_view_ref (Severity: MEDIUM)

Package: libmariadb-dev-compat
Installed: 1:10.11.11-0+deb12u1
Fixed: %!s(<nil>)

MariaDB Server 10.4 through 10.5.*, 10.6 through 10.6.*, 10.7 through 10.11.*, 11.0 through 11.0.*, and 11.1 through 11.4.* crashes in Item_direct_view_ref::derived_field_transformer_for_where.

More Info: https://avd.aquasec.com/nvd/cve-2023-52970

[CVE-2023-52971] mariadb: MariaDB Server Crash (Severity: MEDIUM)

Package: libmariadb-dev-compat
Installed: 1:10.11.11-0+deb12u1
Fixed: %!s(<nil>)

MariaDB Server 10.10 through 10.11.* and 11.0 through 11.4.* crashes in JOIN::fix_all_splittings_in_plan.

More Info: https://avd.aquasec.com/nvd/cve-2023-52971

[CVE-2023-52969] mariadb: MariaDB Server Crash Due to Empty Backtrace Log (Severity: MEDIUM)

Package: libmariadb3
Installed: 1:10.11.11-0+deb12u1
Fixed: %!s(<nil>)

MariaDB Server 10.4 through 10.5.*, 10.6 through 10.6.*, 10.7 through 10.11.*, and 11.0 through 11.0.* can sometimes crash with an empty backtrace log. This may be related to make_aggr_tables_info and optimize_stage2.

More Info: https://avd.aquasec.com/nvd/cve-2023-52969

[CVE-2023-52970] mariadb: MariaDB Server Crash via Item_direct_view_ref (Severity: MEDIUM)

Package: libmariadb3
Installed: 1:10.11.11-0+deb12u1
Fixed: %!s(<nil>)

MariaDB Server 10.4 through 10.5.*, 10.6 through 10.6.*, 10.7 through 10.11.*, 11.0 through 11.0.*, and 11.1 through 11.4.* crashes in Item_direct_view_ref::derived_field_transformer_for_where.

More Info: https://avd.aquasec.com/nvd/cve-2023-52970

[CVE-2023-52971] mariadb: MariaDB Server Crash (Severity: MEDIUM)

Package: libmariadb3
Installed: 1:10.11.11-0+deb12u1
Fixed: %!s(<nil>)

MariaDB Server 10.10 through 10.11.* and 11.0 through 11.4.* crashes in JOIN::fix_all_splittings_in_plan.

More Info: https://avd.aquasec.com/nvd/cve-2023-52971

[CVE-2022-0563] util-linux: partial disclosure of arbitrary files in chfn and chsh when compiled with libreadline (Severity: LOW)

Package: libmount-dev
Installed: 2.38.1-5+deb12u3
Fixed: %!s(<nil>)

A flaw was found in the util-linux chfn and chsh utilities when compiled with Readline support. The Readline library uses an "INPUTRC" environment variable to get a path to the library config file. When the library cannot parse the specified file, it prints an error message containing data from the file. This flaw allows an unprivileged user to read root-owned files, potentially leading to privilege escalation. This flaw affects util-linux versions prior to 2.37.4.

More Info: https://avd.aquasec.com/nvd/cve-2022-0563

[CVE-2022-0563] util-linux: partial disclosure of arbitrary files in chfn and chsh when compiled with libreadline (Severity: LOW)

Package: libmount1
Installed: 2.38.1-5+deb12u3
Fixed: %!s(<nil>)

A flaw was found in the util-linux chfn and chsh utilities when compiled with Readline support. The Readline library uses an "INPUTRC" environment variable to get a path to the library config file. When the library cannot parse the specified file, it prints an error message containing data from the file. This flaw allows an unprivileged user to read root-owned files, potentially leading to privilege escalation. This flaw affects util-linux versions prior to 2.37.4.

More Info: https://avd.aquasec.com/nvd/cve-2022-0563

[CVE-2023-50495] ncurses: segmentation fault via _nc_wrap_entry() (Severity: MEDIUM)

Package: libncurses-dev
Installed: 6.4-4
Fixed: %!s(<nil>)

NCurse v6.4-20230418 was discovered to contain a segmentation fault via the component _nc_wrap_entry().

More Info: https://avd.aquasec.com/nvd/cve-2023-50495

[CVE-2023-50495] ncurses: segmentation fault via _nc_wrap_entry() (Severity: MEDIUM)

Package: libncurses5-dev
Installed: 6.4-4
Fixed: %!s(<nil>)

NCurse v6.4-20230418 was discovered to contain a segmentation fault via the component _nc_wrap_entry().

More Info: https://avd.aquasec.com/nvd/cve-2023-50495

[CVE-2023-50495] ncurses: segmentation fault via _nc_wrap_entry() (Severity: MEDIUM)

Package: libncurses6
Installed: 6.4-4
Fixed: %!s(<nil>)

NCurse v6.4-20230418 was discovered to contain a segmentation fault via the component _nc_wrap_entry().

More Info: https://avd.aquasec.com/nvd/cve-2023-50495

[CVE-2023-50495] ncurses: segmentation fault via _nc_wrap_entry() (Severity: MEDIUM)

Package: libncursesw5-dev
Installed: 6.4-4
Fixed: %!s(<nil>)

NCurse v6.4-20230418 was discovered to contain a segmentation fault via the component _nc_wrap_entry().

More Info: https://avd.aquasec.com/nvd/cve-2023-50495

[CVE-2023-50495] ncurses: segmentation fault via _nc_wrap_entry() (Severity: MEDIUM)

Package: libncursesw6
Installed: 6.4-4
Fixed: %!s(<nil>)

NCurse v6.4-20230418 was discovered to contain a segmentation fault via the component _nc_wrap_entry().

More Info: https://avd.aquasec.com/nvd/cve-2023-50495

[CVE-2023-5841] OpenEXR: Heap Overflow in Scanline Deep Data Parsing (Severity: CRITICAL)

Package: libopenexr-3-1-30
Installed: 3.1.5-5
Fixed: %!s(<nil>)

Due to a failure in validating the number of scanline samples of a OpenEXR file containing deep scanline data, Academy Software Foundation OpenEXÂ image parsing library version 3.2.1 and prior is susceptible to a heap-based buffer overflow vulnerability. This issue was resolved as of versionsÂ v3.2.2 and v3.1.12 of the affected library.

More Info: https://avd.aquasec.com/nvd/cve-2023-5841

[CVE-2017-14988] OpenEXR: Excessive memory allocation in Header::readfrom (Severity: LOW)

Package: libopenexr-3-1-30
Installed: 3.1.5-5
Fixed: %!s(<nil>)

Header::readfrom in IlmImf/ImfHeader.cpp in OpenEXR 2.2.0 allows remote attackers to cause a denial of service (excessive memory allocation) via a crafted file that is accessed with the ImfOpenInputFile function in IlmImf/ImfCRgbaFile.cpp. NOTE: The maintainer and multiple third parties believe that this vulnerability isn't valid

More Info: https://avd.aquasec.com/nvd/cve-2017-14988

[CVE-2024-31047] An issue in Academy Software Foundation openexr v.3.2.3 and before all ... (Severity: UNKNOWN)

Package: libopenexr-3-1-30
Installed: 3.1.5-5
Fixed: %!s(<nil>)

An issue in Academy Software Foundation openexr v.3.2.3 and before allows a local attacker to cause a denial of service (DoS) via the convert function of exrmultipart.cpp.

More Info: https://avd.aquasec.com/nvd/cve-2024-31047

[CVE-2023-5841] OpenEXR: Heap Overflow in Scanline Deep Data Parsing (Severity: CRITICAL)

Package: libopenexr-dev
Installed: 3.1.5-5
Fixed: %!s(<nil>)

Due to a failure in validating the number of scanline samples of a OpenEXR file containing deep scanline data, Academy Software Foundation OpenEXÂ image parsing library version 3.2.1 and prior is susceptible to a heap-based buffer overflow vulnerability. This issue was resolved as of versionsÂ v3.2.2 and v3.1.12 of the affected library.

More Info: https://avd.aquasec.com/nvd/cve-2023-5841

[CVE-2017-14988] OpenEXR: Excessive memory allocation in Header::readfrom (Severity: LOW)

Package: libopenexr-dev
Installed: 3.1.5-5
Fixed: %!s(<nil>)

Header::readfrom in IlmImf/ImfHeader.cpp in OpenEXR 2.2.0 allows remote attackers to cause a denial of service (excessive memory allocation) via a crafted file that is accessed with the ImfOpenInputFile function in IlmImf/ImfCRgbaFile.cpp. NOTE: The maintainer and multiple third parties believe that this vulnerability isn't valid

More Info: https://avd.aquasec.com/nvd/cve-2017-14988

[CVE-2024-31047] An issue in Academy Software Foundation openexr v.3.2.3 and before all ... (Severity: UNKNOWN)

Package: libopenexr-dev
Installed: 3.1.5-5
Fixed: %!s(<nil>)

An issue in Academy Software Foundation openexr v.3.2.3 and before allows a local attacker to cause a denial of service (DoS) via the convert function of exrmultipart.cpp.

More Info: https://avd.aquasec.com/nvd/cve-2024-31047

[CVE-2023-39327] openjpeg: Malicious files can cause the program to enter a large loop (Severity: MEDIUM)

Package: libopenjp2-7
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

A flaw was found in OpenJPEG. Maliciously constructed pictures can cause the program to enter a large loop and continuously print warning messages on the terminal.

More Info: https://avd.aquasec.com/nvd/cve-2023-39327

[CVE-2023-39328] openjpeg: denail of service via crafted image file (Severity: MEDIUM)

Package: libopenjp2-7
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

A vulnerability was found in OpenJPEG similar to CVE-2019-6988. This flaw allows an attacker to bypass existing protections and cause an application crash through a maliciously crafted file.

More Info: https://avd.aquasec.com/nvd/cve-2023-39328

[CVE-2023-39329] openjpeg: Resource exhaustion will occur in the opj_t1_decode_cblks function in the tcd.c (Severity: MEDIUM)

Package: libopenjp2-7
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

A flaw was found in OpenJPEG. A resource exhaustion can occur in the opj_t1_decode_cblks function in tcd.c through a crafted image file, causing a denial of service.

More Info: https://avd.aquasec.com/nvd/cve-2023-39329

[CVE-2016-10505] openjpeg: NULL pointer dereference in imagetopnm function in convert.c (Severity: LOW)

Package: libopenjp2-7
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

NULL pointer dereference vulnerabilities in the imagetopnm function in convert.c, sycc444_to_rgb function in color.c, color_esycc_to_rgb function in color.c, and sycc422_to_rgb function in color.c in OpenJPEG before 2.2.0 allow remote attackers to cause a denial of service (application crash) via crafted j2k files.

More Info: https://avd.aquasec.com/nvd/cve-2016-10505

[CVE-2016-9113] openjpeg2: Multiple security issues (Severity: LOW)

Package: libopenjp2-7
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

There is a NULL pointer dereference in function imagetobmp of convertbmp.c:980 of OpenJPEG 2.1.2. image->comps[0].data is not assigned a value after initialization(NULL). Impact is Denial of Service.

More Info: https://avd.aquasec.com/nvd/cve-2016-9113

[CVE-2016-9114] openjpeg2: Multiple security issues (Severity: LOW)

Package: libopenjp2-7
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

There is a NULL Pointer Access in function imagetopnm of convert.c:1943(jp2) of OpenJPEG 2.1.2. image->comps[compno].data is not assigned a value after initialization(NULL). Impact is Denial of Service.

More Info: https://avd.aquasec.com/nvd/cve-2016-9114

[CVE-2016-9115] openjpeg2: Multiple security issues (Severity: LOW)

Package: libopenjp2-7
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

Heap Buffer Over-read in function imagetotga of convert.c(jp2):942 in OpenJPEG 2.1.2. Impact is Denial of Service. Someone must open a crafted j2k file.

More Info: https://avd.aquasec.com/nvd/cve-2016-9115

[CVE-2016-9116] openjpeg2: Multiple security issues (Severity: LOW)

Package: libopenjp2-7
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

NULL Pointer Access in function imagetopnm of convert.c:2226(jp2) in OpenJPEG 2.1.2. Impact is Denial of Service. Someone must open a crafted j2k file.

More Info: https://avd.aquasec.com/nvd/cve-2016-9116

[CVE-2016-9117] openjpeg2: Multiple security issues (Severity: LOW)

Package: libopenjp2-7
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

NULL Pointer Access in function imagetopnm of convert.c(jp2):1289 in OpenJPEG 2.1.2. Impact is Denial of Service. Someone must open a crafted j2k file.

More Info: https://avd.aquasec.com/nvd/cve-2016-9117

[CVE-2016-9580] openjpeg2: Integer overflow in tiftoimage causes heap buffer overflow (Severity: LOW)

Package: libopenjp2-7
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

An integer overflow vulnerability was found in tiftoimage function in openjpeg 2.1.2, resulting in heap buffer overflow.

More Info: https://avd.aquasec.com/nvd/cve-2016-9580

[CVE-2016-9581] openjpeg2: Infinite loop in tiftoimage resulting into heap buffer overflow in convert_32s_C1P1 (Severity: LOW)

Package: libopenjp2-7
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

An infinite loop vulnerability in tiftoimage that results in heap buffer overflow in convert_32s_C1P1 was found in openjpeg 2.1.2.

More Info: https://avd.aquasec.com/nvd/cve-2016-9581

[CVE-2017-17479] openjpeg: Stack-buffer overflow in the pgxtoimage function (Severity: LOW)

Package: libopenjp2-7
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

In OpenJPEG 2.3.0, a stack-based buffer overflow was discovered in the pgxtoimage function in jpwl/convert.c. The vulnerability causes an out-of-bounds write, which may lead to remote denial of service or possibly remote code execution.

More Info: https://avd.aquasec.com/nvd/cve-2017-17479

[CVE-2018-16375] openjpeg: Heap-based buffer overflow in pnmtoimage function in bin/jpwl/convert.c (Severity: LOW)

Package: libopenjp2-7
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

An issue was discovered in OpenJPEG 2.3.0. Missing checks for header_info.height and header_info.width in the function pnmtoimage in bin/jpwl/convert.c can lead to a heap-based buffer overflow.

More Info: https://avd.aquasec.com/nvd/cve-2018-16375

[CVE-2018-16376] openjpeg: Heap-based buffer overflow in function t2_encode_packet in src/lib/openmj2/t2.c (Severity: LOW)

Package: libopenjp2-7
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

An issue was discovered in OpenJPEG 2.3.0. A heap-based buffer overflow was discovered in the function t2_encode_packet in lib/openmj2/t2.c. The vulnerability causes an out-of-bounds write, which may lead to remote denial

of service or possibly unspecified other impact.

More Info: https://avd.aquasec.com/nvd/cve-2018-16376

[CVE-2018-20846] openjpeg: out-of-bounds read in functions pi_next_lrcp, pi_next_rlcp, pi_next_rpcl, pi_next_pcrl, pi_next_rpcl, and pi_next_cprl in openmj2/pi.c leads to denial of service (Severity: LOW)

Package: libopenjp2-7
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

Out-of-bounds accesses in the functions pi_next_lrcp, pi_next_rlcp, pi_next_rpcl, pi_next_pcrl, pi_next_rpcl, and pi_next_cprl in openmj2/pi.c in OpenJPEG through 2.3.0 allow remote attackers to cause a denial of service (application crash).

More Info: https://avd.aquasec.com/nvd/cve-2018-20846

[CVE-2019-6988] openjpeg: DoS via memory exhaustion in opj_decompress (Severity: LOW)

Package: libopenjp2-7
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

An issue was discovered in OpenJPEG 2.3.0. It allows remote attackers to cause a denial of service (attempted excessive memory allocation) in opj_calloc in openjp2/opj_malloc.c, when called from opj_tcd_init_tile in openjp2/tcd.c, as demonstrated by the 64-bit opj_decompress.

More Info: https://avd.aquasec.com/nvd/cve-2019-6988

[CVE-2023-39327] openjpeg: Malicious files can cause the program to enter a large loop (Severity: MEDIUM)

Package: libopenjp2-7-dev
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

A flaw was found in OpenJPEG. Maliciously constructed pictures can cause the program to enter a large loop and continuously print warning messages on the terminal.

More Info: https://avd.aquasec.com/nvd/cve-2023-39327

[CVE-2023-39328] openjpeg: denail of service via crafted image file (Severity: MEDIUM)

Package: libopenjp2-7-dev
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

A vulnerability was found in OpenJPEG similar to CVE-2019-6988. This flaw allows an attacker to bypass existing protections and cause an application crash through a maliciously crafted file.

More Info: https://avd.aquasec.com/nvd/cve-2023-39328

[CVE-2023-39329] openjpeg: Resource exhaustion will occur in the opj_t1_decode_cblks function in the tcd.c (Severity: MEDIUM)

Package: libopenjp2-7-dev

Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

A flaw was found in OpenJPEG. A resource exhaustion can occur in the opj_t1_decode_cblks function in tcd.c through a crafted image file, causing a denial of service.

More Info: https://avd.aquasec.com/nvd/cve-2023-39329

[CVE-2016-10505] openjpeg: NULL pointer dereference in imagetopnm function in convert.c (Severity: LOW)

Package: libopenjp2-7-dev
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

NULL pointer dereference vulnerabilities in the imagetopnm function in convert.c, sycc444_to_rgb function in color.c, color_esycc_to_rgb function in color.c, and sycc422_to_rgb function in color.c in OpenJPEG before 2.2.0 allow remote attackers to cause a denial of service (application crash) via crafted j2k files.

More Info: https://avd.aquasec.com/nvd/cve-2016-10505

[CVE-2016-9113] openjpeg2: Multiple security issues (Severity: LOW)

Package: libopenjp2-7-dev
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

There is a NULL pointer dereference in function imagetobmp of convertbmp.c:980 of OpenJPEG 2.1.2. image->comps[0].data is not assigned a value after initialization(NULL). Impact is Denial of Service.

More Info: https://avd.aquasec.com/nvd/cve-2016-9113

[CVE-2016-9114] openjpeg2: Multiple security issues (Severity: LOW)

Package: libopenjp2-7-dev
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

There is a NULL Pointer Access in function imagetopnm of convert.c:1943(jp2) of OpenJPEG 2.1.2. image->comps[compno].data is not assigned a value after initialization(NULL). Impact is Denial of Service.

More Info: https://avd.aquasec.com/nvd/cve-2016-9114

[CVE-2016-9115] openjpeg2: Multiple security issues (Severity: LOW)

Package: libopenjp2-7-dev
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

Heap Buffer Over-read in function imagetotga of convert.c(jp2):942 in OpenJPEG 2.1.2. Impact is Denial of Service. Someone must open a crafted j2k file.

More Info: https://avd.aquasec.com/nvd/cve-2016-9115

[CVE-2016-9116] openjpeg2: Multiple security issues (Severity: LOW)

Package: libopenjp2-7-dev

Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

NULL Pointer Access in function imagetopnm of convert.c:2226(jp2) in OpenJPEG 2.1.2. Impact is Denial of Service. Someone must open a crafted j2k file.

More Info: https://avd.aquasec.com/nvd/cve-2016-9116

[CVE-2016-9117] openjpeg2: Multiple security issues (Severity: LOW)

Package: libopenjp2-7-dev
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

NULL Pointer Access in function imagetopnm of convert.c(jp2):1289 in OpenJPEG 2.1.2. Impact is Denial of Service. Someone must open a crafted j2k file.

More Info: https://avd.aquasec.com/nvd/cve-2016-9117

[CVE-2016-9580] openjpeg2: Integer overflow in tiftoimage causes heap buffer overflow (Severity: LOW)

Package: libopenjp2-7-dev
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

An integer overflow vulnerability was found in tiftoimage function in openjpeg 2.1.2, resulting in heap buffer overflow.

More Info: https://avd.aquasec.com/nvd/cve-2016-9580

[CVE-2016-9581] openjpeg2: Infinite loop in tiftoimage resulting into heap buffer overflow in convert_32s_C1P1 (Severity: LOW)

Package: libopenjp2-7-dev
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

An infinite loop vulnerability in tiftoimage that results in heap buffer overflow in convert_32s_C1P1 was found in openjpeg 2.1.2.

More Info: https://avd.aquasec.com/nvd/cve-2016-9581

[CVE-2017-17479] openjpeg: Stack-buffer overflow in the pgxtoimage function (Severity: LOW)

Package: libopenjp2-7-dev
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

In OpenJPEG 2.3.0, a stack-based buffer overflow was discovered in the pgxtoimage function in jpwl/convert.c. The vulnerability causes an out-of-bounds write, which may lead to remote denial of service or possibly remote code execution.

More Info: https://avd.aquasec.com/nvd/cve-2017-17479

[CVE-2018-16375] openjpeg: Heap-based buffer overflow in pnmtoimage function in bin/jpwl/convert.c

(Severity: LOW)

Package: libopenjp2-7-dev
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

An issue was discovered in OpenJPEG 2.3.0. Missing checks for header_info.height and header_info.width in the function pnmtoimage in bin/jpwl/convert.c can lead to a heap-based buffer overflow.

More Info: https://avd.aquasec.com/nvd/cve-2018-16375

[CVE-2018-16376] openjpeg: Heap-based buffer overflow in function t2_encode_packet in src/lib/openmj2/t2.c (Severity: LOW)

Package: libopenjp2-7-dev
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

An issue was discovered in OpenJPEG 2.3.0. A heap-based buffer overflow was discovered in the function t2_encode_packet in lib/openmj2/t2.c. The vulnerability causes an out-of-bounds write, which may lead to remote denial of service or possibly unspecified other impact.

More Info: https://avd.aquasec.com/nvd/cve-2018-16376

[CVE-2018-20846] openjpeg: out-of-bounds read in functions pi_next_lrcp, pi_next_rlcp, pi_next_rpcl, pi_next_pcrl, pi_next_rpcl, and pi_next_cprl in openmj2/pi.c leads to denial of service (Severity: LOW)

Package: libopenjp2-7-dev
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

Out-of-bounds accesses in the functions pi_next_lrcp, pi_next_rlcp, pi_next_rpcl, pi_next_pcrl, pi_next_rpcl, and pi_next_cprl in openmj2/pi.c in OpenJPEG through 2.3.0 allow remote attackers to cause a denial of service (application crash).

More Info: https://avd.aquasec.com/nvd/cve-2018-20846

[CVE-2019-6988] openjpeg: DoS via memory exhaustion in opj_decompress (Severity: LOW)

Package: libopenjp2-7-dev
Installed: 2.5.0-2+deb12u1
Fixed: %!s(<nil>)

An issue was discovered in OpenJPEG 2.3.0. It allows remote attackers to cause a denial of service (attempted excessive memory allocation) in opj_calloc in openjp2/opj_malloc.c, when called from opj_tcd_init_tile in openjp2/tcd.c, as demonstrated by the 64-bit opj_decompress.

More Info: https://avd.aquasec.com/nvd/cve-2019-6988

[CVE-2024-10041] pam: libpam: Libpam vulnerable to read hashed password (Severity: MEDIUM)

Package: libpam-modules
Installed: 1.5.2-6+deb12u1
Fixed: %!s(<nil>)

A vulnerability was found in PAM. The secret information is stored in memory, where the attacker can trigger the victim

program to execute by sending characters to its standard input (stdin). As this occurs, the attacker can train the branch predictor to execute an ROP chain speculatively. This flaw could result in leaked passwords, such as those found in /etc/shadow while performing authentications.

More Info: https://avd.aquasec.com/nvd/cve-2024-10041

[CVE-2024-22365] pam: allowing unprivileged user to block another user namespace (Severity: MEDIUM)

Package: libpam-modules
Installed: 1.5.2-6+deb12u1
Fixed: %!s(<nil>)

linux-pam (aka Linux PAM) before 1.6.0 allows attackers to cause a denial of service (blocked login process) via mkfifo because the openat call (for protect_dir) lacks O_DIRECTORY.

More Info: https://avd.aquasec.com/nvd/cve-2024-22365

[CVE-2024-10041] pam: libpam: Libpam vulnerable to read hashed password (Severity: MEDIUM)

Package: libpam-modules-bin
Installed: 1.5.2-6+deb12u1
Fixed: %!s(<nil>)

A vulnerability was found in PAM. The secret information is stored in memory, where the attacker can trigger the victim program to execute by sending characters to its standard input (stdin). As this occurs, the attacker can train the branch predictor to execute an ROP chain speculatively. This flaw could result in leaked passwords, such as those found in /etc/shadow while performing authentications.

More Info: https://avd.aquasec.com/nvd/cve-2024-10041

[CVE-2024-22365] pam: allowing unprivileged user to block another user namespace (Severity: MEDIUM)

Package: libpam-modules-bin
Installed: 1.5.2-6+deb12u1
Fixed: %!s(<nil>)

linux-pam (aka Linux PAM) before 1.6.0 allows attackers to cause a denial of service (blocked login process) via mkfifo because the openat call (for protect_dir) lacks O_DIRECTORY.

More Info: https://avd.aquasec.com/nvd/cve-2024-22365

[CVE-2024-10041] pam: libpam: Libpam vulnerable to read hashed password (Severity: MEDIUM)

Package: libpam-runtime
Installed: 1.5.2-6+deb12u1
Fixed: %!s(<nil>)

A vulnerability was found in PAM. The secret information is stored in memory, where the attacker can trigger the victim program to execute by sending characters to its standard input (stdin). As this occurs, the attacker can train the branch predictor to execute an ROP chain speculatively. This flaw could result in leaked passwords, such as those found in /etc/shadow while performing authentications.

More Info: https://avd.aquasec.com/nvd/cve-2024-10041

[CVE-2024-22365] pam: allowing unprivileged user to block another user namespace (Severity: MEDIUM)

Package: libpam-runtime
Installed: 1.5.2-6+deb12u1
Fixed: %!s(<nil>)

linux-pam (aka Linux PAM) before 1.6.0 allows attackers to cause a denial of service (blocked login process) via mkfifo because the openat call (for protect_dir) lacks O_DIRECTORY.

More Info: https://avd.aquasec.com/nvd/cve-2024-22365

[CVE-2024-10041] pam: libpam: Libpam vulnerable to read hashed password (Severity: MEDIUM)

Package: libpam0g
Installed: 1.5.2-6+deb12u1
Fixed: %!s(<nil>)

A vulnerability was found in PAM. The secret information is stored in memory, where the attacker can trigger the victim program to execute by sending characters to its standard input (stdin). As this occurs, the attacker can train the branch predictor to execute an ROP chain speculatively. This flaw could result in leaked passwords, such as those found in /etc/shadow while performing authentications.

More Info: https://avd.aquasec.com/nvd/cve-2024-10041

[CVE-2024-22365] pam: allowing unprivileged user to block another user namespace (Severity: MEDIUM)

Package: libpam0g
Installed: 1.5.2-6+deb12u1
Fixed: %!s(<nil>)

linux-pam (aka Linux PAM) before 1.6.0 allows attackers to cause a denial of service (blocked login process) via mkfifo because the openat call (for protect_dir) lacks O_DIRECTORY.

More Info: https://avd.aquasec.com/nvd/cve-2024-22365

[CVE-2023-31484] perl: CPAN.pm does not verify TLS certificates when downloading distributions over HTTPS (Severity: HIGH)

Package: libperl5.36
Installed: 5.36.0-7+deb12u1
Fixed: %!s(<nil>)

CPAN.pm before 2.35 does not verify TLS certificates when downloading distributions over HTTPS.

More Info: https://avd.aquasec.com/nvd/cve-2023-31484

[CVE-2011-4116] perl: File:: Temp insecure temporary file handling (Severity: LOW)

Package: libperl5.36
Installed: 5.36.0-7+deb12u1
Fixed: %!s(<nil>)

_is_safe in the File::Temp module for Perl does not properly handle symlinks.

More Info: https://avd.aquasec.com/nvd/cve-2011-4116

[CVE-2023-31486] http-tiny: insecure TLS cert default (Severity: LOW)

Package: libperl5.36
Installed: 5.36.0-7+deb12u1
Fixed: %!s(<nil>)

HTTP::Tiny before 0.083, a Perl core module since 5.13.9 and available standalone on CPAN, has an insecure default TLS configuration where users must opt in to verify certificates.

More Info: https://avd.aquasec.com/nvd/cve-2023-31486

[CVE-2023-37769] stress-test master commit e4c878 was discovered to contain a FPE vulne ... (Severity: LOW)

Package: libpixman-1-0
Installed: 0.42.2-1
Fixed: %!s(<nil>)

stress-test master commit e4c878 was discovered to contain a FPE vulnerability via the component combine_inner at /pixman-combine-float.c.

More Info: https://avd.aquasec.com/nvd/cve-2023-37769

[CVE-2023-37769] stress-test master commit e4c878 was discovered to contain a FPE vulne ... (Severity: LOW)

Package: libpixman-1-dev
Installed: 0.42.2-1
Fixed: %!s(<nil>)

stress-test master commit e4c878 was discovered to contain a FPE vulnerability via the component combine_inner at /pixman-combine-float.c.

More Info: https://avd.aquasec.com/nvd/cve-2023-37769

[CVE-2021-4214] libpng: hardcoded value leads to heap-overflow (Severity: LOW)

Package: libpng-dev
Installed: 1.6.39-2
Fixed: %!s(<nil>)

A heap overflow flaw was found in libpngs' pngimage.c program. This flaw allows an attacker with local network access to pass a specially crafted PNG file to the pngimage utility, causing an application to crash, leading to a denial of service.

More Info: https://avd.aquasec.com/nvd/cve-2021-4214

[CVE-2021-4214] libpng: hardcoded value leads to heap-overflow (Severity: LOW)

Package: libpng16-16
Installed: 1.6.39-2
Fixed: %!s(<nil>)

A heap overflow flaw was found in libpngs' pngimage.c program. This flaw allows an attacker with local network access

to pass a specially crafted PNG file to the pngimage utility, causing an application to crash, leading to a denial of service.

More Info: https://avd.aquasec.com/nvd/cve-2021-4214

[CVE-2023-4016] procps: ps buffer overflow (Severity: LOW)

Package: libproc2-0
Installed: 2:4.0.2-3
Fixed: %!s(<nil>)

Under some circumstances, this weakness allows a user who has access to run the â€œpsâ€• utility on a machine, the ability to write almost unlimited amounts of unfiltered data into the process heap.

More Info: https://avd.aquasec.com/nvd/cve-2023-4016

[CVE-2025-0938] python: cpython: URL parser allowed square brackets in domain names (Severity: MEDIUM)

Package: libpython3.11-minimal
Installed: 3.11.2-6+deb12u5
Fixed: %!s(<nil>)

The Python standard library functions `urllib.parse.urlsplit` and `urlparse` accepted domain names that included square brackets which isn't valid according to RFC 3986. Square brackets are only meant to be used as delimiters for specifying IPv6 and IPvFuture hosts in URLs. This could result in differential parsing across the Python URL parser and other specification-compliant URL parsers.

More Info: https://avd.aquasec.com/nvd/cve-2025-0938

[CVE-2025-1795] python: Mishandling of comma during folding and unicode-encoding of email headers (Severity: LOW)

Package: libpython3.11-minimal
Installed: 3.11.2-6+deb12u5
Fixed: %!s(<nil>)

During an address list folding when a separating comma ends up on a folded line and that line is to be unicode-encoded then the separator itself is also unicode-encoded. Expected behavior is that the separating comma remains a plan comma. This can result in the address header being misinterpreted by some mail servers.

More Info: https://avd.aquasec.com/nvd/cve-2025-1795

[CVE-2025-0938] python: cpython: URL parser allowed square brackets in domain names (Severity: MEDIUM)

Package: libpython3.11-stdlib
Installed: 3.11.2-6+deb12u5
Fixed: %!s(<nil>)

The Python standard library functions `urllib.parse.urlsplit` and `urlparse` accepted domain names that included square brackets which isn't valid according to RFC 3986. Square brackets are only meant to be used as delimiters for specifying IPv6 and IPvFuture hosts in URLs. This could result in differential parsing across the Python URL parser and other specification-compliant URL parsers.

More Info: https://avd.aquasec.com/nvd/cve-2025-0938

[CVE-2025-1795] python: Mishandling of comma during folding and unicode-encoding of email headers (Severity: LOW)

Package: libpython3.11-stdlib
Installed: 3.11.2-6+deb12u5
Fixed: %!s(<nil>)

During an address list folding when a separating comma ends up on a folded line and that line is to be unicode-encoded then the separator itself is also unicode-encoded. Expected behavior is that the separating comma remains a plan comma. This can result in the address header being misinterpreted by some mail servers.

More Info: https://avd.aquasec.com/nvd/cve-2025-1795

[CVE-2022-27943] binutils: libiberty/rust-demangle.c in GNU GCC 11.2 allows stack exhaustion in demangle_const (Severity: LOW)

Package: libquadmath0
Installed: 12.2.0-14
Fixed: %!s(<nil>)

libiberty/rust-demangle.c in GNU GCC 11.2 allows stack consumption in demangle_const, as demonstrated by nm-new.

More Info: https://avd.aquasec.com/nvd/cve-2022-27943

[CVE-2023-4039] gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 (Severity: LOW)

Package: libquadmath0
Installed: 12.2.0-14
Fixed: %!s(<nil>)

DISPUTEDA failure in the -fstack-protector feature in GCC-based toolchains
that target AArch64 allows an attacker to exploit an existing buffer
overflow in dynamically-sized local variables in your application
without this being detected. This stack-protector failure only applies
to C99-style dynamically-sized local variables or those created using
alloca(). The stack-protector operates as intended for statically-sized
local variables.

The default behavior when the stack-protector
detects an overflow is to terminate your application, resulting in
controlled loss of availability. An attacker who can exploit a buffer
overflow without triggering the stack-protector might be able to change
program flow control to cause an uncontrolled loss of availability or to
go further and affect confidentiality or integrity. NOTE: The GCC project argues that this is a missed hardening bug and not a vulnerability by itself.

More Info: https://avd.aquasec.com/nvd/cve-2023-4039

[CVE-2022-0563] util-linux: partial disclosure of arbitrary files in chfn and chsh when compiled with libreadline (Severity: LOW)

Package: libsmartcols1

Installed: 2.38.1-5+deb12u3
Fixed: %!s(<nil>)

A flaw was found in the util-linux chfn and chsh utilities when compiled with Readline support. The Readline library uses an "INPUTRC" environment variable to get a path to the library config file. When the library cannot parse the specified file, it prints an error message containing data from the file. This flaw allows an unprivileged user to read root-owned files, potentially leading to privilege escalation. This flaw affects util-linux versions prior to 2.37.4.

More Info: https://avd.aquasec.com/nvd/cve-2022-0563

[CVE-2025-29088] sqlite: Denial of Service in SQLite (Severity: MEDIUM)

Package: libsqlite3-0
Installed: 3.40.1-2+deb12u1
Fixed: %!s(<nil>)

An issue in sqlite v.3.49.0 allows an attacker to cause a denial of service via the SQLITE_DBCONFIG_LOOKASIDE component

More Info: https://avd.aquasec.com/nvd/cve-2025-29088

[CVE-2021-45346] sqlite: crafted SQL query allows a malicious user to obtain sensitive information (Severity: LOW)

Package: libsqlite3-0
Installed: 3.40.1-2+deb12u1
Fixed: %!s(<nil>)

A Memory Leak vulnerability exists in SQLite Project SQLite3 3.35.1 and 3.37.0 via maliciously crafted SQL Queries (made via editing the Database File), it is possible to query a record, and leak subsequent bytes of memory that extend beyond the record, which could let a malicious user obtain sensitive information. NOTE: The developer disputes this as a vulnerability stating that If you give SQLite a corrupted database file and submit a query against the database, it might read parts of the database that you did not intend or expect.

More Info: https://avd.aquasec.com/nvd/cve-2021-45346

[CVE-2025-29088] sqlite: Denial of Service in SQLite (Severity: MEDIUM)

Package: libsqlite3-dev
Installed: 3.40.1-2+deb12u1
Fixed: %!s(<nil>)

An issue in sqlite v.3.49.0 allows an attacker to cause a denial of service via the SQLITE_DBCONFIG_LOOKASIDE component

More Info: https://avd.aquasec.com/nvd/cve-2025-29088

[CVE-2021-45346] sqlite: crafted SQL query allows a malicious user to obtain sensitive information (Severity: LOW)

Package: libsqlite3-dev
Installed: 3.40.1-2+deb12u1
Fixed: %!s(<nil>)

A Memory Leak vulnerability exists in SQLite Project SQLite3 3.35.1 and 3.37.0 via maliciously crafted SQL Queries (made via editing the Database File), it is possible to query a record, and leak subsequent bytes of memory that extend

beyond the record, which could let a malicious user obtain sensitive information. NOTE: The developer disputes this as a vulnerability stating that If you give SQLite a corrupted database file and submit a query against the database, it might read parts of the database that you did not intend or expect.

More Info: https://avd.aquasec.com/nvd/cve-2021-45346

[CVE-2024-13176] openssl: Timing side-channel in ECDSA signature computation (Severity: MEDIUM)

Package: libssl-dev
Installed: 3.0.15-1~deb12u1
Fixed: %!s(<nil>)

Issue summary: A timing side-channel which could potentially allow recovering
the private key exists in the ECDSA signature computation.

Impact summary: A timing side-channel in ECDSA signature computations
could allow recovering the private key by an attacker. However, measuring
the timing would require either local access to the signing application or
a very fast network connection with low latency.

There is a timing signal of around 300 nanoseconds when the top word of
the inverted ECDSA nonce value is zero. This can happen with significant
probability only for some of the supported elliptic curves. In particular
the NIST P-521 curve is affected. To be able to measure this leak, the attacker
process must either be located in the same physical computer or must
have a very fast network connection with low latency. For that reason
the severity of this vulnerability is Low.

The FIPS modules in 3.4, 3.3, 3.2, 3.1 and 3.0 are affected by this issue.

More Info: https://avd.aquasec.com/nvd/cve-2024-13176

[CVE-2024-13176] openssl: Timing side-channel in ECDSA signature computation (Severity: MEDIUM)

Package: libssl3
Installed: 3.0.15-1~deb12u1
Fixed: %!s(<nil>)

Issue summary: A timing side-channel which could potentially allow recovering
the private key exists in the ECDSA signature computation.

Impact summary: A timing side-channel in ECDSA signature computations
could allow recovering the private key by an attacker. However, measuring
the timing would require either local access to the signing application or
a very fast network connection with low latency.

There is a timing signal of around 300 nanoseconds when the top word of
the inverted ECDSA nonce value is zero. This can happen with significant
probability only for some of the supported elliptic curves. In particular
the NIST P-521 curve is affected. To be able to measure this leak, the attacker
process must either be located in the same physical computer or must
have a very fast network connection with low latency. For that reason
the severity of this vulnerability is Low.

The FIPS modules in 3.4, 3.3, 3.2, 3.1 and 3.0 are affected by this issue.

More Info: https://avd.aquasec.com/nvd/cve-2024-13176

[CVE-2022-27943] binutils: libiberty/rust-demangle.c in GNU GCC 11.2 allows stack exhaustion in demangle_const (Severity: LOW)

Package: libstdc++-12-dev
Installed: 12.2.0-14
Fixed: %!s(<nil>)

libiberty/rust-demangle.c in GNU GCC 11.2 allows stack consumption in demangle_const, as demonstrated by nm-new.

More Info: https://avd.aquasec.com/nvd/cve-2022-27943

[CVE-2023-4039] gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 (Severity: LOW)

Package: libstdc++-12-dev
Installed: 12.2.0-14
Fixed: %!s(<nil>)

DISPUTEDA failure in the -fstack-protector feature in GCC-based toolchains
that target AArch64 allows an attacker to exploit an existing buffer
overflow in dynamically-sized local variables in your application
without this being detected. This stack-protector failure only applies
to C99-style dynamically-sized local variables or those created using
alloca(). The stack-protector operates as intended for statically-sized
local variables.

The default behavior when the stack-protector
detects an overflow is to terminate your application, resulting in
controlled loss of availability. An attacker who can exploit a buffer
overflow without triggering the stack-protector might be able to change
program flow control to cause an uncontrolled loss of availability or to
go further and affect confidentiality or integrity. NOTE: The GCC project argues that this is a missed hardening bug and not a vulnerability by itself.

More Info: https://avd.aquasec.com/nvd/cve-2023-4039

[CVE-2022-27943] binutils: libiberty/rust-demangle.c in GNU GCC 11.2 allows stack exhaustion in demangle_const (Severity: LOW)

Package: libstdc++6
Installed: 12.2.0-14
Fixed: %!s(<nil>)

libiberty/rust-demangle.c in GNU GCC 11.2 allows stack consumption in demangle_const, as demonstrated by nm-new.

More Info: https://avd.aquasec.com/nvd/cve-2022-27943

[CVE-2023-4039] gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 (Severity: LOW)

Package: libstdc++6

Installed: 12.2.0-14
Fixed: %!s(<nil>)

DISPUTEDA failure in the -fstack-protector feature in GCC-based toolchains that target AArch64 allows an attacker to exploit an existing buffer overflow in dynamically-sized local variables in your application without this being detected. This stack-protector failure only applies to C99-style dynamically-sized local variables or those created using alloca(). The stack-protector operates as intended for statically-sized local variables.

The default behavior when the stack-protector detects an overflow is to terminate your application, resulting in controlled loss of availability. An attacker who can exploit a buffer overflow without triggering the stack-protector might be able to change program flow control to cause an uncontrolled loss of availability or to go further and affect confidentiality or integrity. NOTE: The GCC project argues that this is a missed hardening bug and not a vulnerability by itself.

More Info: https://avd.aquasec.com/nvd/cve-2023-4039

[CVE-2013-4392] systemd: TOCTOU race condition when updating file permissions and SELinux security contexts (Severity: LOW)

Package: libsystemd0
Installed: 252.36-1~deb12u1
Fixed: %!s(<nil>)

systemd, when updating file permissions, allows local users to change the permissions and SELinux security contexts for arbitrary files via a symlink attack on unspecified files.

More Info: https://avd.aquasec.com/nvd/cve-2013-4392

[CVE-2023-31437] An issue was discovered in systemd 253. An attacker can modify a seale ... (Severity: LOW)

Package: libsystemd0
Installed: 252.36-1~deb12u1
Fixed: %!s(<nil>)

An issue was discovered in systemd 253. An attacker can modify a sealed log file such that, in some views, not all existing and sealed log messages are displayed. NOTE: the vendor reportedly sent "a reply denying that any of the finding was a security vulnerability."

More Info: https://avd.aquasec.com/nvd/cve-2023-31437

[CVE-2023-31438] An issue was discovered in systemd 253. An attacker can truncate a sea ... (Severity: LOW)

Package: libsystemd0
Installed: 252.36-1~deb12u1
Fixed: %!s(<nil>)

An issue was discovered in systemd 253. An attacker can truncate a sealed log file and then resume log sealing such that checking the integrity shows no error, despite modifications. NOTE: the vendor reportedly sent "a reply denying that

any of the finding was a security vulnerability."

More Info: https://avd.aquasec.com/nvd/cve-2023-31438

[CVE-2023-31439] An issue was discovered in systemd 253. An attacker can modify the con ... (Severity: LOW)

Package: libsystemd0
Installed: 252.36-1~deb12u1
Fixed: %!s(<nil>)

An issue was discovered in systemd 253. An attacker can modify the contents of past events in a sealed log file and then adjust the file such that checking the integrity shows no error, despite modifications. NOTE: the vendor reportedly sent "a reply denying that any of the finding was a security vulnerability."

More Info: https://avd.aquasec.com/nvd/cve-2023-31439

[CVE-2023-52355] libtiff: TIFFRasterScanlineSize64 produce too-big size and could cause OOM (Severity: HIGH)

Package: libtiff-dev
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

An out-of-memory flaw was found in libtiff that could be triggered by passing a crafted tiff file to the TIFFRasterScanlineSize64() API. This flaw allows a remote attacker to cause a denial of service via a crafted input with a size smaller than 379 KB.

More Info: https://avd.aquasec.com/nvd/cve-2023-52355

[CVE-2023-6277] libtiff: Out-of-memory in TIFFOpen via a craft file (Severity: MEDIUM)

Package: libtiff-dev
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

An out-of-memory flaw was found in libtiff. Passing a crafted tiff file to TIFFOpen() API may allow a remote attacker to cause a denial of service via a craft input with size smaller than 379 KB.

More Info: https://avd.aquasec.com/nvd/cve-2023-6277

[CVE-2017-16232] libtiff: Memory leaks in tif_open.c, tif_lzw.c, and tif_aux.c (Severity: LOW)

Package: libtiff-dev
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

LibTIFF 4.0.8 has multiple memory leak vulnerabilities, which allow attackers to cause a denial of service (memory consumption), as demonstrated by tif_open.c, tif_lzw.c, and tif_aux.c. NOTE: Third parties were unable to reproduce the issue

More Info: https://avd.aquasec.com/nvd/cve-2017-16232

[CVE-2017-17973] libtiff: heap-based use after free in tiff2pdf.c:t2p_writeproc (Severity: LOW)

Package: libtiff-dev

Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

In LibTIFF 4.0.8, there is a heap-based use-after-free in the t2p_writeproc function in tiff2pdf.c. NOTE: there is a third-party report of inability to reproduce this issue

More Info: https://avd.aquasec.com/nvd/cve-2017-17973

[CVE-2017-5563] libtiff: Heap-buffer overflow in LZWEncode tif_lzw.c (Severity: LOW)

Package: libtiff-dev
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

LibTIFF version 4.0.7 is vulnerable to a heap-based buffer over-read in tif_lzw.c resulting in DoS or code execution via a crafted bmp image to tools/bmp2tiff.

More Info: https://avd.aquasec.com/nvd/cve-2017-5563

[CVE-2017-9117] libtiff: Heap-based buffer over-read in bmp2tiff (Severity: LOW)

Package: libtiff-dev
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

In LibTIFF 4.0.6 and possibly other versions, the program processes BMP images without verifying that biWidth and biHeight in the bitmap-information header match the actual input, as demonstrated by a heap-based buffer over-read in bmp2tiff. NOTE: mentioning bmp2tiff does not imply that the activation point is in the bmp2tiff.c file (which was removed before the 4.0.7 release).

More Info: https://avd.aquasec.com/nvd/cve-2017-9117

[CVE-2018-10126] libtiff: NULL pointer dereference in the jpeg_fdct_16x16 function in jfdctint.c (Severity: LOW)

Package: libtiff-dev
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

ijg-libjpeg before 9d, as used in tiff2pdf (from LibTIFF) and other products, does not check for a NULL pointer at a certain place in jpeg_fdct_16x16 in jfdctint.c.

More Info: https://avd.aquasec.com/nvd/cve-2018-10126

[CVE-2022-1210] tiff: Malicious file leads to a denial of service in TIFF File Handler (Severity: LOW)

Package: libtiff-dev
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

A vulnerability classified as problematic was found in LibTIFF 4.3.0. Affected by this vulnerability is the TIFF File Handler of tiff2ps. Opening a malicious file leads to a denial of service. The attack can be launched remotely but requires user interaction. The exploit has been disclosed to the public and may be used.

More Info: https://avd.aquasec.com/nvd/cve-2022-1210

[CVE-2023-1916] libtiff: out-of-bounds read in extractImageSection() in tools/tiffcrop.c (Severity: LOW)

Package: libtiff-dev
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

A flaw was found in tiffcrop, a program distributed by the libtiff package. A specially crafted tiff file can lead to an out-of-bounds read in the extractImageSection function in tools/tiffcrop.c, resulting in a denial of service and limited information disclosure. This issue affects libtiff versions 4.x.

More Info: https://avd.aquasec.com/nvd/cve-2023-1916

[CVE-2023-3164] libtiff: heap-buffer-overflow in extractImageSection() (Severity: LOW)

Package: libtiff-dev
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

A heap-buffer-overflow vulnerability was found in LibTIFF, in extractImageSection() at tools/tiffcrop.c:7916 and tools/tiffcrop.c:7801. This flaw allows attackers to cause a denial of service via a crafted tiff file.

More Info: https://avd.aquasec.com/nvd/cve-2023-3164

[CVE-2023-6228] libtiff: heap-based buffer overflow in cpStripToTile() in tools/tiffcp.c (Severity: LOW)

Package: libtiff-dev
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

An issue was found in the tiffcp utility distributed by the libtiff package where a crafted TIFF file on processing may cause a heap-based buffer overflow leads to an application crash.

More Info: https://avd.aquasec.com/nvd/cve-2023-6228

[CVE-2023-52355] libtiff: TIFFRasterScanlineSize64 produce too-big size and could cause OOM (Severity: HIGH)

Package: libtiff6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

An out-of-memory flaw was found in libtiff that could be triggered by passing a crafted tiff file to the TIFFRasterScanlineSize64() API. This flaw allows a remote attacker to cause a denial of service via a crafted input with a size smaller than 379 KB.

More Info: https://avd.aquasec.com/nvd/cve-2023-52355

[CVE-2023-6277] libtiff: Out-of-memory in TIFFOpen via a craft file (Severity: MEDIUM)

Package: libtiff6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

An out-of-memory flaw was found in libtiff. Passing a crafted tiff file to TIFFOpen() API may allow a remote attacker to cause a denial of service via a craft input with size smaller than 379 KB.

More Info: https://avd.aquasec.com/nvd/cve-2023-6277

[CVE-2017-16232] libtiff: Memory leaks in tif_open.c, tif_lzw.c, and tif_aux.c (Severity: LOW)

Package: libtiff6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

LibTIFF 4.0.8 has multiple memory leak vulnerabilities, which allow attackers to cause a denial of service (memory consumption), as demonstrated by tif_open.c, tif_lzw.c, and tif_aux.c. NOTE: Third parties were unable to reproduce the issue

More Info: https://avd.aquasec.com/nvd/cve-2017-16232

[CVE-2017-17973] libtiff: heap-based use after free in tiff2pdf.c:t2p_writeproc (Severity: LOW)

Package: libtiff6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

In LibTIFF 4.0.8, there is a heap-based use-after-free in the t2p_writeproc function in tiff2pdf.c. NOTE: there is a third-party report of inability to reproduce this issue

More Info: https://avd.aquasec.com/nvd/cve-2017-17973

[CVE-2017-5563] libtiff: Heap-buffer overflow in LZWEncode tif_lzw.c (Severity: LOW)

Package: libtiff6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

LibTIFF version 4.0.7 is vulnerable to a heap-based buffer over-read in tif_lzw.c resulting in DoS or code execution via a crafted bmp image to tools/bmp2tiff.

More Info: https://avd.aquasec.com/nvd/cve-2017-5563

[CVE-2017-9117] libtiff: Heap-based buffer over-read in bmp2tiff (Severity: LOW)

Package: libtiff6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

In LibTIFF 4.0.6 and possibly other versions, the program processes BMP images without verifying that biWidth and biHeight in the bitmap-information header match the actual input, as demonstrated by a heap-based buffer over-read in bmp2tiff. NOTE: mentioning bmp2tiff does not imply that the activation point is in the bmp2tiff.c file (which was removed before the 4.0.7 release).

More Info: https://avd.aquasec.com/nvd/cve-2017-9117

[CVE-2018-10126] libtiff: NULL pointer dereference in the jpeg_fdct_16x16 function in jfdctint.c (Severity: LOW)

Package: libtiff6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

ijg-libjpeg before 9d, as used in tiff2pdf (from LibTIFF) and other products, does not check for a NULL pointer at a

certain place in jpeg_fdct_16x16 in jfdctint.c.

More Info: https://avd.aquasec.com/nvd/cve-2018-10126

[CVE-2022-1210] tiff: Malicious file leads to a denial of service in TIFF File Handler (Severity: LOW)

Package: libtiff6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

A vulnerability classified as problematic was found in LibTIFF 4.3.0. Affected by this vulnerability is the TIFF File Handler of tiff2ps. Opening a malicious file leads to a denial of service. The attack can be launched remotely but requires user interaction. The exploit has been disclosed to the public and may be used.

More Info: https://avd.aquasec.com/nvd/cve-2022-1210

[CVE-2023-1916] libtiff: out-of-bounds read in extractImageSection() in tools/tiffcrop.c (Severity: LOW)

Package: libtiff6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

A flaw was found in tiffcrop, a program distributed by the libtiff package. A specially crafted tiff file can lead to an out-of-bounds read in the extractImageSection function in tools/tiffcrop.c, resulting in a denial of service and limited information disclosure. This issue affects libtiff versions 4.x.

More Info: https://avd.aquasec.com/nvd/cve-2023-1916

[CVE-2023-3164] libtiff: heap-buffer-overflow in extractImageSection() (Severity: LOW)

Package: libtiff6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

A heap-buffer-overflow vulnerability was found in LibTIFF, in extractImageSection() at tools/tiffcrop.c:7916 and tools/tiffcrop.c:7801. This flaw allows attackers to cause a denial of service via a crafted tiff file.

More Info: https://avd.aquasec.com/nvd/cve-2023-3164

[CVE-2023-6228] libtiff: heap-based buffer overflow in cpStripToTile() in tools/tiffcp.c (Severity: LOW)

Package: libtiff6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

An issue was found in the tiffcp utility distributed by the libtiff package where a crafted TIFF file on processing may cause a heap-based buffer overflow leads to an application crash.

More Info: https://avd.aquasec.com/nvd/cve-2023-6228

[CVE-2023-52355] libtiff: TIFFRasterScanlineSize64 produce too-big size and could cause OOM (Severity: HIGH)

Package: libtiffxx6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

An out-of-memory flaw was found in libtiff that could be triggered by passing a crafted tiff file to the TIFFRasterScanlineSize64() API. This flaw allows a remote attacker to cause a denial of service via a crafted input with a size smaller than 379 KB.

More Info: https://avd.aquasec.com/nvd/cve-2023-52355

[CVE-2023-6277] libtiff: Out-of-memory in TIFFOpen via a craft file (Severity: MEDIUM)

Package: libtiffxx6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

An out-of-memory flaw was found in libtiff. Passing a crafted tiff file to TIFFOpen() API may allow a remote attacker to cause a denial of service via a craft input with size smaller than 379 KB.

More Info: https://avd.aquasec.com/nvd/cve-2023-6277

[CVE-2017-16232] libtiff: Memory leaks in tif_open.c, tif_lzw.c, and tif_aux.c (Severity: LOW)

Package: libtiffxx6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

LibTIFF 4.0.8 has multiple memory leak vulnerabilities, which allow attackers to cause a denial of service (memory consumption), as demonstrated by tif_open.c, tif_lzw.c, and tif_aux.c. NOTE: Third parties were unable to reproduce the issue

More Info: https://avd.aquasec.com/nvd/cve-2017-16232

[CVE-2017-17973] libtiff: heap-based use after free in tiff2pdf.c:t2p_writeproc (Severity: LOW)

Package: libtiffxx6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

In LibTIFF 4.0.8, there is a heap-based use-after-free in the t2p_writeproc function in tiff2pdf.c. NOTE: there is a third-party report of inability to reproduce this issue

More Info: https://avd.aquasec.com/nvd/cve-2017-17973

[CVE-2017-5563] libtiff: Heap-buffer overflow in LZWEncode tif_lzw.c (Severity: LOW)

Package: libtiffxx6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

LibTIFF version 4.0.7 is vulnerable to a heap-based buffer over-read in tif_lzw.c resulting in DoS or code execution via a crafted bmp image to tools/bmp2tiff.

More Info: https://avd.aquasec.com/nvd/cve-2017-5563

[CVE-2017-9117] libtiff: Heap-based buffer over-read in bmp2tiff (Severity: LOW)

Package: libtiffxx6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

In LibTIFF 4.0.6 and possibly other versions, the program processes BMP images without verifying that biWidth and biHeight in the bitmap-information header match the actual input, as demonstrated by a heap-based buffer over-read in bmp2tiff. NOTE: mentioning bmp2tiff does not imply that the activation point is in the bmp2tiff.c file (which was removed before the 4.0.7 release).

More Info: https://avd.aquasec.com/nvd/cve-2017-9117

[CVE-2018-10126] libtiff: NULL pointer dereference in the jpeg_fdct_16x16 function in jfdctint.c (Severity: LOW)

Package: libtiffxx6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

ijg-libjpeg before 9d, as used in tiff2pdf (from LibTIFF) and other products, does not check for a NULL pointer at a certain place in jpeg_fdct_16x16 in jfdctint.c.

More Info: https://avd.aquasec.com/nvd/cve-2018-10126

[CVE-2022-1210] tiff: Malicious file leads to a denial of service in TIFF File Handler (Severity: LOW)

Package: libtiffxx6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

A vulnerability classified as problematic was found in LibTIFF 4.3.0. Affected by this vulnerability is the TIFF File Handler of tiff2ps. Opening a malicious file leads to a denial of service. The attack can be launched remotely but requires user interaction. The exploit has been disclosed to the public and may be used.

More Info: https://avd.aquasec.com/nvd/cve-2022-1210

[CVE-2023-1916] libtiff: out-of-bounds read in extractImageSection() in tools/tiffcrop.c (Severity: LOW)

Package: libtiffxx6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

A flaw was found in tiffcrop, a program distributed by the libtiff package. A specially crafted tiff file can lead to an out-of-bounds read in the extractImageSection function in tools/tiffcrop.c, resulting in a denial of service and limited information disclosure. This issue affects libtiff versions 4.x.

More Info: https://avd.aquasec.com/nvd/cve-2023-1916

[CVE-2023-3164] libtiff: heap-buffer-overflow in extractImageSection() (Severity: LOW)

Package: libtiffxx6
Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

A heap-buffer-overflow vulnerability was found in LibTIFF, in extractImageSection() at tools/tiffcrop.c:7916 and tools/tiffcrop.c:7801. This flaw allows attackers to cause a denial of service via a crafted tiff file.

More Info: https://avd.aquasec.com/nvd/cve-2023-3164

[CVE-2023-6228] libtiff: heap-based buffer overflow in cpStripToTile() in tools/tiffcp.c (Severity: LOW)

Package: libtiffxx6

Installed: 4.5.0-6+deb12u2
Fixed: %!s(<nil>)

An issue was found in the tiffcp utility distributed by the libtiff package where a crafted TIFF file on processing may cause a heap-based buffer overflow leads to an application crash.

More Info: https://avd.aquasec.com/nvd/cve-2023-6228

[CVE-2023-50495] ncurses: segmentation fault via _nc_wrap_entry() (Severity: MEDIUM)

Package: libtinfo6
Installed: 6.4-4
Fixed: %!s(<nil>)

NCurse v6.4-20230418 was discovered to contain a segmentation fault via the component _nc_wrap_entry().

More Info: https://avd.aquasec.com/nvd/cve-2023-50495

[CVE-2022-27943] binutils: libiberty/rust-demangle.c in GNU GCC 11.2 allows stack exhaustion in demangle_const (Severity: LOW)

Package: libtsan2
Installed: 12.2.0-14
Fixed: %!s(<nil>)

libiberty/rust-demangle.c in GNU GCC 11.2 allows stack consumption in demangle_const, as demonstrated by nm-new.

More Info: https://avd.aquasec.com/nvd/cve-2022-27943

[CVE-2023-4039] gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 (Severity: LOW)

Package: libtsan2
Installed: 12.2.0-14
Fixed: %!s(<nil>)

DISPUTEDA failure in the -fstack-protector feature in GCC-based toolchains
that target AArch64 allows an attacker to exploit an existing buffer
overflow in dynamically-sized local variables in your application
without this being detected. This stack-protector failure only applies
to C99-style dynamically-sized local variables or those created using
alloca(). The stack-protector operates as intended for statically-sized
local variables.

The default behavior when the stack-protector
detects an overflow is to terminate your application, resulting in
controlled loss of availability. An attacker who can exploit a buffer
overflow without triggering the stack-protector might be able to change
program flow control to cause an uncontrolled loss of availability or to
go further and affect confidentiality or integrity. NOTE: The GCC project argues that this is a missed hardening bug and not a vulnerability by itself.

More Info: https://avd.aquasec.com/nvd/cve-2023-4039

[CVE-2022-27943] binutils: libiberty/rust-demangle.c in GNU GCC 11.2 allows stack exhaustion in

demangle_const (Severity: LOW)

Package: libubsan1
Installed: 12.2.0-14
Fixed: %!s(<nil>)

libiberty/rust-demangle.c in GNU GCC 11.2 allows stack consumption in demangle_const, as demonstrated by nm-new.

More Info: https://avd.aquasec.com/nvd/cve-2022-27943

[CVE-2023-4039] gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 (Severity: LOW)

Package: libubsan1
Installed: 12.2.0-14
Fixed: %!s(<nil>)

DISPUTEDA failure in the -fstack-protector feature in GCC-based toolchains
that target AArch64 allows an attacker to exploit an existing buffer
overflow in dynamically-sized local variables in your application
without this being detected. This stack-protector failure only applies
to C99-style dynamically-sized local variables or those created using
alloca(). The stack-protector operates as intended for statically-sized
local variables.

The default behavior when the stack-protector
detects an overflow is to terminate your application, resulting in
controlled loss of availability. An attacker who can exploit a buffer
overflow without triggering the stack-protector might be able to change
program flow control to cause an uncontrolled loss of availability or to
go further and affect confidentiality or integrity. NOTE: The GCC project argues that this is a missed hardening bug and not a vulnerability by itself.

More Info: https://avd.aquasec.com/nvd/cve-2023-4039

[CVE-2013-4392] systemd: TOCTOU race condition when updating file permissions and SELinux security contexts (Severity: LOW)

Package: libudev1
Installed: 252.36-1~deb12u1
Fixed: %!s(<nil>)

systemd, when updating file permissions, allows local users to change the permissions and SELinux security contexts for arbitrary files via a symlink attack on unspecified files.

More Info: https://avd.aquasec.com/nvd/cve-2013-4392

[CVE-2023-31437] An issue was discovered in systemd 253. An attacker can modify a seale ... (Severity: LOW)

Package: libudev1
Installed: 252.36-1~deb12u1
Fixed: %!s(<nil>)

An issue was discovered in systemd 253. An attacker can modify a sealed log file such that, in some views, not all

existing and sealed log messages are displayed. NOTE: the vendor reportedly sent "a reply denying that any of the finding was a security vulnerability."

More Info: https://avd.aquasec.com/nvd/cve-2023-31437

[CVE-2023-31438] An issue was discovered in systemd 253. An attacker can truncate a sea ... (Severity: LOW)

Package: libudev1
Installed: 252.36-1~deb12u1
Fixed: %!s(<nil>)

An issue was discovered in systemd 253. An attacker can truncate a sealed log file and then resume log sealing such that checking the integrity shows no error, despite modifications. NOTE: the vendor reportedly sent "a reply denying that any of the finding was a security vulnerability."

More Info: https://avd.aquasec.com/nvd/cve-2023-31438

[CVE-2023-31439] An issue was discovered in systemd 253. An attacker can modify the con ... (Severity: LOW)

Package: libudev1
Installed: 252.36-1~deb12u1
Fixed: %!s(<nil>)

An issue was discovered in systemd 253. An attacker can modify the contents of past events in a sealed log file and then adjust the file such that checking the integrity shows no error, despite modifications. NOTE: the vendor reportedly sent "a reply denying that any of the finding was a security vulnerability."

More Info: https://avd.aquasec.com/nvd/cve-2023-31439

[CVE-2022-0563] util-linux: partial disclosure of arbitrary files in chfn and chsh when compiled with libreadline (Severity: LOW)

Package: libuuid1
Installed: 2.38.1-5+deb12u3
Fixed: %!s(<nil>)

A flaw was found in the util-linux chfn and chsh utilities when compiled with Readline support. The Readline library uses an "INPUTRC" environment variable to get a path to the library config file. When the library cannot parse the specified file, it prints an error message containing data from the file. This flaw allows an unprivileged user to read root-owned files, potentially leading to privilege escalation. This flaw affects util-linux versions prior to 2.37.4.

More Info: https://avd.aquasec.com/nvd/cve-2022-0563

[CVE-2007-3476] libgd Denial of service by corrupted GIF images (Severity: LOW)

Package: libwmf-0.2-7
Installed: 0.2.12-5.1
Fixed: %!s(<nil>)

Array index error in gd_gif_in.c in the GD Graphics Library (libgd) before 2.0.35 allows user-assisted remote attackers to cause a denial of service (crash and heap corruption) via large color index values in crafted image data, which results in a segmentation fault.

More Info: https://avd.aquasec.com/nvd/cve-2007-3476

[CVE-2007-3477] gd: arc drawing functions can consume large amount of CPU time (Severity: LOW)

Package: libwmf-0.2-7
Installed: 0.2.12-5.1
Fixed: %!s(<nil>)

The (a) imagearc and (b) imagefilledarc functions in GD Graphics Library (libgd) before 2.0.35 allow attackers to cause a denial of service (CPU consumption) via a large (1) start or (2) end angle degree value.

More Info: https://avd.aquasec.com/nvd/cve-2007-3477

[CVE-2007-3996] php multiple integer overflows in gd (Severity: LOW)

Package: libwmf-0.2-7
Installed: 0.2.12-5.1
Fixed: %!s(<nil>)

Multiple integer overflows in libgd in PHP before 5.2.4 allow remote attackers to cause a denial of service (application crash) and possibly execute arbitrary code via a large (1) srcW or (2) srcH value to the (a) gdImageCopyResized function, or a large (3) sy (height) or (4) sx (width) value to the (b) gdImageCreate or the (c) gdImageCreateTrueColor function.

More Info: https://avd.aquasec.com/nvd/cve-2007-3996

[CVE-2009-3546] gd: insufficient input validation in _gdGetColors() (Severity: LOW)

Package: libwmf-0.2-7
Installed: 0.2.12-5.1
Fixed: %!s(<nil>)

The _gdGetColors function in gd_gd.c in PHP 5.2.11 and 5.3.x before 5.3.1, and the GD Graphics Library 2.x, does not properly verify a certain colorsTotal structure member, which might allow remote attackers to conduct buffer overflow or buffer over-read attacks via a crafted GD file, a different vulnerability than CVE-2009-3293. NOTE: some of these details are obtained from third party information.

More Info: https://avd.aquasec.com/nvd/cve-2009-3546

[TEMP-0601525-BEBB65] [libgd2: gdImageColorTransparent can write outside buffer] (Severity: LOW)

Package: libwmf-0.2-7
Installed: 0.2.12-5.1
Fixed: %!s(<nil>)

%!s(<nil>)

More Info: https://security-tracker.debian.org/tracker/TEMP-0601525-BEBB65

[CVE-2007-3476] libgd Denial of service by corrupted GIF images (Severity: LOW)

Package: libwmf-dev
Installed: 0.2.12-5.1
Fixed: %!s(<nil>)

Array index error in gd_gif_in.c in the GD Graphics Library (libgd) before 2.0.35 allows user-assisted remote attackers to cause a denial of service (crash and heap corruption) via large color index values in crafted image data, which results in

a segmentation fault.

More Info: https://avd.aquasec.com/nvd/cve-2007-3476

[CVE-2007-3477] gd: arc drawing functions can consume large amount of CPU time (Severity: LOW)

Package: libwmf-dev
Installed: 0.2.12-5.1
Fixed: %!s(<nil>)

The (a) imagearc and (b) imagefilledarc functions in GD Graphics Library (libgd) before 2.0.35 allow attackers to cause a denial of service (CPU consumption) via a large (1) start or (2) end angle degree value.

More Info: https://avd.aquasec.com/nvd/cve-2007-3477

[CVE-2007-3996] php multiple integer overflows in gd (Severity: LOW)

Package: libwmf-dev
Installed: 0.2.12-5.1
Fixed: %!s(<nil>)

Multiple integer overflows in libgd in PHP before 5.2.4 allow remote attackers to cause a denial of service (application crash) and possibly execute arbitrary code via a large (1) srcW or (2) srcH value to the (a) gdImageCopyResized function, or a large (3) sy (height) or (4) sx (width) value to the (b) gdImageCreate or the (c) gdImageCreateTrueColor function.

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Installed: 0.2.12-5.1
Fixed: %!s(<nil>)

The _gdGetColors function in gd_gd.c in PHP 5.2.11 and 5.3.x before 5.3.1, and the GD Graphics Library 2.x, does not properly verify a certain colorsTotal structure member, which might allow remote attackers to conduct buffer overflow or buffer over-read attacks via a crafted GD file, a different vulnerability than CVE-2009-3293. NOTE: some of these details are obtained from third party information.

More Info: https://avd.aquasec.com/nvd/cve-2009-3546

[TEMP-0601525-BEBB65] [libgd2: gdImageColorTransparent can write outside buffer] (Severity: LOW)

Package: libwmf-dev
Installed: 0.2.12-5.1
Fixed: %!s(<nil>)

%!s(<nil>)

More Info: https://security-tracker.debian.org/tracker/TEMP-0601525-BEBB65

[CVE-2007-3476] libgd Denial of service by corrupted GIF images (Severity: LOW)

Package: libwmflite-0.2-7
Installed: 0.2.12-5.1
Fixed: %!s(<nil>)

Array index error in gd_gif_in.c in the GD Graphics Library (libgd) before 2.0.35 allows user-assisted remote attackers to cause a denial of service (crash and heap corruption) via large color index values in crafted image data, which results in a segmentation fault.

More Info: https://avd.aquasec.com/nvd/cve-2007-3476

[CVE-2007-3477] gd: arc drawing functions can consume large amount of CPU time (Severity: LOW)

Package: libwmflite-0.2-7
Installed: 0.2.12-5.1
Fixed: %!s(<nil>)

The (a) imagearc and (b) imagefilledarc functions in GD Graphics Library (libgd) before 2.0.35 allow attackers to cause a denial of service (CPU consumption) via a large (1) start or (2) end angle degree value.

More Info: https://avd.aquasec.com/nvd/cve-2007-3477

[CVE-2007-3996] php multiple integer overflows in gd (Severity: LOW)

Package: libwmflite-0.2-7
Installed: 0.2.12-5.1
Fixed: %!s(<nil>)

Multiple integer overflows in libgd in PHP before 5.2.4 allow remote attackers to cause a denial of service (application crash) and possibly execute arbitrary code via a large (1) srcW or (2) srcH value to the (a) gdImageCopyResized function, or a large (3) sy (height) or (4) sx (width) value to the (b) gdImageCreate or the (c) gdImageCreateTrueColor function.

More Info: https://avd.aquasec.com/nvd/cve-2007-3996

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Package: libwmflite-0.2-7
Installed: 0.2.12-5.1
Fixed: %!s(<nil>)

The _gdGetColors function in gd_gd.c in PHP 5.2.11 and 5.3.x before 5.3.1, and the GD Graphics Library 2.x, does not properly verify a certain colorsTotal structure member, which might allow remote attackers to conduct buffer overflow or buffer over-read attacks via a crafted GD file, a different vulnerability than CVE-2009-3293. NOTE: some of these details are obtained from third party information.

More Info: https://avd.aquasec.com/nvd/cve-2009-3546

[TEMP-0601525-BEBB65] [libgd2: gdImageColorTransparent can write outside buffer] (Severity: LOW)

Package: libwmflite-0.2-7
Installed: 0.2.12-5.1
Fixed: %!s(<nil>)

%!s(<nil>)

More Info: https://security-tracker.debian.org/tracker/TEMP-0601525-BEBB65

[CVE-2024-25062] libxml2: use-after-free in XMLReader (Severity: HIGH)

Package: libxml2
Installed: 2.9.14+dfsg-1.3~deb12u1

Fixed: %!s(<nil>)

An issue was discovered in libxml2 before 2.11.7 and 2.12.x before 2.12.5. When using the XML Reader interface with DTD validation and XInclude expansion enabled, processing crafted XML documents can lead to an xmlValidatePopElement use-after-free.

More Info: https://avd.aquasec.com/nvd/cve-2024-25062

[CVE-2024-56171] libxml2: Use-After-Free in libxml2 (Severity: HIGH)

Package: libxml2
Installed: 2.9.14+dfsg-1.3~deb12u1
Fixed: %!s(<nil>)

libxml2 before 2.12.10 and 2.13.x before 2.13.6 has a use-after-free in xmlSchemaIDCFillNodeTables and xmlSchemaBubbleIDCNodeTables in xmlschemas.c. To exploit this, a crafted XML document must be validated against an XML schema with certain identity constraints, or a crafted XML schema must be used.

More Info: https://avd.aquasec.com/nvd/cve-2024-56171

[CVE-2025-24928] libxml2: Stack-based buffer overflow in xmlSnprintfElements of libxml2 (Severity: HIGH)

Package: libxml2
Installed: 2.9.14+dfsg-1.3~deb12u1
Fixed: %!s(<nil>)

libxml2 before 2.12.10 and 2.13.x before 2.13.6 has a stack-based buffer overflow in xmlSnprintfElements in valid.c. To exploit this, DTD validation must occur for an untrusted document or untrusted DTD. NOTE: this is similar to CVE-2017-9047.

More Info: https://avd.aquasec.com/nvd/cve-2025-24928

[CVE-2025-27113] libxml2: NULL Pointer Dereference in libxml2 xmlPatMatch (Severity: HIGH)

Package: libxml2
Installed: 2.9.14+dfsg-1.3~deb12u1
Fixed: %!s(<nil>)

libxml2 before 2.12.10 and 2.13.x before 2.13.6 has a NULL pointer dereference in xmlPatMatch in pattern.c.

More Info: https://avd.aquasec.com/nvd/cve-2025-27113

[CVE-2022-49043] libxml: use-after-free in xmlXIncludeAddNode (Severity: MEDIUM)

Package: libxml2
Installed: 2.9.14+dfsg-1.3~deb12u1
Fixed: %!s(<nil>)

xmlXIncludeAddNode in xinclude.c in libxml2 before 2.11.0 has a use-after-free.

More Info: https://avd.aquasec.com/nvd/cve-2022-49043

[CVE-2023-39615] libxml2: crafted xml can cause global buffer overflow (Severity: MEDIUM)

Package: libxml2
Installed: 2.9.14+dfsg-1.3~deb12u1

Fixed: %!s(<nil>)

Xmlsoft Libxml2 v2.11.0 was discovered to contain an out-of-bounds read via the xmlSAX2StartElement() function at /libxml2/SAX2.c. This vulnerability allows attackers to cause a Denial of Service (DoS) via supplying a crafted XML file. NOTE: the vendor's position is that the product does not support the legacy SAX1 interface with custom callbacks; there is a crash even without crafted input.

More Info: https://avd.aquasec.com/nvd/cve-2023-39615

[CVE-2023-45322] libxml2: use-after-free in xmlUnlinkNode() in tree.c (Severity: MEDIUM)

Package: libxml2
Installed: 2.9.14+dfsg-1.3~deb12u1
Fixed: %!s(<nil>)

libxml2 through 2.11.5 has a use-after-free that can only occur after a certain memory allocation fails. This occurs in xmlUnlinkNode in tree.c. NOTE: the vendor's position is "I don't think these issues are critical enough to warrant a CVE ID ... because an attacker typically can't control when memory allocations fail."

More Info: https://avd.aquasec.com/nvd/cve-2023-45322

[CVE-2025-32414] libxml2: Out-of-Bounds Read in libxml2 (Severity: MEDIUM)

Package: libxml2
Installed: 2.9.14+dfsg-1.3~deb12u1
Fixed: %!s(<nil>)

In libxml2 before 2.13.8 and 2.14.x before 2.14.2, out-of-bounds memory access can occur in the Python API (Python bindings) because of an incorrect return value. This occurs in xmlPythonFileRead and xmlPythonFileReadRaw because of a difference between bytes and characters.

More Info: https://avd.aquasec.com/nvd/cve-2025-32414

[CVE-2024-34459] libxml2: buffer over-read in xmlHTMLPrintFileContext in xmllint.c (Severity: LOW)

Package: libxml2
Installed: 2.9.14+dfsg-1.3~deb12u1
Fixed: %!s(<nil>)

An issue was discovered in xmllint (from libxml2) before 2.11.8 and 2.12.x before 2.12.7. Formatting error messages with xmllint --htmlout can result in a buffer over-read in xmlHTMLPrintFileContext in xmllint.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-34459

[CVE-2024-25062] libxml2: use-after-free in XMLReader (Severity: HIGH)

Package: libxml2-dev
Installed: 2.9.14+dfsg-1.3~deb12u1
Fixed: %!s(<nil>)

An issue was discovered in libxml2 before 2.11.7 and 2.12.x before 2.12.5. When using the XML Reader interface with DTD validation and XInclude expansion enabled, processing crafted XML documents can lead to an xmlValidatePopElement use-after-free.

More Info: https://avd.aquasec.com/nvd/cve-2024-25062

[CVE-2024-56171] libxml2: Use-After-Free in libxml2 (Severity: HIGH)

Package: libxml2-dev
Installed: 2.9.14+dfsg-1.3~deb12u1
Fixed: %!s(<nil>)

libxml2 before 2.12.10 and 2.13.x before 2.13.6 has a use-after-free in xmlSchemaIDCFillNodeTables and xmlSchemaBubbleIDCNodeTables in xmlschemas.c. To exploit this, a crafted XML document must be validated against an XML schema with certain identity constraints, or a crafted XML schema must be used.

More Info: https://avd.aquasec.com/nvd/cve-2024-56171

[CVE-2025-24928] libxml2: Stack-based buffer overflow in xmlSnprintfElements of libxml2 (Severity: HIGH)

Package: libxml2-dev
Installed: 2.9.14+dfsg-1.3~deb12u1
Fixed: %!s(<nil>)

libxml2 before 2.12.10 and 2.13.x before 2.13.6 has a stack-based buffer overflow in xmlSnprintfElements in valid.c. To exploit this, DTD validation must occur for an untrusted document or untrusted DTD. NOTE: this is similar to CVE-2017-9047.

More Info: https://avd.aquasec.com/nvd/cve-2025-24928

[CVE-2025-27113] libxml2: NULL Pointer Dereference in libxml2 xmlPatMatch (Severity: HIGH)

Package: libxml2-dev
Installed: 2.9.14+dfsg-1.3~deb12u1
Fixed: %!s(<nil>)

libxml2 before 2.12.10 and 2.13.x before 2.13.6 has a NULL pointer dereference in xmlPatMatch in pattern.c.

More Info: https://avd.aquasec.com/nvd/cve-2025-27113

[CVE-2022-49043] libxml: use-after-free in xmlXIncludeAddNode (Severity: MEDIUM)

Package: libxml2-dev
Installed: 2.9.14+dfsg-1.3~deb12u1
Fixed: %!s(<nil>)

xmlXIncludeAddNode in xinclude.c in libxml2 before 2.11.0 has a use-after-free.

More Info: https://avd.aquasec.com/nvd/cve-2022-49043

[CVE-2023-39615] libxml2: crafted xml can cause global buffer overflow (Severity: MEDIUM)

Package: libxml2-dev
Installed: 2.9.14+dfsg-1.3~deb12u1
Fixed: %!s(<nil>)

Xmlsoft Libxml2 v2.11.0 was discovered to contain an out-of-bounds read via the xmlSAX2StartElement() function at /libxml2/SAX2.c. This vulnerability allows attackers to cause a Denial of Service (DoS) via supplying a crafted XML file. NOTE: the vendor's position is that the product does not support the legacy SAX1 interface with custom callbacks; there is a crash even without crafted input.

More Info: https://avd.aquasec.com/nvd/cve-2023-39615

[CVE-2023-45322] libxml2: use-after-free in xmlUnlinkNode() in tree.c (Severity: MEDIUM)

Package: libxml2-dev
Installed: 2.9.14+dfsg-1.3~deb12u1
Fixed: %!s(<nil>)

libxml2 through 2.11.5 has a use-after-free that can only occur after a certain memory allocation fails. This occurs in xmlUnlinkNode in tree.c. NOTE: the vendor's position is "I don't think these issues are critical enough to warrant a CVE ID ... because an attacker typically can't control when memory allocations fail."

More Info: https://avd.aquasec.com/nvd/cve-2023-45322

[CVE-2025-32414] libxml2: Out-of-Bounds Read in libxml2 (Severity: MEDIUM)

Package: libxml2-dev
Installed: 2.9.14+dfsg-1.3~deb12u1
Fixed: %!s(<nil>)

In libxml2 before 2.13.8 and 2.14.x before 2.14.2, out-of-bounds memory access can occur in the Python API (Python bindings) because of an incorrect return value. This occurs in xmlPythonFileRead and xmlPythonFileReadRaw because of a difference between bytes and characters.

More Info: https://avd.aquasec.com/nvd/cve-2025-32414

[CVE-2024-34459] libxml2: buffer over-read in xmlHTMLPrintFileContext in xmllint.c (Severity: LOW)

Package: libxml2-dev
Installed: 2.9.14+dfsg-1.3~deb12u1
Fixed: %!s(<nil>)

An issue was discovered in xmllint (from libxml2) before 2.11.8 and 2.12.x before 2.12.7. Formatting error messages with xmllint --htmlout can result in a buffer over-read in xmlHTMLPrintFileContext in xmllint.c.

More Info: https://avd.aquasec.com/nvd/cve-2024-34459

[CVE-2015-9019] libxslt: math.random() in xslt uses unseeded randomness (Severity: LOW)

Package: libxslt1-dev
Installed: 1.1.35-1+deb12u1
Fixed: %!s(<nil>)

In libxslt 1.1.29 and earlier, the EXSLT math.random function was not initialized with a random seed during startup, which could cause usage of this function to produce predictable outputs.

More Info: https://avd.aquasec.com/nvd/cve-2015-9019

[CVE-2015-9019] libxslt: math.random() in xslt uses unseeded randomness (Severity: LOW)

Package: libxslt1.1
Installed: 1.1.35-1+deb12u1
Fixed: %!s(<nil>)

In libxslt 1.1.29 and earlier, the EXSLT math.random function was not initialized with a random seed during startup, which could cause usage of this function to produce predictable outputs.

More Info: https://avd.aquasec.com/nvd/cve-2015-9019

[CVE-2013-7445] kernel: memory exhaustion via crafted Graphics Execution Manager (GEM) objects (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

The Direct Rendering Manager (DRM) subsystem in the Linux kernel through 4.x mishandles requests for Graphics Execution Manager (GEM) objects, which allows context-dependent attackers to cause a denial of service (memory consumption) via an application that processes graphics data, as demonstrated by JavaScript code that creates many CANVAS elements for rendering by Chrome or Firefox.

More Info: https://avd.aquasec.com/nvd/cve-2013-7445

[CVE-2019-19449] kernel: mounting a crafted f2fs filesystem image can lead to slab-out-of-bounds read access in f2fs_build_segment_manager in fs/f2fs/segment.c (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel 5.0.21, mounting a crafted f2fs filesystem image can lead to slab-out-of-bounds read access in f2fs_build_segment_manager in fs/f2fs/segment.c, related to init_min_max_mtime in fs/f2fs/segment.c (because the second argument to get_seg_entry is not validated).

More Info: https://avd.aquasec.com/nvd/cve-2019-19449

[CVE-2019-19814] kernel: out-of-bounds write in __remove_dirty_segment in fs/f2fs/segment.c (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel 5.0.21, mounting a crafted f2fs filesystem image can cause __remove_dirty_segment slab-out-of-bounds write access because an array is bounded by the number of dirty types (8) but the array index can exceed this.

More Info: https://avd.aquasec.com/nvd/cve-2019-19814

[CVE-2021-3847] kernel: low-privileged user privileges escalation (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An unauthorized access to the execution of the setuid file with capabilities flaw in the Linux kernel OverlayFS subsystem was found in the way user copying a capable file from a nosuid mount into another mount. A local user could use this flaw to escalate their privileges on the system.

More Info: https://avd.aquasec.com/nvd/cve-2021-3847

[CVE-2021-3864] kernel: descendant's dumpable setting with certain SUID binaries (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A flaw was found in the way the dumpable flag setting was handled when certain SUID binaries executed its descendants. The prerequisite is a SUID binary that sets real UID equal to effective UID, and real GID equal to effective GID. The descendant will then have a dumpable value set to 1. As a result, if the descendant process crashes and core_pattern is set to a relative value, its core dump is stored in the current directory with uid:gid permissions. An unprivileged local user with eligible root SUID binary could use this flaw to place core dumps into root-owned directories, potentially resulting in escalation of privileges.

More Info: https://avd.aquasec.com/nvd/cve-2021-3864

[CVE-2023-52452] kernel: bpf: Fix accesses to uninit stack slots (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf: Fix accesses to uninit stack slots

Privileged programs are supposed to be able to read uninitialized stack
memory (ever since 6715df8d5) but, before this patch, these accesses
were permitted inconsistently. In particular, accesses were permitted
above state->allocated_stack, but not below it. In other words, if the
stack was already "large enough", the access was permitted, but
otherwise the access was rejected instead of being allowed to "grow the
stack". This undesired rejection was happening in two places:
- in check_stack_slot_within_bounds()
- in check_stack_range_initialized()
This patch arranges for these accesses to be permitted. A bunch of tests
that were relying on the old rejection had to change; all of them were
changed to add also run unprivileged, in which case the old behavior
persists. One tests couldn't be updated - global_func16 - because it
can't run unprivileged for other reasons.

This patch also fixes the tracking of the stack size for variable-offset
reads. This second fix is bundled in the same commit as the first one
because they're inter-related. Before this patch, writes to the stack
using registers containing a variable offset (as opposed to registers
with fixed, known values) were not properly contributing to the
function's needed stack size. As a result, it was possible for a program
to verify, but then to attempt to read out-of-bounds data at runtime
because a too small stack had been allocated for it.

Each function tracks the size of the stack it needs in
bpf_subprog_info.stack_depth, which is maintained by
update_stack_depth(). For regular memory accesses, check_mem_access()
was calling update_state_depth() but it was passing in only the fixed
part of the offset register, ignoring the variable offset. This was
incorrect; the minimum possible value of that register should be used
instead.

This tracking is now fixed by centralizing the tracking of stack size in
grow_stack_state(), and by lifting the calls to grow_stack_state() to
check_stack_access_within_bounds() as suggested by Andrii. The code is
now simpler and more convincingly tracks the correct maximum stack size.
check_stack_range_initialized() can now rely on enough stack having been
allocated for the access; this helps with the fix for the first issue.

A few tests were changed to also check the stack depth computation. The
one that fails without this patch is verifier_var_off:stack_write_priv_vs_unpriv.

More Info: https://avd.aquasec.com/nvd/cve-2023-52452

[CVE-2023-52586] kernel: drm/msm/dpu: Add mutex lock in control vblank irq (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/msm/dpu: Add mutex lock in control vblank irq

Add a mutex lock to control vblank irq to synchronize vblank
enable/disable operations happening from different threads to prevent
race conditions while registering/unregistering the vblank irq callback.

v4: -Removed vblank_ctl_lock from dpu_encoder_virt, so it is only a
    parameter of dpu_encoder_phys.
    -Switch from atomic refcnt to a simple int counter as mutex has
    now been added
v3: Mistakenly did not change wording in last version. It is done now.
v2: Slightly changed wording of commit message

Patchwork: https://patchwork.freedesktop.org/patch/571854/

More Info: https://avd.aquasec.com/nvd/cve-2023-52586

[CVE-2023-52624] kernel: drm/amd/display: Wake DMCUB before executing GPINT commands (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Wake DMCUB before executing GPINT commands

[Why]
DMCUB can be in idle when we attempt to interface with the HW through
the GPINT mailbox resulting in a system hang.

[How]

Add dc_wake_and_execute_gpint() to wrap the wake, execute, sleep
sequence.

If the GPINT executes successfully then DMCUB will be put back into
sleep after the optional response is returned.

It functions similar to the inbox command interface.

More Info: https://avd.aquasec.com/nvd/cve-2023-52624

[CVE-2023-52751] kernel: smb: client: fix use-after-free in smb2_query_info_compound() (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

smb: client: fix use-after-free in smb2_query_info_compound()

The following UAF was triggered when running fstests generic/072 with
KASAN enabled against Windows Server 2022 and mount options
'multichannel,max_channels=2,vers=3.1.1,mfsymlinks,noperm'

```
 BUG: KASAN: slab-use-after-free in smb2_query_info_compound+0x423/0x6d0 [cifs]
 Read of size 8 at addr ffff888014941048 by task xfs_io/27534

 CPU: 0 PID: 27534 Comm: xfs_io Not tainted 6.6.0-rc7 #1
 Hardware name: QEMU Standard PC (Q35 + ICH9, 2009), BIOS
 rel-1.16.2-3-gd478f380-rebuilt.opensuse.org 04/01/2014
 Call Trace:
  dump_stack_lvl+0x4a/0x80
  print_report+0xcf/0x650
  ? srso_alias_return_thunk+0x5/0x7f
  ? srso_alias_return_thunk+0x5/0x7f
  ? __phys_addr+0x46/0x90
  kasan_report+0xda/0x110
  ? smb2_query_info_compound+0x423/0x6d0 [cifs]
  ? smb2_query_info_compound+0x423/0x6d0 [cifs]
  smb2_query_info_compound+0x423/0x6d0 [cifs]
  ? __pfx_smb2_query_info_compound+0x10/0x10 [cifs]
  ? srso_alias_return_thunk+0x5/0x7f
  ? __stack_depot_save+0x39/0x480
  ? kasan_save_stack+0x33/0x60
  ? kasan_set_track+0x25/0x30
  ? ____kasan_slab_free+0x126/0x170
  smb2_queryfs+0xc2/0x2c0 [cifs]
  ? __pfx_smb2_queryfs+0x10/0x10 [cifs]
  ? __pfx___lock_acquire+0x10/0x10
  smb311_queryfs+0x210/0x220 [cifs]
  ? __pfx_smb311_queryfs+0x10/0x10 [cifs]
  ? srso_alias_return_thunk+0x5/0x7f
```

```
 ? __lock_acquire+0x480/0x26c0
 ? lock_release+0x1ed/0x640
 ? srso_alias_return_thunk+0x5/0x7f
 ? do_raw_spin_unlock+0x9b/0x100
 cifs_statfs+0x18c/0x4b0 [cifs]
 statfs_by_dentry+0x9b/0xf0
 fd_statfs+0x4e/0xb0
 __do_sys_fstatfs+0x7f/0xe0
 ? __pfx___do_sys_fstatfs+0x10/0x10
 ? srso_alias_return_thunk+0x5/0x7f
 ? lockdep_hardirqs_on_prepare+0x136/0x200
 ? srso_alias_return_thunk+0x5/0x7f
 do_syscall_64+0x3f/0x90
 entry_SYSCALL_64_after_hwframe+0x6e/0xd8

Allocated by task 27534:
 kasan_save_stack+0x33/0x60
 kasan_set_track+0x25/0x30
 __kasan_kmalloc+0x8f/0xa0
 open_cached_dir+0x71b/0x1240 [cifs]
 smb2_query_info_compound+0x5c3/0x6d0 [cifs]
 smb2_queryfs+0xc2/0x2c0 [cifs]
 smb311_queryfs+0x210/0x220 [cifs]
 cifs_statfs+0x18c/0x4b0 [cifs]
 statfs_by_dentry+0x9b/0xf0
 fd_statfs+0x4e/0xb0
 __do_sys_fstatfs+0x7f/0xe0
 do_syscall_64+0x3f/0x90
 entry_SYSCALL_64_after_hwframe+0x6e/0xd8

Freed by task 27534:
 kasan_save_stack+0x33/0x60
 kasan_set_track+0x25/0x30
 kasan_save_free_info+0x2b/0x50
 ____kasan_slab_free+0x126/0x170
 slab_free_freelist_hook+0xd0/0x1e0
 __kmem_cache_free+0x9d/0x1b0
 open_cached_dir+0xff5/0x1240 [cifs]
 smb2_query_info_compound+0x5c3/0x6d0 [cifs]
 smb2_queryfs+0xc2/0x2c0 [cifs]
```

This is a race between open_cached_dir() and cached_dir_lease_break()
where the cache entry for the open directory handle receives a lease
break while creating it. And before returning from open_cached_dir(),
we put the last reference of the new @cfid because of
!@cfid->has_lease.

Besides the UAF, while running xfstests a lot of missed lease breaks
have been noticed in tests that run several concurrent statfs(2) calls
on those cached fids

```
 CIFS: VFS: \\w22-root1.gandalf.test No task to wake, unknown frame...
 CIFS: VFS: \\w22-root1.gandalf.test Cmd: 18 Err: 0x0 Flags: 0x1...
```

CIFS: VFS: \\w22-root1.gandalf.test smb buf 00000000715bfe83 len 108
CIFS: VFS: Dump pending requests:
CIFS: VFS: \\w22-root1.gandalf.test No task to wake, unknown frame...
CIFS: VFS: \\w22-root1.gandalf.test Cmd: 18 Err: 0x0 Flags: 0x1...
CIFS: VFS: \\w22-root1.gandalf.test smb buf 000000005aa7316e len 108
...

To fix both, in open_cached_dir() ensure that @cfid->has_lease is set
right before sending out compounded request so that any potential
lease break will be get processed by demultiplex thread while we're
still caching @cfid. And, if open failed for some reason, re-check
@cfid->has_lease to decide whether or not put lease reference.

More Info: https://avd.aquasec.com/nvd/cve-2023-52751

[CVE-2024-21803] kernel: bluetooth: use-after-free vulnerability in af_bluetooth.c (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

Use After Free vulnerability in Linux Linux kernel kernel on Linux, x86, ARM (bluetooth modules) allows Local Execution of Code. This vulnerability is associated with program files https://gitee.Com/anolis/cloud-kernel/blob/devel-5.10/net/bluetooth/af_bluetooth.C.

This issue affects Linux kernel: from v2.6.12-rc2 before v6.8-rc1.

More Info: https://avd.aquasec.com/nvd/cve-2024-21803

[CVE-2024-25742] hw: amd: Instruction raise #VC exception at exit (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel before 6.9, an untrusted hypervisor can inject virtual interrupt 29 (#VC) at any point in time and can trigger its handler. This affects AMD SEV-SNP and AMD SEV-ES.

More Info: https://avd.aquasec.com/nvd/cve-2024-25742

[CVE-2024-25743] hw: amd: Instruction raise #VC exception at exit (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel through 6.9, an untrusted hypervisor can inject virtual interrupts 0 and 14 at any point in time and can trigger the SIGFPE signal handler in userspace applications. This affects AMD SEV-SNP and AMD SEV-ES.

More Info: https://avd.aquasec.com/nvd/cve-2024-25743

[CVE-2024-26669] kernel: net/sched: flower: Fix chain template offload (Severity: HIGH)

Package: linux-libc-dev

Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net/sched: flower: Fix chain template offload

When a qdisc is deleted from a net device the stack instructs the
underlying driver to remove its flow offload callback from the
associated filter block using the 'FLOW_BLOCK_UNBIND' command. The stack
then continues to replay the removal of the filters in the block for
this driver by iterating over the chains in the block and invoking the
'reoffload' operation of the classifier being used. In turn, the
classifier in its 'reoffload' operation prepares and emits a
'FLOW_CLS_DESTROY' command for each filter.

However, the stack does not do the same for chain templates and the
underlying driver never receives a 'FLOW_CLS_TMPLT_DESTROY' command when
a qdisc is deleted. This results in a memory leak [1] which can be
reproduced using [2].

Fix by introducing a 'tmplt_reoffload' operation and have the stack
invoke it with the appropriate arguments as part of the replay.
Implement the operation in the sole classifier that supports chain
templates (flower) by emitting the 'FLOW_CLS_TMPLT_{CREATE,DESTROY}'
command based on whether a flow offload callback is being bound to a
filter block or being unbound from one.

As far as I can tell, the issue happens since cited commit which
reordered tcf_block_offload_unbind() before tcf_block_flush_all_chains()
in __tcf_block_put(). The order cannot be reversed as the filter block
is expected to be freed after flushing all the chains.

[1]
unreferenced object 0xffff888107e28800 (size 2048):
  comm "tc", pid 1079, jiffies 4294958525 (age 3074.287s)
  hex dump (first 32 bytes):
    b1 a6 7c 11 81 88 ff ff e0 5b b3 10 81 88 ff ff ..|......[......
    01 00 00 00 00 00 00 00 e0 aa b0 84 ff ff ff ff ....
  backtrace:
    [<ffffffff81c06a68>] __kmem_cache_alloc_node+0x1e8/0x320
    [<ffffffff81ab374e>] __kmalloc+0x4e/0x90
    [<ffffffff832aec6d>] mlxsw_sp_acl_ruleset_get+0x34d/0x7a0
    [<ffffffff832bc195>] mlxsw_sp_flower_tmplt_create+0x145/0x180
    [<ffffffff832b2e1a>] mlxsw_sp_flow_block_cb+0x1ea/0x280
    [<ffffffff83a10613>] tc_setup_cb_call+0x183/0x340
    [<ffffffff83a9f85a>] fl_tmplt_create+0x3da/0x4c0
    [<ffffffff83a22435>] tc_ctl_chain+0xa15/0x1170
    [<ffffffff838a863c>] rtnetlink_rcv_msg+0x3cc/0xed0
    [<ffffffff83ac87f0>] netlink_rcv_skb+0x170/0x440
    [<ffffffff83ac6270>] netlink_unicast+0x540/0x820
    [<ffffffff83ac6e28>] netlink_sendmsg+0x8d8/0xda0
    [<ffffffff83793def>] ____sys_sendmsg+0x30f/0xa80

```
    [<ffffffff8379d29a>] ___sys_sendmsg+0x13a/0x1e0
    [<ffffffff8379d50c>] __sys_sendmsg+0x11c/0x1f0
    [<ffffffff843b9ce0>] do_syscall_64+0x40/0xe0
unreferenced object 0xffff88816d2c0400 (size 1024):
  comm "tc", pid 1079, jiffies 4294958525 (age 3074.287s)
  hex dump (first 32 bytes):
    40 00 00 00 00 00 00 00 57 f6 38 be 00 00 00 00  @.......W.8.....
    10 04 2c 6d 81 88 ff ff 10 04 2c 6d 81 88 ff ff  ..,m......,m....
  backtrace:
    [<ffffffff81c06a68>] __kmem_cache_alloc_node+0x1e8/0x320
    [<ffffffff81ab36c1>] __kmalloc_node+0x51/0x90
    [<ffffffff81a8ed96>] kvmalloc_node+0xa6/0x1f0
    [<ffffffff82827d03>] bucket_table_alloc.isra.0+0x83/0x460
    [<ffffffff82828d2b>] rhashtable_init+0x43b/0x7c0
    [<ffffffff832aed48>] mlxsw_sp_acl_ruleset_get+0x428/0x7a0
    [<ffffffff832bc195>] mlxsw_sp_flower_tmplt_create+0x145/0x180
    [<ffffffff832b2e1a>] mlxsw_sp_flow_block_cb+0x1ea/0x280
    [<ffffffff83a10613>] tc_setup_cb_call+0x183/0x340
    [<ffffffff83a9f85a>] fl_tmplt_create+0x3da/0x4c0
    [<ffffffff83a22435>] tc_ctl_chain+0xa15/0x1170
    [<ffffffff838a863c>] rtnetlink_rcv_msg+0x3cc/0xed0
    [<ffffffff83ac87f0>] netlink_rcv_skb+0x170/0x440
    [<ffffffff83ac6270>] netlink_unicast+0x540/0x820
    [<ffffffff83ac6e28>] netlink_sendmsg+0x8d8/0xda0
    [<ffffffff83793def>] ____sys_sendmsg+0x30f/0xa80

[2]
 # tc qdisc add dev swp1 clsact
 # tc chain add dev swp1 ingress proto ip chain 1 flower dst_ip 0.0.0.0/32
 # tc qdisc del dev
---truncated---
```

More Info: https://avd.aquasec.com/nvd/cve-2024-26669

[CVE-2024-26739] kernel: net/sched: act_mirred: don't override retval if we already lost the skb (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net/sched: act_mirred: don't override retval if we already lost the skb

If we're redirecting the skb, and haven't called tcf_mirred_forward(),
yet, we need to tell the core to drop the skb by setting the retcode
to SHOT. If we have called tcf_mirred_forward(), however, the skb
is out of our hands and returning SHOT will lead to UaF.

Move the retval override to the error path which actually need it.

More Info: https://avd.aquasec.com/nvd/cve-2024-26739

[CVE-2024-26836] kernel: platform/x86: think-lmi: Fix password opcode ordering for workstations (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

platform/x86: think-lmi: Fix password opcode ordering for workstations

The Lenovo workstations require the password opcode to be run before
the attribute value is changed (if Admin password is enabled).

Tested on some Thinkpads to confirm they are OK with this order too.

More Info: https://avd.aquasec.com/nvd/cve-2024-26836

[CVE-2024-26913] kernel: drm/amd/display: Fix dcn35 8k30 Underflow/Corruption Issue (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Fix dcn35 8k30 Underflow/Corruption Issue

[why]
odm calculation is missing for pipe split policy determination
and cause Underflow/Corruption issue.

[how]
Add the odm calculation.

More Info: https://avd.aquasec.com/nvd/cve-2024-26913

[CVE-2024-26930] kernel: scsi: qla2xxx: Fix double free of the ha->vp_map pointer (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

scsi: qla2xxx: Fix double free of the ha->vp_map pointer

Coverity scan reported potential risk of double free of the pointer
ha->vp_map. ha->vp_map was freed in qla2x00_mem_alloc(), and again freed
in function qla2x00_mem_free(ha).

Assign NULL to vp_map and kfree take care of NULL.

More Info: https://avd.aquasec.com/nvd/cve-2024-26930

[CVE-2024-26944] kernel: btrfs: zoned: fix use-after-free in do_zone_finish() (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

btrfs: zoned: fix use-after-free in do_zone_finish()

Shinichiro reported the following use-after-free triggered by the device
replace operation in fstests btrfs/070.

```
 BTRFS info (device nullb1): scrub: finished on devid 1 with status: 0
 ==================================================================
 BUG: KASAN: slab-use-after-free in do_zone_finish+0x91a/0xb90 [btrfs]
 Read of size 8 at addr ffff8881543c8060 by task btrfs-cleaner/3494007

 CPU: 0 PID: 3494007 Comm: btrfs-cleaner Tainted: G        W          6.8.0-rc5-kts #1
 Hardware name: Supermicro Super Server/X11SPi-TF, BIOS 3.3 02/21/2020
 Call Trace:
  <TASK>
  dump_stack_lvl+0x5b/0x90
  print_report+0xcf/0x670
  ? __virt_addr_valid+0x200/0x3e0
  kasan_report+0xd8/0x110
  ? do_zone_finish+0x91a/0xb90 [btrfs]
  ? do_zone_finish+0x91a/0xb90 [btrfs]
  do_zone_finish+0x91a/0xb90 [btrfs]
  btrfs_delete_unused_bgs+0x5e1/0x1750 [btrfs]
  ? __pfx_btrfs_delete_unused_bgs+0x10/0x10 [btrfs]
  ? btrfs_put_root+0x2d/0x220 [btrfs]
  ? btrfs_clean_one_deleted_snapshot+0x299/0x430 [btrfs]
  cleaner_kthread+0x21e/0x380 [btrfs]
  ? __pfx_cleaner_kthread+0x10/0x10 [btrfs]
  kthread+0x2e3/0x3c0
  ? __pfx_kthread+0x10/0x10
  ret_from_fork+0x31/0x70
  ? __pfx_kthread+0x10/0x10
  ret_from_fork_asm+0x1b/0x30
  </TASK>

 Allocated by task 3493983:
  kasan_save_stack+0x33/0x60
  kasan_save_track+0x14/0x30
  __kasan_kmalloc+0xaa/0xb0
  btrfs_alloc_device+0xb3/0x4e0 [btrfs]
  device_list_add.constprop.0+0x993/0x1630 [btrfs]
  btrfs_scan_one_device+0x219/0x3d0 [btrfs]
  btrfs_control_ioctl+0x26e/0x310 [btrfs]
  __x64_sys_ioctl+0x134/0x1b0
  do_syscall_64+0x99/0x190
  entry_SYSCALL_64_after_hwframe+0x6e/0x76
```

```
 Freed by task 3494056:
  kasan_save_stack+0x33/0x60
  kasan_save_track+0x14/0x30
  kasan_save_free_info+0x3f/0x60
  poison_slab_object+0x102/0x170
  __kasan_slab_free+0x32/0x70
  kfree+0x11b/0x320
  btrfs_rm_dev_replace_free_srcdev+0xca/0x280 [btrfs]
  btrfs_dev_replace_finishing+0xd7e/0x14f0 [btrfs]
  btrfs_dev_replace_by_ioctl+0x1286/0x25a0 [btrfs]
  btrfs_ioctl+0xb27/0x57d0 [btrfs]
  __x64_sys_ioctl+0x134/0x1b0
  do_syscall_64+0x99/0x190
  entry_SYSCALL_64_after_hwframe+0x6e/0x76

 The buggy address belongs to the object at ffff8881543c8000
  which belongs to the cache kmalloc-1k of size 1024
 The buggy address is located 96 bytes inside of
  freed 1024-byte region [ffff8881543c8000, ffff8881543c8400)

 The buggy address belongs to the physical page:
 page:00000000fe2c1285 refcount:1 mapcount:0 mapping:0000000000000000 index:0x0 pfn:0x1543c8
 head:00000000fe2c1285 order:3 entire_mapcount:0 nr_pages_mapped:0 pincount:0
 flags: 0x17ffffc0000840(slab|head|node=0|zone=2|lastcpupid=0x1fffff)
 page_type: 0xffffffff()
 raw: 0017ffffc0000840 ffff888100042dc0 ffffea0019e8f200 dead000000000002
 raw: 0000000000000000 0000000000100010 00000001ffffffff 0000000000000000
 page dumped because: kasan: bad access detected

 Memory state around the buggy address:
  ffff8881543c7f00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  ffff8881543c7f80: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 >ffff8881543c8000: fa fb fb fb fb fb fb fb fb fb fb fb fb fb fb fb
                                        ^
  ffff8881543c8080: fb fb fb fb fb fb fb fb fb fb fb fb fb fb fb fb
  ffff8881543c8100: fb fb fb fb fb fb fb fb fb fb fb fb fb fb fb fb
```

This UAF happens because we're accessing stale zone information of a
already removed btrfs_device in do_zone_finish().

The sequence of events is as follows:

```
btrfs_dev_replace_start
  btrfs_scrub_dev
   btrfs_dev_replace_finishing
    btrfs_dev_replace_update_device_in_mapping_tree <-- devices replaced
    btrfs_rm_dev_replace_free_srcdev
     btrfs_free_device                          <-- device freed

cleaner_kthread
 btrfs_delete_unused_bgs
  btrfs_zone_finish
```

do_zone_finish <-- refers the freed device

The reason for this is that we're using a
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2024-26944

[CVE-2024-26982] kernel: Squashfs: check the inode number is not the invalid value of zero (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

Squashfs: check the inode number is not the invalid value of zero

Syskiller has produced an out of bounds access in fill_meta_index().

That out of bounds access is ultimately caused because the inode
has an inode number with the invalid value of zero, which was not checked.

The reason this causes the out of bounds access is due to following
sequence of events:

1. Fill_meta_index() is called to allocate (via empty_meta_index())
   and fill a metadata index. It however suffers a data read error
   and aborts, invalidating the newly returned empty metadata index.
   It does this by setting the inode number of the index to zero,
   which means unused (zero is not a valid inode number).

2. When fill_meta_index() is subsequently called again on another
   read operation, locate_meta_index() returns the previous index
   because it matches the inode number of 0. Because this index
   has been returned it is expected to have been filled, and because
   it hasn't been, an out of bounds access is performed.

This patch adds a sanity check which checks that the inode number
is not zero when the inode is created and returns -EINVAL if it is.

[phillip@squashfs.org.uk: whitespace fix]
Link: https://lkml.kernel.org/r/20240409204723.446925-1-phillip@squashfs.org.uk

More Info: https://avd.aquasec.com/nvd/cve-2024-26982

[CVE-2024-27042] kernel: drm/amdgpu: Fix potential out-of-bounds access in 'amdgpu_discovery_reg_base_init()' (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amdgpu: Fix potential out-of-bounds access in 'amdgpu_discovery_reg_base_init()'

The issue arises when the array 'adev->vcn.vcn_config' is accessed
before checking if the index 'adev->vcn.num_vcn_inst' is within the
bounds of the array.

The fix involves moving the bounds check before the array access. This
ensures that 'adev->vcn.num_vcn_inst' is within the bounds of the array
before it is used as an index.

Fixes the below:
drivers/gpu/drm/amd/amdgpu/amdgpu_discovery.c:1289 amdgpu_discovery_reg_base_init() error: testing array offset 'adev->vcn.num_vcn_inst' after use.

More Info: https://avd.aquasec.com/nvd/cve-2024-27042

[CVE-2024-35866] kernel: smb: client: fix potential UAF in cifs_dump_full_key() (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

smb: client: fix potential UAF in cifs_dump_full_key()

Skip sessions that are being teared down (status == SES_EXITING) to
avoid UAF.

More Info: https://avd.aquasec.com/nvd/cve-2024-35866

[CVE-2024-35887] kernel: ax25: fix use-after-free bugs caused by ax25_ds_del_timer (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ax25: fix use-after-free bugs caused by ax25_ds_del_timer

When the ax25 device is detaching, the ax25_dev_device_down()
calls ax25_ds_del_timer() to cleanup the slave_timer. When
the timer handler is running, the ax25_ds_del_timer() that
calls del_timer() in it will return directly. As a result,
the use-after-free bugs could happen, one of the scenarios
is shown below:

```
     (Thread 1)          |      (Thread 2)
                         | ax25_ds_timeout()
ax25_dev_device_down()   |
  ax25_ds_del_timer()    |
    del_timer()          |
```

```
 ax25_dev_put() //FREE   |
                         |  ax25_dev-> //USE
```

In order to mitigate bugs, when the device is detaching, use
timer_shutdown_sync() to stop the timer.

More Info: https://avd.aquasec.com/nvd/cve-2024-35887

[CVE-2024-35929] kernel: rcu/nocb: Fix WARN_ON_ONCE() in the rcu_nocb_bypass_lock() (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

rcu/nocb: Fix WARN_ON_ONCE() in the rcu_nocb_bypass_lock()

For the kernels built with CONFIG_RCU_NOCB_CPU_DEFAULT_ALL=y and
CONFIG_RCU_LAZY=y, the following scenarios will trigger WARN_ON_ONCE()
in the rcu_nocb_bypass_lock() and rcu_nocb_wait_contended() functions:

```
       CPU2                                CPU11
kthread
rcu_nocb_cb_kthread                          ksys_write
rcu_do_batch                               vfs_write
rcu_torture_timer_cb                         proc_sys_write
__kmem_cache_free                             proc_sys_call_handler
kmemleak_free                               drop_caches_sysctl_handler
delete_object_full                          drop_slab
__delete_object                             shrink_slab
put_object                                lazy_rcu_shrink_scan
call_rcu                                rcu_nocb_flush_bypass
__call_rcu_commn                              rcu_nocb_bypass_lock
                                      raw_spin_trylock(&rdp->nocb_bypass_lock) fail
                                      atomic_inc(&rdp->nocb_lock_contended);
rcu_nocb_wait_contended                         WARN_ON_ONCE(smp_processor_id() != rdp->cpu);
 WARN_ON_ONCE(atomic_read(&rdp->nocb_lock_contended))                                  |
                     |_ _ _ _ _ _ _ _ _same rdp and rdp->cpu != 11_ _ _ _ _ _ _ _ _ __|
```

Reproduce this bug with "echo 3 > /proc/sys/vm/drop_caches".

This commit therefore uses rcu_nocb_try_flush_bypass() instead of
rcu_nocb_flush_bypass() in lazy_rcu_shrink_scan(). If the nocb_bypass
queue is being flushed, then rcu_nocb_try_flush_bypass will return
directly.

More Info: https://avd.aquasec.com/nvd/cve-2024-35929

[CVE-2024-36013] kernel: Bluetooth: L2CAP: Fix slab-use-after-free in l2cap_connect() (Severity: HIGH)

Package: linux-libc-dev

Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

Bluetooth: L2CAP: Fix slab-use-after-free in l2cap_connect()

Extend a critical section to prevent chan from early freeing.
Also make the l2cap_connect() return type void. Nothing is using the
returned value but it is ugly to return a potentially freed pointer.
Making it void will help with backports because earlier kernels did use
the return value. Now the compile will break for kernels where this
patch is not a complete fix.

Call stack summary:

[use]
l2cap_bredr_sig_cmd
  l2cap_connect
  â”Œ mutex_lock(&conn->chan_lock);
  â”, chan = pchan->ops->new_connection(pchan); <- alloc chan
  â”, __l2cap_chan_add(conn, chan);
  â”,   l2cap_chan_hold(chan);
  â”,   list_add(&chan->list, &conn->chan_l);   ... (1)
  â”” mutex_unlock(&conn->chan_lock);
    chan->conf_state   ... (4) <- use after free

[free]
l2cap_conn_del
â”Œ mutex_lock(&conn->chan_lock);
â”, foreach chan in conn->chan_l: ... (2)
â”,   l2cap_chan_put(chan);
â”,   l2cap_chan_destroy
â”,   kfree(chan)   ... (3) <- chan freed
â”” mutex_unlock(&conn->chan_lock);

==
BUG: KASAN: slab-use-after-free in instrument_atomic_read
include/linux/instrumented.h:68 [inline]
BUG: KASAN: slab-use-after-free in _test_bit
include/asm-generic/bitops/instrumented-non-atomic.h:141 [inline]
BUG: KASAN: slab-use-after-free in l2cap_connect+0xa67/0x11a0
net/bluetooth/l2cap_core.c:4260
Read of size 8 at addr ffff88810bf040a0 by task kworker/u3:1/311

More Info: https://avd.aquasec.com/nvd/cve-2024-36013

[CVE-2024-36921] kernel: wifi: iwlwifi: mvm: guard against invalid STA ID on removal (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

wifi: iwlwifi: mvm: guard against invalid STA ID on removal

Guard against invalid station IDs in iwl_mvm_mld_rm_sta_id as that would
result in out-of-bounds array accesses. This prevents issues should the
driver get into a bad state during error handling.

More Info: https://avd.aquasec.com/nvd/cve-2024-36921

[CVE-2024-38570] kernel: gfs2: Fix potential glock use-after-free on unmount (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

gfs2: Fix potential glock use-after-free on unmount

When a DLM lockspace is released and there ares still locks in that
lockspace, DLM will unlock those locks automatically. Commit
fb6791d100d1b started exploiting this behavior to speed up filesystem
unmount: gfs2 would simply free glocks it didn't want to unlock and then
release the lockspace. This didn't take the bast callbacks for
asynchronous lock contention notifications into account, which remain
active until until a lock is unlocked or its lockspace is released.

To prevent those callbacks from accessing deallocated objects, put the
glocks that should not be unlocked on the sd_dead_glocks list, release
the lockspace, and only then free those glocks.

As an additional measure, ignore unexpected ast and bast callbacks if
the receiving glock is dead.

More Info: https://avd.aquasec.com/nvd/cve-2024-38570

[CVE-2024-38630] kernel: watchdog: cpu5wdt.c: Fix use-after-free bug caused by cpu5wdt_trigger (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

watchdog: cpu5wdt.c: Fix use-after-free bug caused by cpu5wdt_trigger

When the cpu5wdt module is removing, the origin code uses del_timer() to
de-activate the timer. If the timer handler is running, del_timer() could
not stop it and will return directly. If the port region is released by
release_region() and then the timer handler cpu5wdt_trigger() calls outb()
to write into the region that is released, the use-after-free bug will
happen.

Change del_timer() to timer_shutdown_sync() in order that the timer handler
could be finished before the port region is released.

More Info: https://avd.aquasec.com/nvd/cve-2024-38630

[CVE-2024-39479] kernel: drm/i915/hwmon: Get rid of devm (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/i915/hwmon: Get rid of devm

When both hwmon and hwmon drvdata (on which hwmon depends) are device
managed resources, the expectation, on device unbind, is that hwmon will be
released before drvdata. However, in i915 there are two separate code
paths, which both release either drvdata or hwmon and either can be
released before the other. These code paths (for device unbind) are as
follows (see also the bug referenced below):

Call Trace:
release_nodes+0x11/0x70
devres_release_group+0xb2/0x110
component_unbind_all+0x8d/0xa0
component_del+0xa5/0x140
intel_pxp_tee_component_fini+0x29/0x40 [i915]
intel_pxp_fini+0x33/0x80 [i915]
i915_driver_remove+0x4c/0x120 [i915]
i915_pci_remove+0x19/0x30 [i915]
pci_device_remove+0x32/0xa0
device_release_driver_internal+0x19c/0x200
unbind_store+0x9c/0xb0

and

Call Trace:
release_nodes+0x11/0x70
devres_release_all+0x8a/0xc0
device_unbind_cleanup+0x9/0x70
device_release_driver_internal+0x1c1/0x200
unbind_store+0x9c/0xb0

This means that in i915, if use devm, we cannot gurantee that hwmon will
always be released before drvdata. Which means that we have a uaf if hwmon
sysfs is accessed when drvdata has been released but hwmon hasn't.

The only way out of this seems to be do get rid of devm_ and release/free
everything explicitly during device unbind.

v2: Change commit message and other minor code changes
v3: Cleanup from i915_hwmon_register on error (Armin Wolf)
v4: Eliminate potential static analyzer warning (Rodrigo)

Eliminate fetch_and_zero (Jani)
v5: Restore previous logic for ddat_gt->hwmon_dev error return (Andi)

More Info: https://avd.aquasec.com/nvd/cve-2024-39479

[CVE-2024-39508] kernel: io_uring/io-wq: Use set_bit() and test_bit() at worker->flags (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

io_uring/io-wq: Use set_bit() and test_bit() at worker->flags

Utilize set_bit() and test_bit() on worker->flags within io_uring/io-wq
to address potential data races.

The structure io_worker->flags may be accessed through various data
paths, leading to concurrency issues. When KCSAN is enabled, it reveals
data races occurring in io_worker_handle_work and
io_wq_activate_free_worker functions.

```
  BUG: KCSAN: data-race in io_worker_handle_work / io_wq_activate_free_worker
  write to 0xffff8885c4246404 of 4 bytes by task 49071 on cpu 28:
  io_worker_handle_work (io_uring/io-wq.c:434 io_uring/io-wq.c:569)
  io_wq_worker (io_uring/io-wq.c:?)
<snip>

  read to 0xffff8885c4246404 of 4 bytes by task 49024 on cpu 5:
  io_wq_activate_free_worker (io_uring/io-wq.c:? io_uring/io-wq.c:285)
  io_wq_enqueue (io_uring/io-wq.c:947)
  io_queue_iowq (io_uring/io_uring.c:524)
  io_req_task_submit (io_uring/io_uring.c:1511)
  io_handle_tw_list (io_uring/io_uring.c:1198)
<snip>
```

Line numbers against commit 18daea77cca6 ("Merge tag 'for-linus' of
git://git.kernel.org/pub/scm/virt/kvm/kvm").

These races involve writes and reads to the same memory location by
different tasks running on different CPUs. To mitigate this, refactor
the code to use atomic operations such as set_bit(), test_bit(), and
clear_bit() instead of basic "and" and "or" operations. This ensures
thread-safe manipulation of worker flags.

Also, move `create_index` to avoid holes in the structure.

More Info: https://avd.aquasec.com/nvd/cve-2024-39508

[CVE-2024-41013] kernel: xfs: don't walk off the end of a directory data block (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1

Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

xfs: don't walk off the end of a directory data block

This adds sanity checks for xfs_dir2_data_unused and xfs_dir2_data_entry
to make sure don't stray beyond valid memory region. Before patching, the
loop simply checks that the start offset of the dup and dep is within the
range. So in a crafted image, if last entry is xfs_dir2_data_unused, we
can change dup->length to dup->length-1 and leave 1 byte of space. In the
next traversal, this space will be considered as dup or dep. We may
encounter an out of bound read when accessing the fixed members.

In the patch, we make sure that the remaining bytes large enough to hold
an unused entry before accessing xfs_dir2_data_unused and
xfs_dir2_data_unused is XFS_DIR2_DATA_ALIGN byte aligned. We also make
sure that the remaining bytes large enough to hold a dirent with a
single-byte name before accessing xfs_dir2_data_entry.

More Info: https://avd.aquasec.com/nvd/cve-2024-41013

[CVE-2024-42162] kernel: gve: Account for stopped queues when reading NIC stats (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

gve: Account for stopped queues when reading NIC stats

We now account for the fact that the NIC might send us stats for a
subset of queues. Without this change, gve_get_ethtool_stats might make
an invalid access on the priv->stats_report->stats array.

More Info: https://avd.aquasec.com/nvd/cve-2024-42162

[CVE-2024-44941] kernel: f2fs: fix to cover read extent cache access with lock (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

f2fs: fix to cover read extent cache access with lock

syzbot reports a f2fs bug as below:

BUG: KASAN: slab-use-after-free in sanity_check_extent_cache+0x370/0x410 fs/f2fs/extent_cache.c:46
Read of size 4 at addr ffff8880739ab220 by task syz-executor200/5097

CPU: 0 PID: 5097 Comm: syz-executor200 Not tainted 6.9.0-rc6-syzkaller #0

Hardware name: Google Google Compute Engine/Google Compute Engine, BIOS Google 03/27/2024
Call Trace:
 <TASK>
 __dump_stack lib/dump_stack.c:88 [inline]
 dump_stack_lvl+0x241/0x360 lib/dump_stack.c:114
 print_address_description mm/kasan/report.c:377 [inline]
 print_report+0x169/0x550 mm/kasan/report.c:488
 kasan_report+0x143/0x180 mm/kasan/report.c:601
 sanity_check_extent_cache+0x370/0x410 fs/f2fs/extent_cache.c:46
 do_read_inode fs/f2fs/inode.c:509 [inline]
 f2fs_iget+0x33e1/0x46e0 fs/f2fs/inode.c:560
 f2fs_nfs_get_inode+0x74/0x100 fs/f2fs/super.c:3237
 generic_fh_to_dentry+0x9f/0xf0 fs/libfs.c:1413
 exportfs_decode_fh_raw+0x152/0x5f0 fs/exportfs/expfs.c:444
 exportfs_decode_fh+0x3c/0x80 fs/exportfs/expfs.c:584
 do_handle_to_path fs/fhandle.c:155 [inline]
 handle_to_path fs/fhandle.c:210 [inline]
 do_handle_open+0x495/0x650 fs/fhandle.c:226
 do_syscall_x64 arch/x86/entry/common.c:52 [inline]
 do_syscall_64+0xf5/0x240 arch/x86/entry/common.c:83
 entry_SYSCALL_64_after_hwframe+0x77/0x7f

We missed to cover sanity_check_extent_cache() w/ extent cache lock,
so, below race case may happen, result in use after free issue.

- f2fs_iget
 - do_read_inode
  - f2fs_init_read_extent_tree
  : add largest extent entry in to cache
     - shrink
      - f2fs_shrink_read_extent_tree
       - __shrink_extent_tree
        - __detach_extent_node
        : drop largest extent entry
  - sanity_check_extent_cache
  : access et->largest w/o lock

let's refactor sanity_check_extent_cache() to avoid extent cache access
and call it before f2fs_init_read_extent_tree() to fix this issue.

More Info: https://avd.aquasec.com/nvd/cve-2024-44941

[CVE-2024-44942] kernel: f2fs: fix to do sanity check on F2FS_INLINE_DATA flag in inode during GC (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

f2fs: fix to do sanity check on F2FS_INLINE_DATA flag in inode during GC

syzbot reports a f2fs bug as below:

------------[cut here]------------
kernel BUG at fs/f2fs/inline.c:258!
CPU: 1 PID: 34 Comm: kworker/u8:2 Not tainted 6.9.0-rc6-syzkaller-00012-g9e4bc4bcae01 #0
RIP: 0010:f2fs_write_inline_data+0x781/0x790 fs/f2fs/inline.c:258
Call Trace:
 f2fs_write_single_data_page+0xb65/0x1d60 fs/f2fs/data.c:2834
 f2fs_write_cache_pages fs/f2fs/data.c:3133 [inline]
 __f2fs_write_data_pages fs/f2fs/data.c:3288 [inline]
 f2fs_write_data_pages+0x1efe/0x3a90 fs/f2fs/data.c:3315
 do_writepages+0x35b/0x870 mm/page-writeback.c:2612
 __writeback_single_inode+0x165/0x10b0 fs/fs-writeback.c:1650
 writeback_sb_inodes+0x905/0x1260 fs/fs-writeback.c:1941
 wb_writeback+0x457/0xce0 fs/fs-writeback.c:2117
 wb_do_writeback fs/fs-writeback.c:2264 [inline]
 wb_workfn+0x410/0x1090 fs/fs-writeback.c:2304
 process_one_work kernel/workqueue.c:3254 [inline]
 process_scheduled_works+0xa12/0x17c0 kernel/workqueue.c:3335
 worker_thread+0x86d/0xd70 kernel/workqueue.c:3416
 kthread+0x2f2/0x390 kernel/kthread.c:388
 ret_from_fork+0x4d/0x80 arch/x86/kernel/process.c:147
 ret_from_fork_asm+0x1a/0x30 arch/x86/entry/entry_64.S:244

The root cause is: inline_data inode can be fuzzed, so that there may
be valid blkaddr in its direct node, once f2fs triggers background GC
to migrate the block, it will hit f2fs_bug_on() during dirty page
writeback.

Let's add sanity check on F2FS_INLINE_DATA flag in inode during GC,
so that, it can forbid migrating inline_data inode's data block for
fixing.

More Info: https://avd.aquasec.com/nvd/cve-2024-44942

[CVE-2024-44951] kernel: serial: sc16is7xx: fix TX fifo corruption (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

serial: sc16is7xx: fix TX fifo corruption

Sometimes, when a packet is received on channel A at almost the same time
as a packet is about to be transmitted on channel B, we observe with a
logic analyzer that the received packet on channel A is transmitted on
channel B. In other words, the Tx buffer data on channel B is corrupted
with data from channel A.

The problem appeared since commit 4409df5866b7 ("serial: sc16is7xx: change
EFR lock to operate on each channels"), which changed the EFR locking to
operate on each channel instead of chip-wise.

This commit has introduced a regression, because the EFR lock is used not only to protect the EFR registers access, but also, in a very obscure and undocumented way, to protect access to the data buffer, which is shared by the Tx and Rx handlers, but also by each channel of the IC.

Fix this regression first by switching to kfifo_out_linear_ptr() in sc16is7xx_handle_tx() to eliminate the need for a shared Rx/Tx buffer.

Secondly, replace the chip-wise Rx buffer with a separate Rx buffer for each channel.

More Info: https://avd.aquasec.com/nvd/cve-2024-44951

[CVE-2024-46774] kernel: powerpc/rtas: Prevent Spectre v1 gadget construction in sys_rtas() (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

powerpc/rtas: Prevent Spectre v1 gadget construction in sys_rtas()

Smatch warns:

```
arch/powerpc/kernel/rtas.c:1932 __do_sys_rtas() warn: potential
spectre issue 'args.args' [r] (local cap)
```

The 'nargs' and 'nret' locals come directly from a user-supplied buffer and are used as indexes into a small stack-based array and as inputs to copy_to_user() after they are subject to bounds checks.

Use array_index_nospec() after the bounds checks to clamp these values for speculative execution.

More Info: https://avd.aquasec.com/nvd/cve-2024-46774

[CVE-2024-46786] kernel: fscache: delete fscache_cookie_lru_timer when fscache exits to avoid UAF (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

fscache: delete fscache_cookie_lru_timer when fscache exits to avoid UAF

The fscache_cookie_lru_timer is initialized when the fscache module is inserted, but is not deleted when the fscache module is removed. If timer_reduce() is called before removing the fscache module, the fscache_cookie_lru_timer will be added to the timer list of

the current cpu. Afterwards, a use-after-free will be triggered
in the softIRQ after removing the fscache module, as follows:

==========
BUG: unable to handle page fault for address: fffffbfff803c9e9
 PF: supervisor read access in kernel mode
 PF: error_code(0x0000) - not-present page
PGD 21ffea067 P4D 21ffea067 PUD 21ffe6067 PMD 110a7c067 PTE 0
Oops: Oops: 0000 [#1] PREEMPT SMP KASAN PTI
CPU: 1 UID: 0 PID: 0 Comm: swapper/1 Tainted: G W 6.11.0-rc3 #855
Tainted: [W]=WARN
RIP: 0010:__run_timer_base.part.0+0x254/0x8a0
Call Trace:
 <IRQ>
 tmigr_handle_remote_up+0x627/0x810
 __walk_groups.isra.0+0x47/0x140
 tmigr_handle_remote+0x1fa/0x2f0
 handle_softirqs+0x180/0x590
 irq_exit_rcu+0x84/0xb0
 sysvec_apic_timer_interrupt+0x6e/0x90
 </IRQ>
 <TASK>
 asm_sysvec_apic_timer_interrupt+0x1a/0x20
RIP: 0010:default_idle+0xf/0x20
 default_idle_call+0x38/0x60
 do_idle+0x2b5/0x300
 cpu_startup_entry+0x54/0x60
 start_secondary+0x20d/0x280
 common_startup_64+0x13e/0x148
 </TASK>
Modules linked in: [last unloaded: netfs]
==========

Therefore delete fscache_cookie_lru_timer when removing the fscahe module.

More Info: https://avd.aquasec.com/nvd/cve-2024-46786

[CVE-2024-46811] kernel: drm/amd/display: Fix index may exceed array range within fpu_update_bw_bounding_box (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Fix index may exceed array range within fpu_update_bw_bounding_box

[Why]
Coverity reports OVERRUN warning. soc.num_states could
be 40. But array range of bw_params->clk_table.entries is 8.

[How]

Assert if soc.num_states greater than 8.

More Info: https://avd.aquasec.com/nvd/cve-2024-46811

[CVE-2024-46813] kernel: drm/amd/display: Check link_index before accessing dc->links[] (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Check link_index before accessing dc->links[]

[WHY & HOW]
dc->links[] has max size of MAX_LINKS and NULL is return when trying to
access with out-of-bound index.

This fixes 3 OVERRUN and 1 RESOURCE_LEAK issues reported by Coverity.

More Info: https://avd.aquasec.com/nvd/cve-2024-46813

[CVE-2024-47691] kernel: f2fs: fix to avoid use-after-free in f2fs_stop_gc_thread() (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

f2fs: fix to avoid use-after-free in f2fs_stop_gc_thread()

syzbot reports a f2fs bug as below:

__dump_stack lib/dump_stack.c:88 [inline]
dump_stack_lvl+0x241/0x360 lib/dump_stack.c:114
print_report+0xe8/0x550 mm/kasan/report.c:491
kasan_report+0x143/0x180 mm/kasan/report.c:601
kasan_check_range+0x282/0x290 mm/kasan/generic.c:189
instrument_atomic_read_write include/linux/instrumented.h:96 [inline]
atomic_fetch_add_relaxed include/linux/atomic/atomic-instrumented.h:252 [inline]
__refcount_add include/linux/refcount.h:184 [inline]
__refcount_inc include/linux/refcount.h:241 [inline]
refcount_inc include/linux/refcount.h:258 [inline]
get_task_struct include/linux/sched/task.h:118 [inline]
kthread_stop+0xca/0x630 kernel/kthread.c:704
f2fs_stop_gc_thread+0x65/0xb0 fs/f2fs/gc.c:210
f2fs_do_shutdown+0x192/0x540 fs/f2fs/file.c:2283
f2fs_ioc_shutdown fs/f2fs/file.c:2325 [inline]
__f2fs_ioctl+0x443a/0xbe60 fs/f2fs/file.c:4325
vfs_ioctl fs/ioctl.c:51 [inline]
__do_sys_ioctl fs/ioctl.c:907 [inline]
__se_sys_ioctl+0xfc/0x170 fs/ioctl.c:893

do_syscall_x64 arch/x86/entry/common.c:52 [inline]
do_syscall_64+0xf3/0x230 arch/x86/entry/common.c:83
entry_SYSCALL_64_after_hwframe+0x77/0x7f

The root cause is below race condition, it may cause use-after-free
issue in sbi->gc_th pointer.

- remount
 - f2fs_remount
  - f2fs_stop_gc_thread
   - kfree(gc_th)
    - f2fs_ioc_shutdown
     - f2fs_do_shutdown
      - f2fs_stop_gc_thread
       - kthread_stop(gc_th->f2fs_gc_task)
   : sbi->gc_thread = NULL;

We will call f2fs_do_shutdown() in two paths:
- for f2fs_ioc_shutdown() path, we should grab sb->s_umount semaphore
for fixing.
- for f2fs_shutdown() path, it's safe since caller has already grabbed
sb->s_umount semaphore.

More Info: https://avd.aquasec.com/nvd/cve-2024-47691

[CVE-2024-49928] kernel: wifi: rtw89: avoid reading out of bounds when loading TX power FW elements (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

wifi: rtw89: avoid reading out of bounds when loading TX power FW elements

Because the loop-expression will do one more time before getting false from
cond-expression, the original code copied one more entry size beyond valid
region.

Fix it by moving the entry copy to loop-body.

More Info: https://avd.aquasec.com/nvd/cve-2024-49928

[CVE-2024-50029] kernel: Bluetooth: hci_conn: Fix UAF in hci_enhanced_setup_sync (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

Bluetooth: hci_conn: Fix UAF in hci_enhanced_setup_sync

This checks if the ACL connection remains valid as it could be destroyed
while hci_enhanced_setup_sync is pending on cmd_sync leading to the
following trace:

BUG: KASAN: slab-use-after-free in hci_enhanced_setup_sync+0x91b/0xa60
Read of size 1 at addr ffff888002328ffd by task kworker/u5:2/37

CPU: 0 UID: 0 PID: 37 Comm: kworker/u5:2 Not tainted 6.11.0-rc6-01300-g810be445d8d6 #7099
Hardware name: QEMU Standard PC (Q35 + ICH9, 2009), BIOS 1.16.3-2.fc40 04/01/2014
Workqueue: hci0 hci_cmd_sync_work
Call Trace:
 <TASK>
 dump_stack_lvl+0x5d/0x80
 ? hci_enhanced_setup_sync+0x91b/0xa60
 print_report+0x152/0x4c0
 ? hci_enhanced_setup_sync+0x91b/0xa60
 ? __virt_addr_valid+0x1fa/0x420
 ? hci_enhanced_setup_sync+0x91b/0xa60
 kasan_report+0xda/0x1b0
 ? hci_enhanced_setup_sync+0x91b/0xa60
 hci_enhanced_setup_sync+0x91b/0xa60
 ? __pfx_hci_enhanced_setup_sync+0x10/0x10
 ? __pfx___mutex_lock+0x10/0x10
 hci_cmd_sync_work+0x1c2/0x330
 process_one_work+0x7d9/0x1360
 ? __pfx_lock_acquire+0x10/0x10
 ? __pfx_process_one_work+0x10/0x10
 ? assign_work+0x167/0x240
 worker_thread+0x5b7/0xf60
 ? __kthread_parkme+0xac/0x1c0
 ? __pfx_worker_thread+0x10/0x10
 ? __pfx_worker_thread+0x10/0x10
 kthread+0x293/0x360
 ? __pfx_kthread+0x10/0x10
 ret_from_fork+0x2f/0x70
 ? __pfx_kthread+0x10/0x10
 ret_from_fork_asm+0x1a/0x30
 </TASK>

Allocated by task 34:
 kasan_save_stack+0x30/0x50
 kasan_save_track+0x14/0x30
 __kasan_kmalloc+0x8f/0xa0
 __hci_conn_add+0x187/0x17d0
 hci_connect_sco+0x2e1/0xb90
 sco_sock_connect+0x2a2/0xb80
 __sys_connect+0x227/0x2a0
 __x64_sys_connect+0x6d/0xb0
 do_syscall_64+0x71/0x140
 entry_SYSCALL_64_after_hwframe+0x76/0x7e

Freed by task 37:
 kasan_save_stack+0x30/0x50

kasan_save_track+0x14/0x30
kasan_save_free_info+0x3b/0x60
__kasan_slab_free+0x101/0x160
kfree+0xd0/0x250
device_release+0x9a/0x210
kobject_put+0x151/0x280
hci_conn_del+0x448/0xbf0
hci_abort_conn_sync+0x46f/0x980
hci_cmd_sync_work+0x1c2/0x330
process_one_work+0x7d9/0x1360
worker_thread+0x5b7/0xf60
kthread+0x293/0x360
ret_from_fork+0x2f/0x70
ret_from_fork_asm+0x1a/0x30

More Info: https://avd.aquasec.com/nvd/cve-2024-50029

[CVE-2024-50063] kernel: bpf: Prevent tail call between progs attached to different hooks (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf: Prevent tail call between progs attached to different hooks

bpf progs can be attached to kernel functions, and the attached functions
can take different parameters or return different return values. If
prog attached to one kernel function tail calls prog attached to another
kernel function, the ctx access or return value verification could be
bypassed.

For example, if prog1 is attached to func1 which takes only 1 parameter
and prog2 is attached to func2 which takes two parameters. Since verifier
assumes the bpf ctx passed to prog2 is constructed based on func2's
prototype, verifier allows prog2 to access the second parameter from
the bpf ctx passed to it. The problem is that verifier does not prevent
prog1 from passing its bpf ctx to prog2 via tail call. In this case,
the bpf ctx passed to prog2 is constructed from func1 instead of func2,
that is, the assumption for ctx access verification is bypassed.

Another example, if BPF LSM prog1 is attached to hook file_alloc_security,
and BPF LSM prog2 is attached to hook bpf_lsm_audit_rule_known. Verifier
knows the return value rules for these two hooks, e.g. it is legal for
bpf_lsm_audit_rule_known to return positive number 1, and it is illegal
for file_alloc_security to return positive number. So verifier allows
prog2 to return positive number 1, but does not allow prog1 to return
positive number. The problem is that verifier does not prevent prog1
from calling prog2 via tail call. In this case, prog2's return value 1
will be used as the return value for prog1's hook file_alloc_security.
That is, the return value rule is bypassed.

This patch adds restriction for tail call to prevent such bypasses.

More Info: https://avd.aquasec.com/nvd/cve-2024-50063

[CVE-2024-50112] kernel: x86/lam: Disable ADDRESS_MASKING in most cases (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

x86/lam: Disable ADDRESS_MASKING in most cases

Linear Address Masking (LAM) has a weakness related to transient
execution as described in the SLAM paper[1]. Unless Linear Address
Space Separation (LASS) is enabled this weakness may be exploitable.

Until kernel adds support for LASS[2], only allow LAM for COMPILE_TEST,
or when speculation mitigations have been disabled at compile time,
otherwise keep LAM disabled.

There are no processors in market that support LAM yet, so currently
nobody is affected by this issue.

[1] SLAM: https://download.vusec.net/papers/slam_sp24.pdf
[2] LASS: https://lore.kernel.org/lkml/20230609183632.48706-1-alexander.shishkin@linux.intel.com/

[dhansen: update SPECULATION_MITIGATIONS -> CPU_MITIGATIONS]

More Info: https://avd.aquasec.com/nvd/cve-2024-50112

[CVE-2024-50217] kernel: btrfs: fix use-after-free of block device file in __btrfs_free_extra_devids() (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

btrfs: fix use-after-free of block device file in __btrfs_free_extra_devids()

Mounting btrfs from two images (which have the same one fsid and two
different dev_uuids) in certain executing order may trigger an UAF for
variable 'device->bdev_file' in __btrfs_free_extra_devids(). And
following are the details:

1. Attach image_1 to loop0, attach image_2 to loop1, and scan btrfs
   devices by ioctl(BTRFS_IOC_SCAN_DEV):

        / btrfs_device_1 â†’ loop0
   fs_device

```
          \  btrfs_device_2 â†’ loop1
2. mount /dev/loop0 /mnt
   btrfs_open_devices
    btrfs_device_1->bdev_file = btrfs_get_bdev_and_sb(loop0)
    btrfs_device_2->bdev_file = btrfs_get_bdev_and_sb(loop1)
   btrfs_fill_super
    open_ctree
     fail: btrfs_close_devices // -ENOMEM
     btrfs_close_bdev(btrfs_device_1)
           fput(btrfs_device_1->bdev_file)
       // btrfs_device_1->bdev_file is freed
     btrfs_close_bdev(btrfs_device_2)
           fput(btrfs_device_2->bdev_file)

3. mount /dev/loop1 /mnt
   btrfs_open_devices
    btrfs_get_bdev_and_sb(&bdev_file)
     // EIO, btrfs_device_1->bdev_file is not assigned,
     // which points to a freed memory area
    btrfs_device_2->bdev_file = btrfs_get_bdev_and_sb(loop1)
   btrfs_fill_super
    open_ctree
     btrfs_free_extra_devids
      if (btrfs_device_1->bdev_file)
       fput(btrfs_device_1->bdev_file) // UAF !
```

Fix it by setting 'device->bdev_file' as 'NULL' after closing the
btrfs_device in btrfs_close_one_device().

More Info: https://avd.aquasec.com/nvd/cve-2024-50217

[CVE-2024-50226] kernel: cxl/port: Fix use-after-free, permit out-of-order decoder shutdown (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

cxl/port: Fix use-after-free, permit out-of-order decoder shutdown

In support of investigating an initialization failure report [1],
cxl_test was updated to register mock memory-devices after the mock
root-port/bus device had been registered. That led to cxl_test crashing
with a use-after-free bug with the following signature:

```
        cxl_port_attach_region: cxl region3: cxl_host_bridge.0:port3 decoder3.0 add: mem0:decoder7.0 @ 0 next: cxl_switch_uport.0 nr_eps: 1 nr_targets: 1
       cxl_port_attach_region: cxl region3: cxl_host_bridge.0:port3 decoder3.0 add: mem4:decoder14.0 @ 1 next: cxl_switch_uport.0 nr_eps: 2 nr_targets: 1
   cxl_port_setup_targets: cxl region3: cxl_switch_uport.0:port6 target[0] = cxl_switch_dport.0 for mem0:decoder7.0 @ 0
1)  cxl_port_setup_targets: cxl region3: cxl_switch_uport.0:port6 target[1] = cxl_switch_dport.4 for mem4:decoder14.0 @
```

1
[..]
cxld_unregister: cxl decoder14.0:
cxl_region_decode_reset: cxl_region region3:
mock_decoder_reset: cxl_port port3: decoder3.0 reset
2) mock_decoder_reset: cxl_port port3: decoder3.0: out of order reset, expected decoder3.1
cxl_endpoint_decoder_release: cxl decoder14.0:
[..]
cxld_unregister: cxl decoder7.0:
3) cxl_region_decode_reset: cxl_region region3:
Oops: general protection fault, probably for non-canonical address 0x6b6b6b6b6b6b6bc3: 0000 [#1] PREEMPT SMP PTI
[..]
RIP: 0010:to_cxl_port+0x8/0x60 [cxl_core]
[..]
Call Trace:
<TASK>
cxl_region_decode_reset+0x69/0x190 [cxl_core]
cxl_region_detach+0xe8/0x210 [cxl_core]
cxl_decoder_kill_region+0x27/0x40 [cxl_core]
cxld_unregister+0x5d/0x60 [cxl_core]

At 1) a region has been established with 2 endpoint decoders (7.0 and 14.0). Those endpoints share a common switch-decoder in the topology (3.0). At teardown, 2), decoder14.0 is the first to be removed and hits the "out of order reset case" in the switch decoder. The effect though is that region3 cleanup is aborted leaving it in-tact and referencing decoder14.0. At 3) the second attempt to teardown region3 trips over the stale decoder14.0 object which has long since been deleted.

The fix here is to recognize that the CXL specification places no mandate on in-order shutdown of switch-decoders, the driver enforces in-order allocation, and hardware enforces in-order commit. So, rather than fail and leave objects dangling, always remove them.

In support of making cxl_region_decode_reset() always succeed, cxl_region_invalidate_memregion() failures are turned into warnings. Crashing the kernel is ok there since system integrity is at risk if caches cannot be managed around physical address mutation events like CXL region destruction.

A new device_for_each_child_reverse_from() is added to cleanup port->commit_end after all dependent decoders have been disabled. In other words if decoders are allocated 0->1->2 and disabled 1->2->0 then port->commit_end only decrements from 2 after 2 has been disabled, and it decrements all the way to zero since 1 was disabled previously.

More Info: https://avd.aquasec.com/nvd/cve-2024-50226

[CVE-2024-50246] kernel: fs/ntfs3: Add rough attr alloc_size check (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1

Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

fs/ntfs3: Add rough attr alloc_size check

More Info: https://avd.aquasec.com/nvd/cve-2024-50246

[CVE-2024-53068] kernel: firmware: arm_scmi: Fix slab-use-after-free in scmi_bus_notifier() (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

firmware: arm_scmi: Fix slab-use-after-free in scmi_bus_notifier()

The scmi_dev->name is released prematurely in __scmi_device_destroy(),
which causes slab-use-after-free when accessing scmi_dev->name in
scmi_bus_notifier(). So move the release of scmi_dev->name to
scmi_device_release() to avoid slab-use-after-free.

```
| BUG: KASAN: slab-use-after-free in strncmp+0xe4/0xec
| Read of size 1 at addr ffffff80a482bcc0 by task swapper/0/1
|
| CPU: 1 PID: 1 Comm: swapper/0 Not tainted 6.6.38-debug #1
| Hardware name: Qualcomm Technologies, Inc. SA8775P Ride (DT)
| Call trace:
|  dump_backtrace+0x94/0x114
|  show_stack+0x18/0x24
|  dump_stack_lvl+0x48/0x60
|  print_report+0xf4/0x5b0
|  kasan_report+0xa4/0xec
|  __asan_report_load1_noabort+0x20/0x2c
|  strncmp+0xe4/0xec
|  scmi_bus_notifier+0x5c/0x54c
|  notifier_call_chain+0xb4/0x31c
|  blocking_notifier_call_chain+0x68/0x9c
|  bus_notify+0x54/0x78
|  device_del+0x1bc/0x840
|  device_unregister+0x20/0xb4
|  __scmi_device_destroy+0xac/0x280
|  scmi_device_destroy+0x94/0xd0
|  scmi_chan_setup+0x524/0x750
|  scmi_probe+0x7fc/0x1508
|  platform_probe+0xc4/0x19c
|  really_probe+0x32c/0x99c
|  __driver_probe_device+0x15c/0x3c4
|  driver_probe_device+0x5c/0x170
|  __driver_attach+0x1c8/0x440
|  bus_for_each_dev+0xf4/0x178
```

```
|  driver_attach+0x3c/0x58
|  bus_add_driver+0x234/0x4d4
|  driver_register+0xf4/0x3c0
|  __platform_driver_register+0x60/0x88
|  scmi_driver_init+0xb0/0x104
|  do_one_initcall+0xb4/0x664
|  kernel_init_freeable+0x3c8/0x894
|  kernel_init+0x24/0x1e8
|  ret_from_fork+0x10/0x20
|
| Allocated by task 1:
|  kasan_save_stack+0x2c/0x54
|  kasan_set_track+0x2c/0x40
|  kasan_save_alloc_info+0x24/0x34
|  __kasan_kmalloc+0xa0/0xb8
|  __kmalloc_node_track_caller+0x6c/0x104
|  kstrdup+0x48/0x84
|  kstrdup_const+0x34/0x40
|  __scmi_device_create.part.0+0x8c/0x408
|  scmi_device_create+0x104/0x370
|  scmi_chan_setup+0x2a0/0x750
|  scmi_probe+0x7fc/0x1508
|  platform_probe+0xc4/0x19c
|  really_probe+0x32c/0x99c
|  __driver_probe_device+0x15c/0x3c4
|  driver_probe_device+0x5c/0x170
|  __driver_attach+0x1c8/0x440
|  bus_for_each_dev+0xf4/0x178
|  driver_attach+0x3c/0x58
|  bus_add_driver+0x234/0x4d4
|  driver_register+0xf4/0x3c0
|  __platform_driver_register+0x60/0x88
|  scmi_driver_init+0xb0/0x104
|  do_one_initcall+0xb4/0x664
|  kernel_init_freeable+0x3c8/0x894
|  kernel_init+0x24/0x1e8
|  ret_from_fork+0x10/0x20
|
| Freed by task 1:
|  kasan_save_stack+0x2c/0x54
|  kasan_set_track+0x2c/0x40
|  kasan_save_free_info+0x38/0x5c
|  __kasan_slab_free+0xe8/0x164
|  __kmem_cache_free+0x11c/0x230
|  kfree+0x70/0x130
|  kfree_const+0x20/0x40
|  __scmi_device_destroy+0x70/0x280
|  scmi_device_destroy+0x94/0xd0
|  scmi_chan_setup+0x524/0x750
|  scmi_probe+0x7fc/0x1508
|  platform_probe+0xc4/0x19c
|  really_probe+0x32c/0x99c
|  __driver_probe_device+0x15c/0x3c4
```

| driver_probe_device+0x5c/0x170
| __driver_attach+0x1c8/0x440
| bus_for_each_dev+0xf4/0x178
| driver_attach+0x3c/0x58
| bus_add_driver+0x234/0x4d4
| driver_register+0xf4/0x3c0
| __platform_driver_register+0x60/0x88
| scmi_driver_init+0xb0/0x104
| do_one_initcall+0xb4/0x664
| kernel_init_freeable+0x3c8/0x894
| kernel_init+0x24/0x1e8
| ret_from_fork+0x10/0x20

More Info: https://avd.aquasec.com/nvd/cve-2024-53068

[CVE-2024-53108] kernel: drm/amd/display: Adjust VSDB parser for replay feature (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Adjust VSDB parser for replay feature

At some point, the IEEE ID identification for the replay check in the
AMD EDID was added. However, this check causes the following
out-of-bounds issues when using KASAN:

[27.804016] BUG: KASAN: slab-out-of-bounds in amdgpu_dm_update_freesync_caps+0xefa/0x17a0 [amdgpu]
[27.804788] Read of size 1 at addr ffff8881647fdb00 by task systemd-udevd/383

...

[27.821207] Memory state around the buggy address:
[27.821215] ffff8881647fda00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
[27.821224] ffff8881647fda80: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
[27.821234] >ffff8881647fdb00: fc fc fc fc fc fc fc fc fc fc fc fc fc fc fc fc
[27.821243] ^
[27.821250] ffff8881647fdb80: fc fc fc fc fc fc fc fc fc fc fc fc fc fc fc fc
[27.821259] ffff8881647fdc00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
[27.821268] ==

This is caused because the ID extraction happens outside of the range of
the edid lenght. This commit addresses this issue by considering the
amd_vsdb_block size.

(cherry picked from commit b7e381b1ccd5e778e3d9c44c669ad38439a861d8)

More Info: https://avd.aquasec.com/nvd/cve-2024-53108

[CVE-2024-53133] kernel: drm/amd/display: Handle dml allocation failure to avoid crash (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Handle dml allocation failure to avoid crash

[Why]
In the case where a dml allocation fails for any reason, the
current state's dml contexts would no longer be valid. Then
subsequent calls dc_state_copy_internal would shallow copy
invalid memory and if the new state was released, a double
free would occur.

[How]
Reset dml pointers in new_state to NULL and avoid invalid
pointer

(cherry picked from commit bcafdc61529a48f6f06355d78eb41b3aeda5296c)

More Info: https://avd.aquasec.com/nvd/cve-2024-53133

[CVE-2024-53166] kernel: block, bfq: fix bfqq uaf in bfq_limit_depth() (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

block, bfq: fix bfqq uaf in bfq_limit_depth()

Set new allocated bfqq to bic or remove freed bfqq from bic are both
protected by bfqd->lock, however bfq_limit_depth() is deferencing bfqq
from bic without the lock, this can lead to UAF if the io_context is
shared by multiple tasks.

For example, test bfq with io_uring can trigger following UAF in v6.6:

==
BUG: KASAN: slab-use-after-free in bfqq_group+0x15/0x50

Call Trace:
 <TASK>
 dump_stack_lvl+0x47/0x80
 print_address_description.constprop.0+0x66/0x300
 print_report+0x3e/0x70
 kasan_report+0xb4/0xf0
 bfqq_group+0x15/0x50
 bfqq_request_over_limit+0x130/0x9a0
 bfq_limit_depth+0x1b5/0x480
 __blk_mq_alloc_requests+0x2b5/0xa00
 blk_mq_get_new_requests+0x11d/0x1d0

blk_mq_submit_bio+0x286/0xb00
submit_bio_noacct_nocheck+0x331/0x400
__block_write_full_folio+0x3d0/0x640
writepage_cb+0x3b/0xc0
write_cache_pages+0x254/0x6c0
write_cache_pages+0x254/0x6c0
do_writepages+0x192/0x310
filemap_fdatawrite_wbc+0x95/0xc0
__filemap_fdatawrite_range+0x99/0xd0
filemap_write_and_wait_range.part.0+0x4d/0xa0
blkdev_read_iter+0xef/0x1e0
io_read+0x1b6/0x8a0
io_issue_sqe+0x87/0x300
io_wq_submit_work+0xeb/0x390
io_worker_handle_work+0x24d/0x550
io_wq_worker+0x27f/0x6c0
ret_from_fork_asm+0x1b/0x30
</TASK>

Allocated by task 808602:
kasan_save_stack+0x1e/0x40
kasan_set_track+0x21/0x30
__kasan_slab_alloc+0x83/0x90
kmem_cache_alloc_node+0x1b1/0x6d0
bfq_get_queue+0x138/0xfa0
bfq_get_bfqq_handle_split+0xe3/0x2c0
bfq_init_rq+0x196/0xbb0
bfq_insert_request.isra.0+0xb5/0x480
bfq_insert_requests+0x156/0x180
blk_mq_insert_request+0x15d/0x440
blk_mq_submit_bio+0x8a4/0xb00
submit_bio_noacct_nocheck+0x331/0x400
__blkdev_direct_IO_async+0x2dd/0x330
blkdev_write_iter+0x39a/0x450
io_write+0x22a/0x840
io_issue_sqe+0x87/0x300
io_wq_submit_work+0xeb/0x390
io_worker_handle_work+0x24d/0x550
io_wq_worker+0x27f/0x6c0
ret_from_fork+0x2d/0x50
ret_from_fork_asm+0x1b/0x30

Freed by task 808589:
kasan_save_stack+0x1e/0x40
kasan_set_track+0x21/0x30
kasan_save_free_info+0x27/0x40
__kasan_slab_free+0x126/0x1b0
kmem_cache_free+0x10c/0x750
bfq_put_queue+0x2dd/0x770
__bfq_insert_request.isra.0+0x155/0x7a0
bfq_insert_request.isra.0+0x122/0x480
bfq_insert_requests+0x156/0x180
blk_mq_dispatch_plug_list+0x528/0x7e0

blk_mq_flush_plug_list.part.0+0xe5/0x590
__blk_flush_plug+0x3b/0x90
blk_finish_plug+0x40/0x60
do_writepages+0x19d/0x310
filemap_fdatawrite_wbc+0x95/0xc0
__filemap_fdatawrite_range+0x99/0xd0
filemap_write_and_wait_range.part.0+0x4d/0xa0
blkdev_read_iter+0xef/0x1e0
io_read+0x1b6/0x8a0
io_issue_sqe+0x87/0x300
io_wq_submit_work+0xeb/0x390
io_worker_handle_work+0x24d/0x550
io_wq_worker+0x27f/0x6c0
ret_from_fork+0x2d/0x50
ret_from_fork_asm+0x1b/0x30

Fix the problem by protecting bic_to_bfqq() with bfqd->lock.

More Info: https://avd.aquasec.com/nvd/cve-2024-53166

[CVE-2024-53168] kernel: sunrpc: fix one UAF issue caused by sunrpc kernel tcp socket (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

sunrpc: fix one UAF issue caused by sunrpc kernel tcp socket

BUG: KASAN: slab-use-after-free in tcp_write_timer_handler+0x156/0x3e0
Read of size 1 at addr ffff888111f322cd by task swapper/0/0

CPU: 0 UID: 0 PID: 0 Comm: swapper/0 Not tainted 6.12.0-rc4-dirty #7
Hardware name: QEMU Standard PC (i440FX + PIIX, 1996), BIOS 1.15.0-1
Call Trace:
<IRQ>
dump_stack_lvl+0x68/0xa0
print_address_description.constprop.0+0x2c/0x3d0
print_report+0xb4/0x270
kasan_report+0xbd/0xf0
tcp_write_timer_handler+0x156/0x3e0
tcp_write_timer+0x66/0x170
call_timer_fn+0xfb/0x1d0
__run_timers+0x3f8/0x480
run_timer_softirq+0x9b/0x100
handle_softirqs+0x153/0x390
__irq_exit_rcu+0x103/0x120
irq_exit_rcu+0xe/0x20
sysvec_apic_timer_interrupt+0x76/0x90
</IRQ>
<TASK>

 asm_sysvec_apic_timer_interrupt+0x1a/0x20
RIP: 0010:default_idle+0xf/0x20
Code: 4c 01 c7 4c 29 c2 e9 72 ff ff ff 90 90 90 90 90 90 90 90 90 90 90 90
 90 90 90 90 f3 0f 1e fa 66 90 0f 00 2d 33 f8 25 00 fb f4 <fa> c3 cc cc cc
 cc 66 66 2e 0f 1f 84 00 00 00 00 00 90 90 90 90 90
RSP: 0018:ffffffffa2007e28 EFLAGS: 00000242
RAX: 00000000000f3b31 RBX: 1ffffffff4400fc7 RCX: ffffffffa09c3196
RDX: 0000000000000000 RSI: 0000000000000000 RDI: ffffffff9f00590f
RBP: 0000000000000000 R08: 0000000000000001 R09: ffffed102360835d
R10: ffff88811b041aeb R11: 0000000000000001 R12: 0000000000000000
R13: ffffffffa202d7c0 R14: 0000000000000000 R15: 00000000000147d0
 default_idle_call+0x6b/0xa0
 cpuidle_idle_call+0x1af/0x1f0
 do_idle+0xbc/0x130
 cpu_startup_entry+0x33/0x40
 rest_init+0x11f/0x210
 start_kernel+0x39a/0x420
 x86_64_start_reservations+0x18/0x30
 x86_64_start_kernel+0x97/0xa0
 common_startup_64+0x13e/0x141
 </TASK>

Allocated by task 595:
 kasan_save_stack+0x24/0x50
 kasan_save_track+0x14/0x30
 __kasan_slab_alloc+0x87/0x90
 kmem_cache_alloc_noprof+0x12b/0x3f0
 copy_net_ns+0x94/0x380
 create_new_namespaces+0x24c/0x500
 unshare_nsproxy_namespaces+0x75/0xf0
 ksys_unshare+0x24e/0x4f0
 __x64_sys_unshare+0x1f/0x30
 do_syscall_64+0x70/0x180
 entry_SYSCALL_64_after_hwframe+0x76/0x7e

Freed by task 100:
 kasan_save_stack+0x24/0x50
 kasan_save_track+0x14/0x30
 kasan_save_free_info+0x3b/0x60
 __kasan_slab_free+0x54/0x70
 kmem_cache_free+0x156/0x5d0
 cleanup_net+0x5d3/0x670
 process_one_work+0x776/0xa90
 worker_thread+0x2e2/0x560
 kthread+0x1a8/0x1f0
 ret_from_fork+0x34/0x60
 ret_from_fork_asm+0x1a/0x30

Reproduction script:

```
mkdir -p /mnt/nfsshare
mkdir -p /mnt/nfs/netns_1
mkfs.ext4 /dev/sdb
```

```
mount /dev/sdb /mnt/nfsshare
systemctl restart nfs-server
chmod 777 /mnt/nfsshare
exportfs -i -o rw,no_root_squash *:/mnt/nfsshare

ip netns add netns_1
ip link add name veth_1_peer type veth peer veth_1
ifconfig veth_1_peer 11.11.0.254 up
ip link set veth_1 netns netns_1
ip netns exec netns_1 ifconfig veth_1 11.11.0.1

ip netns exec netns_1 /root/iptables -A OUTPUT -d 11.11.0.254 -p tcp \
 --tcp-flags FIN FIN  -j DROP

(note: In my environment, a DESTROY_CLIENTID operation is always sent
 immediately, breaking the nfs tcp connection.)
ip netns exec netns_1 timeout -s 9 300 mount -t nfs -o proto=tcp,vers=4.1 \
 11.11.0.254:/mnt/nfsshare /mnt/nfs/netns_1

ip netns del netns_1

The reason here is that the tcp socket in netns_1 (nfs side) has been
shutdown and closed (done in xs_destroy), but the FIN message (with ack)
is discarded, and the nfsd side keeps sending retransmission messages.
As a result, when the tcp sock in netns_1 processes the received message,
it sends the message (FIN message) in the sending queue, and the tcp timer
is re-established. When the network namespace is deleted, the net structure
accessed by tcp's timer handler function causes problems.

To fix this problem, let's hold netns refcnt for the tcp kernel socket as
done in other modules. This is an ugly hack which can easily be backported
to earlier kernels. A proper fix which cleans up the interfaces will
follow, but may not be so easy to backport.

More Info: https://avd.aquasec.com/nvd/cve-2024-53168
```

[CVE-2024-53179] kernel: smb: client: fix use-after-free of signing key (Severity: HIGH)

```
Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

smb: client: fix use-after-free of signing key

Customers have reported use-after-free in @ses->auth_key.response with
SMB2.1 + sign mounts which occurs due to following race:

task A                  task B
cifs_mount()
 dfs_mount_share()
  get_session()
   cifs_mount_get_session()    cifs_send_recv()
```

```
cifs_get_smb_ses()          compound_send_recv()
 cifs_setup_session()       smb2_setup_request()
  kfree_sensitive()         smb2_calc_signature()
                          crypto_shash_setkey() *UAF*
```

Fix this by ensuring that we have a valid @ses->auth_key.response by checking whether @ses->ses_status is SES_GOOD or SES_EXITING with @ses->ses_lock held. After commit 24a9799aa8ef ("smb: client: fix UAF in smb2_reconnect_server()"), we made sure to call ->logoff() only when @ses was known to be good (e.g. valid ->auth_key.response), so it's safe to access signing key when @ses->ses_status == SES_EXITING.

More Info: https://avd.aquasec.com/nvd/cve-2024-53179

[CVE-2024-53203] kernel: usb: typec: fix potential array underflow in ucsi_ccg_sync_control() (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

usb: typec: fix potential array underflow in ucsi_ccg_sync_control()

The "command" variable can be controlled by the user via debugfs. The worry is that if con_index is zero then "&uc->ucsi->connector[con_index - 1]" would be an array underflow.

More Info: https://avd.aquasec.com/nvd/cve-2024-53203

[CVE-2024-53216] kernel: nfsd: release svc_expkey/svc_export with rcu_work (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

nfsd: release svc_expkey/svc_export with rcu_work

The last reference for `cache_head` can be reduced to zero in `c_show` and `e_show`(using `rcu_read_lock` and `rcu_read_unlock`). Consequently, `svc_export_put` and `expkey_put` will be invoked, leading to two issues:

1. The `svc_export_put` will directly free ex_uuid. However, `e_show`/`c_show` will access `ex_uuid` after `cache_put`, which can trigger a use-after-free issue, shown below.

   ```
   ==================================================================
   BUG: KASAN: slab-use-after-free in svc_export_show+0x362/0x430 [nfsd]
   Read of size 1 at addr ff11000010fdc120 by task cat/870
   ```

CPU: 1 UID: 0 PID: 870 Comm: cat Not tainted 6.12.0-rc3+ #1
Hardware name: QEMU Standard PC (i440FX + PIIX, 1996), BIOS 1.16.1-2.fc37 04/01/2014
Call Trace:
<TASK>
dump_stack_lvl+0x53/0x70
print_address_description.constprop.0+0x2c/0x3a0
print_report+0xb9/0x280
kasan_report+0xae/0xe0
svc_export_show+0x362/0x430 [nfsd]
c_show+0x161/0x390 [sunrpc]
seq_read_iter+0x589/0x770
seq_read+0x1e5/0x270
proc_reg_read+0xe1/0x140
vfs_read+0x125/0x530
ksys_read+0xc1/0x160
do_syscall_64+0x5f/0x170
entry_SYSCALL_64_after_hwframe+0x76/0x7e

Allocated by task 830:
kasan_save_stack+0x20/0x40
kasan_save_track+0x14/0x30
__kasan_kmalloc+0x8f/0xa0
__kmalloc_node_track_caller_noprof+0x1bc/0x400
kmemdup_noprof+0x22/0x50
svc_export_parse+0x8a9/0xb80 [nfsd]
cache_do_downcall+0x71/0xa0 [sunrpc]
cache_write_procfs+0x8e/0xd0 [sunrpc]
proc_reg_write+0xe1/0x140
vfs_write+0x1a5/0x6d0
ksys_write+0xc1/0x160
do_syscall_64+0x5f/0x170
entry_SYSCALL_64_after_hwframe+0x76/0x7e

Freed by task 868:
kasan_save_stack+0x20/0x40
kasan_save_track+0x14/0x30
kasan_save_free_info+0x3b/0x60
__kasan_slab_free+0x37/0x50
kfree+0xf3/0x3e0
svc_export_put+0x87/0xb0 [nfsd]
cache_purge+0x17f/0x1f0 [sunrpc]
nfsd_destroy_serv+0x226/0x2d0 [nfsd]
nfsd_svc+0x125/0x1e0 [nfsd]
write_threads+0x16a/0x2a0 [nfsd]
nfsctl_transaction_write+0x74/0xa0 [nfsd]
vfs_write+0x1a5/0x6d0
ksys_write+0xc1/0x160
do_syscall_64+0x5f/0x170
entry_SYSCALL_64_after_hwframe+0x76/0x7e

2. We cannot sleep while using `rcu_read_lock`/`rcu_read_unlock`.
   However, `svc_export_put`/`expkey_put` will call path_put, which

subsequently triggers a sleeping operation due to the following
`dput`.

=============================
WARNING: suspicious RCU usage
5.10.0-dirty #141 Not tainted

...
Call Trace:
dump_stack+0x9a/0xd0
___might_sleep+0x231/0x240
dput+0x39/0x600
path_put+0x1b/0x30
svc_export_put+0x17/0x80
e_show+0x1c9/0x200
seq_read_iter+0x63f/0x7c0
seq_read+0x226/0x2d0
vfs_read+0x113/0x2c0
ksys_read+0xc9/0x170
do_syscall_64+0x33/0x40
entry_SYSCALL_64_after_hwframe+0x67/0xd1

Fix these issues by using `rcu_work` to help release
`svc_expkey`/`svc_export`. This approach allows for an asynchronous
context to invoke `path_put` and also facilitates the freeing of
`uuid/exp/key` after an RCU grace period.

More Info: https://avd.aquasec.com/nvd/cve-2024-53216

[CVE-2024-56538] kernel: drm: zynqmp_kms: Unplug DRM device before removal (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm: zynqmp_kms: Unplug DRM device before removal

Prevent userspace accesses to the DRM device from causing
use-after-frees by unplugging the device before we remove it. This
causes any further userspace accesses to result in an error without
further calls into this driver's internals.

More Info: https://avd.aquasec.com/nvd/cve-2024-56538

[CVE-2024-56775] kernel: drm/amd/display: Fix handling of plane refcount (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Fix handling of plane refcount

[Why]
The mechanism to backup and restore plane states doesn't maintain refcount, which can cause issues if the refcount of the plane changes in between backup and restore operations, such as memory leaks if the refcount was supposed to go down, or double frees / invalid memory accesses if the refcount was supposed to go up.

[How]
Cache and re-apply current refcount when restoring plane states.

More Info: https://avd.aquasec.com/nvd/cve-2024-56775

[CVE-2024-56784] kernel: drm/amd/display: Adding array index check to prevent memory corruption (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Adding array index check to prevent memory corruption

[Why & How]
Array indices out of bound caused memory corruption. Adding checks to ensure that array index stays in bound.

More Info: https://avd.aquasec.com/nvd/cve-2024-56784

[CVE-2024-57900] kernel: ila: serialize calls to nf_register_net_hooks() (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ila: serialize calls to nf_register_net_hooks()

syzbot found a race in ila_add_mapping() [1]

commit 031ae72825ce ("ila: call nf_unregister_net_hooks() sooner")
attempted to fix a similar issue.

Looking at the syzbot repro, we have concurrent ILA_CMD_ADD commands.

Add a mutex to make sure at most one thread is calling nf_register_net_hooks().

[1]
BUG: KASAN: slab-use-after-free in rht_key_hashfn include/linux/rhashtable.h:159 [inline]
BUG: KASAN: slab-use-after-free in __rhashtable_lookup.constprop.0+0x426/0x550 include/linux/rhashtable.h:604
Read of size 4 at addr ffff888028f40008 by task dhcpcd/5501

CPU: 1 UID: 0 PID: 5501 Comm: dhcpcd Not tainted 6.13.0-rc4-syzkaller-00054-gd6ef8b40d075 #0
Hardware name: Google Google Compute Engine/Google Compute Engine, BIOS Google 09/13/2024
Call Trace:
 <IRQ>
  __dump_stack lib/dump_stack.c:94 [inline]
  dump_stack_lvl+0x116/0x1f0 lib/dump_stack.c:120
  print_address_description mm/kasan/report.c:378 [inline]
  print_report+0xc3/0x620 mm/kasan/report.c:489
  kasan_report+0xd9/0x110 mm/kasan/report.c:602
  rht_key_hashfn include/linux/rhashtable.h:159 [inline]
  __rhashtable_lookup.constprop.0+0x426/0x550 include/linux/rhashtable.h:604
  rhashtable_lookup include/linux/rhashtable.h:646 [inline]
  rhashtable_lookup_fast include/linux/rhashtable.h:672 [inline]
  ila_lookup_wildcards net/ipv6/ila/ila_xlat.c:127 [inline]
  ila_xlat_addr net/ipv6/ila/ila_xlat.c:652 [inline]
  ila_nf_input+0x1ee/0x620 net/ipv6/ila/ila_xlat.c:185
  nf_hook_entry_hookfn include/linux/netfilter.h:154 [inline]
  nf_hook_slow+0xbb/0x200 net/netfilter/core.c:626
  nf_hook.constprop.0+0x42e/0x750 include/linux/netfilter.h:269
  NF_HOOK include/linux/netfilter.h:312 [inline]
  ipv6_rcv+0xa4/0x680 net/ipv6/ip6_input.c:309
  __netif_receive_skb_one_core+0x12e/0x1e0 net/core/dev.c:5672
  __netif_receive_skb+0x1d/0x160 net/core/dev.c:5785
  process_backlog+0x443/0x15f0 net/core/dev.c:6117
  __napi_poll.constprop.0+0xb7/0x550 net/core/dev.c:6883
  napi_poll net/core/dev.c:6952 [inline]
  net_rx_action+0xa94/0x1010 net/core/dev.c:7074
  handle_softirqs+0x213/0x8f0 kernel/softirq.c:561
  __do_softirq kernel/softirq.c:595 [inline]
  invoke_softirq kernel/softirq.c:435 [inline]
  __irq_exit_rcu+0x109/0x170 kernel/softirq.c:662
  irq_exit_rcu+0x9/0x30 kernel/softirq.c:678
  instr_sysvec_apic_timer_interrupt arch/x86/kernel/apic/apic.c:1049 [inline]
  sysvec_apic_timer_interrupt+0xa4/0xc0 arch/x86/kernel/apic/apic.c:1049

More Info: https://avd.aquasec.com/nvd/cve-2024-57900

[CVE-2024-57982] kernel: xfrm: state: fix out-of-bounds read during lookup (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

xfrm: state: fix out-of-bounds read during lookup

lookup and resize can run in parallel.

The xfrm_state_hash_generation seqlock ensures a retry, but the hash
functions can observe a hmask value that is too large for the new hlist
array.

rehash does:
  rcu_assign_pointer(net->xfrm.state_bydst, ndst) [..]
  net->xfrm.state_hmask = nhashmask;

While state lookup does:
  h = xfrm_dst_hash(net, daddr, saddr, tmpl->reqid, encap_family);
  hlist_for_each_entry_rcu(x, net->xfrm.state_bydst + h, bydst) {

This is only safe in case the update to state_bydst is larger than
net->xfrm.xfrm_state_hmask (or if the lookup function gets
serialized via state spinlock again).

Fix this by prefetching state_hmask and the associated pointers.
The xfrm_state_hash_generation seqlock retry will ensure that the pointer
and the hmask will be consistent.

The existing helpers, like xfrm_dst_hash(), are now unsafe for RCU side,
add lockdep assertions to document that they are only safe for insert
side.

xfrm_state_lookup_byaddr() uses the spinlock rather than RCU.
AFAICS this is an oversight from back when state lookup was converted to
RCU, this lock should be replaced with RCU in a future patch.

More Info: https://avd.aquasec.com/nvd/cve-2024-57982

[CVE-2024-57984] kernel: i3c: dw: Fix use-after-free in dw_i3c_master driver due to race condition (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

i3c: dw: Fix use-after-free in dw_i3c_master driver due to race condition

In dw_i3c_common_probe, &master->hj_work is bound with
dw_i3c_hj_work. And dw_i3c_master_irq_handler can call
dw_i3c_master_irq_handle_ibis function to start the work.

If we remove the module which will call dw_i3c_common_remove to
make cleanup, it will free master->base through i3c_master_unregister
while the work mentioned above will be used. The sequence of operations
that may lead to a UAF bug is as follows:

CPU0 CPU1

| dw_i3c_hj_work
dw_i3c_common_remove |
i3c_master_unregister(&master->base) |
device_unregister(&master->dev) |
device_release |

//free master->base |
| i3c_master_do_daa(&master->base)
| //use master->base

Fix it by ensuring that the work is canceled before proceeding with
the cleanup in dw_i3c_common_remove.

More Info: https://avd.aquasec.com/nvd/cve-2024-57984

[CVE-2024-58002] kernel: media: uvcvideo: Remove dangling pointers (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

media: uvcvideo: Remove dangling pointers

When an async control is written, we copy a pointer to the file handle
that started the operation. That pointer will be used when the device is
done. Which could be anytime in the future.

If the user closes that file descriptor, its structure will be freed,
and there will be one dangling pointer per pending async control, that
the driver will try to use.

Clean all the dangling pointers during release().

To avoid adding a performance penalty in the most common case (no async
operation), a counter has been introduced with some logic to make sure
that it is properly handled.

More Info: https://avd.aquasec.com/nvd/cve-2024-58002

[CVE-2025-21702] kernel: pfifo_tail_enqueue: Drop new packet when sch->limit == 0 (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

pfifo_tail_enqueue: Drop new packet when sch->limit == 0

Expected behaviour:
In case we reach scheduler's limit, pfifo_tail_enqueue() will drop a
packet in scheduler's queue and decrease scheduler's qlen by one.
Then, pfifo_tail_enqueue() enqueue new packet and increase
scheduler's qlen by one. Finally, pfifo_tail_enqueue() return
`NET_XMIT_CN` status code.

Weird behaviour:
In case we set `sch->limit == 0` and trigger pfifo_tail_enqueue() on a

scheduler that has no packet, the 'drop a packet' step will do nothing.
This means the scheduler's qlen still has value equal 0.
Then, we continue to enqueue new packet and increase scheduler's qlen by
one. In summary, we can leverage pfifo_tail_enqueue() to increase qlen by
one and return `NET_XMIT_CN` status code.

The problem is:
Let's say we have two qdiscs: Qdisc_A and Qdisc_B.
- Qdisc_A's type must have '->graft()' function to create parent/child relationship.
  Let's say Qdisc_A's type is `hfsc`. Enqueue packet to this qdisc will trigger `hfsc_enqueue`.
- Qdisc_B's type is pfifo_head_drop. Enqueue packet to this qdisc will trigger `pfifo_tail_enqueue`.
- Qdisc_B is configured to have `sch->limit == 0`.
- Qdisc_A is configured to route the enqueued's packet to Qdisc_B.

Enqueue packet through Qdisc_A will lead to:
- hfsc_enqueue(Qdisc_A) -> pfifo_tail_enqueue(Qdisc_B)
- Qdisc_B->q.qlen += 1
- pfifo_tail_enqueue() return `NET_XMIT_CN`
- hfsc_enqueue() check for `NET_XMIT_SUCCESS` and see `NET_XMIT_CN` => hfsc_enqueue() don't increase qlen of Qdisc_A.

The whole process lead to a situation where Qdisc_A->q.qlen == 0 and Qdisc_B->q.qlen == 1.
Replace 'hfsc' with other type (for example: 'drr') still lead to the same problem.
This violate the design where parent's qlen should equal to the sum of its childrens'qlen.

Bug impact: This issue can be used for user->kernel privilege escalation when it is reachable.

More Info: https://avd.aquasec.com/nvd/cve-2025-21702

[CVE-2025-21855] kernel: ibmvnic: Don't reference skb after sending to VIOS (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

ibmvnic: Don't reference skb after sending to VIOS

Previously, after successfully flushing the xmit buffer to VIOS,
the tx_bytes stat was incremented by the length of the skb.

It is invalid to access the skb memory after sending the buffer to
the VIOS because, at any point after sending, the VIOS can trigger
an interrupt to free this memory. A race between reading skb->len
and freeing the skb is possible (especially during LPM) and will
result in use-after-free:
```
==================================================================
BUG: KASAN: slab-use-after-free in ibmvnic_xmit+0x75c/0x1808 [ibmvnic]
Read of size 4 at addr c00000024eb48a70 by task hxecom/14495
<...>
Call Trace:
[c000000118f66cf0] [c0000000018cba6c] dump_stack_lvl+0x84/0xe8 (unreliable)
[c000000118f66d20] [c0000000006f0080] print_report+0x1a8/0x7f0
```

[c000000118f66df0] [c0000000006f08f0] kasan_report+0x128/0x1f8
[c000000118f66f00] [c0000000006f2868] __asan_load4+0xac/0xe0
[c000000118f66f20] [c0080000046eac84] ibmvnic_xmit+0x75c/0x1808 [ibmvnic]
[c000000118f67340] [c0000000014be168] dev_hard_start_xmit+0x150/0x358
<...>
Freed by task 0:
kasan_save_stack+0x34/0x68
kasan_save_track+0x2c/0x50
kasan_save_free_info+0x64/0x108
__kasan_mempool_poison_object+0x148/0x2d4
napi_skb_cache_put+0x5c/0x194
net_tx_action+0x154/0x5b8
handle_softirqs+0x20c/0x60c
do_softirq_own_stack+0x6c/0x88
<...>
The buggy address belongs to the object at c00000024eb48a00 which
belongs to the cache skbuff_head_cache of size 224
==

More Info: https://avd.aquasec.com/nvd/cve-2025-21855

[CVE-2025-21858] kernel: geneve: Fix use-after-free in geneve_find_dev(). (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

geneve: Fix use-after-free in geneve_find_dev().

syzkaller reported a use-after-free in geneve_find_dev() [0]
without repro.

geneve_configure() links struct geneve_dev.next to
net_generic(net, geneve_net_id)->geneve_list.

The net here could differ from dev_net(dev) if IFLA_NET_NS_PID,
IFLA_NET_NS_FD, or IFLA_TARGET_NETNSID is set.

When dev_net(dev) is dismantled, geneve_exit_batch_rtnl() finally
calls unregister_netdevice_queue() for each dev in the netns,
and later the dev is freed.

However, its geneve_dev.next is still linked to the backend UDP
socket netns.

Then, use-after-free will occur when another geneve dev is created
in the netns.

Let's call geneve_dellink() instead in geneve_destroy_tunnels().

[0]:
BUG: KASAN: slab-use-after-free in geneve_find_dev drivers/net/geneve.c:1295 [inline]

BUG: KASAN: slab-use-after-free in geneve_configure+0x234/0x858 drivers/net/geneve.c:1343
Read of size 2 at addr ffff000054d6ee24 by task syz.1.4029/13441

CPU: 1 UID: 0 PID: 13441 Comm: syz.1.4029 Not tainted 6.13.0-g0ad9617c78ac #24 dc35ca22c79fb82e8e7bc5c9c9adafea898b1e3d
Hardware name: linux,dummy-virt (DT)
Call trace:
 show_stack+0x38/0x50 arch/arm64/kernel/stacktrace.c:466 (C)
 __dump_stack lib/dump_stack.c:94 [inline]
 dump_stack_lvl+0xbc/0x108 lib/dump_stack.c:120
 print_address_description mm/kasan/report.c:378 [inline]
 print_report+0x16c/0x6f0 mm/kasan/report.c:489
 kasan_report+0xc0/0x120 mm/kasan/report.c:602
 __asan_report_load2_noabort+0x20/0x30 mm/kasan/report_generic.c:379
 geneve_find_dev drivers/net/geneve.c:1295 [inline]
 geneve_configure+0x234/0x858 drivers/net/geneve.c:1343
 geneve_newlink+0xb8/0x128 drivers/net/geneve.c:1634
 rtnl_newlink_create+0x23c/0x868 net/core/rtnetlink.c:3795
 __rtnl_newlink net/core/rtnetlink.c:3906 [inline]
 rtnl_newlink+0x1054/0x1630 net/core/rtnetlink.c:4021
 rtnetlink_rcv_msg+0x61c/0x918 net/core/rtnetlink.c:6911
 netlink_rcv_skb+0x1dc/0x398 net/netlink/af_netlink.c:2543
 rtnetlink_rcv+0x34/0x50 net/core/rtnetlink.c:6938
 netlink_unicast_kernel net/netlink/af_netlink.c:1322 [inline]
 netlink_unicast+0x618/0x838 net/netlink/af_netlink.c:1348
 netlink_sendmsg+0x5fc/0x8b0 net/netlink/af_netlink.c:1892
 sock_sendmsg_nosec net/socket.c:713 [inline]
 __sock_sendmsg net/socket.c:728 [inline]
 ____sys_sendmsg+0x410/0x6f8 net/socket.c:2568
 ___sys_sendmsg+0x178/0x1d8 net/socket.c:2622
 __sys_sendmsg net/socket.c:2654 [inline]
 __do_sys_sendmsg net/socket.c:2659 [inline]
 __se_sys_sendmsg net/socket.c:2657 [inline]
 __arm64_sys_sendmsg+0x12c/0x1c8 net/socket.c:2657
 __invoke_syscall arch/arm64/kernel/syscall.c:35 [inline]
 invoke_syscall+0x90/0x278 arch/arm64/kernel/syscall.c:49
 el0_svc_common+0x13c/0x250 arch/arm64/kernel/syscall.c:132
 do_el0_svc+0x54/0x70 arch/arm64/kernel/syscall.c:151
 el0_svc+0x4c/0xa8 arch/arm64/kernel/entry-common.c:744
 el0t_64_sync_handler+0x78/0x108 arch/arm64/kernel/entry-common.c:762
 el0t_64_sync+0x198/0x1a0 arch/arm64/kernel/entry.S:600

Allocated by task 13247:
 kasan_save_stack mm/kasan/common.c:47 [inline]
 kasan_save_track+0x30/0x68 mm/kasan/common.c:68
 kasan_save_alloc_info+0x44/0x58 mm/kasan/generic.c:568
 poison_kmalloc_redzone mm/kasan/common.c:377 [inline]
 __kasan_kmalloc+0x84/0xa0 mm/kasan/common.c:394
 kasan_kmalloc include/linux/kasan.h:260 [inline]
 __do_kmalloc_node mm/slub.c:4298 [inline]
 __kmalloc_node_noprof+0x2a0/0x560 mm/slub.c:4304
 __kvmalloc_node_noprof+0x9c/0x230 mm/util.c:645
 alloc_netdev_mqs+0xb8/0x11a0 net/core/dev.c:11470

rtnl_create_link+0x2b8/0xb50 net/core/rtnetlink.c:3604
rtnl_newlink_create+0x19c/0x868 net/core/rtnetlink.c:3780
__rtnl_newlink net/core/rtnetlink.c:3906 [inline]
rtnl_newlink+0x1054/0x1630 net/core/rtnetlink.c:4021
rtnetlink_rcv_msg+0x61c/0x918 net/core/rtnetlink.c:6911
netlink_rcv_skb+0x1dc/0x398 net/netlink/af_netlink.c:2543
rtnetlink_rcv+0x34/0x50 net/core/rtnetlink.c:6938
netlink_unicast_kernel net/netlink/af_n
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2025-21858

[CVE-2025-21863] kernel: io_uring: prevent opcode speculation (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

io_uring: prevent opcode speculation

sqe->opcode is used for different tables, make sure we santitise it
against speculations.

More Info: https://avd.aquasec.com/nvd/cve-2025-21863

[CVE-2025-21919] kernel: sched/fair: Fix potential memory corruption in child_cfs_rq_on_list (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

sched/fair: Fix potential memory corruption in child_cfs_rq_on_list

child_cfs_rq_on_list attempts to convert a 'prev' pointer to a cfs_rq.
This 'prev' pointer can originate from struct rq's leaf_cfs_rq_list,
making the conversion invalid and potentially leading to memory
corruption. Depending on the relative positions of leaf_cfs_rq_list and
the task group (tg) pointer within the struct, this can cause a memory
fault or access garbage data.

The issue arises in list_add_leaf_cfs_rq, where both
cfs_rq->leaf_cfs_rq_list and rq->leaf_cfs_rq_list are added to the same
leaf list. Also, rq->tmp_alone_branch can be set to rq->leaf_cfs_rq_list.

This adds a check `if (prev == &rq->leaf_cfs_rq_list)` after the main
conditional in child_cfs_rq_on_list. This ensures that the container_of
operation will convert a correct cfs_rq struct.

This check is sufficient because only cfs_rqs on the same CPU are added

to the list, so verifying the 'prev' pointer against the current rq's list head is enough.

Fixes a potential memory corruption issue that due to current struct layout might not be manifesting as a crash but could lead to unpredictable behavior when the layout changes.

More Info: https://avd.aquasec.com/nvd/cve-2025-21919

[CVE-2025-21920] kernel: vlan: enforce underlying device type (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

vlan: enforce underlying device type

Currently, VLAN devices can be created on top of non-ethernet devices.

Besides the fact that it doesn't make much sense, this also causes a bug which leaks the address of a kernel function to usermode.

When creating a VLAN device, we initialize GARP (garp_init_applicant) and MRP (mrp_init_applicant) for the underlying device.

As part of the initialization process, we add the multicast address of each applicant to the underlying device, by calling dev_mc_add.

__dev_mc_add uses dev->addr_len to determine the length of the new multicast address.

This causes an out-of-bounds read if dev->addr_len is greater than 6, since the multicast addresses provided by GARP and MRP are only 6 bytes long.

This behaviour can be reproduced using the following commands:

ip tunnel add gretest mode ip6gre local ::1 remote ::2 dev lo
ip l set up dev gretest
ip link add link gretest name vlantest type vlan id 100

Then, the following command will display the address of garp_pdu_rcv:

ip maddr show | grep 01:80:c2:00:00:21

Fix the bug by enforcing the type of the underlying device during VLAN device initialization.

More Info: https://avd.aquasec.com/nvd/cve-2025-21920

[CVE-2025-21926] kernel: net: gso: fix ownership in __udp_gso_segment (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

net: gso: fix ownership in __udp_gso_segment

In __udp_gso_segment the skb destructor is removed before segmenting the
skb but the socket reference is kept as-is. This is an issue if the
original skb is later orphaned as we can hit the following bug:

```
kernel BUG at ./include/linux/skbuff.h:3312!  (skb_orphan)
RIP: 0010:ip_rcv_core+0x8b2/0xca0
Call Trace:
 ip_rcv+0xab/0x6e0
 __netif_receive_skb_one_core+0x168/0x1b0
 process_backlog+0x384/0x1100
 __napi_poll.constprop.0+0xa1/0x370
 net_rx_action+0x925/0xe50
```

The above can happen following a sequence of events when using
OpenVSwitch, when an OVS_ACTION_ATTR_USERSPACE action precedes an
OVS_ACTION_ATTR_OUTPUT action:

1. OVS_ACTION_ATTR_USERSPACE is handled (in do_execute_actions): the skb
   goes through queue_gso_packets and then __udp_gso_segment, where its
   destructor is removed.
2. The segments' data are copied and sent to userspace.
3. OVS_ACTION_ATTR_OUTPUT is handled (in do_execute_actions) and the
   same original skb is sent to its path.
4. If it later hits skb_orphan, we hit the bug.

Fix this by also removing the reference to the socket in
__udp_gso_segment.

More Info: https://avd.aquasec.com/nvd/cve-2025-21926

[CVE-2025-21927] kernel: nvme-tcp: fix potential memory corruption in nvme_tcp_recv_pdu() (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

nvme-tcp: fix potential memory corruption in nvme_tcp_recv_pdu()

nvme_tcp_recv_pdu() doesn't check the validity of the header length.
When header digests are enabled, a target might send a packet with an
invalid header length (e.g. 255), causing nvme_tcp_verify_hdgst()
to access memory outside the allocated area and cause memory corruptions

by overwriting it with the calculated digest.

Fix this by rejecting packets with an unexpected header length.

More Info: https://avd.aquasec.com/nvd/cve-2025-21927

[CVE-2025-21928] kernel: HID: intel-ish-hid: Fix use-after-free issue in ishtp_hid_remove() (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

HID: intel-ish-hid: Fix use-after-free issue in ishtp_hid_remove()

The system can experience a random crash a few minutes after the driver is
removed. This issue occurs due to improper handling of memory freeing in
the ishtp_hid_remove() function.

The function currently frees the `driver_data` directly within the loop
that destroys the HID devices, which can lead to accessing freed memory.
Specifically, `hid_destroy_device()` uses `driver_data` when it calls
`hid_ishtp_set_feature()` to power off the sensor, so freeing
`driver_data` beforehand can result in accessing invalid memory.

This patch resolves the issue by storing the `driver_data` in a temporary
variable before calling `hid_destroy_device()`, and then freeing the
`driver_data` after the device is destroyed.

More Info: https://avd.aquasec.com/nvd/cve-2025-21928

[CVE-2025-21934] kernel: rapidio: fix an API misues when rio_add_net() fails (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

rapidio: fix an API misues when rio_add_net() fails

rio_add_net() calls device_register() and fails when device_register()
fails. Thus, put_device() should be used rather than kfree(). Add
"mport->net = NULL;" to avoid a use after free issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-21934

[CVE-2025-21945] kernel: ksmbd: fix use-after-free in smb2_lock (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

ksmbd: fix use-after-free in smb2_lock

If smb_lock->zero_len has value, ->llist of smb_lock is not delete and
flock is old one. It will cause use-after-free on error handling
routine.

More Info: https://avd.aquasec.com/nvd/cve-2025-21945

[CVE-2025-21979] kernel: wifi: cfg80211: cancel wiphy_work before freeing wiphy (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

wifi: cfg80211: cancel wiphy_work before freeing wiphy

A wiphy_work can be queued from the moment the wiphy is allocated and
initialized (i.e. wiphy_new_nm). When a wiphy_work is queued, the
rdev::wiphy_work is getting queued.

If wiphy_free is called before the rdev::wiphy_work had a chance to run,
the wiphy memory will be freed, and then when it eventally gets to run
it'll use invalid memory.

Fix this by canceling the work before freeing the wiphy.

More Info: https://avd.aquasec.com/nvd/cve-2025-21979

[CVE-2025-21991] kernel: x86/microcode/AMD: Fix out-of-bounds on systems with CPU-less NUMA nodes (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

x86/microcode/AMD: Fix out-of-bounds on systems with CPU-less NUMA nodes

Currently, load_microcode_amd() iterates over all NUMA nodes, retrieves their
CPU masks and unconditionally accesses per-CPU data for the first CPU of each
mask.

According to Documentation/admin-guide/mm/numaperf.rst:

> "Some memory may share the same node as a CPU, and others are provided as
> memory only nodes."

Therefore, some node CPU masks may be empty and wouldn't have a "first CPU".

On a machine with far memory (and therefore CPU-less NUMA nodes):
- cpumask_of_node(nid) is 0
- cpumask_first(0) is CONFIG_NR_CPUS
- cpu_data(CONFIG_NR_CPUS) accesses the cpu_info per-CPU array at an
  index that is 1 out of bounds

This does not have any security implications since flashing microcode is
a privileged operation but I believe this has reliability implications by
potentially corrupting memory while flashing a microcode update.

When booting with CONFIG_UBSAN_BOUNDS=y on an AMD machine that flashes
a microcode update. I get the following splat:

```
UBSAN: array-index-out-of-bounds in arch/x86/kernel/cpu/microcode/amd.c:X:Y
index 512 is out of range for type 'unsigned long[512]'
[...]
Call Trace:
 dump_stack
 __ubsan_handle_out_of_bounds
 load_microcode_amd
 request_microcode_amd
 reload_store
 kernfs_fop_write_iter
 vfs_write
 ksys_write
 do_syscall_64
 entry_SYSCALL_64_after_hwframe
```

Change the loop to go over only NUMA nodes which have CPUs before determining
whether the first CPU on the respective node needs microcode update.

[bp: Massage commit message, fix typo.]

More Info: https://avd.aquasec.com/nvd/cve-2025-21991

[CVE-2025-21993] kernel: iscsi_ibft: Fix UBSAN shift-out-of-bounds warning in ibft_attr_show_nic() (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

iscsi_ibft: Fix UBSAN shift-out-of-bounds warning in ibft_attr_show_nic()

When performing an iSCSI boot using IPv6, iscsistart still reads the
/sys/firmware/ibft/ethernetX/subnet-mask entry. Since the IPv6 prefix
length is 64, this causes the shift exponent to become negative,
triggering a UBSAN warning. As the concept of a subnet mask does not
apply to IPv6, the value is set to ~0 to suppress the warning message.

More Info: https://avd.aquasec.com/nvd/cve-2025-21993

[CVE-2025-21999] kernel: proc: fix UAF in proc_get_inode() (Severity: HIGH)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

proc: fix UAF in proc_get_inode()

Fix race between rmmod and /proc/XXX's inode instantiation.

The bug is that pde->proc_ops don't belong to /proc, it belongs to a
module, therefore dereferencing it after /proc entry has been registered
is a bug unless use_pde/unuse_pde() pair has been used.

use_pde/unuse_pde can be avoided (2 atomic ops!) because pde->proc_ops
never changes so information necessary for inode instantiation can be
saved _before_ proc_register() in PDE itself and used later, avoiding
pde->proc_ops->... dereference.

```
     rmmod                      lookup
sys_delete_module
                     proc_lookup_de
     pde_get(de);
     proc_get_inode(dir->i_sb, de);
  mod->exit()
    proc_remove
     remove_proc_subtree
      proc_entry_rundown(de);
  free_module(mod);

                          if (S_ISREG(inode->i_mode))
                     if (de->proc_ops->proc_read_iter)
                      --> As module is already freed, will trigger UAF
```

BUG: unable to handle page fault for address: fffffbfff80a702b
PGD 817fc4067 P4D 817fc4067 PUD 817fc0067 PMD 102ef4067 PTE 0
Oops: Oops: 0000 [#1] PREEMPT SMP KASAN PTI
CPU: 26 UID: 0 PID: 2667 Comm: ls Tainted: G
Hardware name: QEMU Standard PC (i440FX + PIIX, 1996)
RIP: 0010:proc_get_inode+0x302/0x6e0
RSP: 0018:ffff88811c837998 EFLAGS: 00010a06
RAX: dfffc0000000000 RBX: ffffffffc0538140 RCX: 0000000000000007
RDX: 1ffffffff80a702b RSI: 0000000000000001 RDI: ffffffffc0538158
RBP: ffff8881299a6000 R08: 0000000067bbe1e5 R09: 1ffff11023906f20
R10: ffffffffb560ca07 R11: ffffffffb2b43a58 R12: ffff888105bb78f0
R13: ffff888100518048 R14: ffff8881299a6004 R15: 0000000000000001
FS: 00007f95b9686840(0000) GS:ffff8883af100000(0000) knlGS:0000000000000000
CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: fffffbfff80a702b CR3: 0000000117dd2000 CR4: 00000000000006f0
DR0: 0000000000000000 DR1: 0000000000000000 DR2: 0000000000000000
DR3: 0000000000000000 DR6: 00000000fffe0ff0 DR7: 0000000000000400

Call Trace:
 <TASK>
 proc_lookup_de+0x11f/0x2e0
 __lookup_slow+0x188/0x350
 walk_component+0x2ab/0x4f0
 path_lookupat+0x120/0x660
 filename_lookup+0x1ce/0x560
 vfs_statx+0xac/0x150
 __do_sys_newstat+0x96/0x110
 do_syscall_64+0x5f/0x170
 entry_SYSCALL_64_after_hwframe+0x76/0x7e

[adobriyan@gmail.com: don't do 2 atomic ops on the common path]

More Info: https://avd.aquasec.com/nvd/cve-2025-21999

[CVE-2019-15213] kernel: use-after-free caused by malicious USB device in drivers/media/usb/dvb-usb/dvb-usb-init.c (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in the Linux kernel before 5.2.3. There is a use-after-free caused by a malicious USB device in the drivers/media/usb/dvb-usb/dvb-usb-init.c driver.

More Info: https://avd.aquasec.com/nvd/cve-2019-15213

[CVE-2019-16089] kernel: Improper return check in nbd_genl_status function in drivers/block/nbd.c (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in the Linux kernel through 5.2.13. nbd_genl_status in drivers/block/nbd.c does not check the nla_nest_start_noflag return value.

More Info: https://avd.aquasec.com/nvd/cve-2019-16089

[CVE-2019-20794] kernel: task processes not being properly ended could lead to resource exhaustion (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in the Linux kernel 4.18 through 5.6.11 when unprivileged user namespaces are allowed. A user can create their own PID namespace, and mount a FUSE filesystem. Upon interaction with this FUSE filesystem, if the userspace component is terminated via a kill of the PID namespace's pid 1, it will result in a hung task, and resources being permanently locked up until system reboot. This can result in resource exhaustion.

More Info: https://avd.aquasec.com/nvd/cve-2019-20794

[CVE-2020-14304] kernel: ethtool when reading eeprom of device could lead to memory leak

(Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A memory disclosure flaw was found in the Linux kernel's ethernet drivers, in the way it read data from the EEPROM of the device. This flaw allows a local user to read uninitialized values from the kernel memory. The highest threat from this vulnerability is to confidentiality.

More Info: https://avd.aquasec.com/nvd/cve-2020-14304

[CVE-2020-36694] kernel: netfilter: use-after-free in the packet processing context (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in netfilter in the Linux kernel before 5.10. There can be a use-after-free in the packet processing context, because the per-CPU sequence count is mishandled during concurrent iptables rules replacement. This could be exploited with the CAP_NET_ADMIN capability in an unprivileged namespace. NOTE: cc00bca was reverted in 5.12.

More Info: https://avd.aquasec.com/nvd/cve-2020-36694

[CVE-2021-47658] kernel: drm/amd/pm: fix a potential gpu_metrics_table memory leak (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/pm: fix a potential gpu_metrics_table memory leak

Memory is allocated for gpu_metrics_table in renoir_init_smc_tables(),
but not freed in int smu_v12_0_fini_smc_tables(). Free it!

More Info: https://avd.aquasec.com/nvd/cve-2021-47658

[CVE-2023-0597] kernel: x86/mm: Randomize per-cpu entry area (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A flaw possibility of memory leak in the Linux kernel cpu_entry_area mapping of X86 CPU data to memory was found in the way user can guess location of exception stack(s) or other important data. A local user could use this flaw to get access to some important data with expected location in memory.

More Info: https://avd.aquasec.com/nvd/cve-2023-0597

[CVE-2023-21264] In multiple functions of mem_protect.c, there is a possible way to acc ... (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In multiple functions of mem_protect.c, there is a possible way to access hypervisor memory due to a memory access check in the wrong place. This could lead to local escalation of privilege with System execution privileges needed. User interaction is not needed for exploitation.

More Info: https://avd.aquasec.com/nvd/cve-2023-21264

[CVE-2023-23005] kernel: incorrect check for error case in the memory_tier_init (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel before 6.2, mm/memory-tiers.c misinterprets the alloc_memory_type return value (expects it to be NULL in the error case, whereas it is actually an error pointer). NOTE: this is disputed by third parties because there are no realistic cases in which a user can cause the alloc_memory_type error case to be reached.

More Info: https://avd.aquasec.com/nvd/cve-2023-23005

[CVE-2023-31082] kernel: sleeping function called from an invalid context in gsmld_write (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in drivers/tty/n_gsm.c in the Linux kernel 6.2. There is a sleeping function called from an invalid context in gsmld_write, which will block the kernel. Note: This has been disputed by 3rd parties as not a valid vulnerability.

More Info: https://avd.aquasec.com/nvd/cve-2023-31082

[CVE-2023-3397] kernel: slab-use-after-free Write in txEnd due to race condition (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A race condition occurred between the functions lmLogClose and txEnd in JFS, in the Linux Kernel, executed in different threads. This flaw allows a local attacker with normal user privileges to crash the system or leak internal kernel information.

More Info: https://avd.aquasec.com/nvd/cve-2023-3397

[CVE-2023-37454] kernel: udf: use-after-free write in udf_close_lvid (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in the Linux kernel through 6.4.2. A crafted UDF filesystem image causes a use-after-free write

operation in the udf_put_super and udf_close_lvid functions in fs/udf/super.c. NOTE: the suse.com reference has a different perspective about this.

More Info: https://avd.aquasec.com/nvd/cve-2023-37454

[CVE-2023-4010] kernel: usb: hcd: malformed USB descriptor leads to infinite loop in usb_giveback_urb() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A flaw was found in the USB Host Controller Driver framework in the Linux kernel. The usb_giveback_urb function has a logic loophole in its implementation. Due to the inappropriate judgment condition of the goto statement, the function cannot return under the input of a specific malformed descriptor file, so it falls into an endless loop, resulting in a denial of service.

More Info: https://avd.aquasec.com/nvd/cve-2023-4010

[CVE-2023-4133] kernel: cxgb4: use-after-free in ch_flower_stats_cb() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A use-after-free vulnerability was found in the cxgb4 driver in the Linux kernel. The bug occurs when the cxgb4 device is detaching due to a possible rearming of the flower_stats_timer from the work queue. This flaw allows a local user to crash the system, causing a denial of service condition.

More Info: https://avd.aquasec.com/nvd/cve-2023-4133

[CVE-2023-52485] kernel: drm/amd/display: Wake DMCUB before sending a command cause deadlock (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Wake DMCUB before sending a command

[Why]
We can hang in place trying to send commands when the DMCUB isn't powered on.

[How]
For functions that execute within a DC context or DC lock we can wrap the direct calls to dm_execute_dmub_cmd/list with code that exits idle power optimizations and reallows once we're done with the command submission on success.

For DM direct submissions the DM will need to manage the enter/exit sequencing manually.

We cannot invoke a DMCUB command directly within the DM execution
helper or we can deadlock.

More Info: https://avd.aquasec.com/nvd/cve-2023-52485

[CVE-2023-52590] kernel: ocfs2: Avoid touching renamed directory if parent does not change (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ocfs2: Avoid touching renamed directory if parent does not change

The VFS will not be locking moved directory if its parent does not
change. Change ocfs2 rename code to avoid touching renamed directory if
its parent does not change as without locking that can corrupt the
filesystem.

More Info: https://avd.aquasec.com/nvd/cve-2023-52590

[CVE-2023-52591] kernel: reiserfs: Avoid touching renamed directory if parent does not change (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

reiserfs: Avoid touching renamed directory if parent does not change

The VFS will not be locking moved directory if its parent does not
change. Change reiserfs rename code to avoid touching renamed directory
if its parent does not change as without locking that can corrupt the
filesystem.

More Info: https://avd.aquasec.com/nvd/cve-2023-52591

[CVE-2023-52596] kernel: sysctl: Fix out of bounds access for empty sysctl registers (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

sysctl: Fix out of bounds access for empty sysctl registers

When registering tables to the sysctl subsystem there is a check to see
if header is a permanently empty directory (used for mounts). This check
evaluates the first element of the ctl_table. This results in an out of

bounds evaluation when registering empty directories.

The function register_sysctl_mount_point now passes a ctl_table of size
1 instead of size 0. It now relies solely on the type to identify
a permanently empty register.

Make sure that the ctl_table has at least one element before testing for
permanent emptiness.

More Info: https://avd.aquasec.com/nvd/cve-2023-52596

[CVE-2023-52625] kernel: drm/amd/display: Refactor DMCUB enter/exit idle interface (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Refactor DMCUB enter/exit idle interface

[Why]
We can hang in place trying to send commands when the DMCUB isn't
powered on.

[How]
We need to exit out of the idle state prior to sending a command,
but the process that performs the exit also invokes a command itself.

Fixing this issue involves the following:

1. Using a software state to track whether or not we need to start
   the process to exit idle or notify idle.

It's possible for the hardware to have exited an idle state without
driver knowledge, but entering one is always restricted to a driver
allow - which makes the SW state vs HW state mismatch issue purely one
of optimization, which should seldomly be hit, if at all.

2. Refactor any instances of exit/notify idle to use a single wrapper
   that maintains this SW state.

This works simialr to dc_allow_idle_optimizations, but works at the
DMCUB level and makes sure the state is marked prior to any notify/exit
idle so we don't enter an infinite loop.

3. Make sure we exit out of idle prior to sending any commands or
   waiting for DMCUB idle.

This patch takes care of 1/2. A future patch will take care of wrapping
DMCUB command submission with calls to this new interface.

More Info: https://avd.aquasec.com/nvd/cve-2023-52625

[CVE-2023-52629] kernel: sh: push-switch: Reorder cleanup operations to avoid use-after-free bug (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

sh: push-switch: Reorder cleanup operations to avoid use-after-free bug

The original code puts flush_work() before timer_shutdown_sync()
in switch_drv_remove(). Although we use flush_work() to stop
the worker, it could be rescheduled in switch_timer(). As a result,
a use-after-free bug can occur. The details are shown below:

```
     (cpu 0)                  |      (cpu 1)
switch_drv_remove()           |
 flush_work()                 |
  ...                         |  switch_timer // timer
                              |   schedule_work(&psw->work)
 timer_shutdown_sync()        |
 ...                          |  switch_work_handler // worker
 kfree(psw) // free           |
                              |   psw->state = 0 // use
```

This patch puts timer_shutdown_sync() before flush_work() to
mitigate the bugs. As a result, the worker and timer will be
stopped safely before the deallocate operations.

More Info: https://avd.aquasec.com/nvd/cve-2023-52629

[CVE-2023-52648] kernel: drm/vmwgfx: Unmap the surface before resetting it on a plane state (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/vmwgfx: Unmap the surface before resetting it on a plane state

Switch to a new plane state requires unreferencing of all held surfaces.
In the work required for mob cursors the mapped surfaces started being
cached but the variable indicating whether the surface is currently
mapped was not being reset. This leads to crashes as the duplicated
state, incorrectly, indicates the that surface is mapped even when
no surface is present. That's because after unreferencing the surface
it's perfectly possible for the plane to be backed by a bo instead of a
surface.

Reset the surface mapped flag when unreferencing the plane state surface
to fix null derefs in cleanup. Fixes crashes in KDE KWin 6.0 on Wayland:

Oops: 0000 [#1] PREEMPT SMP PTI
CPU: 4 PID: 2533 Comm: kwin_wayland Not tainted 6.7.0-rc3-vmwgfx #2
Hardware name: VMware, Inc. VMware Virtual Platform/440BX Desktop Reference Platform, BIOS 6.00 11/12/2020
RIP: 0010:vmw_du_cursor_plane_cleanup_fb+0x124/0x140 [vmwgfx]
Code: 00 00 00 75 3a 48 83 c4 10 5b 5d c3 cc cc cc cc 48 8b b3 a8 00 00 00 48 c7 c7 99 90 43 c0 e8 93 c5 db ca 48 8b 83 a8 00 00 00 <48> 8b 78 28 e8 e3 f>
RSP: 0018:ffffb6b98216fa80 EFLAGS: 00010246
RAX: 0000000000000000 RBX: ffff969d84cdcb00 RCX: 0000000000000027
RDX: 0000000000000000 RSI: 0000000000000001 RDI: ffff969e75f21600
RBP: ffff969d4143dc50 R08: 0000000000000000 R09: ffffb6b98216f920
R10: 0000000000000003 R11: ffff969e7feb3b10 R12: 0000000000000000
R13: 0000000000000000 R14: 000000000000027b R15: ffff969d49c9fc00
FS: 00007f1e8f1b4180(0000) GS:ffff969e75f00000(0000) knlGS:0000000000000000
CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 0000000000000028 CR3: 0000000104006004 CR4: 00000000003706f0
Call Trace:
 <TASK>
 ? __die+0x23/0x70
 ? page_fault_oops+0x171/0x4e0
 ? exc_page_fault+0x7f/0x180
 ? asm_exc_page_fault+0x26/0x30
 ? vmw_du_cursor_plane_cleanup_fb+0x124/0x140 [vmwgfx]
 drm_atomic_helper_cleanup_planes+0x9b/0xc0
 commit_tail+0xd1/0x130
 drm_atomic_helper_commit+0x11a/0x140
 drm_atomic_commit+0x97/0xd0
 ? __pfx___drm_printfn_info+0x10/0x10
 drm_atomic_helper_update_plane+0xf5/0x160
 drm_mode_cursor_universal+0x10e/0x270
 drm_mode_cursor_common+0x102/0x230
 ? __pfx_drm_mode_cursor2_ioctl+0x10/0x10
 drm_ioctl_kernel+0xb2/0x110
 drm_ioctl+0x26d/0x4b0
 ? __pfx_drm_mode_cursor2_ioctl+0x10/0x10
 ? __pfx_drm_ioctl+0x10/0x10
 vmw_generic_ioctl+0xa4/0x110 [vmwgfx]
 __x64_sys_ioctl+0x94/0xd0
 do_syscall_64+0x61/0xe0
 ? __x64_sys_ioctl+0xaf/0xd0
 ? syscall_exit_to_user_mode+0x2b/0x40
 ? do_syscall_64+0x70/0xe0
 ? __x64_sys_ioctl+0xaf/0xd0
 ? syscall_exit_to_user_mode+0x2b/0x40
 ? do_syscall_64+0x70/0xe0
 ? exc_page_fault+0x7f/0x180
 entry_SYSCALL_64_after_hwframe+0x6e/0x76
RIP: 0033:0x7f1e93f279ed
Code: 04 25 28 00 00 00 48 89 45 c8 31 c0 48 8d 45 10 c7 45 b0 10 00 00 00 48 89 45 b8 48 8d 45 d0 48 89 45 c0 b8 10 00 00 00 0f 05 <89> c2 3d 00 f0 ff f>
RSP: 002b:00007ffca0faf600 EFLAGS: 00000246 ORIG_RAX: 0000000000000010

RAX: ffffffffffffffda RBX: 000055db876ed2c0 RCX: 00007f1e93f279ed
RDX: 00007ffca0faf6c0 RSI: 00000000c02464bb RDI: 0000000000000015
RBP: 00007ffca0faf650 R08: 000055db87184010 R09: 0000000000000007
R10: 000055db886471a0 R11: 0000000000000246 R12: 00007ffca0faf6c0
R13: 00000000c02464bb R14: 0000000000000015 R15: 00007ffca0faf790
</TASK>
Modules linked in: snd_seq_dummy snd_hrtimer nf_conntrack_netbios_ns nf_conntrack_broadcast nft_fib_inet nft_fib_ipv4 nft_fib_ipv6 nft_fib nft_reject_ine>
CR2: 0000000000000028
---[end trace 0000000000000000]---
RIP: 0010:vmw_du_cursor_plane_cleanup_fb+0x124/0x140 [vmwgfx]
Code: 00 00 00 75 3a 48 83 c4 10 5b 5d c3 cc cc cc cc 48 8b b3 a8 00 00 00 48 c7 c7 99 90 43 c0 e8 93 c5 db ca 48 8b 83 a8 00 00 00 <48> 8b 78 28 e8 e3 f>
RSP: 0018:ffffb6b98216fa80 EFLAGS: 00010246
RAX: 0000000000000000 RBX: ffff969d84cdcb00 RCX: 0000000000000027
RDX: 0000000000000000 RSI: 0000000000000001 RDI: ffff969e75f21600
RBP: ffff969d4143
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2023-52648

[CVE-2023-52653] kernel: SUNRPC: fix a memleak in gss_import_v2_context (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

SUNRPC: fix a memleak in gss_import_v2_context

The ctx->mech_used.data allocated by kmemdup is not freed in neither
gss_import_v2_context nor it only caller gss_krb5_import_sec_context,
which frees ctx on error.

Thus, this patch reform the last call of gss_import_v2_context to the
gss_krb5_import_ctx_v2, preventing the memleak while keepping the return
formation.

More Info: https://avd.aquasec.com/nvd/cve-2023-52653

[CVE-2023-52658] kernel: Revert "net/mlx5: Block entering switchdev mode with ns inconsistency" (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

Revert "net/mlx5: Block entering switchdev mode with ns inconsistency"

This reverts commit 662404b24a4c4d839839ed25e3097571f5938b9b.
The revert is required due to the suspicion it is not good for anything

and cause crash.

More Info: https://avd.aquasec.com/nvd/cve-2023-52658

[CVE-2023-52671] kernel: drm/amd/display: Fix hang/underflow when transitioning to ODM4:1 (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Fix hang/underflow when transitioning to ODM4:1

[Why]
Under some circumstances, disabling an OPTC and attempting to reclaim
its OPP(s) for a different OPTC could cause a hang/underflow due to OPPs
not being properly disconnected from the disabled OPTC.

[How]
Ensure that all OPPs are unassigned from an OPTC when it gets disabled.

More Info: https://avd.aquasec.com/nvd/cve-2023-52671

[CVE-2023-52673] kernel: drm/amd/display: Fix a debugfs null pointer error (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Fix a debugfs null pointer error

[WHY & HOW]
Check whether get_subvp_en() callback exists before calling it.

More Info: https://avd.aquasec.com/nvd/cve-2023-52673

[CVE-2023-52676] kernel: bpf: Guard stack limits against 32bit overflow (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf: Guard stack limits against 32bit overflow

This patch promotes the arithmetic around checking stack bounds to be
done in the 64-bit domain, instead of the current 32bit. The arithmetic
implies adding together a 64-bit register with a int offset. The
register was checked to be below 1<<29 when it was variable, but not
when it was fixed. The offset either comes from an instruction (in which

case it is 16 bit), from another register (in which case the caller
checked it to be below 1<<29 [1]), or from the size of an argument to a
kfunc (in which case it can be a u32 [2]). Between the register being
inconsistently checked to be below 1<<29, and the offset being up to an
u32, it appears that we were open to overflowing the `int`s which were
currently used for arithmetic.

[1]
https://github.com/torvalds/linux/blob/815fb87b753055df2d9e50f6cd80eb10235fe3e9/kernel/bpf/verifier.c#L7494-L7498
[2] https://github.com/torvalds/linux/blob/815fb87b753055df2d9e50f6cd80eb10235fe3e9/kernel/bpf/verifier.c#L11904

More Info: https://avd.aquasec.com/nvd/cve-2023-52676

[CVE-2023-52761] kernel: riscv: VMAP_STACK overflow detection thread-safe (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

riscv: VMAP_STACK overflow detection thread-safe

commit 31da94c25aea ("riscv: add VMAP_STACK overflow detection") added
support for CONFIG_VMAP_STACK. If overflow is detected, CPU switches to
`shadow_stack` temporarily before switching finally to per-cpu
`overflow_stack`.

If two CPUs/harts are racing and end up in over flowing kernel stack, one
or both will end up corrupting each other state because `shadow_stack` is
not per-cpu. This patch optimizes per-cpu overflow stack switch by
directly picking per-cpu `overflow_stack` and gets rid of `shadow_stack`.

Following are the changes in this patch

- Defines an asm macro to obtain per-cpu symbols in destination
  register.
- In entry.S, when overflow is detected, per-cpu overflow stack is
  located using per-cpu asm macro. Computing per-cpu symbol requires
  a temporary register. x31 is saved away into CSR_SCRATCH
  (CSR_SCRATCH is anyways zero since we're in kernel).

Please see Links for additional relevant disccussion and alternative
solution.

Tested by `echo EXHAUST_STACK > /sys/kernel/debug/provoke-crash/DIRECT`
Kernel crash log below

Insufficient stack space to handle exception!/debug/provoke-crash/DIRECT
Task stack: [0xff20000010a98000..0xff20000010a9c000]
Overflow stack: [0xff600001f7d98370..0xff600001f7d99370]
CPU: 1 PID: 205 Comm: bash Not tainted 6.1.0-rc2-00001-g328a1f96f7b9 #34
Hardware name: riscv-virtio,qemu (DT)
epc : __memset+0x60/0xfc

ra : recursive_loop+0x48/0xc6 [lkdtm]
epc : ffffffff808de0e4 ra : ffffffff0163a752 sp : ff20000010a97e80
gp : ffffffff815c0330 tp : ff600000820ea280 t0 : ff20000010a97e88
t1 : 000000000000002e t2 : 3233206874706564 s0 : ff20000010a982b0
s1 : 0000000000000012 a0 : ff20000010a97e88 a1 : 0000000000000000
a2 : 0000000000000400 a3 : ff20000010a98288 a4 : 0000000000000000
a5 : 0000000000000000 a6 : fffffffffffe43f0 a7 : 00007fffffffffff
s2 : ff20000010a97e88 s3 : ffffffff01644680 s4 : ff20000010a9be90
s5 : ff600000842ba6c0 s6 : 00aaaaaac29e42b0 s7 : 00ffffff0aa3684
s8 : 00aaaaaac2978040 s9 : 0000000000000065 s10: 00ffffff8a7cad10
s11: 00ffffff8a76a4e0 t3 : ffffffff815dbaf4 t4 : ffffffff815dbaf4
t5 : ffffffff815dbab8 t6 : ff20000010a9bb48
status: 0000000200000120 badaddr: ff20000010a97e88 cause: 000000000000000f
Kernel panic - not syncing: Kernel stack overflow
CPU: 1 PID: 205 Comm: bash Not tainted 6.1.0-rc2-00001-g328a1f96f7b9 #34
Hardware name: riscv-virtio,qemu (DT)
Call Trace:
[<ffffffff80006754>] dump_backtrace+0x30/0x38
[<ffffffff808de798>] show_stack+0x40/0x4c
[<ffffffff808ea2a8>] dump_stack_lvl+0x44/0x5c
[<ffffffff808ea2d8>] dump_stack+0x18/0x20
[<ffffffff808dec06>] panic+0x126/0x2fe
[<ffffffff800065ea>] walk_stackframe+0x0/0xf0
[<ffffffff0163a752>] recursive_loop+0x48/0xc6 [lkdtm]
SMP: stopping secondary CPUs
---[end Kernel panic - not syncing: Kernel stack overflow]---

More Info: https://avd.aquasec.com/nvd/cve-2023-52761

[CVE-2023-52770] kernel: f2fs: split initial and dynamic conditions for extent_cache (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

f2fs: split initial and dynamic conditions for extent_cache

Let's allocate the extent_cache tree without dynamic conditions to avoid a
missing condition causing a panic as below.

create a file w/ a compressed flag
disable the compression
panic while updating extent_cache

F2FS-fs (dm-64): Swapfile: last extent is not aligned to section
F2FS-fs (dm-64): Swapfile (3) is not align to section: 1) creat(), 2) ioctl(F2FS_IOC_SET_PIN_FILE), 3) fallocate(2097152 * N)
Adding 124996k swap on ./swap-file. Priority:0 extents:2 across:17179494468k
==========
BUG: KASAN: null-ptr-deref in instrument_atomic_read_write out/common/include/linux/instrumented.h:101 [inline]

BUG: KASAN: null-ptr-deref in atomic_try_cmpxchg_acquire out/common/include/asm-generic/atomic-instrumented.h:705 [inline]
BUG: KASAN: null-ptr-deref in queued_write_lock out/common/include/asm-generic/qrwlock.h:92 [inline]
BUG: KASAN: null-ptr-deref in __raw_write_lock out/common/include/linux/rwlock_api_smp.h:211 [inline]
BUG: KASAN: null-ptr-deref in _raw_write_lock+0x5a/0x110 out/common/kernel/locking/spinlock.c:295
Write of size 4 at addr 0000000000000030 by task syz-executor154/3327

CPU: 0 PID: 3327 Comm: syz-executor154 Tainted: G O 5.10.185 #1
Hardware name: emulation qemu-x86/qemu-x86, BIOS 2023.01-21885-gb3cc1cd24d 01/01/2023
Call Trace:
__dump_stack out/common/lib/dump_stack.c:77 [inline]
dump_stack_lvl+0x17e/0x1c4 out/common/lib/dump_stack.c:118
__kasan_report+0x16c/0x260 out/common/mm/kasan/report.c:415
kasan_report+0x51/0x70 out/common/mm/kasan/report.c:428
kasan_check_range+0x2f3/0x340 out/common/mm/kasan/generic.c:186
__kasan_check_write+0x14/0x20 out/common/mm/kasan/shadow.c:37
instrument_atomic_read_write out/common/include/linux/instrumented.h:101 [inline]
atomic_try_cmpxchg_acquire out/common/include/asm-generic/atomic-instrumented.h:705 [inline]
queued_write_lock out/common/include/asm-generic/qrwlock.h:92 [inline]
__raw_write_lock out/common/include/linux/rwlock_api_smp.h:211 [inline]
_raw_write_lock+0x5a/0x110 out/common/kernel/locking/spinlock.c:295
__drop_extent_tree+0xdf/0x2f0 out/common/fs/f2fs/extent_cache.c:1155
f2fs_drop_extent_tree+0x17/0x30 out/common/fs/f2fs/extent_cache.c:1172
f2fs_insert_range out/common/fs/f2fs/file.c:1600 [inline]
f2fs_fallocate+0x19fd/0x1f40 out/common/fs/f2fs/file.c:1764
vfs_fallocate+0x514/0x9b0 out/common/fs/open.c:310
ksys_fallocate out/common/fs/open.c:333 [inline]
__do_sys_fallocate out/common/fs/open.c:341 [inline]
__se_sys_fallocate out/common/fs/open.c:339 [inline]
__x64_sys_fallocate+0xb8/0x100 out/common/fs/open.c:339
do_syscall_64+0x35/0x50 out/common/arch/x86/entry/common.c:46

More Info: https://avd.aquasec.com/nvd/cve-2023-52770

[CVE-2023-52771] kernel: cxl/port: Fix delete_endpoint() vs parent unregistration race (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

cxl/port: Fix delete_endpoint() vs parent unregistration race

The CXL subsystem, at cxl_mem ->probe() time, establishes a lineage of
ports (struct cxl_port objects) between an endpoint and the root of a
CXL topology. Each port including the endpoint port is attached to the
cxl_port driver.

Given that setup, it follows that when either any port in that lineage
goes through a cxl_port ->remove() event, or the memdev goes through a
cxl_mem ->remove() event. The hierarchy below the removed port, or the

entire hierarchy if the memdev is removed needs to come down.

The delete_endpoint() callback is careful to check whether it is being
called to tear down the hierarchy, or if it is only being called to
teardown the memdev because an ancestor port is going through
->remove().

That care needs to take the device_lock() of the endpoint's parent.
Which requires 2 bugs to be fixed:

1/ A reference on the parent is needed to prevent use-after-free
   scenarios like this signature:

    BUG: spinlock bad magic on CPU#0, kworker/u56:0/11
    Hardware name: QEMU Standard PC (Q35 + ICH9, 2009), BIOS edk2-20230524-3.fc38 05/24/2023
    Workqueue: cxl_port detach_memdev [cxl_core]
    RIP: 0010:spin_bug+0x65/0xa0
    Call Trace:
     do_raw_spin_lock+0x69/0xa0
     __mutex_lock+0x695/0xb80
     delete_endpoint+0xad/0x150 [cxl_core]
     devres_release_all+0xb8/0x110
     device_unbind_cleanup+0xe/0x70
     device_release_driver_internal+0x1d2/0x210
     detach_memdev+0x15/0x20 [cxl_core]
     process_one_work+0x1e3/0x4c0
     worker_thread+0x1dd/0x3d0

2/ In the case of RCH topologies, the parent device that needs to be
   locked is not always @port->dev as returned by cxl_mem_find_port(), use
   endpoint->dev.parent instead.

More Info: https://avd.aquasec.com/nvd/cve-2023-52771

[CVE-2023-52797] kernel: drivers: perf: Check find_first_bit() return value (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drivers: perf: Check find_first_bit() return value

We must check the return value of find_first_bit() before using the
return value as an index array since it happens to overflow the array
and then panic:

[107.318430] Kernel BUG [#1]
[107.319434] CPU: 3 PID: 1238 Comm: kill Tainted: G   E   6.6.0-rc6ubuntu-defconfig #2
[107.319465] Hardware name: riscv-virtio,qemu (DT)
[107.319551] epc : pmu_sbi_ovf_handler+0x3a4/0x3ae
[107.319840] ra : pmu_sbi_ovf_handler+0x52/0x3ae
[107.319868] epc : ffffffff80a0a77c ra : ffffffff80a0a42a sp : ffffaf83fecda350

[107.319884] gp : ffffffff823961a8 tp : ffffaf8083db1dc0 t0 : ffffaf83fecda480
[107.319899] t1 : ffffffff80cafe62 t2 : 000000000000ff00 s0 : ffffaf83fecda520
[107.319921] s1 : ffffaf83fecda380 a0 : 00000018fca29df0 a1 : ffffffffffffffff
[107.319936] a2 : 0000000001073734 a3 : 0000000000000004 a4 : 0000000000000000
[107.319951] a5 : 0000000000000040 a6 : 000000001d1c8774 a7 : 0000000000504d55
[107.319965] s2 : ffffffff82451f10 s3 : ffffffff82724e70 s4 : 000000000000003f
[107.319980] s5 : 0000000000000011 s6 : ffffaf8083db27c0 s7 : 0000000000000000
[107.319995] s8 : 0000000000000001 s9 : 00007fffb45d6558 s10: 00007fffb45d81a0
[107.320009] s11: ffffaf7ffff60000 t3 : 0000000000000004 t4 : 0000000000000000
[107.320023] t5 : ffffaf7f80000000 t6 : ffffaf8000000000
[107.320037] status: 0000000200000100 badaddr: 0000000000000000 cause: 0000000000000003
[107.320081] [<ffffffff80a0a77c>] pmu_sbi_ovf_handler+0x3a4/0x3ae
[107.320112] [<ffffffff800b42d0>] handle_percpu_devid_irq+0x9e/0x1a0
[107.320131] [<ffffffff800ad92c>] generic_handle_domain_irq+0x28/0x36
[107.320148] [<ffffffff8065f9f8>] riscv_intc_irq+0x36/0x4e
[107.320166] [<ffffffff80caf4a0>] handle_riscv_irq+0x54/0x86
[107.320189] [<ffffffff80cb0036>] do_irq+0x64/0x96
[107.320271] Code: 85a6 855e b097 ff7f 80e7 9220 b709 9002 4501 bbd9 (9002) 6097
[107.320585] ---[end trace 0000000000000000]---
[107.320704] Kernel panic - not syncing: Fatal exception in interrupt
[107.320775] SMP: stopping secondary CPUs
[107.321219] Kernel Offset: 0x0 from 0xffffffff80000000
[107.333051] ---[end Kernel panic - not syncing: Fatal exception in interrupt]---

More Info: https://avd.aquasec.com/nvd/cve-2023-52797

[CVE-2023-52857] kernel: drm/mediatek: Fix coverity issue with unintentional integer overflow (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

drm/mediatek: Fix coverity issue with unintentional integer overflow

1. Instead of multiplying 2 variable of different types. Change to
assign a value of one variable and then multiply the other variable.

2. Add a int variable for multiplier calculation instead of calculating
different types multiplier with dma_addr_t variable directly.

More Info: https://avd.aquasec.com/nvd/cve-2023-52857

[CVE-2023-52888] kernel: media: mediatek: vcodec: Only free buffer VA that is not NULL (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

media: mediatek: vcodec: Only free buffer VA that is not NULL

In the MediaTek vcodec driver, while mtk_vcodec_mem_free() is mostly called only when the buffer to free exists, there are some instances that didn't do the check and triggered warnings in practice.

We believe those checks were forgotten unintentionally. Add the checks back to fix the warnings.

More Info: https://avd.aquasec.com/nvd/cve-2023-52888

[CVE-2023-52920] kernel: bpf: support non-r10 register spill/fill to/from stack in precision tracking (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf: support non-r10 register spill/fill to/from stack in precision tracking

Use instruction (jump) history to record instructions that performed register spill/fill to/from stack, regardless if this was done through read-only r10 register, or any other register after copying r10 into it *and* potentially adjusting offset.

To make this work reliably, we push extra per-instruction flags into instruction history, encoding stack slot index (spi) and stack frame number in extra 10 bit flags we take away from prev_idx in instruction history. We don't touch idx field for maximum performance, as it's checked most frequently during backtracking.

This change removes basically the last remaining practical limitation of precision backtracking logic in BPF verifier. It fixes known deficiencies, but also opens up new opportunities to reduce number of verified states, explored in the subsequent patches.

There are only three differences in selftests' BPF object files according to veristat, all in the positive direction (less states).

File	Program	Insns (A)	Insns (B)	Insns (DIFF)	States (A)	States (B)	States (DIFF)
test_cls_redirect_dynptr.bpf.linked3.o	cls_redirect	2987	2864	-123 (-4.12%)	240	231	-9 (-3.75%)
xdp_synproxy_kern.bpf.linked3.o	syncookie_tc	82848	82661	-187 (-0.23%)	5107	5073	-34 (-0.67%)
xdp_synproxy_kern.bpf.linked3.o	syncookie_xdp	85116	84964	-152 (-0.18%)	5162	5130	-32 (-0.62%)

Note, I avoided renaming jmp_history to more generic insn_hist to minimize number of lines changed and potential merge conflicts between bpf and bpf-next trees.

Notice also cur_hist_entry pointer reset to NULL at the beginning of instruction verification loop. This pointer avoids the problem of relying on last jump history entry's insn_idx to determine whether we already have entry for current instruction or not. It can happen that we added jump history entry because current instruction is_jmp_point(), but also we need to add instruction flags for stack access. In this case, we don't want to entries, so we need to reuse last added entry, if it is present.

Relying on insn_idx comparison has the same ambiguity problem as the one that was fixed recently in [0], so we avoid that.

[0] https://patchwork.kernel.org/project/netdevbpf/patch/20231110002638.4168352-3-andrii@kernel.org/

More Info: https://avd.aquasec.com/nvd/cve-2023-52920

[CVE-2023-52927] kernel: netfilter: allow exp not to be removed in nf_ct_find_expectation (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

netfilter: allow exp not to be removed in nf_ct_find_expectation

Currently nf_conntrack_in() calling nf_ct_find_expectation() will remove the exp from the hash table. However, in some scenario, we expect the exp not to be removed when the created ct will not be confirmed, like in OVS and TC conntrack in the following patches.

This patch allows exp not to be removed by setting IPS_CONFIRMED in the status of the tmpl.

More Info: https://avd.aquasec.com/nvd/cve-2023-52927

[CVE-2023-6039] kernel: use-after-free in drivers/net/usb/lan78xx.c in lan78xx_disconnect (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A use-after-free flaw was found in lan78xx_disconnect in drivers/net/usb/lan78xx.c in the network sub-component, net/usb/lan78xx in the Linux Kernel. This flaw allows a local attacker to crash the system when the LAN78XX USB device detaches.

More Info: https://avd.aquasec.com/nvd/cve-2023-6039

[CVE-2023-6240] kernel: Marvin vulnerability side-channel leakage in the RSA decryption operation (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1

Fixed: %!s(<nil>)

A Marvin vulnerability side-channel leakage was found in the RSA decryption operation in the Linux Kernel. This issue may allow a network attacker to decrypt ciphertexts or forge signatures, limiting the services that use that private key.

More Info: https://avd.aquasec.com/nvd/cve-2023-6240

[CVE-2024-2193] hw: Spectre-SRC that is Speculative Race Conditions (SRCs) for synchronization primitives similar like Spectre V1 with possibility to bypass software features (e.g., IPIs, high-precision timers, etc) (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A Speculative Race Condition (SRC) vulnerability that impacts modern CPU architectures supporting speculative execution (related to Spectre V1) has been disclosed. An unauthenticated attacker can exploit this vulnerability to disclose arbitrary data from the CPU using race conditions to access the speculative executable code paths.

More Info: https://avd.aquasec.com/nvd/cve-2024-2193

[CVE-2024-24855] kernel: Race condition in lpfc_unregister_fcf_rescan() in scsi/lpfc/lpfc_hbadisc.c (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

A race condition was found in the Linux kernel's scsi device driver in lpfc_unregister_fcf_rescan() function. This can result in a null pointer dereference issue, possibly leading to a kernel panic or denial of service issue.

More Info: https://avd.aquasec.com/nvd/cve-2024-24855

[CVE-2024-24864] A race condition was found in the Linux kernel's media/dvb-core in dvb ... (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A race condition was found in the Linux kernel's media/dvb-core in dvbdmx_write()Â function. This can result in a null pointer dereference issue, possibly leading to a kernel panic or denial of service issue.

More Info: https://avd.aquasec.com/nvd/cve-2024-24864

[CVE-2024-25740] kernel: memory leak in ubi driver (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A memory leak flaw was found in the UBI driver in drivers/mtd/ubi/attach.c in the Linux kernel through 6.7.4 for UBI_IOCATT, because kobj->name is not released.

More Info: https://avd.aquasec.com/nvd/cve-2024-25740

[CVE-2024-26618] hw: arm64/sme: Always exit sme_alloc() early with existing storage (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

arm64/sme: Always exit sme_alloc() early with existing storage

When sme_alloc() is called with existing storage and we are not flushing we
will always allocate new storage, both leaking the existing storage and
corrupting the state. Fix this by separating the checks for flushing and
for existing storage as we do for SVE.

Callers that reallocate (eg, due to changing the vector length) should
call sme_free() themselves.

More Info: https://avd.aquasec.com/nvd/cve-2024-26618

[CVE-2024-26647] kernel: drm/amd/display: Fix late dereference 'dsc' check in 'link_set_dsc_pps_packet()' (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Fix late derefrence 'dsc' check in 'link_set_dsc_pps_packet()'

In link_set_dsc_pps_packet(), 'struct display_stream_compressor *dsc'
was dereferenced in a DC_LOGGER_INIT(dsc->ctx->logger); before the 'dsc'
NULL pointer check.

Fixes the below:
drivers/gpu/drm/amd/amdgpu/../display/dc/link/link_dpms.c:905 link_set_dsc_pps_packet() warn: variable dereferenced before check 'dsc' (see line 903)

More Info: https://avd.aquasec.com/nvd/cve-2024-26647

[CVE-2024-26648] kernel: NULL check in edp_setup_replay() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Fix variable deferencing before NULL check in edp_setup_replay()

In edp_setup_replay(), 'struct dc *dc' & 'struct dmub_replay *replay'
was dereferenced before the pointer 'link' & 'replay' NULL check.

Fixes the below:
drivers/gpu/drm/amd/amdgpu/../display/dc/link/protocols/link_edp_panel_control.c:947 edp_setup_replay() warn: variable dereferenced before check 'link' (see line 933)

More Info: https://avd.aquasec.com/nvd/cve-2024-26648

[CVE-2024-26656] kernel: drm/amdgpu: use-after-free vulnerability (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

drm/amdgpu: fix use-after-free bug

The bug can be triggered by sending a single amdgpu_gem_userptr_ioctl
to the AMDGPU DRM driver on any ASICs with an invalid address and size.
The bug was reported by Joonkyo Jung <joonkyoj@yonsei.ac.kr>.
For example the following code:

```
static void Syzkaller1(int fd)
{
 struct drm_amdgpu_gem_userptr arg;
 int ret;

 arg.addr = 0xffffffffffff0000;
 arg.size = 0x80000000; /*2 Gb*/
 arg.flags = 0x7;
 ret = drmIoctl(fd, 0xc1186451/*amdgpu_gem_userptr_ioctl*/, &arg);
}
```

Due to the address and size are not valid there is a failure in
amdgpu_hmm_register->mmu_interval_notifier_insert->__mmu_interval_notifier_insert->
check_shl_overflow, but we even the amdgpu_hmm_register failure we still call
amdgpu_hmm_unregister into amdgpu_gem_object_free which causes access to a bad address.
The following stack is below when the issue is reproduced when Kazan is enabled:

[+0.000014] Hardware name: ASUS System Product Name/ROG STRIX B550-F GAMING (WI-FI), BIOS 1401 12/03/2020
[+0.000009] RIP: 0010:mmu_interval_notifier_remove+0x327/0x340
[+0.000017] Code: ff ff 49 89 44 24 08 48 b8 00 01 00 00 00 00 ad de 4c 89 f7 49 89 47 40 48 83 c0 22 49 89 47 48 e8 ce d1 2d 01 e9 32 ff ff ff <0f> 0b e9 16 ff ff ff 4c 89 ef e8 fa 14 b3 ff e9 36 ff ff ff e8 80

[+0.000014] RSP: 0018:ffffc90002657988 EFLAGS: 00010246
[+0.000013] RAX: 0000000000000000 RBX: 1ffff920004caf35 RCX: ffffffff8160565b
[+0.000011] RDX: dfffc0000000000 RSI: 0000000000000004 RDI: ffff8881a9f78260
[+0.000010] RBP: ffffc90002657a70 R08: 0000000000000001 R09: fffff520004caf25
[+0.000010] R10: 0000000000000003 R11: ffffffff8161d1d6 R12: ffff88810e988c00
[+0.000010] R13: ffff888126fb5a00 R14: ffff88810e988c0c R15: ffff8881a9f78260
[+0.000011] FS: 00007ff9ec848540(0000) GS:ffff8883cc880000(0000) knlGS:0000000000000000
[+0.000012] CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
[+0.000010] CR2: 000055b3f7e14328 CR3: 00000001b5770000 CR4: 0000000000350ef0
[+0.000010] Call Trace:
[+0.000006] <TASK>
[+0.000007] ? show_regs+0x6a/0x80
[+0.000018] ? __warn+0xa5/0x1b0
[+0.000019] ? mmu_interval_notifier_remove+0x327/0x340
[+0.000018] ? report_bug+0x24a/0x290
[+0.000022] ? handle_bug+0x46/0x90
[+0.000015] ? exc_invalid_op+0x19/0x50
[+0.000016] ? asm_exc_invalid_op+0x1b/0x20
[+0.000017] ? kasan_save_stack+0x26/0x50
[+0.000017] ? mmu_interval_notifier_remove+0x23b/0x340
[+0.000019] ? mmu_interval_notifier_remove+0x327/0x340
[+0.000019] ? mmu_interval_notifier_remove+0x23b/0x340
[+0.000020] ? __pfx_mmu_interval_notifier_remove+0x10/0x10
[+0.000017] ? kasan_save_alloc_info+0x1e/0x30
[+0.000018] ? srso_return_thunk+0x5/0x5f
[+0.000014] ? __kasan_kmalloc+0xb1/0xc0
[+0.000018] ? srso_return_thunk+0x5/0x5f
[+0.000013] ? __kasan_check_read+0x11/0x20
[+0.000020] amdgpu_hmm_unregister+0x34/0x50 [amdgpu]
[+0.004695] amdgpu_gem_object_free+0x66/0xa0 [amdgpu]
[+0.004534] ? __pfx_amdgpu_gem_object_free+0x10/0x10 [amdgpu]
[+0.004291] ? do_syscall_64+0x5f/0xe0
[+0.000023] ? srso_return_thunk+0x5/0x5f
[+0.000017] drm_gem_object_free+0x3b/0x50 [drm]
[+0.000489] amdgpu_gem_userptr_ioctl+0x306/0x500 [amdgpu]
[+0.004295] ? __pfx_amdgpu_gem_userptr_ioctl+0x10/0x10 [amdgpu]
[+0.004270] ? srso_return_thunk+0x5/0x5f
[+0.000014] ? __this_cpu_preempt_check+0x13/0x20
[+0.000015] ? srso_return_thunk+0x5/0x5f
[+0.000013] ? sysvec_apic_timer_interrupt+0x57/0xc0
[+0.000020] ? srso_return_thunk+0x5/0x5f
[+0.000014] ? asm_sysvec_apic_timer_interrupt+0x1b/0x20
[+0.000022] ? drm_ioctl_kernel+0x17b/0x1f0 [drm]
[+0.000496] ? __pfx_amdgpu_gem_userptr_ioctl+0x10/0x10 [amdgpu]
[+0.004272] ? drm_ioctl_kernel+0x190/0x1f0 [drm]
[+0.000492] drm_ioctl_kernel+0x140/0x1f0 [drm]
[+0.000497] ? __pfx_amdgpu_gem_userptr_ioctl+0x10/0x10 [amdgpu]
[+0.004297] ? __pfx_drm_ioctl_kernel+0x10/0x10 [d
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2024-26656

[CVE-2024-26661] kernel: drm/amd/display: Add NULL test for 'timing generator' in 'dcn21_set_pipe()'

(Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Add NULL test for 'timing generator' in 'dcn21_set_pipe()'

In "u32 otg_inst = pipe_ctx->stream_res.tg->inst;"
pipe_ctx->stream_res.tg could be NULL, it is relying on the caller to
ensure the tg is not NULL.

More Info: https://avd.aquasec.com/nvd/cve-2024-26661

[CVE-2024-26662] kernel: drm/amd/display: 'panel_cntl' could be null in 'dcn21_set_backlight_level()' (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Fix 'panel_cntl' could be null in 'dcn21_set_backlight_level()'

'panel_cntl' structure used to control the display panel could be null,
dereferencing it could lead to a null pointer access.

Fixes the below:
drivers/gpu/drm/amd/amdgpu/../display/dc/hwss/dcn21/dcn21_hwseq.c:269 dcn21_set_backlight_level() error: we previously assumed 'panel_cntl' could be null (see line 250)

More Info: https://avd.aquasec.com/nvd/cve-2024-26662

[CVE-2024-26670] kernel: arm64: entry: fix ARM64_WORKAROUND_SPECULATIVE_UNPRIV_LOAD (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

arm64: entry: fix ARM64_WORKAROUND_SPECULATIVE_UNPRIV_LOAD

Currently the ARM64_WORKAROUND_SPECULATIVE_UNPRIV_LOAD workaround isn't
quite right, as it is supposed to be applied after the last explicit
memory access, but is immediately followed by an LDR.

The ARM64_WORKAROUND_SPECULATIVE_UNPRIV_LOAD workaround is used to
handle Cortex-A520 erratum 2966298 and Cortex-A510 erratum 3117295,
which are described in:

* https://developer.arm.com/documentation/SDEN2444153/0600/?lang=en
* https://developer.arm.com/documentation/SDEN1873361/1600/?lang=en

In both cases the workaround is described as:

| If pagetable isolation is disabled, the context switch logic in the
| kernel can be updated to execute the following sequence on affected
| cores before exiting to EL0, and after all explicit memory accesses:
|
| 1. A non-shareable TLBI to any context and/or address, including
| unused contexts or addresses, such as a `TLBI VALE1 Xzr`.
|
| 2. A DSB NSH to guarantee completion of the TLBI.

The important part being that the TLBI+DSB must be placed "after all
explicit memory accesses".

Unfortunately, as-implemented, the TLBI+DSB is immediately followed by
an LDR, as we have:

| alternative_if ARM64_WORKAROUND_SPECULATIVE_UNPRIV_LOAD
| tlbi vale1, xzr
| dsb nsh
| alternative_else_nop_endif
| alternative_if_not ARM64_UNMAP_KERNEL_AT_EL0
| ldr lr, [sp, #S_LR]
| add sp, sp, #PT_REGS_SIZE // restore sp
| eret
| alternative_else_nop_endif
|
| [... KPTI exception return path ...]

This patch fixes this by reworking the logic to place the TLBI+DSB
immediately before the ERET, after all explicit memory accesses.

The ERET is currently in a separate alternative block, and alternatives
cannot be nested. To account for this, the alternative block for
ARM64_UNMAP_KERNEL_AT_EL0 is replaced with a single alternative branch
to skip the KPTI logic, with the new shape of the logic being:

| alternative_insn "b .L_skip_tramp_exit_\@", nop, ARM64_UNMAP_KERNEL_AT_EL0
| [... KPTI exception return path ...]
| .L_skip_tramp_exit_\@:
|
| ldr lr, [sp, #S_LR]
| add sp, sp, #PT_REGS_SIZE // restore sp
|
| alternative_if ARM64_WORKAROUND_SPECULATIVE_UNPRIV_LOAD
| tlbi vale1, xzr
| dsb nsh
| alternative_else_nop_endif
| eret

The new structure means that the workaround is only applied when KPTI is not in use; this is fine as noted in the documented implications of the erratum:

| Pagetable isolation between EL0 and higher level ELs prevents the
| issue from occurring.

... and as per the workaround description quoted above, the workaround is only necessary "If pagetable isolation is disabled".

More Info: https://avd.aquasec.com/nvd/cve-2024-26670

[CVE-2024-26672] kernel: drm/amdgpu: variable 'mca_funcs' dereferenced before NULL check in 'amdgpu_mca_smu_get_mca_entry()' (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amdgpu: Fix variable 'mca_funcs' dereferenced before NULL check in 'amdgpu_mca_smu_get_mca_entry()'

Fixes the below:

drivers/gpu/drm/amd/amdgpu/amdgpu_mca.c:377 amdgpu_mca_smu_get_mca_entry() warn: variable dereferenced before check 'mca_funcs' (see line 368)

```
357 int amdgpu_mca_smu_get_mca_entry(struct amdgpu_device *adev,
        enum amdgpu_mca_error_type type,
358                                int idx, struct mca_bank_entry *entry)
359 {
360         const struct amdgpu_mca_smu_funcs *mca_funcs =
    adev->mca.mca_funcs;
361         int count;
362
363         switch (type) {
364         case AMDGPU_MCA_ERROR_TYPE_UE:
365                 count = mca_funcs->max_ue_count;
```

mca_funcs is dereferenced here.

```
366                 break;
367         case AMDGPU_MCA_ERROR_TYPE_CE:
368                 count = mca_funcs->max_ce_count;
```

mca_funcs is dereferenced here.

```
369                 break;
370         default:
371                 return -EINVAL;
372         }
373
```

```
374         if (idx >= count)
375                 return -EINVAL;
376
377         if (mca_funcs && mca_funcs->mca_get_mca_entry)
        ^^^^^^^^^
```

Checked too late!

More Info: https://avd.aquasec.com/nvd/cve-2024-26672

[CVE-2024-26677] kernel: rxrpc: Fix delayed ACKs to not set the reference serial number (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

rxrpc: Fix delayed ACKs to not set the reference serial number

Fix the construction of delayed ACKs to not set the reference serial number
as they can't be used as an RTT reference.

More Info: https://avd.aquasec.com/nvd/cve-2024-26677

[CVE-2024-26691] kernel: KVM: arm64: Fix circular locking dependency (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

KVM: arm64: Fix circular locking dependency

The rule inside kvm enforces that the vcpu->mutex is taken *inside*
kvm->lock. The rule is violated by the pkvm_create_hyp_vm() which acquires
the kvm->lock while already holding the vcpu->mutex lock from
kvm_vcpu_ioctl(). Avoid the circular locking dependency altogether by
protecting the hyp vm handle with the config_lock, much like we already
do for other forms of VM-scoped data.

More Info: https://avd.aquasec.com/nvd/cve-2024-26691

[CVE-2024-26719] kernel: nouveau: offload fence uevents work to workqueue (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

nouveau: offload fence uevents work to workqueue

This should break the deadlock between the fctx lock and the irq lock.

This offloads the processing off the work from the irq into a workqueue.

More Info: https://avd.aquasec.com/nvd/cve-2024-26719

[CVE-2024-26740] kernel: net/sched: act_mirred: use the backlog for mirred ingress (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net/sched: act_mirred: use the backlog for mirred ingress

The test Davide added in commit ca22da2fbd69 ("act_mirred: use the backlog
for nested calls to mirred ingress") hangs our testing VMs every 10 or so
runs, with the familiar tcp_v4_rcv -> tcp_v4_rcv deadlock reported by
lockdep.

The problem as previously described by Davide (see Link) is that
if we reverse flow of traffic with the redirect (egress -> ingress)
we may reach the same socket which generated the packet. And we may
still be holding its socket lock. The common solution to such deadlocks
is to put the packet in the Rx backlog, rather than run the Rx path
inline. Do that for all egress -> ingress reversals, not just once
we started to nest mirred calls.

In the past there was a concern that the backlog indirection will
lead to loss of error reporting / less accurate stats. But the current
workaround does not seem to address the issue.

More Info: https://avd.aquasec.com/nvd/cve-2024-26740

[CVE-2024-26756] kernel: md: Don't register sync_thread for reshape directly (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

md: Don't register sync_thread for reshape directly

Currently, if reshape is interrupted, then reassemble the array will
register sync_thread directly from pers->run(), in this case
'MD_RECOVERY_RUNNING' is set directly, however, there is no guarantee
that md_do_sync() will be executed, hence stop_sync_thread() will hang
because 'MD_RECOVERY_RUNNING' can't be cleared.

Last patch make sure that md_do_sync() will set MD_RECOVERY_DONE,
however, following hang can still be triggered by dm-raid test

shell/lvconvert-raid-reshape.sh occasionally:

[root@fedora ~]# cat /proc/1982/stack
[<0>] stop_sync_thread+0x1ab/0x270 [md_mod]
[<0>] md_frozen_sync_thread+0x5c/0xa0 [md_mod]
[<0>] raid_presuspend+0x1e/0x70 [dm_raid]
[<0>] dm_table_presuspend_targets+0x40/0xb0 [dm_mod]
[<0>] __dm_destroy+0x2a5/0x310 [dm_mod]
[<0>] dm_destroy+0x16/0x30 [dm_mod]
[<0>] dev_remove+0x165/0x290 [dm_mod]
[<0>] ctl_ioctl+0x4bb/0x7b0 [dm_mod]
[<0>] dm_ctl_ioctl+0x11/0x20 [dm_mod]
[<0>] vfs_ioctl+0x21/0x60
[<0>] __x64_sys_ioctl+0xb9/0xe0
[<0>] do_syscall_64+0xc6/0x230
[<0>] entry_SYSCALL_64_after_hwframe+0x6c/0x74

Meanwhile mddev->recovery is:
MD_RECOVERY_RUNNING |
MD_RECOVERY_INTR |
MD_RECOVERY_RESHAPE |
MD_RECOVERY_FROZEN

Fix this problem by remove the code to register sync_thread directly
from raid10 and raid5. And let md_check_recovery() to register
sync_thread.

More Info: https://avd.aquasec.com/nvd/cve-2024-26756

[CVE-2024-26757] kernel: md: Don't ignore read-only array in md_check_recovery() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

md: Don't ignore read-only array in md_check_recovery()

Usually if the array is not read-write, md_check_recovery() won't
register new sync_thread in the first place. And if the array is
read-write and sync_thread is registered, md_set_readonly() will
unregister sync_thread before setting the array read-only. md/raid
follow this behavior hence there is no problem.

After commit f52f5c71f3d4 ("md: fix stopping sync thread"), following
hang can be triggered by test shell/integrity-caching.sh:

1) array is read-only. dm-raid update super block:
rs_update_sbs
 ro = mddev->ro
 mddev->ro = 0

```
  -> set array read-write
 md_update_sb

2) register new sync thread concurrently.

3) dm-raid set array back to read-only:
rs_update_sbs
 mddev->ro = ro

4) stop the array:
raid_dtr
 md_stop
  stop_sync_thread
    set_bit(MD_RECOVERY_INTR, &mddev->recovery);
    md_wakeup_thread_directly(mddev->sync_thread);
    wait_event(..., !test_bit(MD_RECOVERY_RUNNING, &mddev->recovery))

5) sync thread done:
 md_do_sync
 set_bit(MD_RECOVERY_DONE, &mddev->recovery);
 md_wakeup_thread(mddev->thread);

6) daemon thread can't unregister sync thread:
 md_check_recovery
  if (!md_is_rdwr(mddev) &&
      !test_bit(MD_RECOVERY_NEEDED, &mddev->recovery))
   return;
  -> -> MD_RECOVERY_RUNNING can't be cleared, hence step 4 hang;

The root cause is that dm-raid manipulate 'mddev->ro' by itself,
however, dm-raid really should stop sync thread before setting the
array read-only. Unfortunately, I need to read more code before I
can refacter the handler of 'mddev->ro' in dm-raid, hence let's fix
the problem the easy way for now to prevent dm-raid regression.
```

More Info: https://avd.aquasec.com/nvd/cve-2024-26757

[CVE-2024-26758] kernel: md: Don't ignore suspended array in md_check_recovery() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

md: Don't ignore suspended array in md_check_recovery()

mddev_suspend() never stop sync_thread, hence it doesn't make sense to
ignore suspended array in md_check_recovery(), which might cause
sync_thread can't be unregistered.

After commit f52f5c71f3d4 ("md: fix stopping sync thread"), following

hang can be triggered by test shell/integrity-caching.sh:

1) suspend the array:
raid_postsuspend
 mddev_suspend

2) stop the array:
raid_dtr
 md_stop
  __md_stop_writes
   stop_sync_thread
    set_bit(MD_RECOVERY_INTR, &mddev->recovery);
    md_wakeup_thread_directly(mddev->sync_thread);
    wait_event(..., !test_bit(MD_RECOVERY_RUNNING, &mddev->recovery))

3) sync thread done:
md_do_sync
 set_bit(MD_RECOVERY_DONE, &mddev->recovery);
 md_wakeup_thread(mddev->thread);

4) daemon thread can't unregister sync thread:
md_check_recovery
 if (mddev->suspended)
   return; -> return directly
 md_read_sync_thread
 clear_bit(MD_RECOVERY_RUNNING, &mddev->recovery);
 -> MD_RECOVERY_RUNNING can't be cleared, hence step 2 hang;

This problem is not just related to dm-raid, fix it by ignoring
suspended array in md_check_recovery(). And follow up patches will
improve dm-raid better to frozen sync thread during suspend.

More Info: https://avd.aquasec.com/nvd/cve-2024-26758

[CVE-2024-26767] kernel: drm/amd/display: fixed integer types and null check locations (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: fixed integer types and null check locations

[why]:
issues fixed:
- comparison with wider integer type in loop condition which can cause
infinite loops
- pointer dereference before null check

More Info: https://avd.aquasec.com/nvd/cve-2024-26767

[CVE-2024-26768] kernel: LoongArch: Change acpi_core_pic[NR_CPUS] to acpi_core_pic[MAX_CORE_PIC] (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

LoongArch: Change acpi_core_pic[NR_CPUS] to acpi_core_pic[MAX_CORE_PIC]

With default config, the value of NR_CPUS is 64. When HW platform has
more then 64 cpus, system will crash on these platforms. MAX_CORE_PIC
is the maximum cpu number in MADT table (max physical number) which can
exceed the supported maximum cpu number (NR_CPUS, max logical number),
but kernel should not crash. Kernel should boot cpus with NR_CPUS, let
the remainder cpus stay in BIOS.

The potential crash reason is that the array acpi_core_pic[NR_CPUS] can
be overflowed when parsing MADT table, and it is obvious that CORE_PIC
should be corresponding to physical core rather than logical core, so it
is better to define the array as acpi_core_pic[MAX_CORE_PIC].

With the patch, system can boot up 64 vcpus with qemu parameter -smp 128,
otherwise system will crash with the following message.

[0.000000] CPU 0 Unable to handle kernel paging request at virtual address 0000420000004259, era == 90000000037a5f0c, ra == 90000000037a46ec
[0.000000] Oops[#1]:
[0.000000] CPU: 0 PID: 0 Comm: swapper Not tainted 6.8.0-rc2+ #192
[0.000000] Hardware name: QEMU QEMU Virtual Machine, BIOS unknown 2/2/2022
[0.000000] pc 90000000037a5f0c ra 90000000037a46ec tp 9000000003c90000 sp 9000000003c93d60
[0.000000] a0 0000000000000019 a1 9000000003d93bc0 a2 0000000000000000 a3 9000000003c93bd8
[0.000000] a4 9000000003c93a74 a5 9000000083c93a67 a6 9000000003c938f0 a7 0000000000000005
[0.000000] t0 0000420000004201 t1 0000000000000000 t2 0000000000000001 t3 0000000000000001
[0.000000] t4 0000000000000003 t5 0000000000000000 t6 0000000000000030 t7 0000000000000063
[0.000000] t8 0000000000000014 u0 ffffffffffffffff s9 0000000000000000 s0 9000000003caee98
[0.000000] s1 90000000041b0480 s2 9000000003c93da0 s3 9000000003c93d98 s4 9000000003c93d90
[0.000000] s5 9000000003caa000 s6 000000000a7fd000 s7 000000000f556b60 s8 000000000e0a4330
[0.000000] ra: 90000000037a46ec platform_init+0x214/0x250
[0.000000] ERA: 90000000037a5f0c efi_runtime_init+0x30/0x94
[0.000000] CRMD: 000000b0 (PLV0 -IE -DA +PG DACF=CC DACM=CC -WE)
[0.000000] PRMD: 00000000 (PPLV0 -PIE -PWE)
[0.000000] EUEN: 00000000 (-FPE -SXE -ASXE -BTE)
[0.000000] ECFG: 00070800 (LIE=11 VS=7)
[0.000000] ESTAT: 00010000 [PIL] (IS= ECode=1 EsubCode=0)
[0.000000] BADV: 0000420000004259
[0.000000] PRID: 0014c010 (Loongson-64bit, Loongson-3A5000)
[0.000000] Modules linked in:
[0.000000] Process swapper (pid: 0, threadinfo=(____ptrval____), task=(____ptrval____))
[0.000000] Stack : 9000000003c93a14 9000000003800898 90000000041844f8 90000000037a46ec
[0.000000] 000000000a7fd000 0000000008290000 0000000000000000 0000000000000000
[0.000000] 0000000000000000 0000000000000000 00000000019d8000 000000000f556b60

[0.000000] 000000000a7fd000 000000000f556b08 9000000003ca7700 9000000003800000
[0.000000] 9000000003c93e50 9000000003800898 9000000003800108 90000000037a484c
[0.000000] 000000000e0a4330 000000000f556b60 000000000a7fd000 000000000f556b08
[0.000000] 9000000003ca7700 9000000004184000 0000000000200000 000000000e02b018
[0.000000] 000000000a7fd000 90000000037a0790 9000000003800108 0000000000000000
[0.000000] 0000000000000000 000000000e0a4330 000000000f556b60 000000000a7fd000
[0.000000] 000000000f556b08 000000000eaae298 000000000eaa5040 0000000000200000
[0.000000] ...
[0.000000] Call Trace:
[0.000000] [<90000000037a5f0c>] efi_runtime_init+0x30/0x94
[0.000000] [<90000000037a46ec>] platform_init+0x214/0x250
[0.000000] [<90000000037a484c>] setup_arch+0x124/0x45c
[0.000000] [<90000000037a0790>] start_kernel+0x90/0x670
[0.000000] [<900000000378b0d8>] kernel_entry+0xd8/0xdc

More Info: https://avd.aquasec.com/nvd/cve-2024-26768

[CVE-2024-26783] kernel: mm/vmscan: fix a bug calling wakeup_kswapd() with a wrong zone index (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

mm/vmscan: fix a bug calling wakeup_kswapd() with a wrong zone index

With numa balancing on, when a numa system is running where a numa node
doesn't have its local memory so it has no managed zones, the following
oops has been observed. It's because wakeup_kswapd() is called with a
wrong zone index, -1. Fixed it by checking the index before calling
wakeup_kswapd().

> BUG: unable to handle page fault for address: 00000000000033f3
> #PF: supervisor read access in kernel mode
> #PF: error_code(0x0000) - not-present page
> PGD 0 P4D 0
> Oops: 0000 [#1] PREEMPT SMP NOPTI
> CPU: 2 PID: 895 Comm: masim Not tainted 6.6.0-dirty #255
> Hardware name: QEMU Standard PC (i440FX + PIIX, 1996), BIOS
> rel-1.16.0-0-gd239552ce722-prebuilt.qemu.org 04/01/2014
> RIP: 0010:wakeup_kswapd (./linux/mm/vmscan.c:7812)
> Code: (omitted)
> RSP: 0000:ffffc90004257d58 EFLAGS: 00010286
> RAX: ffffffffffffffff RBX: ffff88883fff0480 RCX: 0000000000000003
> RDX: 0000000000000000 RSI: 0000000000000000 RDI: ffff88883fff0480
> RBP: ffffffffffffffff R08: ff0003ffffffffff R09: ffffffffffffffff
> R10: ffff888106c95540 R11: 0000000055555554 R12: 0000000000000003
> R13: 0000000000000000 R14: 0000000000000000 R15: ffff88883fff0940
> FS: 00007fc4b8124740(0000) GS:ffff888827c00000(0000) knlGS:0000000000000000
> CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
> CR2: 00000000000033f3 CR3: 000000026cc08004 CR4: 0000000000770ee0

> DR0: 0000000000000000 DR1: 0000000000000000 DR2: 0000000000000000
> DR3: 0000000000000000 DR6: 00000000fffe0ff0 DR7: 0000000000000400
> PKRU: 55555554
> Call Trace:
> <TASK>
> ? __die
> ? page_fault_oops
> ? __pte_offset_map_lock
> ? exc_page_fault
> ? asm_exc_page_fault
> ? wakeup_kswapd
> migrate_misplaced_page
> __handle_mm_fault
> handle_mm_fault
> do_user_addr_fault
> exc_page_fault
> asm_exc_page_fault
> RIP: 0033:0x55b897ba0808
> Code: (omitted)
> RSP: 002b:00007ffeefa821a0 EFLAGS: 00010287
> RAX: 000055b89983acd0 RBX: 00007ffeefa823f8 RCX: 000055b89983acd0
> RDX: 00007fc2f8122010 RSI: 0000000000020000 RDI: 000055b89983acd0
> RBP: 00007ffeefa821a0 R08: 0000000000000037 R09: 0000000000000075
> R10: 0000000000000000 R11: 0000000000000202 R12: 0000000000000000
> R13: 00007ffeefa82410 R14: 000055b897ba5dd8 R15: 00007fc4b8340000
> </TASK>

More Info: https://avd.aquasec.com/nvd/cve-2024-26783

[CVE-2024-26799] kernel: ASoC: qcom: Fix uninitialized pointer dmactl (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ASoC: qcom: Fix uninitialized pointer dmactl

In the case where __lpass_get_dmactl_handle is called and the driver
id dai_id is invalid the pointer dmactl is not being assigned a value,
and dmactl contains a garbage value since it has not been initialized
and so the null check may not work. Fix this to initialize dmactl to
NULL. One could argue that modern compilers will set this to zero, but
it is useful to keep this initialized as per the same way in functions
__lpass_platform_codec_intf_init and lpass_cdc_dma_daiops_hw_params.

Cleans up clang scan build warning:
sound/soc/qcom/lpass-cdc-dma.c:275:7: warning: Branch condition
evaluates to a garbage value [core.uninitialized.Branch]

More Info: https://avd.aquasec.com/nvd/cve-2024-26799

[CVE-2024-26807] kernel: spi: cadence-qspi: fix pointer reference in runtime PM hooks (Severity:

MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

Both cadence-quadspi ->runtime_suspend() and ->runtime_resume()
implementations start with:

```
 struct cqspi_st *cqspi = dev_get_drvdata(dev);
 struct spi_controller *host = dev_get_drvdata(dev);
```

This obviously cannot be correct, unless "struct cqspi_st" is the
first member of " struct spi_controller", or the other way around, but
it is not the case. "struct spi_controller" is allocated by
devm_spi_alloc_host(), which allocates an extra amount of memory for
private data, used to store "struct cqspi_st".

The ->probe() function of the cadence-quadspi driver then sets the
device drvdata to store the address of the "struct cqspi_st"
structure. Therefore:

```
 struct cqspi_st *cqspi = dev_get_drvdata(dev);
```

is correct, but:

```
 struct spi_controller *host = dev_get_drvdata(dev);
```

is not, as it makes "host" point not to a "struct spi_controller" but
to the same "struct cqspi_st" structure as above.

This obviously leads to bad things (memory corruption, kernel crashes)
directly during ->probe(), as ->probe() enables the device using PM
runtime, leading the ->runtime_resume() hook being called, which in
turns calls spi_controller_resume() with the wrong pointer.

This has at least been reported [0] to cause a kernel crash, but the
exact behavior will depend on the memory contents.

[0] https://lore.kernel.org/all/20240226121803.5a7r5wkpbbowcxgx@dhruva/

This issue potentially affects all platforms that are currently using
the cadence-quadspi driver.

More Info: https://avd.aquasec.com/nvd/cve-2024-26807

[CVE-2024-26822] kernel: smb: client: set correct id, uid and cruid for multiuser automounts (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

smb: client: set correct id, uid and cruid for multiuser automounts

When uid, gid and cruid are not specified, we need to dynamically
set them into the filesystem context used for automounting otherwise
they'll end up reusing the values from the parent mount.

More Info: https://avd.aquasec.com/nvd/cve-2024-26822

[CVE-2024-26841] kernel: LoongArch: Update cpu_sibling_map when disabling nonboot CPUs (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

LoongArch: Update cpu_sibling_map when disabling nonboot CPUs

Update cpu_sibling_map when disabling nonboot CPUs by defining & calling
clear_cpu_sibling_map(), otherwise we get such errors on SMT systems:

jump label: negative count!
WARNING: CPU: 6 PID: 45 at kernel/jump_label.c:263 __static_key_slow_dec_cpuslocked+0xec/0x100
CPU: 6 PID: 45 Comm: cpuhp/6 Not tainted 6.8.0-rc5+ #1340
pc 90000000004c302c ra 90000000004c302c tp 90000001005bc000 sp 90000001005bfd20
a0 000000000000001b a1 900000000224c278 a2 90000001005bfb58 a3 900000000224c280
a4 900000000224c278 a5 90000001005bfb50 a6 0000000000000001 a7 0000000000000001
t0 ce87a4763eb5234a t1 ce87a4763eb5234a t2 0000000000000000 t3 0000000000000000
t4 0000000000000006 t5 0000000000000000 t6 0000000000000064 t7 0000000000001964
t8 000000000009ebf6 u0 9000000001f2a068 s9 0000000000000000 s0 900000000246a2d8
s1 ffffffffffffffff s2 ffffffffffffffff s3 90000000021518c0 s4 0000000000000040
s5 9000000002151058 s6 9000000009828e40 s7 00000000000000b4 s8 0000000000000006
   ra: 90000000004c302c __static_key_slow_dec_cpuslocked+0xec/0x100
  ERA: 90000000004c302c __static_key_slow_dec_cpuslocked+0xec/0x100
 CRMD: 000000b0 (PLV0 -IE -DA +PG DACF=CC DACM=CC -WE)
 PRMD: 00000004 (PPLV0 +PIE -PWE)
 EUEN: 00000000 (-FPE -SXE -ASXE -BTE)
 ECFG: 00071c1c (LIE=2-4,10-12 VS=7)
ESTAT: 000c0000 [BRK] (IS= ECode=12 EsubCode=0)
 PRID: 0014d000 (Loongson-64bit, Loongson-3A6000-HV)
CPU: 6 PID: 45 Comm: cpuhp/6 Not tainted 6.8.0-rc5+ #1340
Stack : 0000000000000000 900000000203f258 900000000179afc8 90000001005bc000
        90000001005bf980 0000000000000000 90000001005bf988 9000000001fe0be0
        900000000224c280 900000000224c278 90000001005bf8c0 0000000000000001
        0000000000000001 ce87a4763eb5234a 0000000007f38000 90000001003f8cc0
        0000000000000000 0000000000000006 0000000000000000 4c206e6f73676e6f
        6f4c203a656d616e 000000000009ec99 0000000007f38000 0000000000000000
        900000000214b000 9000000001fe0be0 0000000000000004 0000000000000000
        0000000000000107 0000000000000009 ffffffffffafdabe 00000000000000b4

0000000000000006 90000000004c302c 9000000000224528 00005555939a0c7c
00000000000000b0 0000000000000004 0000000000000000 0000000000071c1c
...
Call Trace:
[<9000000000224528>] show_stack+0x48/0x1a0
[<900000000179afc8>] dump_stack_lvl+0x78/0xa0
[<9000000000263ed0>] __warn+0x90/0x1a0
[<90000000017419b8>] report_bug+0x1b8/0x280
[<900000000179c564>] do_bp+0x264/0x420
[<90000000004c302c>] __static_key_slow_dec_cpuslocked+0xec/0x100
[<90000000002b4d7c>] sched_cpu_deactivate+0x2fc/0x300
[<9000000000266498>] cpuhp_invoke_callback+0x178/0x8a0
[<9000000000267f70>] cpuhp_thread_fun+0xf0/0x240
[<90000000002a117c>] smpboot_thread_fn+0x1dc/0x2e0
[<900000000029a720>] kthread+0x140/0x160
[<9000000000222288>] ret_from_kernel_thread+0xc/0xa4

More Info: https://avd.aquasec.com/nvd/cve-2024-26841

[CVE-2024-26842] kernel: scsi: ufs: core: Fix shift issue in ufshcd_clear_cmd() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

scsi: ufs: core: Fix shift issue in ufshcd_clear_cmd()

When task_tag >= 32 (in MCQ mode) and sizeof(unsigned int) == 4, 1U <<
task_tag will out of bounds for a u32 mask. Fix this up to prevent
SHIFT_ISSUE (bitwise shifts that are out of bounds for their data type).

[name:debug_monitors&]Unexpected kernel BRK exception at EL1
[name:traps&]Internal error: BRK handler: 00000000f2005514 [#1] PREEMPT SMP
[name:mediatek_cpufreq_hw&]cpufreq stop DVFS log done
[name:mrdump&]Kernel Offset: 0x1ba5800000 from 0xffffffc008000000
[name:mrdump&]PHYS_OFFSET: 0x80000000
[name:mrdump&]pstate: 22400005 (nzCv daif +PAN -UAO)
[name:mrdump&]pc : [0xffffffdbaf52bb2c] ufshcd_clear_cmd+0x280/0x288
[name:mrdump&]lr : [0xffffffdbaf52a774] ufshcd_wait_for_dev_cmd+0x3e4/0x82c
[name:mrdump&]sp : ffffffc0081471b0
<snip>
Workqueue: ufs_eh_wq_0 ufshcd_err_handler
Call trace:
 dump_backtrace+0xf8/0x144
 show_stack+0x18/0x24
 dump_stack_lvl+0x78/0x9c
 dump_stack+0x18/0x44
 mrdump_common_die+0x254/0x480 [mrdump]
 ipanic_die+0x20/0x30 [mrdump]
 notify_die+0x15c/0x204
 die+0x10c/0x5f8
 arm64_notify_die+0x74/0x13c

do_debug_exception+0x164/0x26c
el1_dbg+0x64/0x80
el1h_64_sync_handler+0x3c/0x90
el1h_64_sync+0x68/0x6c
ufshcd_clear_cmd+0x280/0x288
ufshcd_wait_for_dev_cmd+0x3e4/0x82c
ufshcd_exec_dev_cmd+0x5bc/0x9ac
ufshcd_verify_dev_init+0x84/0x1c8
ufshcd_probe_hba+0x724/0x1ce0
ufshcd_host_reset_and_restore+0x260/0x574
ufshcd_reset_and_restore+0x138/0xbd0
ufshcd_err_handler+0x1218/0x2f28
process_one_work+0x5fc/0x1140
worker_thread+0x7d8/0xe20
kthread+0x25c/0x468
ret_from_fork+0x10/0x20

More Info: https://avd.aquasec.com/nvd/cve-2024-26842

[CVE-2024-26866] kernel: spi: lpspi: Avoid potential use-after-free in probe() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

spi: lpspi: Avoid potential use-after-free in probe()

fsl_lpspi_probe() is allocating/disposing memory manually with
spi_alloc_host()/spi_alloc_target(), but uses
devm_spi_register_controller(). In case of error after the latter call the
memory will be explicitly freed in the probe function by
spi_controller_put() call, but used afterwards by "devm" management outside
probe() (spi_unregister_controller() <- devm_spi_unregister() below).

Unable to handle kernel NULL pointer dereference at virtual address 0000000000000070
...
Call trace:
kernfs_find_ns
kernfs_find_and_get_ns
sysfs_remove_group
sysfs_remove_groups
device_remove_attrs
device_del
spi_unregister_controller
devm_spi_unregister
release_nodes
devres_release_all
really_probe
driver_probe_device
__device_attach_driver
bus_for_each_drv
__device_attach

device_initial_probe
bus_probe_device
deferred_probe_work_func
process_one_work
worker_thread
kthread
ret_from_fork

More Info: https://avd.aquasec.com/nvd/cve-2024-26866

[CVE-2024-26869] kernel: f2fs: fix to truncate meta inode pages forcely (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

f2fs: fix to truncate meta inode pages forcely

Below race case can cause data corruption:

```
Thread A    GC thread
     - gc_data_segment
      - ra_data_block
       - locked meta_inode page
- f2fs_inplace_write_data
 - invalidate_mapping_pages
 : fail to invalidate meta_inode page
   due to lock failure or dirty|writeback
   status
 - f2fs_submit_page_bio
 : write last dirty data to old blkaddr
      - move_data_block
       - load old data from meta_inode page
       - f2fs_submit_page_write
       : write old data to new blkaddr
```

Because invalidate_mapping_pages() will skip invalidating page which
has unclear status including locked, dirty, writeback and so on, so
we need to use truncate_inode_pages_range() instead of
invalidate_mapping_pages() to make sure meta_inode page will be dropped.

More Info: https://avd.aquasec.com/nvd/cve-2024-26869

[CVE-2024-26876] kernel: drm/bridge: adv7511: fix crash on irq during probe (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/bridge: adv7511: fix crash on irq during probe

Moved IRQ registration down to end of adv7511_probe().

If an IRQ already is pending during adv7511_probe
(before adv7511_cec_init) then cec_received_msg_ts
could crash using uninitialized data:

```
Unable to handle kernel read from unreadable memory at virtual address 00000000000003d5
Internal error: Oops: 96000004 [#1] PREEMPT_RT SMP
Call trace:
 cec_received_msg_ts+0x48/0x990 [cec]
 adv7511_cec_irq_process+0x1cc/0x308 [adv7511]
 adv7511_irq_process+0xd8/0x120 [adv7511]
 adv7511_irq_handler+0x1c/0x30 [adv7511]
 irq_thread_fn+0x30/0xa0
 irq_thread+0x14c/0x238
 kthread+0x190/0x1a8
```

More Info: https://avd.aquasec.com/nvd/cve-2024-26876

[CVE-2024-26902] kernel: perf: RISCV: Fix panic on pmu overflow handler (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

perf: RISCV: Fix panic on pmu overflow handler

(1 << idx) of int is not desired when setting bits in unsigned long
overflowed_ctrs, use BIT() instead. This panic happens when running
'perf record -e branches' on sophgo sg2042.

```
[  273.311852] Unable to handle kernel NULL pointer dereference at virtual address 0000000000000098
[  273.320851] Oops [#1]
[  273.323179] Modules linked in:
[  273.326303] CPU: 0 PID: 1475 Comm: perf Not tainted 6.6.0-rc3+ #9
[  273.332521] Hardware name: Sophgo Mango (DT)
[  273.336878] epc : riscv_pmu_ctr_get_width_mask+0x8/0x62
[  273.342291]  ra : pmu_sbi_ovf_handler+0x2e0/0x34e
[  273.347091] epc : ffffffff80aecd98 ra : ffffffff80aee056 sp : ffffff6e36928b0
[  273.354454]  gp : ffffffff821f82d0 tp : ffffffd90c353200 t0 : 0000002ade4f9978
[  273.361815]  t1 : 0000000000504d55 t2 : ffffffff8016cd8c s0 : ffffff6e3692a70
[  273.369180]  s1 : 0000000000000020 a0 : 0000000000000000 a1 : 00001a8e81800000
[  273.376540]  a2 : 0000003c00070198 a3 : 0000003c00db75a4 a4 : 0000000000000015
[  273.383901]  a5 : ffffffd7ff8804b0 a6 : 0000000000000015 a7 : 000000000000002a
[  273.391327]  s2 : 000000000000ffff s3 : 0000000000000000 s4 : ffffffd7ff8803b0
[  273.398773]  s5 : 0000000000504d55 s6 : ffffffd905069800 s7 : ffffffff821fe210
[  273.406139]  s8 : 000000007fffffff s9 : ffffffd7ff8803b0 s10: ffffffd903f29098
[  273.413660]  s11: 0000000080000000 t3 : 0000000000000003 t4 : ffffffff8017a0ca
[  273.421022]  t5 : ffffffff8023cfc2 t6 : ffffffd9040780e8
[  273.426437] status: 0000000200000100 badaddr: 0000000000000098 cause: 000000000000000d
[  273.434512] [<ffffffff80aecd98>] riscv_pmu_ctr_get_width_mask+0x8/0x62
```

[273.441169] [<ffffffff80076bd8>] handle_percpu_devid_irq+0x98/0x1ee
[273.447562] [<ffffffff80071158>] generic_handle_domain_irq+0x28/0x36
[273.454151] [<ffffffff8047a99a>] riscv_intc_irq+0x36/0x4e
[273.459659] [<ffffffff80c944de>] handle_riscv_irq+0x4a/0x74
[273.465442] [<ffffffff80c94c48>] do_irq+0x62/0x92
[273.470360] Code: 0420 60a2 6402 5529 0141 8082 0013 0000 0013 0000 (6d5c) b783
[273.477921] ---[end trace 0000000000000000]---
[273.482630] Kernel panic - not syncing: Fatal exception in interrupt

More Info: https://avd.aquasec.com/nvd/cve-2024-26902

[CVE-2024-26914] kernel: drm/amd/display: fix incorrect mpc_combine array size (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: fix incorrect mpc_combine array size

[why]
MAX_SURFACES is per stream, while MAX_PLANES is per asic. The
mpc_combine is an array that records all the planes per asic. Therefore
MAX_PLANES should be used as the array size. Using MAX_SURFACES causes
array overflow when there are more than 3 planes.

[how]
Use the MAX_PLANES for the mpc_combine array size.

More Info: https://avd.aquasec.com/nvd/cve-2024-26914

[CVE-2024-26947] kernel: ARM: 9359/1: flush: check if the folio is reserved for no-mapping addresses (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ARM: 9359/1: flush: check if the folio is reserved for no-mapping addresses

Since commit a4d5613c4dc6 ("arm: extend pfn_valid to take into account
freed memory map alignment") changes the semantics of pfn_valid() to check
presence of the memory map for a PFN. A valid page for an address which
is reserved but not mapped by the kernel[1], the system crashed during
some uio test with the following memory layout:

 node   0: [mem 0x00000000c0a00000-0x00000000cc8fffff]
 node   0: [mem 0x00000000d0000000-0x00000000da1fffff]
 the uio layout isï¼š0xc0900000, 0x100000

the crash backtrace like:

Unable to handle kernel paging request at virtual address bff00000
[...]
CPU: 1 PID: 465 Comm: startapp.bin Tainted: G O 5.10.0 #1
Hardware name: Generic DT based system
PC is at b15_flush_kern_dcache_area+0x24/0x3c
LR is at __sync_icache_dcache+0x6c/0x98
[...]
(b15_flush_kern_dcache_area) from (__sync_icache_dcache+0x6c/0x98)
(__sync_icache_dcache) from (set_pte_at+0x28/0x54)
(set_pte_at) from (remap_pfn_range+0x1a0/0x274)
(remap_pfn_range) from (uio_mmap+0x184/0x1b8 [uio])
(uio_mmap [uio]) from (__mmap_region+0x264/0x5f4)
(__mmap_region) from (__do_mmap_mm+0x3ec/0x440)
(__do_mmap_mm) from (do_mmap+0x50/0x58)
(do_mmap) from (vm_mmap_pgoff+0xfc/0x188)
(vm_mmap_pgoff) from (ksys_mmap_pgoff+0xac/0xc4)
(ksys_mmap_pgoff) from (ret_fast_syscall+0x0/0x5c)
Code: e0801001 e2423001 e1c00003 f57ff04f (ee070f3e)
---[end trace 09cf0734c3805d52]---
Kernel panic - not syncing: Fatal exception

So check if PG_reserved was set to solve this issue.

[1]: https://lore.kernel.org/lkml/Zbtdue57RO0QScJM@linux.ibm.com/

More Info: https://avd.aquasec.com/nvd/cve-2024-26947

[CVE-2024-26948] kernel: drm/amd/display: Add a dc_state NULL check in dc_state_release (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Add a dc_state NULL check in dc_state_release

[How]
Check wheather state is NULL before releasing it.

More Info: https://avd.aquasec.com/nvd/cve-2024-26948

[CVE-2024-26953] kernel: net: esp: fix bad handling of pages from page_pool (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net: esp: fix bad handling of pages from page_pool

When the skb is reorganized during esp_output (!esp->inline), the pages
coming from the original skb fragments are supposed to be released back
to the system through put_page. But if the skb fragment pages are
originating from a page_pool, calling put_page on them will trigger a
page_pool leak which will eventually result in a crash.

This leak can be easily observed when using CONFIG_DEBUG_VM and doing
ipsec + gre (non offloaded) forwarding:

```
 BUG: Bad page state in process ksoftirqd/16  pfn:1451b6
 page:00000000de2b8d32 refcount:0 mapcount:0 mapping:0000000000000000 index:0x1451b6000 pfn:0x1451b6
 flags: 0x200000000000000(node=0|zone=2)
 page_type: 0xffffffff()
 raw: 0200000000000000 dead000000000040 ffff88810d23c000 0000000000000000
 raw: 00000001451b6000 0000000000000001 00000000ffffffff 0000000000000000
 page dumped because: page_pool leak
  Modules linked in: ip_gre gre mlx5_ib mlx5_core xt_conntrack xt_MASQUERADE nf_conntrack_netlink nfnetlink iptable_nat nf_nat xt_addrtype br_netfilter rpcrdma rdma_ucm ib_iser libiscsi scsi_transport_iscsi ib_umad rdma_cm ib_ipoib iw_cm ib_cm ib_uverbs ib_core overlay zram zsmalloc fuse [last unloaded: mlx5_core]
 CPU: 16 PID: 96 Comm: ksoftirqd/16 Not tainted 6.8.0-rc4+ #22
  Hardware name: QEMU Standard PC (Q35 + ICH9, 2009), BIOS rel-1.13.0-0-gf21b5a4aeb02-prebuilt.qemu.org 04/01/2014
 Call Trace:
  <TASK>
  dump_stack_lvl+0x36/0x50
  bad_page+0x70/0xf0
  free_unref_page_prepare+0x27a/0x460
  free_unref_page+0x38/0x120
  esp_ssg_unref.isra.0+0x15f/0x200
  esp_output_tail+0x66d/0x780
  esp_xmit+0x2c5/0x360
  validate_xmit_xfrm+0x313/0x370
  ? validate_xmit_skb+0x1d/0x330
  validate_xmit_skb_list+0x4c/0x70
  sch_direct_xmit+0x23e/0x350
  __dev_queue_xmit+0x337/0xba0
  ? nf_hook_slow+0x3f/0xd0
  ip_finish_output2+0x25e/0x580
  iptunnel_xmit+0x19b/0x240
  ip_tunnel_xmit+0x5fb/0xb60
  ipgre_xmit+0x14d/0x280 [ip_gre]
  dev_hard_start_xmit+0xc3/0x1c0
  __dev_queue_xmit+0x208/0xba0
  ? nf_hook_slow+0x3f/0xd0
  ip_finish_output2+0x1ca/0x580
  ip_sublist_rcv_finish+0x32/0x40
  ip_sublist_rcv+0x1b2/0x1f0
  ? ip_rcv_finish_core.constprop.0+0x460/0x460
  ip_list_rcv+0x103/0x130
  __netif_receive_skb_list_core+0x181/0x1e0
  netif_receive_skb_list_internal+0x1b3/0x2c0
  napi_gro_receive+0xc8/0x200
  gro_cell_poll+0x52/0x90
```

__napi_poll+0x25/0x1a0
net_rx_action+0x28e/0x300
__do_softirq+0xc3/0x276
? sort_range+0x20/0x20
run_ksoftirqd+0x1e/0x30
smpboot_thread_fn+0xa6/0x130
kthread+0xcd/0x100
? kthread_complete_and_exit+0x20/0x20
ret_from_fork+0x31/0x50
? kthread_complete_and_exit+0x20/0x20
ret_from_fork_asm+0x11/0x20
</TASK>

The suggested fix is to introduce a new wrapper (skb_page_unref) that
covers page refcounting for page_pool pages as well.

More Info: https://avd.aquasec.com/nvd/cve-2024-26953

[CVE-2024-26962] kernel: dm-raid456, md/raid456: fix a deadlock for dm-raid456 while io concurrent with reshape (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

dm-raid456, md/raid456: fix a deadlock for dm-raid456 while io concurrent with reshape

For raid456, if reshape is still in progress, then IO across reshape
position will wait for reshape to make progress. However, for dm-raid,
in following cases reshape will never make progress hence IO will hang:

1) the array is read-only;
2) MD_RECOVERY_WAIT is set;
3) MD_RECOVERY_FROZEN is set;

After commit c467e97f079f ("md/raid6: use valid sector values to determine
if an I/O should wait on the reshape") fix the problem that IO across
reshape position doesn't wait for reshape, the dm-raid test
shell/lvconvert-raid-reshape.sh start to hang:

[root@fedora ~]# cat /proc/979/stack
[<0>] wait_woken+0x7d/0x90
[<0>] raid5_make_request+0x929/0x1d70 [raid456]
[<0>] md_handle_request+0xc2/0x3b0 [md_mod]
[<0>] raid_map+0x2c/0x50 [dm_raid]
[<0>] __map_bio+0x251/0x380 [dm_mod]
[<0>] dm_submit_bio+0x1f0/0x760 [dm_mod]
[<0>] __submit_bio+0xc2/0x1c0
[<0>] submit_bio_noacct_nocheck+0x17f/0x450
[<0>] submit_bio_noacct+0x2bc/0x780
[<0>] submit_bio+0x70/0xc0

[<0>] mpage_readahead+0x169/0x1f0
[<0>] blkdev_readahead+0x18/0x30
[<0>] read_pages+0x7c/0x3b0
[<0>] page_cache_ra_unbounded+0x1ab/0x280
[<0>] force_page_cache_ra+0x9e/0x130
[<0>] page_cache_sync_ra+0x3b/0x110
[<0>] filemap_get_pages+0x143/0xa30
[<0>] filemap_read+0xdc/0x4b0
[<0>] blkdev_read_iter+0x75/0x200
[<0>] vfs_read+0x272/0x460
[<0>] ksys_read+0x7a/0x170
[<0>] __x64_sys_read+0x1c/0x30
[<0>] do_syscall_64+0xc6/0x230
[<0>] entry_SYSCALL_64_after_hwframe+0x6c/0x74

This is because reshape can't make progress.

For md/raid, the problem doesn't exist because register new sync_thread
doesn't rely on the IO to be done any more:

1) If array is read-only, it can switch to read-write by ioctl/sysfs;
2) md/raid never set MD_RECOVERY_WAIT;
3) If MD_RECOVERY_FROZEN is set, mddev_suspend() doesn't hold
   'reconfig_mutex', hence it can be cleared and reshape can continue by
   sysfs api 'sync_action'.

However, I'm not sure yet how to avoid the problem in dm-raid yet. This
patch on the one hand make sure raid_message() can't change
sync_thread() through raid_message() after presuspend(), on the other
hand detect the above 3 cases before wait for IO do be done in
dm_suspend(), and let dm-raid requeue those IO.

More Info: https://avd.aquasec.com/nvd/cve-2024-26962

[CVE-2024-27005] kernel: interconnect: Don't access req_list while it's being manipulated (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

interconnect: Don't access req_list while it's being manipulated

The icc_lock mutex was split into separate icc_lock and icc_bw_lock
mutexes in [1] to avoid lockdep splats. However, this didn't adequately
protect access to icc_node::req_list.

The icc_set_bw() function will eventually iterate over req_list while
only holding icc_bw_lock, but req_list can be modified while only
holding icc_lock. This causes races between icc_set_bw(), of_icc_get(),
and icc_put().

Example A:

```
 CPU0                          CPU1
 ----                          ----
 icc_set_bw(path_a)
  mutex_lock(&icc_bw_lock);
                               icc_put(path_b)
                                 mutex_lock(&icc_lock);
  aggregate_requests()
    hlist_for_each_entry(r, ...
                                 hlist_del(...
      <r = invalid pointer>
```

Example B:

```
 CPU0                          CPU1
 ----                          ----
 icc_set_bw(path_a)
  mutex_lock(&icc_bw_lock);
                               path_b = of_icc_get()
                                 of_icc_get_by_index()
                                   mutex_lock(&icc_lock);
                                   path_find()
                                     path_init()
  aggregate_requests()
    hlist_for_each_entry(r, ...
                                       hlist_add_head(...
      <r = invalid pointer>
```

Fix this by ensuring icc_bw_lock is always held before manipulating
icc_node::req_list. The additional places icc_bw_lock is held don't
perform any memory allocations, so we should still be safe from the
original lockdep splats that motivated the separate locks.

[1] commit af42269c3523 ("interconnect: Fix locking for runpm vs reclaim")

More Info: https://avd.aquasec.com/nvd/cve-2024-27005

[CVE-2024-27010] kernel: net/sched: Fix mirred deadlock on device recursion (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net/sched: Fix mirred deadlock on device recursion

When the mirred action is used on a classful egress qdisc and a packet is
mirrored or redirected to self we hit a qdisc lock deadlock.
See trace below.

[..... other info removed for brevity....]

```
[   82.890906]
[   82.890906] ============================================
[   82.890906] WARNING: possible recursive locking detected
[   82.890906] 6.8.0-05205-g77fadd89fe2d-dirty #213 Tainted: G        W
[   82.890906] --------------------------------------------
[   82.890906] ping/418 is trying to acquire lock:
[   82.890906] ffff888006994110 (&sch->q.lock){+.-.}-{3:3}, at:
__dev_queue_xmit+0x1778/0x3550
[   82.890906]
[   82.890906] but task is already holding lock:
[   82.890906] ffff888006994110 (&sch->q.lock){+.-.}-{3:3}, at:
__dev_queue_xmit+0x1778/0x3550
[   82.890906]
[   82.890906] other info that might help us debug this:
[   82.890906]  Possible unsafe locking scenario:
[   82.890906]
[   82.890906]        CPU0
[   82.890906]        ----
[   82.890906]   lock(&sch->q.lock);
[   82.890906]   lock(&sch->q.lock);
[   82.890906]
[   82.890906]  *** DEADLOCK ***
[   82.890906]
[..... other info removed for brevity....]

Example setup (eth0->eth0) to recreate
tc qdisc add dev eth0 root handle 1: htb default 30
tc filter add dev eth0 handle 1: protocol ip prio 2 matchall \
    action mirred egress redirect dev eth0

Another example(eth0->eth1->eth0) to recreate
tc qdisc add dev eth0 root handle 1: htb default 30
tc filter add dev eth0 handle 1: protocol ip prio 2 matchall \
    action mirred egress redirect dev eth1

tc qdisc add dev eth1 root handle 1: htb default 30
tc filter add dev eth1 handle 1: protocol ip prio 2 matchall \
    action mirred egress redirect dev eth0

We fix this by adding an owner field (CPU id) to struct Qdisc set after
root qdisc is entered. When the softirq enters it a second time, if the
qdisc owner is the same CPU, the packet is dropped to break the loop.

More Info: https://avd.aquasec.com/nvd/cve-2024-27010
```

[CVE-2024-27011] kernel: netfilter: nf_tables: fix memleak in map from abort path (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

netfilter: nf_tables: fix memleak in map from abort path

The delete set command does not rely on the transaction object for element removal, therefore, a combination of delete element + delete set from the abort path could result in restoring twice the refcount of the mapping.

Check for inactive element in the next generation for the delete element command in the abort path, skip restoring state if next generation bit has been already cleared. This is similar to the activate logic using the set walk iterator.

[6170.286929] ------------[cut here]------------
[6170.286939] WARNING: CPU: 6 PID: 790302 at net/netfilter/nf_tables_api.c:2086 nf_tables_chain_destroy+0x1f7/0x220 [nf_tables]
[6170.287071] Modules linked in: [...]
[6170.287633] CPU: 6 PID: 790302 Comm: kworker/6:2 Not tainted 6.9.0-rc3+ #365
[6170.287768] RIP: 0010:nf_tables_chain_destroy+0x1f7/0x220 [nf_tables]
[6170.287886] Code: df 48 8d 7d 58 e8 69 2e 3b df 48 8b 7d 58 e8 80 1b 37 df 48 8d 7d 68 e8 57 2e 3b df 48 8b 7d 68 e8 6e 1b 37 df 48 89 ef eb c4 <0f> 0b 48 83 c4 08 5b 5d 41 5c 41 5d 41 5e 41 5f c3 cc cc cc cc 0f
[6170.287895] RSP: 0018:ffff888134b8fd08 EFLAGS: 00010202
[6170.287904] RAX: 0000000000000001 RBX: ffff888125bffb28 RCX: dfffc0000000000
[6170.287912] RDX: 0000000000000003 RSI: ffffffffa20298ab RDI: ffff88811ebe4750
[6170.287919] RBP: ffff88811ebe4700 R08: ffff88838e812650 R09: fffffbfff0623a55
[6170.287926] R10: ffffffff8311d2af R11: 0000000000000001 R12: ffff888125bffb10
[6170.287933] R13: ffff888125bffb10 R14: dead000000000122 R15: dead000000000100
[6170.287940] FS: 0000000000000000(0000) GS:ffff888390b00000(0000) knlGS:0000000000000000
[6170.287948] CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
[6170.287955] CR2: 00007fd31fc00710 CR3: 0000000133f60004 CR4: 0000000001706f0
[6170.287962] Call Trace:
[6170.287967] <TASK>
[6170.287973] ? __warn+0x9f/0x1a0
[6170.287986] ? nf_tables_chain_destroy+0x1f7/0x220 [nf_tables]
[6170.288092] ? report_bug+0x1b1/0x1e0
[6170.287986] ? nf_tables_chain_destroy+0x1f7/0x220 [nf_tables]
[6170.288092] ? report_bug+0x1b1/0x1e0
[6170.288104] ? handle_bug+0x3c/0x70
[6170.288112] ? exc_invalid_op+0x17/0x40
[6170.288120] ? asm_exc_invalid_op+0x1a/0x20
[6170.288132] ? nf_tables_chain_destroy+0x2b/0x220 [nf_tables]
[6170.288243] ? nf_tables_chain_destroy+0x1f7/0x220 [nf_tables]
[6170.288366] ? nf_tables_chain_destroy+0x2b/0x220 [nf_tables]
[6170.288483] nf_tables_trans_destroy_work+0x588/0x590 [nf_tables]

More Info: https://avd.aquasec.com/nvd/cve-2024-27011

[CVE-2024-27012] kernel: netfilter: nf_tables: restore set elements when delete set fails (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

netfilter: nf_tables: restore set elements when delete set fails

From abort path, nft_mapelem_activate() needs to restore refcounters to the original state. Currently, it uses the set->ops->walk() to iterate over these set elements. The existing set iterator skips inactive elements in the next generation, this does not work from the abort path to restore the original state since it has to skip active elements instead (not inactive ones).

This patch moves the check for inactive elements to the set iterator callback, then it reverses the logic for the .activate case which needs to skip active elements.

Toggle next generation bit for elements when delete set command is invoked and call nft_clear() from .activate (abort) path to restore the next generation bit.

The splat below shows an object in mappings memleak:

[43929.457523] ------------[cut here]------------
[43929.457532] WARNING: CPU: 0 PID: 1139 at include/net/netfilter/nf_tables.h:1237 nft_setelem_data_deactivate+0xe4/0xf0 [nf_tables]
[...]
[43929.458014] RIP: 0010:nft_setelem_data_deactivate+0xe4/0xf0 [nf_tables]
[43929.458076] Code: 83 f8 01 77 ab 49 8d 7c 24 08 e8 37 5e d0 de 49 8b 6c 24 08 48 8d 7d 50 e8 e9 5c d0 de 8b 45 50 8d 50 ff 89 55 50 85 c0 75 86 <0f> 0b eb 82 0f 0b eb b3 0f 1f 40 00 90 90 90 90 90 90 90 90 90
[43929.458081] RSP: 0018:ffff888140f9f4b0 EFLAGS: 00010246
[43929.458086] RAX: 0000000000000000 RBX: ffff8881434f5288 RCX: dfffc0000000000
[43929.458090] RDX: 00000000ffffffff RSI: ffffffffa26d28a7 RDI: ffff88810ecc9550
[43929.458093] RBP: ffff88810ecc9500 R08: 0000000000000001 R09: ffffed10281f3e8f
[43929.458096] R10: 0000000000000003 R11: ffff0000ffff0000 R12: ffff8881434f52a0
[43929.458100] R13: ffff888140f9f5f4 R14: ffff888151c7a800 R15: 0000000000000002
[43929.458103] FS: 00007f0c687c4740(0000) GS:ffff888390800000(0000) knlGS:0000000000000000
[43929.458107] CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
[43929.458111] CR2: 00007f58dbe5b008 CR3: 0000000123602005 CR4: 00000000001706f0
[43929.458114] Call Trace:
[43929.458118] <TASK>
[43929.458121] ? __warn+0x9f/0x1a0
[43929.458127] ? nft_setelem_data_deactivate+0xe4/0xf0 [nf_tables]
[43929.458188] ? report_bug+0x1b1/0x1e0
[43929.458196] ? handle_bug+0x3c/0x70
[43929.458200] ? exc_invalid_op+0x17/0x40
[43929.458211] ? nft_setelem_data_deactivate+0xd7/0xf0 [nf_tables]
[43929.458271] ? nft_setelem_data_deactivate+0xe4/0xf0 [nf_tables]
[43929.458332] nft_mapelem_deactivate+0x24/0x30 [nf_tables]
[43929.458392] nft_rhash_walk+0xdd/0x180 [nf_tables]
[43929.458453] ? __pfx_nft_rhash_walk+0x10/0x10 [nf_tables]
[43929.458512] ? rb_insert_color+0x2e/0x280
[43929.458520] nft_map_deactivate+0xdc/0x1e0 [nf_tables]
[43929.458582] ? __pfx_nft_map_deactivate+0x10/0x10 [nf_tables]
[43929.458642] ? __pfx_nft_mapelem_deactivate+0x10/0x10 [nf_tables]
[43929.458701] ? __rcu_read_unlock+0x46/0x70

[43929.458709] nft_delset+0xff/0x110 [nf_tables]
[43929.458769] nft_flush_table+0x16f/0x460 [nf_tables]
[43929.458830] nf_tables_deltable+0x501/0x580 [nf_tables]

More Info: https://avd.aquasec.com/nvd/cve-2024-27012

[CVE-2024-27041] kernel: drm/amd/display: fix NULL checks for adev->dm.dc in amdgpu_dm_fini() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: fix NULL checks for adev->dm.dc in amdgpu_dm_fini()

Since 'adev->dm.dc' in amdgpu_dm_fini() might turn out to be NULL
before the call to dc_enable_dmub_notifications(), check
beforehand to ensure there will not be a possible NULL-ptr-deref
there.

Also, since commit 1e88eb1b2c25 ("drm/amd/display: Drop
CONFIG_DRM_AMD_DC_HDCP") there are two separate checks for NULL in
'adev->dm.dc' before dc_deinit_callbacks() and dc_dmub_srv_destroy().
Clean up by combining them all under one 'if'.

Found by Linux Verification Center (linuxtesting.org) with static
analysis tool SVACE.

More Info: https://avd.aquasec.com/nvd/cve-2024-27041

[CVE-2024-27056] kernel: wifi: iwlwifi: mvm: ensure offloading TID queue exists (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

wifi: iwlwifi: mvm: ensure offloading TID queue exists

The resume code path assumes that the TX queue for the offloading TID
has been configured. At resume time it then tries to sync the write
pointer as it may have been updated by the firmware.

In the unusual event that no packets have been send on TID 0, the queue
will not have been allocated and this causes a crash. Fix this by
ensuring the queue exist at suspend time.

More Info: https://avd.aquasec.com/nvd/cve-2024-27056

[CVE-2024-27057] kernel: ASoC: SOF: ipc4-pcm: Workaround for crashed firmware on system suspend (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ASoC: SOF: ipc4-pcm: Workaround for crashed firmware on system suspend

When the system is suspended while audio is active, the
sof_ipc4_pcm_hw_free() is invoked to reset the pipelines since during
suspend the DSP is turned off, streams will be re-started after resume.

If the firmware crashes during while audio is running (or when we reset
the stream before suspend) then the sof_ipc4_set_multi_pipeline_state()
will fail with IPC error and the state change is interrupted.
This will cause misalignment between the kernel and firmware state on next
DSP boot resulting errors returned by firmware for IPC messages, eventually
failing the audio resume.
On stream close the errors are ignored so the kernel state will be
corrected on the next DSP boot, so the second boot after the DSP panic.

If sof_ipc4_trigger_pipelines() is called from sof_ipc4_pcm_hw_free() then
state parameter is SOF_IPC4_PIPE_RESET and only in this case.

Treat a forced pipeline reset similarly to how we treat a pcm_free by
ignoring error on state sending to allow the kernel's state to be
consistent with the state the firmware will have after the next boot.

More Info: https://avd.aquasec.com/nvd/cve-2024-27057

[CVE-2024-27062] kernel: nouveau: lock the client object tree. (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

nouveau: lock the client object tree.

It appears the client object tree has no locking unless I've missed
something else. Fix races around adding/removing client objects,
mostly vram bar mappings.

4562.099306] general protection fault, probably for non-canonical address 0x6677ed422bceb80c: 0000 [#1] PREEMPT SMP PTI
[4562.099314] CPU: 2 PID: 23171 Comm: deqp-vk Not tainted 6.8.0-rc6+ #27
[4562.099324] Hardware name: Gigabyte Technology Co., Ltd. Z390 I AORUS PRO WIFI/Z390 I AORUS PRO WIFI-CF, BIOS F8 11/05/2021
[4562.099330] RIP: 0010:nvkm_object_search+0x1d/0x70 [nouveau]
[4562.099503] Code: 90 90 90 90 90 90 90 90 90 90 90 90 90 66 0f 1f 00 0f 1f 44 00 00 48 89 f8 48 85 f6 74 39 48 8b 87 a0 00 00 00 48 85 c0 74 12 <48> 8b 48 f8 48 39 ce 73 15 48 8b 40 10 48 85 c0 75 ee 48 c7 c0 fe
[4562.099506] RSP: 0000:ffffa94cc420bbf8 EFLAGS: 00010206
[4562.099512] RAX: 6677ed422bceb814 RBX: ffff98108791f400 RCX: ffff9810f26b8f58

[4562.099517] RDX: 0000000000000000 RSI: ffff9810f26b9158 RDI: ffff98108791f400
[4562.099519] RBP: ffff9810f26b9158 R08: 0000000000000000 R09: 0000000000000000
[4562.099521] R10: ffffa94cc420bc48 R11: 0000000000000001 R12: ffff9810f02a7cc0
[4562.099526] R13: 0000000000000000 R14: 00000000000000ff R15: 0000000000000007
[4562.099528] FS: 00007f629c5017c0(0000) GS:ffff98142c700000(0000) knlGS:0000000000000000
[4562.099534] CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
[4562.099536] CR2: 00007f629a882000 CR3: 000000017019e004 CR4: 00000000003706f0
[4562.099541] DR0: 0000000000000000 DR1: 0000000000000000 DR2: 0000000000000000
[4562.099542] DR3: 0000000000000000 DR6: 00000000fffe0ff0 DR7: 0000000000000400
[4562.099544] Call Trace:
[4562.099555] <TASK>
[4562.099573] ? die_addr+0x36/0x90
[4562.099583] ? exc_general_protection+0x246/0x4a0
[4562.099593] ? asm_exc_general_protection+0x26/0x30
[4562.099600] ? nvkm_object_search+0x1d/0x70 [nouveau]
[4562.099730] nvkm_ioctl+0xa1/0x250 [nouveau]
[4562.099861] nvif_object_map_handle+0xc8/0x180 [nouveau]
[4562.099986] nouveau_ttm_io_mem_reserve+0x122/0x270 [nouveau]
[4562.100156] ? dma_resv_test_signaled+0x26/0xb0
[4562.100163] ttm_bo_vm_fault_reserved+0x97/0x3c0 [ttm]
[4562.100182] ? __mutex_unlock_slowpath+0x2a/0x270
[4562.100189] nouveau_ttm_fault+0x69/0xb0 [nouveau]
[4562.100356] __do_fault+0x32/0x150
[4562.100362] do_fault+0x7c/0x560
[4562.100369] __handle_mm_fault+0x800/0xc10
[4562.100382] handle_mm_fault+0x17c/0x3e0
[4562.100388] do_user_addr_fault+0x208/0x860
[4562.100395] exc_page_fault+0x7f/0x200
[4562.100402] asm_exc_page_fault+0x26/0x30
[4562.100412] RIP: 0033:0x9b9870
[4562.100419] Code: 85 a8 f7 ff ff 8b 8d 80 f7 ff ff 89 08 e9 18 f2 ff ff 0f 1f 84 00 00 00 00 00 44 89 32 e9 90 fa ff ff 0f 1f 84 00 00 00 00 00 <44> 89 32 e9 f8 f1 ff ff 0f 1f 84 00 00 00 00 00 66 44 89 32 e9 e7
[4562.100422] RSP: 002b:00007fff9ba2dc70 EFLAGS: 00010246
[4562.100426] RAX: 0000000000000004 RBX: 000000000dd65e10 RCX: 000000fff0000000
[4562.100428] RDX: 00007f629a882000 RSI: 00007f629a882000 RDI: 0000000000000066
[4562.100432] RBP: 00007fff9ba2e570 R08: 0000000000000000 R09: 0000000123ddf000
[4562.100434] R10: 0000000000000001 R11: 0000000000000246 R12: 000000007fffffff
[4562.100436] R13: 0000000000000000 R14: 0000000000000000 R15: 0000000000000000
[4562.100446] </TASK>
[4562.100448] Modules linked in: nf_conntrack_netbios_ns nf_conntrack_broadcast nft_fib_inet nft_fib_ipv4 nft_fib_ipv6 nft_fib nft_reject_inet nf_reject_ipv4 nf_reject_ipv6 nft_reject nft_ct nft_chain_nat nf_nat nf_conntrack nf_defrag_ipv6 nf_defrag_ipv4 ip_set nf_tables libcrc32c nfnetlink cmac bnep sunrpc iwlmvm intel_rapl_msr intel_rapl_common snd_sof_pci_intel_cnl x86_pkg_temp_thermal intel_powerclamp snd_sof_intel_hda_common mac80211 coretemp snd_soc_acpi_intel_match kvm_intel snd_soc_acpi snd_soc_hdac_hda snd_sof_pci snd_sof_xtensa_dsp snd_sof_intel_hda_mlink
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2024-27062

[CVE-2024-27079] kernel: iommu/vt-d: Fix NULL domain on device release (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

iommu/vt-d: Fix NULL domain on device release

In the kdump kernel, the IOMMU operates in deferred_attach mode. In this mode, info->domain may not yet be assigned by the time the release_device function is called. It leads to the following crash in the crash kernel:

```
BUG: kernel NULL pointer dereference, address: 000000000000003c
...
RIP: 0010:do_raw_spin_lock+0xa/0xa0
...
_raw_spin_lock_irqsave+0x1b/0x30
intel_iommu_release_device+0x96/0x170
iommu_deinit_device+0x39/0xf0
__iommu_group_remove_device+0xa0/0xd0
iommu_bus_notifier+0x55/0xb0
notifier_call_chain+0x5a/0xd0
blocking_notifier_call_chain+0x41/0x60
bus_notify+0x34/0x50
device_del+0x269/0x3d0
pci_remove_bus_device+0x77/0x100
p2sb_bar+0xae/0x1d0
...
i801_probe+0x423/0x740
```

Use the release_domain mechanism to fix it. The scalable mode context entry which is not part of release domain should be cleared in release_device().

More Info: https://avd.aquasec.com/nvd/cve-2024-27079

[CVE-2024-27408] kernel: dmaengine: dw-edma: eDMA: Add sync read before starting the DMA transfer in remote setup (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

dmaengine: dw-edma: eDMA: Add sync read before starting the DMA transfer in remote setup

The Linked list element and pointer are not stored in the same memory as the eDMA controller register. If the doorbell register is toggled before the full write of the linked list a race condition error will occur.
In remote setup we can only use a readl to the memory to assure the full write has occurred.

More Info: https://avd.aquasec.com/nvd/cve-2024-27408

[CVE-2024-35784] kernel: btrfs: fix deadlock with fiemap and extent locking (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

btrfs: fix deadlock with fiemap and extent locking

While working on the patchset to remove extent locking I got a lockdep splat with fiemap and pagefaulting with my new extent lock replacement lock.

This deadlock exists with our normal code, we just don't have lockdep annotations with the extent locking so we've never noticed it.

Since we're copying the fiemap extent to user space on every iteration we have the chance of pagefaulting. Because we hold the extent lock for the entire range we could mkwrite into a range in the file that we have mmap'ed. This would deadlock with the following stack trace

[<0>] lock_extent+0x28d/0x2f0
[<0>] btrfs_page_mkwrite+0x273/0x8a0
[<0>] do_page_mkwrite+0x50/0xb0
[<0>] do_fault+0xc1/0x7b0
[<0>] __handle_mm_fault+0x2fa/0x460
[<0>] handle_mm_fault+0xa4/0x330
[<0>] do_user_addr_fault+0x1f4/0x800
[<0>] exc_page_fault+0x7c/0x1e0
[<0>] asm_exc_page_fault+0x26/0x30
[<0>] rep_movs_alternative+0x33/0x70
[<0>] _copy_to_user+0x49/0x70
[<0>] fiemap_fill_next_extent+0xc8/0x120
[<0>] emit_fiemap_extent+0x4d/0xa0
[<0>] extent_fiemap+0x7f8/0xad0
[<0>] btrfs_fiemap+0x49/0x80
[<0>] __x64_sys_ioctl+0x3e1/0xb50
[<0>] do_syscall_64+0x94/0x1a0
[<0>] entry_SYSCALL_64_after_hwframe+0x6e/0x76

I wrote an fstest to reproduce this deadlock without my replacement lock and verified that the deadlock exists with our existing locking.

To fix this simply don't take the extent lock for the entire duration of the fiemap. This is safe in general because we keep track of where we are when we're searching the tree, so if an ordered extent updates in the middle of our fiemap call we'll still emit the correct extents because we know what offset we were on before.

The only place we maintain the lock is searching delalloc. Since the delalloc stuff can change during writeback we want to lock the extent range so we have a consistent view of delalloc at the time we're checking to see if we need to set the delalloc flag.

With this patch applied we no longer deadlock with my testcase.

More Info: https://avd.aquasec.com/nvd/cve-2024-35784

[CVE-2024-35790] kernel: usb: typec: altmodes/displayport: create sysfs nodes as driver's default device attribute group (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

usb: typec: altmodes/displayport: create sysfs nodes as driver's default device attribute group

The DisplayPort driver's sysfs nodes may be present to the userspace before
typec_altmode_set_drvdata() completes in dp_altmode_probe. This means that
a sysfs read can trigger a NULL pointer error by deferencing dp->hpd in
hpd_show or dp->lock in pin_assignment_show, as dev_get_drvdata() returns
NULL in those cases.

Remove manual sysfs node creation in favor of adding attribute group as
default for devices bound to the driver. The ATTRIBUTE_GROUPS() macro is
not used here otherwise the path to the sysfs nodes is no longer compliant
with the ABI.

More Info: https://avd.aquasec.com/nvd/cve-2024-35790

[CVE-2024-35794] kernel: dm-raid: really frozen sync_thread during suspend (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

dm-raid: really frozen sync_thread during suspend

1) commit f52f5c71f3d4 ("md: fix stopping sync thread") remove
   MD_RECOVERY_FROZEN from __md_stop_writes() and doesn't realize that
   dm-raid relies on __md_stop_writes() to frozen sync_thread
   indirectly. Fix this problem by adding MD_RECOVERY_FROZEN in
   md_stop_writes(), and since stop_sync_thread() is only used for
   dm-raid in this case, also move stop_sync_thread() to
   md_stop_writes().
2) The flag MD_RECOVERY_FROZEN doesn't mean that sync thread is frozen,
   it only prevent new sync_thread to start, and it can't stop the
   running sync thread; In order to frozen sync_thread, after seting the
   flag, stop_sync_thread() should be used.
3) The flag MD_RECOVERY_FROZEN doesn't mean that writes are stopped, use
   it as condition for md_stop_writes() in raid_postsuspend() doesn't
   look correct. Consider that reentrant stop_sync_thread() do nothing,
   always call md_stop_writes() in raid_postsuspend().
4) raid_message can set/clear the flag MD_RECOVERY_FROZEN at anytime,

and if MD_RECOVERY_FROZEN is cleared while the array is suspended,
new sync_thread can start unexpected. Fix this by disallow
raid_message() to change sync_thread status during suspend.

Note that after commit f52f5c71f3d4 ("md: fix stopping sync thread"), the
test shell/lvconvert-raid-reshape.sh start to hang in stop_sync_thread(),
and with previous fixes, the test won't hang there anymore, however, the
test will still fail and complain that ext4 is corrupted. And with this
patch, the test won't hang due to stop_sync_thread() or fail due to ext4
is corrupted anymore. However, there is still a deadlock related to
dm-raid456 that will be fixed in following patches.

More Info: https://avd.aquasec.com/nvd/cve-2024-35794

[CVE-2024-35799] kernel: drm/amd/display: Prevent crash when disable stream (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Prevent crash when disable stream

[Why]
Disabling stream encoder invokes a function that no longer exists.

[How]
Check if the function declaration is NULL in disable stream encoder.

More Info: https://avd.aquasec.com/nvd/cve-2024-35799

[CVE-2024-35808] kernel: md/dm-raid: don't call md_reap_sync_thread() directly (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

md/dm-raid: don't call md_reap_sync_thread() directly

Currently md_reap_sync_thread() is called from raid_message() directly
without holding 'reconfig_mutex', this is definitely unsafe because
md_reap_sync_thread() can change many fields that is protected by
'reconfig_mutex'.

However, hold 'reconfig_mutex' here is still problematic because this
will cause deadlock, for example, commit 130443d60b1b ("md: refactor
idle/frozen_sync_thread() to fix deadlock").

Fix this problem by using stop_sync_thread() to unregister sync_thread,
like md/raid did.

More Info: https://avd.aquasec.com/nvd/cve-2024-35808

[CVE-2024-35843] kernel: iommu/vt-d: Use device rbtree in iopf reporting path (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

iommu/vt-d: Use device rbtree in iopf reporting path

The existing I/O page fault handler currently locates the PCI device by calling pci_get_domain_bus_and_slot(). This function searches the list of all PCI devices until the desired device is found. To improve lookup efficiency, replace it with device_rbtree_find() to search the device within the probed device rbtree.

The I/O page fault is initiated by the device, which does not have any synchronization mechanism with the software to ensure that the device stays in the probed device tree. Theoretically, a device could be released by the IOMMU subsystem after device_rbtree_find() and before iopf_get_dev_fault_param(), which would cause a use-after-free problem.

Add a mutex to synchronize the I/O page fault reporting path and the IOMMU release device path. This lock doesn't introduce any performance overhead, as the conflict between I/O page fault reporting and device releasing is very rare.

More Info: https://avd.aquasec.com/nvd/cve-2024-35843

[CVE-2024-35860] kernel: bpf: support deferring bpf_link dealloc to after RCU grace period (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf: support deferring bpf_link dealloc to after RCU grace period

BPF link for some program types is passed as a "context" which can be used by those BPF programs to look up additional information. E.g., for multi-kprobes and multi-uprobes, link is used to fetch BPF cookie values.

Because of this runtime dependency, when bpf_link refcnt drops to zero there could still be active BPF programs running accessing link data.

This patch adds generic support to defer bpf_link dealloc callback to after RCU GP, if requested. This is done by exposing two different deallocation callbacks, one synchronous and one deferred. If deferred one is provided, bpf_link_free() will schedule dealloc_deferred()

callback to happen after RCU GP.

BPF is using two flavors of RCU: "classic" non-sleepable one and RCU
tasks trace one. The latter is used when sleepable BPF programs are
used. bpf_link_free() accommodates that by checking underlying BPF
program's sleepable flag, and goes either through normal RCU GP only for
non-sleepable, or through RCU tasks trace GP *and* then normal RCU GP
(taking into account rcu_trace_implies_rcu_gp() optimization), if BPF
program is sleepable.

We use this for multi-kprobe and multi-uprobe links, which dereference
link during program run. We also preventively switch raw_tp link to use
deferred dealloc callback, as upcoming changes in bpf-next tree expose
raw_tp link data (specifically, cookie value) to BPF program at runtime
as well.

More Info: https://avd.aquasec.com/nvd/cve-2024-35860

[CVE-2024-35869] kernel: smb: client: guarantee refcounted children from parent session (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

smb: client: guarantee refcounted children from parent session

Avoid potential use-after-free bugs when walking DFS referrals,
mounting and performing DFS failover by ensuring that all children
from parent @tcon->ses are also refcounted. They're all needed across
the entire DFS mount. Get rid of @tcon->dfs_ses_list while we're at
it, too.

More Info: https://avd.aquasec.com/nvd/cve-2024-35869

[CVE-2024-35878] kernel: of: module: prevent NULL pointer dereference in vsnprintf() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

of: module: prevent NULL pointer dereference in vsnprintf()

In of_modalias(), we can get passed the str and len parameters which would
cause a kernel oops in vsnprintf() since it only allows passing a NULL ptr
when the length is also 0. Also, we need to filter out the negative values
of the len parameter as these will result in a really huge buffer since
snprintf() takes size_t parameter while ours is ssize_t...

Found by Linux Verification Center (linuxtesting.org) with the Svace static analysis tool.

More Info: https://avd.aquasec.com/nvd/cve-2024-35878

[CVE-2024-35904] kernel: selinux: avoid dereference of garbage after mount failure (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

selinux: avoid dereference of garbage after mount failure

In case kern_mount() fails and returns an error pointer return in the error branch instead of continuing and dereferencing the error pointer.

While on it drop the never read static variable selinuxfs_mount.

More Info: https://avd.aquasec.com/nvd/cve-2024-35904

[CVE-2024-35924] kernel: usb: typec: ucsi: Limit read size on v1.2 (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

usb: typec: ucsi: Limit read size on v1.2

Between UCSI 1.2 and UCSI 2.0, the size of the MESSAGE_IN region was increased from 16 to 256. In order to avoid overflowing reads for older systems, add a mechanism to use the read UCSI version to truncate read sizes on UCSI v1.2.

More Info: https://avd.aquasec.com/nvd/cve-2024-35924

[CVE-2024-35931] kernel: drm/amdgpu: Skip do PCI error slot reset during RAS recovery (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amdgpu: Skip do PCI error slot reset during RAS recovery

Why:
    The PCI error slot reset maybe triggered after inject ue to UMC multi times, this
    caused system hang.
    [557.371857] amdgpu 0000:af:00.0: amdgpu: GPU reset succeeded, trying to resume

[557.373718] [drm] PCIE GART of 512M enabled.
[557.373722] [drm] PTB located at 0x0000031FED700000
[557.373788] [drm] VRAM is lost due to GPU reset!
[557.373789] [drm] PSP is resuming...
[557.547012] mlx5_core 0000:55:00.0: mlx5_pci_err_detected Device state = 1 pci_status: 0. Exit, result = 3, need reset
[557.547067] [drm] PCI error: detected callback, state(1)!!
[557.547069] [drm] No support for XGMI hive yet...
[557.548125] mlx5_core 0000:55:00.0: mlx5_pci_slot_reset Device state = 1 pci_status: 0. Enter
[557.607763] mlx5_core 0000:55:00.0: wait vital counter value 0x16b5b after 1 iterations
[557.607777] mlx5_core 0000:55:00.0: mlx5_pci_slot_reset Device state = 1 pci_status: 1. Exit, err = 0, result = 5, recovered
[557.610492] [drm] PCI error: slot reset callback!!
...
[560.689382] amdgpu 0000:3f:00.0: amdgpu: GPU reset(2) succeeded!
[560.689546] amdgpu 0000:5a:00.0: amdgpu: GPU reset(2) succeeded!
[560.689562] general protection fault, probably for non-canonical address 0x5f080b54534f611f: 0000 [#1] SMP NOPTI
[560.701008] CPU: 16 PID: 2361 Comm: kworker/u448:9 Tainted: G OE 5.15.0-91-generic #101-Ubuntu
[560.712057] Hardware name: Microsoft C278A/C278A, BIOS C2789.5.BS.1C11.AG.1 11/08/2023
[560.720959] Workqueue: amdgpu-reset-hive amdgpu_ras_do_recovery [amdgpu]
[560.728887] RIP: 0010:amdgpu_device_gpu_recover.cold+0xbf1/0xcf5 [amdgpu]
[560.736891] Code: ff 41 89 c6 e9 1b ff ff ff 44 0f b6 45 b0 e9 4f ff ff ff be 01 00 00 00 4c 89 e7 e8 76 c9 8b ff 44 0f b6 45 b0 e9 3c fd ff ff <48> 83 ba 18 02 00 00 00 0f 84 6a f8 ff ff 48 8d 7a 78 be 01 00 00
[560.757967] RSP: 0018:ffa0000032e53d80 EFLAGS: 00010202
[560.763848] RAX: ffa00000001dfd10 RBX: ffa0000000197090 RCX: ffa0000032e53db0
[560.771856] RDX: 5f080b54534f5f07 RSI: 0000000000000000 RDI: ff11000128100010
[560.779867] RBP: ffa0000032e53df0 R08: 0000000000000000 R09: ffffffffffe77f08
[560.787879] R10: 0000000000ffff0a R11: 0000000000000001 R12: 0000000000000000
[560.795889] R13: ffa0000032e53e00 R14: 0000000000000000 R15: 0000000000000000
[560.803889] FS: 0000000000000000(0000) GS:ff11007e7e800000(0000) knlGS:0000000000000000
[560.812973] CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
[560.819422] CR2: 000055a04c118e68 CR3: 0000000007410005 CR4: 0000000000771ee0
[560.827433] DR0: 0000000000000000 DR1: 0000000000000000 DR2: 0000000000000000
[560.835433] DR3: 0000000000000000 DR6: 00000000fffe07f0 DR7: 0000000000000400
[560.843444] PKRU: 55555554
[560.846480] Call Trace:
[560.849225] <TASK>
[560.851580] ? show_trace_log_lvl+0x1d6/0x2ea
[560.856488] ? show_trace_log_lvl+0x1d6/0x2ea
[560.861379] ? amdgpu_ras_do_recovery+0x1b2/0x210 [amdgpu]
[560.867778] ? show_regs.part.0+0x23/0x29
[560.872293] ? __die_body.cold+0x8/0xd
[560.876502] ? die_addr+0x3e/0x60
[560.880238] ? exc_general_protection+0x1c5/0x410
[560.885532] ? asm_exc_general_protection+0x27/0x30
[560.891025] ? amdgpu_device_gpu_recover.cold+0xbf1/0xcf5 [amdgpu]
[560.898323] amdgpu_ras_do_recovery+0x1b2/0x210 [amdgpu]
[560.904520] process_one_work+0x228/0x3d0

How:

In RAS recovery, mode-1 reset is issued from RAS fatal error handling and expected
all the nodes in a hive to be reset. no need to issue another mode-1 during this procedure.

More Info: https://avd.aquasec.com/nvd/cve-2024-35931

[CVE-2024-35942] kernel: pmdomain: imx8mp-blk-ctrl: imx8mp_blk: Add fdcc clock to hdmimix domain (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

pmdomain: imx8mp-blk-ctrl: imx8mp_blk: Add fdcc clock to hdmimix domain

According to i.MX8MP RM and HDMI ADD, the fdcc clock is part of
hdmi rx verification IP that should not enable for HDMI TX.
But actually if the clock is disabled before HDMI/LCDIF probe,
LCDIF will not get pixel clock from HDMI PHY and print the error
logs:

[CRTC:39:crtc-2] vblank wait timed out
WARNING: CPU: 2 PID: 9 at drivers/gpu/drm/drm_atomic_helper.c:1634 drm_atomic_helper_wait_for_vblanks.part.0+0x23c/0x260

Add fdcc clock to LCDIF and HDMI TX power domains to fix the issue.

More Info: https://avd.aquasec.com/nvd/cve-2024-35942

[CVE-2024-35945] kernel: net: phy: phy_device: Prevent nullptr exceptions on ISR (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net: phy: phy_device: Prevent nullptr exceptions on ISR

If phydev->irq is set unconditionally, check
for valid interrupt handler or fall back to polling mode to prevent
nullptr exceptions in interrupt service routine.

More Info: https://avd.aquasec.com/nvd/cve-2024-35945

[CVE-2024-35946] kernel: wifi: rtw89: fix null pointer access when abort scan (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

wifi: rtw89: fix null pointer access when abort scan

During cancel scan we might use vif that weren't scanning.
Fix this by using the actual scanning vif.

More Info: https://avd.aquasec.com/nvd/cve-2024-35946

[CVE-2024-35949] kernel: btrfs: make sure that WRITTEN is set on all metadata blocks (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

btrfs: make sure that WRITTEN is set on all metadata blocks

We previously would call btrfs_check_leaf() if we had the check
integrity code enabled, which meant that we could only run the extended
leaf checks if we had WRITTEN set on the header flags.

This leaves a gap in our checking, because we could end up with
corruption on disk where WRITTEN isn't set on the leaf, and then the
extended leaf checks don't get run which we rely on to validate all of
the item pointers to make sure we don't access memory outside of the
extent buffer.

However, since 732fab95abe2 ("btrfs: check-integrity: remove
CONFIG_BTRFS_FS_CHECK_INTEGRITY option") we no longer call
btrfs_check_leaf() from btrfs_mark_buffer_dirty(), which means we only
ever call it on blocks that are being written out, and thus have WRITTEN
set, or that are being read in, which should have WRITTEN set.

Add checks to make sure we have WRITTEN set appropriately, and then make
sure __btrfs_check_leaf() always does the item checking. This will
protect us from file systems that have been corrupted and no longer have
WRITTEN set on some of the blocks.

This was hit on a crafted image tweaking the WRITTEN bit and reported by
KASAN as out-of-bound access in the eb accessors. The example is a dir
item at the end of an eb.

[2.042] BTRFS warning (device loop1): bad eb member start: ptr 0x3fff start 30572544 member offset 16410 size 2
[2.040] general protection fault, probably for non-canonical address 0xe0009d1000000003: 0000 [#1] PREEMPT SMP KASAN NOPTI
[2.537] KASAN: maybe wild-memory-access in range [0x0005088000000018-0x000508800000001f]
[2.729] CPU: 0 PID: 2587 Comm: mount Not tainted 6.8.2 #1
[2.729] Hardware name: QEMU Standard PC (i440FX + PIIX, 1996), BIOS 1.15.0-1 04/01/2014
[2.621] RIP: 0010:btrfs_get_16+0x34b/0x6d0
[2.621] RSP: 0018:ffff88810871fab8 EFLAGS: 00000206
[2.621] RAX: 0000a11000000003 RBX: ffff888104ff8720 RCX: ffff88811b2288c0
[2.621] RDX: dfffc0000000000 RSI: ffffffff81dd8aca RDI: ffff88810871f748
[2.621] RBP: 000000000000401a R08: 0000000000000001 R09: ffffed10210e3ee9
[2.621] R10: ffff88810871f74f R11: 205d323430333737 R12: 000000000000001a
[2.621] R13: 000508800000001a R14: 1ffff110210e3f5d R15: ffffffff850011e8
[2.621] FS: 00007f56ea275840(0000) GS:ffff88811b200000(0000) knlGS:0000000000000000

[2.621] CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
[2.621] CR2: 00007febd13b75c0 CR3: 000000010bb50000 CR4: 00000000000006f0
[2.621] Call Trace:
[2.621] <TASK>
[2.621] ? show_regs+0x74/0x80
[2.621] ? die_addr+0x46/0xc0
[2.621] ? exc_general_protection+0x161/0x2a0
[2.621] ? asm_exc_general_protection+0x26/0x30
[2.621] ? btrfs_get_16+0x33a/0x6d0
[2.621] ? btrfs_get_16+0x34b/0x6d0
[2.621] ? btrfs_get_16+0x33a/0x6d0
[2.621] ? __pfx_btrfs_get_16+0x10/0x10
[2.621] ? __pfx_mutex_unlock+0x10/0x10
[2.621] btrfs_match_dir_item_name+0x101/0x1a0
[2.621] btrfs_lookup_dir_item+0x1f3/0x280
[2.621] ? __pfx_btrfs_lookup_dir_item+0x10/0x10
[2.621] btrfs_get_tree+0xd25/0x1910

[copy more details from report]

More Info: https://avd.aquasec.com/nvd/cve-2024-35949

[CVE-2024-35951] kernel: drm/panfrost: Fix the error path in panfrost_mmu_map_fault_addr() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/panfrost: Fix the error path in panfrost_mmu_map_fault_addr()

Subject: [PATCH] drm/panfrost: Fix the error path in
 panfrost_mmu_map_fault_addr()

If some the pages or sgt allocation failed, we shouldn't release the
pages ref we got earlier, otherwise we will end up with unbalanced
get/put_pages() calls. We should instead leave everything in place
and let the BO release function deal with extra cleanup when the object
is destroyed, or let the fault handler try again next time it's called.

More Info: https://avd.aquasec.com/nvd/cve-2024-35951

[CVE-2024-35961] kernel: net/mlx5: Register devlink first under devlink lock (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net/mlx5: Register devlink first under devlink lock

In case device is having a non fatal FW error during probe, the
driver will report the error to user via devlink. This will trigger
a WARN_ON, since mlx5 is calling devlink_register() last.
In order to avoid the WARN_ON[1], change mlx5 to invoke devl_register()
first under devlink lock.

[1]
WARNING: CPU: 5 PID: 227 at net/devlink/health.c:483 devlink_recover_notify.constprop.0+0xb8/0xc0
CPU: 5 PID: 227 Comm: kworker/u16:3 Not tainted 6.4.0-rc5_for_upstream_min_debug_2023_06_12_12_38 #1
Hardware name: QEMU Standard PC (Q35 + ICH9, 2009), BIOS rel-1.13.0-0-gf21b5a4aeb02-prebuilt.qemu.org 04/01/2014
Workqueue: mlx5_health0000:08:00.0 mlx5_fw_reporter_err_work [mlx5_core]
RIP: 0010:devlink_recover_notify.constprop.0+0xb8/0xc0
Call Trace:
 <TASK>
 ? __warn+0x79/0x120
 ? devlink_recover_notify.constprop.0+0xb8/0xc0
 ? report_bug+0x17c/0x190
 ? handle_bug+0x3c/0x60
 ? exc_invalid_op+0x14/0x70
 ? asm_exc_invalid_op+0x16/0x20
 ? devlink_recover_notify.constprop.0+0xb8/0xc0
 devlink_health_report+0x4a/0x1c0
 mlx5_fw_reporter_err_work+0xa4/0xd0 [mlx5_core]
 process_one_work+0x1bb/0x3c0
 ? process_one_work+0x3c0/0x3c0
 worker_thread+0x4d/0x3c0
 ? process_one_work+0x3c0/0x3c0
 kthread+0xc6/0xf0
 ? kthread_complete_and_exit+0x20/0x20
 ret_from_fork+0x1f/0x30
 </TASK>

More Info: https://avd.aquasec.com/nvd/cve-2024-35961

[CVE-2024-35974] kernel: block: fix q->blkg_list corruption during disk rebind (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

block: fix q->blkg_list corruption during disk rebind

Multiple gendisk instances can allocated/added for single request queue
in case of disk rebind. blkg may still stay in q->blkg_list when calling
blkcg_init_disk() for rebind, then q->blkg_list becomes corrupted.

Fix the list corruption issue by:

- add blkg_init_queue() to initialize q->blkg_list & q->blkcg_mutex only
- move calling blkg_init_queue() into blk_alloc_queue()

The list corruption should be started since commit f1c006f1c685 ("blk-cgroup:
synchronize pd_free_fn() from blkg_free_workfn() and blkcg_deactivate_policy()")
which delays removing blkg from q->blkg_list into blkg_free_workfn().

More Info: https://avd.aquasec.com/nvd/cve-2024-35974

[CVE-2024-36022] kernel: drm/amdgpu: Init zone device and drm client after mode-1 reset on reload (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amdgpu: Init zone device and drm client after mode-1 reset on reload

In passthrough environment, when amdgpu is reloaded after unload, mode-1
is triggered after initializing the necessary IPs, That init does not
include KFD, and KFD init waits until the reset is completed. KFD init
is called in the reset handler, but in this case, the zone device and
drm client is not initialized, causing app to create kernel panic.

v2: Removing the init KFD condition from amdgpu_amdkfd_drm_client_create.
As the previous version has the potential of creating DRM client twice.

v3: v2 patch results in SDMA engine hung as DRM open causes VM clear to SDMA
before SDMA init. Adding the condition to in drm client creation, on top of v1,
to guard against drm client creation call multiple times.

More Info: https://avd.aquasec.com/nvd/cve-2024-36022

[CVE-2024-36024] kernel: drm/amd/display: Disable idle reallow as part of command/gpint execution (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Disable idle reallow as part of command/gpint execution

[Why]
Workaroud for a race condition where DMCUB is in the process of
committing to IPS1 during the handshake causing us to miss the
transition into IPS2 and touch the INBOX1 RPTR causing a HW hang.

[How]
Disable the reallow to ensure that we have enough of a gap between entry
and exit and we're not seeing back-to-back wake_and_executes.

More Info: https://avd.aquasec.com/nvd/cve-2024-36024

[CVE-2024-36881] kernel: mm/userfaultfd: reset ptes when close() for wr-protected ones (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

mm/userfaultfd: reset ptes when close() for wr-protected ones

Userfaultfd unregister includes a step to remove wr-protect bits from all
the relevant pgtable entries, but that only covered an explicit
UFFDIO_UNREGISTER ioctl, not a close() on the userfaultfd itself. Cover
that too. This fixes a WARN trace.

The only user visible side effect is the user can observe leftover
wr-protect bits even if the user close()ed on an userfaultfd when
releasing the last reference of it. However hopefully that should be
harmless, and nothing bad should happen even if so.

This change is now more important after the recent page-table-check
patch we merged in mm-unstable (446dd9ad37d0 ("mm/page_table_check:
support userfault wr-protect entries")), as we'll do sanity check on
uffd-wp bits without vma context. So it's better if we can 100%
guarantee no uffd-wp bit leftovers, to make sure each report will be
valid.

More Info: https://avd.aquasec.com/nvd/cve-2024-36881

[CVE-2024-36903] kernel: ipv6: Fix potential uninit-value access in __ip6_make_skb() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ipv6: Fix potential uninit-value access in __ip6_make_skb()

As it was done in commit fc1092f51567 ("ipv4: Fix uninit-value access in
__ip_make_skb()") for IPv4, check FLOWI_FLAG_KNOWN_NH on fl6->flowi6_flags
instead of testing HDRINCL on the socket to avoid a race condition which
causes uninit-value access.

More Info: https://avd.aquasec.com/nvd/cve-2024-36903

[CVE-2024-36907] kernel: SUNRPC: add a missing rpc_stat for TCP TLS (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

SUNRPC: add a missing rpc_stat for TCP TLS

Commit 1548036ef120 ("nfs: make the rpc_stat per net namespace") added
functionality to specify rpc_stats function but missed adding it to the
TCP TLS functionality. As the result, mounting with xprtsec=tls lead to
the following kernel oops.

[128.984192] Unable to handle kernel NULL pointer dereference at
virtual address 000000000000001c
[128.985058] Mem abort info:
[128.985372]   ESR = 0x0000000096000004
[128.985709]   EC = 0x25: DABT (current EL), IL = 32 bits
[128.986176]   SET = 0, FnV = 0
[128.986521]   EA = 0, S1PTW = 0
[128.986804]   FSC = 0x04: level 0 translation fault
[128.987229] Data abort info:
[128.987597]   ISV = 0, ISS = 0x00000004, ISS2 = 0x00000000
[128.988169]   CM = 0, WnR = 0, TnD = 0, TagAccess = 0
[128.988811]   GCS = 0, Overlay = 0, DirtyBit = 0, Xs = 0
[128.989302] user pgtable: 4k pages, 48-bit VAs, pgdp=0000000106c84000
[128.990048] [000000000000001c] pgd=0000000000000000, p4d=0000000000000000
[128.990736] Internal error: Oops: 0000000096000004 [#1] SMP
[128.991168] Modules linked in: nfs_layout_nfsv41_files
rpcsec_gss_krb5 auth_rpcgss nfsv4 dns_resolver nfs lockd grace netfs
uinput dm_mod nft_fib_inet nft_fib_ipv4 nft_fib_ipv6 nft_fib
nft_reject_inet nf_reject_ipv4 nf_reject_ipv6 nft_reject nft_ct
nft_chain_nat nf_nat nf_conntrack nf_defrag_ipv6 nf_defrag_ipv4 rfkill
ip_set nf_tables nfnetlink qrtr vsock_loopback
vmw_vsock_virtio_transport_common vmw_vsock_vmci_transport vsock
sunrpc vfat fat uvcvideo videobuf2_vmalloc videobuf2_memops uvc
videobuf2_v4l2 videodev videobuf2_common mc vmw_vmci xfs libcrc32c
e1000e crct10dif_ce ghash_ce sha2_ce vmwgfx nvme sha256_arm64
nvme_core sr_mod cdrom sha1_ce drm_ttm_helper ttm drm_kms_helper drm
sg fuse
[128.996466] CPU: 0 PID: 179 Comm: kworker/u4:26 Kdump: loaded Not
tainted 6.8.0-rc6+ #12
[128.997226] Hardware name: VMware, Inc. VMware20,1/VBSA, BIOS
VMW201.00V.21805430.BA64.2305221830 05/22/2023
[128.998084] Workqueue: xprtiod xs_tcp_tls_setup_socket [sunrpc]
[128.998701] pstate: 81400005 (Nzcv daif +PAN -UAO -TCO +DIT -SSBS BTYPE=--)
[128.999384] pc : call_start+0x74/0x138 [sunrpc]
[128.999809] lr : __rpc_execute+0xb8/0x3e0 [sunrpc]
[129.000244] sp : ffff8000832b3a00
[129.000508] x29: ffff8000832b3a00 x28: ffff800081ac79c0 x27: ffff800081ac7000
[129.001111] x26: 0000000004248060 x25: 0000000000000000 x24: ffff800081596008
[129.001757] x23: ffff80007b087240 x22: ffff00009a509d30 x21: 0000000000000000
[129.002345] x20: ffff000090075600 x19: ffff00009a509d00 x18: ffffffffffffffff
[129.002912] x17: 733d4d4554535953 x16: 42555300312d746e x15: ffff8000832b3a88
[129.003464] x14: ffffffffffffffff x13: ffff8000832b3a7d x12: 0000000000000008
[129.004021] x11: 0101010101010101 x10: ffff8000150cb560 x9 : ffff80007b087c00
[129.004577] x8 : ffff00009a509de0 x7 : 0000000000000000 x6 : 00000000be8c4ee3
[129.005026] x5 : 0000000000000000 x4 : 0000000000000000 x3 : ffff000094d56680

[129.005425] x2 : ffff80007b0637f8 x1 : ffff000090075600 x0 : ffff00009a509d00
[129.005824] Call trace:
[129.005967] call_start+0x74/0x138 [sunrpc]
[129.006233] __rpc_execute+0xb8/0x3e0 [sunrpc]
[129.006506] rpc_execute+0x160/0x1d8 [sunrpc]
[129.006778] rpc_run_task+0x148/0x1f8 [sunrpc]
[129.007204] tls_probe+0x80/0xd0 [sunrpc]
[129.007460] rpc_ping+0x28/0x80 [sunrpc]
[129.007715] rpc_create_xprt+0x134/0x1a0 [sunrpc]
[129.007999] rpc_create+0x128/0x2a0 [sunrpc]
[129.008264] xs_tcp_tls_setup_socket+0xdc/0x508 [sunrpc]
[129.008583] process_one_work+0x174/0x3c8
[129.008813] worker_thread+0x2c8/0x3e0
[129.009033] kthread+0x100/0x110
[129.009225] ret_from_fork+0x10/0x20
[129.009432] Code: f0ffffc2 911fe042 aa1403e1 aa1303e0 (b9401c83)

More Info: https://avd.aquasec.com/nvd/cve-2024-36907

[CVE-2024-36908] kernel: blk-iocost: do not WARN if iocg was already offlined (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

blk-iocost: do not WARN if iocg was already offlined

In iocg_pay_debt(), warn is triggered if 'active_list' is empty, which
is intended to confirm iocg is active when it has debt. However, warn
can be triggered during a blkcg or disk removal, if iocg_waitq_timer_fn()
is run at that time:

  WARNING: CPU: 0 PID: 2344971 at block/blk-iocost.c:1402 iocg_pay_debt+0x14c/0x190
  Call trace:
  iocg_pay_debt+0x14c/0x190
  iocg_kick_waitq+0x438/0x4c0
  iocg_waitq_timer_fn+0xd8/0x130
  __run_hrtimer+0x144/0x45c
  __hrtimer_run_queues+0x16c/0x244
  hrtimer_interrupt+0x2cc/0x7b0

The warn in this situation is meaningless. Since this iocg is being
removed, the state of the 'active_list' is irrelevant, and 'waitq_timer'
is canceled after removing 'active_list' in ioc_pd_free(), which ensures
iocg is freed after iocg_waitq_timer_fn() returns.

Therefore, add the check if iocg was already offlined to avoid warn
when removing a blkcg or disk.

More Info: https://avd.aquasec.com/nvd/cve-2024-36908

[CVE-2024-36911] kernel: hv_netvsc: Don't free decrypted memory (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

hv_netvsc: Don't free decrypted memory

In CoCo VMs it is possible for the untrusted host to cause
set_memory_encrypted() or set_memory_decrypted() to fail such that an
error is returned and the resulting memory is shared. Callers need to
take care to handle these errors to avoid returning decrypted (shared)
memory to the page allocator, which could lead to functional or security
issues.

The netvsc driver could free decrypted/shared pages if
set_memory_decrypted() fails. Check the decrypted field in the gpadl
to decide whether to free the memory.

More Info: https://avd.aquasec.com/nvd/cve-2024-36911

[CVE-2024-36913] kernel: Drivers: hv: vmbus: Leak pages if set_memory_encrypted() fails (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

Drivers: hv: vmbus: Leak pages if set_memory_encrypted() fails

In CoCo VMs it is possible for the untrusted host to cause
set_memory_encrypted() or set_memory_decrypted() to fail such that an
error is returned and the resulting memory is shared. Callers need to
take care to handle these errors to avoid returning decrypted (shared)
memory to the page allocator, which could lead to functional or security
issues.

VMBus code could free decrypted pages if set_memory_encrypted()/decrypted()
fails. Leak the pages if this happens.

More Info: https://avd.aquasec.com/nvd/cve-2024-36913

[CVE-2024-36922] kernel: wifi: iwlwifi: read txq->read_ptr under lock (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

wifi: iwlwifi: read txq->read_ptr under lock

If we read txq->read_ptr without lock, we can read the same
value twice, then obtain the lock, and reclaim from there
to two different places, but crucially reclaim the same
entry twice, resulting in the WARN_ONCE() a little later.
Fix that by reading txq->read_ptr under lock.

More Info: https://avd.aquasec.com/nvd/cve-2024-36922

[CVE-2024-36927] kernel: ipv4: Fix uninit-value access in __ip_make_skb() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ipv4: Fix uninit-value access in __ip_make_skb()

KMSAN reported uninit-value access in __ip_make_skb() [1]. __ip_make_skb()
tests HDRINCL to know if the skb has icmphdr. However, HDRINCL can cause a
race condition. If calling setsockopt(2) with IP_HDRINCL changes HDRINCL
while __ip_make_skb() is running, the function will access icmphdr in the
skb even if it is not included. This causes the issue reported by KMSAN.

Check FLOWI_FLAG_KNOWN_NH on fl4->flowi4_flags instead of testing HDRINCL
on the socket.

Also, fl4->fl4_icmp_type and fl4->fl4_icmp_code are not initialized. These
are union in struct flowi4 and are implicitly initialized by
flowi4_init_output(), but we should not rely on specific union layout.

Initialize these explicitly in raw_sendmsg().

[1]
BUG: KMSAN: uninit-value in __ip_make_skb+0x2b74/0x2d20 net/ipv4/ip_output.c:1481
 __ip_make_skb+0x2b74/0x2d20 net/ipv4/ip_output.c:1481
 ip_finish_skb include/net/ip.h:243 [inline]
 ip_push_pending_frames+0x4c/0x5c0 net/ipv4/ip_output.c:1508
 raw_sendmsg+0x2381/0x2690 net/ipv4/raw.c:654
 inet_sendmsg+0x27b/0x2a0 net/ipv4/af_inet.c:851
 sock_sendmsg_nosec net/socket.c:730 [inline]
 __sock_sendmsg+0x274/0x3c0 net/socket.c:745
 __sys_sendto+0x62c/0x7b0 net/socket.c:2191
 __do_sys_sendto net/socket.c:2203 [inline]
 __se_sys_sendto net/socket.c:2199 [inline]
 __x64_sys_sendto+0x130/0x200 net/socket.c:2199
 do_syscall_64+0xd8/0x1f0 arch/x86/entry/common.c:83
 entry_SYSCALL_64_after_hwframe+0x6d/0x75

Uninit was created at:
 slab_post_alloc_hook mm/slub.c:3804 [inline]
 slab_alloc_node mm/slub.c:3845 [inline]
 kmem_cache_alloc_node+0x5f6/0xc50 mm/slub.c:3888
 kmalloc_reserve+0x13c/0x4a0 net/core/skbuff.c:577

__alloc_skb+0x35a/0x7c0 net/core/skbuff.c:668
alloc_skb include/linux/skbuff.h:1318 [inline]
__ip_append_data+0x49ab/0x68c0 net/ipv4/ip_output.c:1128
ip_append_data+0x1e7/0x260 net/ipv4/ip_output.c:1365
raw_sendmsg+0x22b1/0x2690 net/ipv4/raw.c:648
inet_sendmsg+0x27b/0x2a0 net/ipv4/af_inet.c:851
sock_sendmsg_nosec net/socket.c:730 [inline]
__sock_sendmsg+0x274/0x3c0 net/socket.c:745
__sys_sendto+0x62c/0x7b0 net/socket.c:2191
__do_sys_sendto net/socket.c:2203 [inline]
__se_sys_sendto net/socket.c:2199 [inline]
__x64_sys_sendto+0x130/0x200 net/socket.c:2199
do_syscall_64+0xd8/0x1f0 arch/x86/entry/common.c:83
entry_SYSCALL_64_after_hwframe+0x6d/0x75

CPU: 1 PID: 15709 Comm: syz-executor.7 Not tainted 6.8.0-11567-gb3603fcb79b1 #25
Hardware name: QEMU Standard PC (i440FX + PIIX, 1996), BIOS 1.16.3-1.fc39 04/01/2014

More Info: https://avd.aquasec.com/nvd/cve-2024-36927

[CVE-2024-36949] kernel: amd/amdkfd: sync all devices to wait all processes being evicted (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

amd/amdkfd: sync all devices to wait all processes being evicted

If there are more than one device doing reset in parallel, the first
device will call kfd_suspend_all_processes() to evict all processes
on all devices, this call takes time to finish. other device will
start reset and recover without waiting. if the process has not been
evicted before doing recover, it will be restored, then caused page
fault.

More Info: https://avd.aquasec.com/nvd/cve-2024-36949

[CVE-2024-36951] kernel: drm/amdkfd: range check cp bad op exception interrupts (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amdkfd: range check cp bad op exception interrupts

Due to a CP interrupt bug, bad packet garbage exception codes are raised.
Do a range check so that the debugger and runtime do not receive garbage
codes.

Update the user api to guard exception code type checking as well.

More Info: https://avd.aquasec.com/nvd/cve-2024-36951

[CVE-2024-36968] kernel: Bluetooth: L2CAP: Fix div-by-zero in l2cap_le_flowctl_init() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

Bluetooth: L2CAP: Fix div-by-zero in l2cap_le_flowctl_init()

l2cap_le_flowctl_init() can cause both div-by-zero and an integer
overflow since hdev->le_mtu may not fall in the valid range.

Move MTU from hci_dev to hci_conn to validate MTU and stop the connection
process earlier if MTU is invalid.
Also, add a missing validation in read_buffer_size() and make it return
an error value if the validation fails.
Now hci_conn_add() returns ERR_PTR() as it can fail due to the both a
kzalloc failure and invalid MTU value.

divide error: 0000 [#1] PREEMPT SMP KASAN NOPTI
CPU: 0 PID: 67 Comm: kworker/u5:0 Tainted: G W 6.9.0-rc5+ #20
Hardware name: QEMU Standard PC (i440FX + PIIX, 1996), BIOS 1.15.0-1 04/01/2014
Workqueue: hci0 hci_rx_work
RIP: 0010:l2cap_le_flowctl_init+0x19e/0x3f0 net/bluetooth/l2cap_core.c:547
Code: e8 17 17 0c 00 66 41 89 9f 84 00 00 00 bf 01 00 00 00 41 b8 02 00 00 00 4c
89 fe 4c 89 e2 89 d9 e8 27 17 0c 00 44 89 f0 31 d2 <66> f7 f3 89 c3 ff c3 4d 8d
b7 88 00 00 00 4c 89 f0 48 c1 e8 03 42
RSP: 0018:ffff88810bc0f858 EFLAGS: 00010246
RAX: 00000000000002a0 RBX: 0000000000000000 RCX: dfffc0000000000
RDX: 0000000000000000 RSI: ffff88810bc0f7c0 RDI: ffffc90002dcb66f
RBP: ffff88810bc0f880 R08: aa69db2dda70ff01 R09: 0000ffaaaaaaaaaa
R10: 0084000000ffaaaa R11: 0000000000000000 R12: ffff88810d65a084
R13: dfffc0000000000 R14: 00000000000002a0 R15: ffff88810d65a000
FS: 0000000000000000(0000) GS:ffff88811ac00000(0000) knlGS:0000000000000000
CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 0000000020000100 CR3: 0000000103268003 CR4: 0000000000770ef0
PKRU: 55555554
Call Trace:
<TASK>
l2cap_le_connect_req net/bluetooth/l2cap_core.c:4902 [inline]
l2cap_le_sig_cmd net/bluetooth/l2cap_core.c:5420 [inline]
l2cap_le_sig_channel net/bluetooth/l2cap_core.c:5486 [inline]
l2cap_recv_frame+0xe59d/0x11710 net/bluetooth/l2cap_core.c:6809
l2cap_recv_acldata+0x544/0x10a0 net/bluetooth/l2cap_core.c:7506
hci_acldata_packet net/bluetooth/hci_core.c:3939 [inline]
hci_rx_work+0x5e5/0xb20 net/bluetooth/hci_core.c:4176
process_one_work kernel/workqueue.c:3254 [inline]

process_scheduled_works+0x90f/0x1530 kernel/workqueue.c:3335
worker_thread+0x926/0xe70 kernel/workqueue.c:3416
kthread+0x2e3/0x380 kernel/kthread.c:388
ret_from_fork+0x5c/0x90 arch/x86/kernel/process.c:147
ret_from_fork_asm+0x1a/0x30 arch/x86/entry/entry_64.S:244
</TASK>
Modules linked in:
---[end trace 0000000000000000]---

More Info: https://avd.aquasec.com/nvd/cve-2024-36968

[CVE-2024-38541] kernel: of: module: add buffer overflow check in of_modalias() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

of: module: add buffer overflow check in of_modalias()

In of_modalias(), if the buffer happens to be too small even for the 1st
snprintf() call, the len parameter will become negative and str parameter
(if not NULL initially) will point beyond the buffer's end. Add the buffer
overflow check after the 1st snprintf() call and fix such check after the
strlen() call (accounting for the terminating NUL char).

More Info: https://avd.aquasec.com/nvd/cve-2024-38541

[CVE-2024-38557] kernel: net/mlx5: Reload only IB representors upon lag disable/enable (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net/mlx5: Reload only IB representors upon lag disable/enable

On lag disable, the bond IB device along with all of its
representors are destroyed, and then the slaves' representors get reloaded.

In case the slave IB representor load fails, the eswitch error flow
unloads all representors, including ethernet representors, where the
netdevs get detached and removed from lag bond. Such flow is inaccurate
as the lag driver is not responsible for loading/unloading ethernet
representors. Furthermore, the flow described above begins by holding
lag lock to prevent bond changes during disable flow. However, when
reaching the ethernet representors detachment from lag, the lag lock is
required again, triggering the following deadlock:

Call trace:
__switch_to+0xf4/0x148

__schedule+0x2c8/0x7d0
schedule+0x50/0xe0
schedule_preempt_disabled+0x18/0x28
__mutex_lock.isra.13+0x2b8/0x570
__mutex_lock_slowpath+0x1c/0x28
mutex_lock+0x4c/0x68
mlx5_lag_remove_netdev+0x3c/0x1a0 [mlx5_core]
mlx5e_uplink_rep_disable+0x70/0xa0 [mlx5_core]
mlx5e_detach_netdev+0x6c/0xb0 [mlx5_core]
mlx5e_netdev_change_profile+0x44/0x138 [mlx5_core]
mlx5e_netdev_attach_nic_profile+0x28/0x38 [mlx5_core]
mlx5e_vport_rep_unload+0x184/0x1b8 [mlx5_core]
mlx5_esw_offloads_rep_load+0xd8/0xe0 [mlx5_core]
mlx5_eswitch_reload_reps+0x74/0xd0 [mlx5_core]
mlx5_disable_lag+0x130/0x138 [mlx5_core]
mlx5_lag_disable_change+0x6c/0x70 [mlx5_core] // hold ldev->lock
mlx5_devlink_eswitch_mode_set+0xc0/0x410 [mlx5_core]
devlink_nl_cmd_eswitch_set_doit+0xdc/0x180
genl_family_rcv_msg_doit.isra.17+0xe8/0x138
genl_rcv_msg+0xe4/0x220
netlink_rcv_skb+0x44/0x108
genl_rcv+0x40/0x58
netlink_unicast+0x198/0x268
netlink_sendmsg+0x1d4/0x418
sock_sendmsg+0x54/0x60
__sys_sendto+0xf4/0x120
__arm64_sys_sendto+0x30/0x40
el0_svc_common+0x8c/0x120
do_el0_svc+0x30/0xa0
el0_svc+0x20/0x30
el0_sync_handler+0x90/0xb8
el0_sync+0x160/0x180

Thus, upon lag enable/disable, load and unload only the IB representors
of the slaves preventing the deadlock mentioned above.

While at it, refactor the mlx5_esw_offloads_rep_load() function to have
a static helper method for its internal logic, in symmetry with the
representor unload design.

More Info: https://avd.aquasec.com/nvd/cve-2024-38557

[CVE-2024-38564] kernel: bpf: Add BPF_PROG_TYPE_CGROUP_SKB attach type enforcement in BPF_LINK_CREATE (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf: Add BPF_PROG_TYPE_CGROUP_SKB attach type enforcement in BPF_LINK_CREATE

bpf_prog_attach uses attach_type_to_prog_type to enforce proper
attach type for BPF_PROG_TYPE_CGROUP_SKB. link_create uses
bpf_prog_get and relies on bpf_prog_attach_check_attach_type
to properly verify prog_type <> attach_type association.

Add missing attach_type enforcement for the link_create case.
Otherwise, it's currently possible to attach cgroup_skb prog
types to other cgroup hooks.

More Info: https://avd.aquasec.com/nvd/cve-2024-38564

[CVE-2024-38594] kernel: net: stmmac: move the EST lock to struct stmmac_priv (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net: stmmac: move the EST lock to struct stmmac_priv

Reinitialize the whole EST structure would also reset the mutex
lock which is embedded in the EST structure, and then trigger
the following warning. To address this, move the lock to struct
stmmac_priv. We also need to reacquire the mutex lock when doing
this initialization.

DEBUG_LOCKS_WARN_ON(lock->magic != lock)
WARNING: CPU: 3 PID: 505 at kernel/locking/mutex.c:587 __mutex_lock+0xd84/0x1068
 Modules linked in:
 CPU: 3 PID: 505 Comm: tc Not tainted 6.9.0-rc6-00053-g0106679839f7-dirty #29
 Hardware name: NXP i.MX8MPlus EVK board (DT)
 pstate: 60000005 (nZCv daif -PAN -UAO -TCO -DIT -SSBS BTYPE=--)
 pc : __mutex_lock+0xd84/0x1068
 lr : __mutex_lock+0xd84/0x1068
 sp : ffffffc0864e3570
 x29: ffffffc0864e3570 x28: ffffffc0817bdc78 x27: 0000000000000003
 x26: ffffff80c54f1808 x25: ffffff80c9164080 x24: ffffffc080d723ac
 x23: 0000000000000000 x22: 0000000000000002 x21: 0000000000000000
 x20: 0000000000000000 x19: ffffffc083bc3000 x18: ffffffffffffffff
 x17: ffffffc08117b080 x16: 0000000000000002 x15: ffffff80d2d40000
 x14: 00000000000002da x13: ffffff80d2d404b8 x12: ffffffc082b5a5c8
 x11: ffffffc082bca680 x10: ffffffc082bb2640 x9 : ffffffc082bb2698
 x8 : 0000000000017fe8 x7 : c0000000ffffefff x6 : 0000000000000001
 x5 : ffffff8178fe0d48 x4 : 0000000000000000 x3 : 0000000000000027
 x2 : ffffff8178fe0d50 x1 : 0000000000000000 x0 : 0000000000000000
 Call trace:
  __mutex_lock+0xd84/0x1068
  mutex_lock_nested+0x28/0x34
  tc_setup_taprio+0x118/0x68c
  stmmac_setup_tc+0x50/0xf0
  taprio_change+0x868/0xc9c

More Info: https://avd.aquasec.com/nvd/cve-2024-38594

[CVE-2024-38608] kernel: net/mlx5e: Fix netif state handling (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net/mlx5e: Fix netif state handling

mlx5e_suspend cleans resources only if netif_device_present() returns
true. However, mlx5e_resume changes the state of netif, via
mlx5e_nic_enable, only if reg_state == NETREG_REGISTERED.
In the below case, the above leads to NULL-ptr Oops[1] and memory
leaks:

mlx5e_probe
 _mlx5e_resume
  mlx5e_attach_netdev
   mlx5e_nic_enable <-- netdev not reg, not calling netif_device_attach()
  register_netdev <-- failed for some reason.
ERROR_FLOW:
 _mlx5e_suspend <-- netif_device_present return false, resources aren't freed :(

Hence, clean resources in this case as well.

[1]
BUG: kernel NULL pointer dereference, address: 0000000000000000
PGD 0 P4D 0
Oops: 0010 [#1] SMP
CPU: 2 PID: 9345 Comm: test-ovs-ct-gen Not tainted 6.5.0_for_upstream_min_debug_2023_09_05_16_01 #1
Hardware name: QEMU Standard PC (Q35 + ICH9, 2009), BIOS rel-1.13.0-0-gf21b5a4aeb02-prebuilt.qemu.org 04/01/2014
RIP: 0010:0x0
Code: Unable to access opcode bytes at0xffffffffffffffd6.
RSP: 0018:ffff888178aaf758 EFLAGS: 00010246
Call Trace:
 <TASK>
 ? __die+0x20/0x60
 ? page_fault_oops+0x14c/0x3c0
 ? exc_page_fault+0x75/0x140
 ? asm_exc_page_fault+0x22/0x30
 notifier_call_chain+0x35/0xb0
 blocking_notifier_call_chain+0x3d/0x60
 mlx5_blocking_notifier_call_chain+0x22/0x30 [mlx5_core]
 mlx5_core_uplink_netdev_event_replay+0x3e/0x60 [mlx5_core]
 mlx5_mdev_netdev_track+0x53/0x60 [mlx5_ib]
 mlx5_ib_roce_init+0xc3/0x340 [mlx5_ib]
 __mlx5_ib_add+0x34/0xd0 [mlx5_ib]
 mlx5r_probe+0xe1/0x210 [mlx5_ib]
 ? auxiliary_match_id+0x6a/0x90
 auxiliary_bus_probe+0x38/0x80
 ? driver_sysfs_add+0x51/0x80

really_probe+0xc9/0x3e0
? driver_probe_device+0x90/0x90
__driver_probe_device+0x80/0x160
driver_probe_device+0x1e/0x90
__device_attach_driver+0x7d/0x100
bus_for_each_drv+0x80/0xd0
__device_attach+0xbc/0x1f0
bus_probe_device+0x86/0xa0
device_add+0x637/0x840
__auxiliary_device_add+0x3b/0xa0
add_adev+0xc9/0x140 [mlx5_core]
mlx5_rescan_drivers_locked+0x22a/0x310 [mlx5_core]
mlx5_register_device+0x53/0xa0 [mlx5_core]
mlx5_init_one_devl_locked+0x5c4/0x9c0 [mlx5_core]
mlx5_init_one+0x3b/0x60 [mlx5_core]
probe_one+0x44c/0x730 [mlx5_core]
local_pci_probe+0x3e/0x90
pci_device_probe+0xbf/0x210
? kernfs_create_link+0x5d/0xa0
? sysfs_do_create_link_sd+0x60/0xc0
really_probe+0xc9/0x3e0
? driver_probe_device+0x90/0x90
__driver_probe_device+0x80/0x160
driver_probe_device+0x1e/0x90
__device_attach_driver+0x7d/0x100
bus_for_each_drv+0x80/0xd0
__device_attach+0xbc/0x1f0
pci_bus_add_device+0x54/0x80
pci_iov_add_virtfn+0x2e6/0x320
sriov_enable+0x208/0x420
mlx5_core_sriov_configure+0x9e/0x200 [mlx5_core]
sriov_numvfs_store+0xae/0x1a0
kernfs_fop_write_iter+0x10c/0x1a0
vfs_write+0x291/0x3c0
ksys_write+0x5f/0xe0
do_syscall_64+0x3d/0x90
entry_SYSCALL_64_after_hwframe+0x46/0xb0
CR2: 0000000000000000
---[end trace 0000000000000000]---

More Info: https://avd.aquasec.com/nvd/cve-2024-38608

[CVE-2024-38611] kernel: media: i2c: et8ek8: Don't strip remove function when driver is builtin (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

media: i2c: et8ek8: Don't strip remove function when driver is builtin

Using __exit for the remove function results in the remove callback
being discarded with CONFIG_VIDEO_ET8EK8=y. When such a device gets
unbound (e.g. using sysfs or hotplug), the driver is just removed
without the cleanup being performed. This results in resource leaks. Fix
it by compiling in the remove callback unconditionally.

This also fixes a W=1 modpost warning:

WARNING: modpost: drivers/media/i2c/et8ek8/et8ek8: section mismatch in reference: et8ek8_i2c_driver+0x10 (section: .data) -> et8ek8_remove (section: .exit.text)

More Info: https://avd.aquasec.com/nvd/cve-2024-38611

[CVE-2024-38620] kernel: Bluetooth: HCI: Remove HCI_AMP support (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

Bluetooth: HCI: Remove HCI_AMP support

Since BT_HS has been remove HCI_AMP controllers no longer has any use so
remove it along with the capability of creating AMP controllers.

Since we no longer need to differentiate between AMP and Primary
controllers, as only HCI_PRIMARY is left, this also remove
hdev->dev_type altogether.

More Info: https://avd.aquasec.com/nvd/cve-2024-38620

[CVE-2024-38622] kernel: drm/msm/dpu: Add callback function pointer check before its call (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/msm/dpu: Add callback function pointer check before its call

In dpu_core_irq_callback_handler() callback function pointer is compared to NULL,
but then callback function is unconditionally called by this pointer.
Fix this bug by adding conditional return.

Found by Linux Verification Center (linuxtesting.org) with SVACE.

Patchwork: https://patchwork.freedesktop.org/patch/588237/

More Info: https://avd.aquasec.com/nvd/cve-2024-38622

[CVE-2024-38625] kernel: fs/ntfs3: Check 'folio' pointer for NULL (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

fs/ntfs3: Check 'folio' pointer for NULL

It can be NULL if bmap is called.

More Info: https://avd.aquasec.com/nvd/cve-2024-38625

[CVE-2024-40965] kernel: i2c: lpi2c: Avoid calling clk_get_rate during transfer (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

i2c: lpi2c: Avoid calling clk_get_rate during transfer

Instead of repeatedly calling clk_get_rate for each transfer, lock
the clock rate and cache the value.
A deadlock has been observed while adding tlv320aic32x4 audio codec to
the system. When this clock provider adds its clock, the clk mutex is
locked already, it needs to access i2c, which in return needs the mutex
for clk_get_rate as well.

More Info: https://avd.aquasec.com/nvd/cve-2024-40965

[CVE-2024-40969] kernel: f2fs: don't set RO when shutting down f2fs (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

f2fs: don't set RO when shutting down f2fs

Shutdown does not check the error of thaw_super due to readonly, which
causes a deadlock like below.

```
f2fs_ioc_shutdown(F2FS_GOING_DOWN_FULLSYNC)       issue_discard_thread
 - bdev_freeze
  - freeze_super
 - f2fs_stop_checkpoint()
  - f2fs_handle_critical_error                  - sb_start_write
    - set RO                                  - waiting
 - bdev_thaw
  - thaw_super_locked
    - return -EINVAL, if sb_rdonly()
 - f2fs_stop_discard_thread
```

-> wait for kthread_stop(discard_thread);

More Info: https://avd.aquasec.com/nvd/cve-2024-40969

[CVE-2024-40973] kernel: media: mtk-vcodec: potential null pointer deference in SCP (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

media: mtk-vcodec: potential null pointer deference in SCP

The return value of devm_kzalloc() needs to be checked to avoid
NULL pointer deference. This is similar to CVE-2022-3113.

More Info: https://avd.aquasec.com/nvd/cve-2024-40973

[CVE-2024-40975] kernel: platform/x86: x86-android-tablets: Unregister devices in reverse order (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

platform/x86: x86-android-tablets: Unregister devices in reverse order

Not all subsystems support a device getting removed while there are
still consumers of the device with a reference to the device.

One example of this is the regulator subsystem. If a regulator gets
unregistered while there are still drivers holding a reference
a WARN() at drivers/regulator/core.c:5829 triggers, e.g.:

```
 WARNING: CPU: 1 PID: 1587 at drivers/regulator/core.c:5829 regulator_unregister
 Hardware name: Intel Corp. VALLEYVIEW C0 PLATFORM/BYT-T FFD8, BIOS BLADE_21.X64.0005.R00.1504101516 FFD8_X64_R_2015_04_10_1516 04/10/2015
 RIP: 0010:regulator_unregister
 Call Trace:
  <TASK>
  regulator_unregister
  devres_release_group
  i2c_device_remove
  device_release_driver_internal
  bus_remove_device
  device_del
  device_unregister
  x86_android_tablet_remove
```

On the Lenovo Yoga Tablet 2 series the bq24190 charger chip also provides

a 5V boost converter output for powering USB devices connected to the micro
USB port, the bq24190-charger driver exports this as a Vbus regulator.

On the 830 (8") and 1050 ("10") models this regulator is controlled by
a platform_device and x86_android_tablet_remove() removes platform_device-s
before i2c_clients so the consumer gets removed first.

But on the 1380 (13") model there is a lc824206xa micro-USB switch
connected over I2C and the extcon driver for that controls the regulator.
The bq24190 i2c-client *must* be registered first, because that creates
the regulator with the lc824206xa listed as its consumer. If the regulator
has not been registered yet the lc824206xa driver will end up getting
a dummy regulator.

Since in this case both the regulator provider and consumer are I2C
devices, the only way to ensure that the consumer is unregistered first
is to unregister the I2C devices in reverse order of in which they were
created.

For consistency and to avoid similar problems in the future change
x86_android_tablet_remove() to unregister all device types in reverse
order.

More Info: https://avd.aquasec.com/nvd/cve-2024-40975

[CVE-2024-40998] kernel: ext4: fix uninitialized ratelimit_state->lock access in __ext4_fill_super() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ext4: fix uninitialized ratelimit_state->lock access in __ext4_fill_super()

In the following concurrency we will access the uninitialized rs->lock:

```
ext4_fill_super
  ext4_register_sysfs
   // sysfs registered msg_ratelimit_interval_ms
                          // Other processes modify rs->interval to
                          // non-zero via msg_ratelimit_interval_ms
  ext4_orphan_cleanup
    ext4_msg(sb, KERN_INFO, "Errors on filesystem, "
      __ext4_msg
        ___ratelimit(&(EXT4_SB(sb)->s_msg_ratelimit_state)
          if (!rs->interval)  // do nothing if interval is 0
            return 1;
          raw_spin_trylock_irqsave(&rs->lock, flags)
            raw_spin_trylock(lock)
              _raw_spin_trylock
                __raw_spin_trylock
```

```
            spin_acquire(&lock->dep_map, 0, 1, _RET_IP_)
              lock_acquire
                __lock_acquire
                  register_lock_class
                    assign_lock_key
                      dump_stack();
  ratelimit_state_init(&sbi->s_msg_ratelimit_state, 5 * HZ, 10);
    raw_spin_lock_init(&rs->lock);
    // init rs->lock here
```

and get the following dump_stack:

```
=========================================================
INFO: trying to register non-static key.
The code is fine but needs lockdep annotation, or maybe
you didn't initialize this object before use?
turning off the locking correctness validator.
CPU: 12 PID: 753 Comm: mount Tainted: G E 6.7.0-rc6-next-20231222 #504
[...]
Call Trace:
 dump_stack_lvl+0xc5/0x170
 dump_stack+0x18/0x30
 register_lock_class+0x740/0x7c0
 __lock_acquire+0x69/0x13a0
 lock_acquire+0x120/0x450
 _raw_spin_trylock+0x98/0xd0
 ___ratelimit+0xf6/0x220
 __ext4_msg+0x7f/0x160 [ext4]
 ext4_orphan_cleanup+0x665/0x740 [ext4]
 __ext4_fill_super+0x21ea/0x2b10 [ext4]
 ext4_fill_super+0x14d/0x360 [ext4]
[...]
=========================================================
```

Normally interval is 0 until s_msg_ratelimit_state is initialized, so ___ratelimit() does nothing. But registering sysfs precedes initializing rs->lock, so it is possible to change rs->interval to a non-zero value via the msg_ratelimit_interval_ms interface of sysfs while rs->lock is uninitialized, and then a call to ext4_msg triggers the problem by accessing an uninitialized rs->lock. Therefore register sysfs after all initializations are complete to avoid such problems.

More Info: https://avd.aquasec.com/nvd/cve-2024-40998

[CVE-2024-40999] kernel: net: ena: Add validation for completion descriptors consistency (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net: ena: Add validation for completion descriptors consistency

Validate that `first` flag is set only for the first
descriptor in multi-buffer packets.
In case of an invalid descriptor, a reset will occur.
A new reset reason for RX data corruption has been added.

More Info: https://avd.aquasec.com/nvd/cve-2024-40999

[CVE-2024-41008] kernel: drm/amdgpu: change vm->task_info handling (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amdgpu: change vm->task_info handling

This patch changes the handling and lifecycle of vm->task_info object.
The major changes are:
- vm->task_info is a dynamically allocated ptr now, and its uasge is
  reference counted.
- introducing two new helper funcs for task_info lifecycle management
    - amdgpu_vm_get_task_info: reference counts up task_info before
      returning this info
    - amdgpu_vm_put_task_info: reference counts down task_info
- last put to task_info() frees task_info from the vm.

This patch also does logistical changes required for existing usage
of vm->task_info.

V2: Do not block all the prints when task_info not found (Felix)

V3: Fixed review comments from Felix
  - Fix wrong indentation
  - No debug message for -ENOMEM
  - Add NULL check for task_info
  - Do not duplicate the debug messages (ti vs no ti)
  - Get first reference of task_info in vm_init(), put last
    in vm_fini()

V4: Fixed review comments from Felix
  - fix double reference increment in create_task_info
  - change amdgpu_vm_get_task_info_pasid
  - additional changes in amdgpu_gem.c while porting

More Info: https://avd.aquasec.com/nvd/cve-2024-41008

[CVE-2024-41023] kernel: sched/deadline: Fix task_struct reference leak (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

sched/deadline: Fix task_struct reference leak

During the execution of the following stress test with linux-rt:

stress-ng --cyclic 30 --timeout 30 --minimize --quiet

kmemleak frequently reported a memory leak concerning the task_struct:

```
unreferenced object 0xffff8881305b8000 (size 16136):
  comm "stress-ng", pid 614, jiffies 4294883961 (age 286.412s)
  object hex dump (first 32 bytes):
    02 40 00 00 00 00 00 00 00 00 00 00 00 00 00 00  .@..............
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ................
  debug hex dump (first 16 bytes):
    53 09 00 00 00 00 00 00 00 00 00 00 00 00 00 00  S...............
  backtrace:
    [<00000000046b6790>] dup_task_struct+0x30/0x540
    [<00000000c5ca0f0b>] copy_process+0x3d9/0x50e0
    [<00000000ced59777>] kernel_clone+0xb0/0x770
    [<00000000a50befdc>] __do_sys_clone+0xb6/0xf0
    [<000000001dbf2008>] do_syscall_64+0x5d/0xf0
    [<00000000552900ff>] entry_SYSCALL_64_after_hwframe+0x6e/0x76
```

The issue occurs in start_dl_timer(), which increments the task_struct
reference count and sets a timer. The timer callback, dl_task_timer,
is supposed to decrement the reference count upon expiration. However,
if enqueue_task_dl() is called before the timer expires and cancels it,
the reference count is not decremented, leading to the leak.

This patch fixes the reference leak by ensuring the task_struct
reference count is properly decremented when the timer is canceled.

More Info: https://avd.aquasec.com/nvd/cve-2024-41023

[CVE-2024-41031] kernel: mm/filemap: skip to create PMD-sized page cache if needed (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

mm/filemap: skip to create PMD-sized page cache if needed

On ARM64, HPAGE_PMD_ORDER is 13 when the base page size is 64KB. The
PMD-sized page cache can't be supported by xarray as the following error
messages indicate.

```
------------[ cut here ]------------
```

WARNING: CPU: 35 PID: 7484 at lib/xarray.c:1025 xas_split_alloc+0xf8/0x128
Modules linked in: nft_fib_inet nft_fib_ipv4 nft_fib_ipv6 nft_fib \
nft_reject_inet nf_reject_ipv4 nf_reject_ipv6 nft_reject nft_ct \
nft_chain_nat nf_nat nf_conntrack nf_defrag_ipv6 nf_defrag_ipv4 \
ip_set rfkill nf_tables nfnetlink vfat fat virtio_balloon drm \
fuse xfs libcrc32c crct10dif_ce ghash_ce sha2_ce sha256_arm64 \
sha1_ce virtio_net net_failover virtio_console virtio_blk failover \
dimlib virtio_mmio
CPU: 35 PID: 7484 Comm: test Kdump: loaded Tainted: G W 6.10.0-rc5-gavin+ #9
Hardware name: QEMU KVM Virtual Machine, BIOS edk2-20240524-1.el9 05/24/2024
pstate: 83400005 (Nzcv daif +PAN -UAO +TCO +DIT -SSBS BTYPE=--)
pc : xas_split_alloc+0xf8/0x128
lr : split_huge_page_to_list_to_order+0x1c4/0x720
sp : ffff800087a4f6c0
x29: ffff800087a4f6c0 x28: ffff800087a4f720 x27: 000000001fffffff
x26: 0000000000000c40 x25: 000000000000000d x24: ffff00010625b858
x23: ffff800087a4f720 x22: fffffffdfc0780000 x21: 0000000000000000
x20: 0000000000000000 x19: fffffffdfc0780000 x18: 000000001ff40000
x17: 00000000ffffffff x16: 0000018000000000 x15: 51ec004000000000
x14: 0000e00000000000 x13: 0000000000002000 x12: 0000000000000020
x11: 51ec000000000000 x10: 51ece1c0ffff8000 x9 : ffffbeb961a44d28
x8 : 0000000000000003 x7 : fffffffdfc0456420 x6 : ffff0000e1aa6eb8
x5 : 20bf08b4fe778fca x4 : fffffffdfc0456420 x3 : 0000000000000c40
x2 : 000000000000000d x1 : 000000000000000c x0 : 0000000000000000
Call trace:
 xas_split_alloc+0xf8/0x128
 split_huge_page_to_list_to_order+0x1c4/0x720
 truncate_inode_partial_folio+0xdc/0x160
 truncate_inode_pages_range+0x1b4/0x4a8
 truncate_pagecache_range+0x84/0xa0
 xfs_flush_unmap_range+0x70/0x90 [xfs]
 xfs_file_fallocate+0xfc/0x4d8 [xfs]
 vfs_fallocate+0x124/0x2e8
 ksys_fallocate+0x4c/0xa0
 __arm64_sys_fallocate+0x24/0x38
 invoke_syscall.constprop.0+0x7c/0xd8
 do_el0_svc+0xb4/0xd0
 el0_svc+0x44/0x1d8
 el0t_64_sync_handler+0x134/0x150
 el0t_64_sync+0x17c/0x180

Fix it by skipping to allocate PMD-sized page cache when its size is
larger than MAX_PAGECACHE_ORDER. For this specific case, we will fall to
regular path where the readahead window is determined by BDI's sysfs file
(read_ahead_kb).

More Info: https://avd.aquasec.com/nvd/cve-2024-41031

[CVE-2024-41045] kernel: bpf: Defer work in bpf_timer_cancel_and_free (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf: Defer work in bpf_timer_cancel_and_free

Currently, the same case as previous patch (two timer callbacks trying
to cancel each other) can be invoked through bpf_map_update_elem as
well, or more precisely, freeing map elements containing timers. Since
this relies on hrtimer_cancel as well, it is prone to the same deadlock
situation as the previous patch.

It would be sufficient to use hrtimer_try_to_cancel to fix this problem,
as the timer cannot be enqueued after async_cancel_and_free. Once
async_cancel_and_free has been done, the timer must be reinitialized
before it can be armed again. The callback running in parallel trying to
arm the timer will fail, and freeing bpf_hrtimer without waiting is
sufficient (given kfree_rcu), and bpf_timer_cb will return
HRTIMER_NORESTART, preventing the timer from being rearmed again.

However, there exists a UAF scenario where the callback arms the timer
before entering this function, such that if cancellation fails (due to
timer callback invoking this routine, or the target timer callback
running concurrently). In such a case, if the timer expiration is
significantly far in the future, the RCU grace period expiration
happening before it will free the bpf_hrtimer state and along with it
the struct hrtimer, that is enqueued.

Hence, it is clear cancellation needs to occur after
async_cancel_and_free, and yet it cannot be done inline due to deadlock
issues. We thus modify bpf_timer_cancel_and_free to defer work to the
global workqueue, adding a work_struct alongside rcu_head (both used at
different points of time, so can share space).

Update existing code comments to reflect the new state of affairs.

More Info: https://avd.aquasec.com/nvd/cve-2024-41045

[CVE-2024-41067] kernel: btrfs: scrub: handle RST lookup error correctly (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

btrfs: scrub: handle RST lookup error correctly

[BUG]
When running btrfs/060 with forced RST feature, it would crash the
following ASSERT() inside scrub_read_endio():

 ASSERT(sector_nr < stripe->nr_sectors);

Before that, we would have tree dump from
btrfs_get_raid_extent_offset(), as we failed to find the RST entry for

the range.

[CAUSE]
Inside scrub_submit_extent_sector_read() every time we allocated a new
bbio we immediately called btrfs_map_block() to make sure there was some
RST range covering the scrub target.

But if btrfs_map_block() fails, we immediately call endio for the bbio,
while the bbio is newly allocated, it's completely empty.

Then inside scrub_read_endio(), we go through the bvecs to find
the sector number (as bi_sector is no longer reliable if the bio is
submitted to lower layers).

And since the bio is empty, such bvecs iteration would not find any
sector matching the sector, and return sector_nr == stripe->nr_sectors,
triggering the ASSERT().

[FIX]
Instead of calling btrfs_map_block() after allocating a new bbio, call
btrfs_map_block() first.

Since our only objective of calling btrfs_map_block() is only to update
stripe_len, there is really no need to do that after btrfs_alloc_bio().

This new timing would avoid the problem of handling empty bbio
completely, and in fact fixes a possible race window for the old code,
where if the submission thread is the only owner of the pending_io, the
scrub would never finish (since we didn't decrease the pending_io
counter).

Although the root cause of RST lookup failure still needs to be
addressed.

More Info: https://avd.aquasec.com/nvd/cve-2024-41067

[CVE-2024-41082] kernel: nvme-fabrics: use reserved tag for reg read/write command (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

nvme-fabrics: use reserved tag for reg read/write command

In some scenarios, if too many commands are issued by nvme command in
the same time by user tasks, this may exhaust all tags of admin_q. If
a reset (nvme reset or IO timeout) occurs before these commands finish,
reconnect routine may fail to update nvme regs due to insufficient tags,
which will cause kernel hang forever. In order to workaround this issue,
maybe we can let reg_read32()/reg_read64()/reg_write32() use reserved

tags. This maybe safe for nvmf:

1. For the disable ctrl path, we will not issue connect command
2. For the enable ctrl / fw activate path, since connect and reg_xx()
   are called serially.

So the reserved tags may still be enough while reg_xx() use reserved tags.

More Info: https://avd.aquasec.com/nvd/cve-2024-41082

[CVE-2024-41935] kernel: f2fs: fix to shrink read extent node in batches (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

f2fs: fix to shrink read extent node in batches

We use rwlock to protect core structure data of extent tree during
its shrink, however, if there is a huge number of extent nodes in
extent tree, during shrink of extent tree, it may hold rwlock for
a very long time, which may trigger kernel hang issue.

This patch fixes to shrink read extent node in batches, so that,
critical region of the rwlock can be shrunk to avoid its extreme
long time hold.

More Info: https://avd.aquasec.com/nvd/cve-2024-41935

[CVE-2024-42067] kernel: bpf: Take return from set_memory_rox() into account with bpf_jit_binary_lock_ro() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf: Take return from set_memory_rox() into account with bpf_jit_binary_lock_ro()

set_memory_rox() can fail, leaving memory unprotected.

Check return and bail out when bpf_jit_binary_lock_ro() returns
an error.

More Info: https://avd.aquasec.com/nvd/cve-2024-42067

[CVE-2024-42079] kernel: gfs2: Fix NULL pointer dereference in gfs2_log_flush (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

gfs2: Fix NULL pointer dereference in gfs2_log_flush

In gfs2_jindex_free(), set sdp->sd_jdesc to NULL under the log flush
lock to provide exclusion against gfs2_log_flush().

In gfs2_log_flush(), check if sdp->sd_jdesc is non-NULL before
dereferencing it. Otherwise, we could run into a NULL pointer
dereference when outstanding glock work races with an unmount
(glock_work_func -> run_queue -> do_xmote -> inode_go_sync ->
gfs2_log_flush).

More Info: https://avd.aquasec.com/nvd/cve-2024-42079

[CVE-2024-42107] kernel: ice: Don't process extts if PTP is disabled (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ice: Don't process extts if PTP is disabled

The ice_ptp_extts_event() function can race with ice_ptp_release() and
result in a NULL pointer dereference which leads to a kernel panic.

Panic occurs because the ice_ptp_extts_event() function calls
ptp_clock_event() with a NULL pointer. The ice driver has already
released the PTP clock by the time the interrupt for the next external
timestamp event occurs.

To fix this, modify the ice_ptp_extts_event() function to check the
PTP state and bail early if PTP is not ready.

More Info: https://avd.aquasec.com/nvd/cve-2024-42107

[CVE-2024-42118] kernel: drm/amd/display: Do not return negative stream id for array (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Do not return negative stream id for array

[WHY]
resource_stream_to_stream_idx returns an array index and it return -1
when not found; however, -1 is not a valid array index number.

[HOW]

When this happens, call ASSERT(), and return a zero instead.

This fixes an OVERRUN and an NEGATIVE_RETURNS issues reported by Coverity.

More Info: https://avd.aquasec.com/nvd/cve-2024-42118

[CVE-2024-42123] kernel: drm/amdgpu: fix double free err_addr pointer warnings (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amdgpu: fix double free err_addr pointer warnings

In amdgpu_umc_bad_page_polling_timeout, the amdgpu_umc_handle_bad_pages
will be run many times so that double free err_addr in some special case.
So set the err_addr to NULL to avoid the warnings.

More Info: https://avd.aquasec.com/nvd/cve-2024-42123

[CVE-2024-42125] kernel: wifi: rtw89: fw: scan offload prohibit all 6 GHz channel if no 6 GHz sband (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

wifi: rtw89: fw: scan offload prohibit all 6 GHz channel if no 6 GHz sband

We have some policy via BIOS to block uses of 6 GHz. In this case, 6 GHz
sband will be NULL even if it is WiFi 7 chip. So, add NULL handling here
to avoid crash.

More Info: https://avd.aquasec.com/nvd/cve-2024-42125

[CVE-2024-42128] kernel: leds: an30259a: Use devm_mutex_init() for mutex initialization (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

leds: an30259a: Use devm_mutex_init() for mutex initialization

In this driver LEDs are registered using devm_led_classdev_register()
so they are automatically unregistered after module's remove() is done.
led_classdev_unregister() calls module's led_set_brightness() to turn off
the LEDs and that callback uses mutex which was destroyed already
in module's remove() so use devm API instead.

More Info: https://avd.aquasec.com/nvd/cve-2024-42128

[CVE-2024-42129] kernel: leds: mlxreg: Use devm_mutex_init() for mutex initialization (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

leds: mlxreg: Use devm_mutex_init() for mutex initialization

In this driver LEDs are registered using devm_led_classdev_register()
so they are automatically unregistered after module's remove() is done.
led_classdev_unregister() calls module's led_set_brightness() to turn off
the LEDs and that callback uses mutex which was destroyed already
in module's remove() so use devm API instead.

More Info: https://avd.aquasec.com/nvd/cve-2024-42129

[CVE-2024-42135] kernel: vhost_task: Handle SIGKILL by flushing work and exiting (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

vhost_task: Handle SIGKILL by flushing work and exiting

Instead of lingering until the device is closed, this has us handle
SIGKILL by:

1. marking the worker as killed so we no longer try to use it with
   new virtqueues and new flush operations.
2. setting the virtqueue to worker mapping so no new works are queued.
3. running all the exiting works.

More Info: https://avd.aquasec.com/nvd/cve-2024-42135

[CVE-2024-42139] kernel: ice: Fix improper extts handling (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ice: Fix improper extts handling

Extts events are disabled and enabled by the application ts2phc.
However, in case where the driver is removed when the application is

running, a specific extts event remains enabled and can cause a kernel crash.
As a side effect, when the driver is reloaded and application is started again, remaining extts event for the channel from a previous run will keep firing and the message "extts on unexpected channel" might be printed to the user.

To avoid that, extts events shall be disabled when PTP is released.

More Info: https://avd.aquasec.com/nvd/cve-2024-42139

[CVE-2024-42156] kernel: s390/pkey: Wipe copies of clear-key structures on failure (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

s390/pkey: Wipe copies of clear-key structures on failure

Wipe all sensitive data from stack for all IOCTLs, which convert a clear-key into a protected- or secure-key.

More Info: https://avd.aquasec.com/nvd/cve-2024-42156

[CVE-2024-42158] kernel: s390/pkey: Use kfree_sensitive() to fix Coccinelle warnings (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

s390/pkey: Use kfree_sensitive() to fix Coccinelle warnings

Replace memzero_explicit() and kfree() with kfree_sensitive() to fix warnings reported by Coccinelle:

WARNING opportunity for kfree_sensitive/kvfree_sensitive (line 1506)
WARNING opportunity for kfree_sensitive/kvfree_sensitive (line 1643)
WARNING opportunity for kfree_sensitive/kvfree_sensitive (line 1770)

More Info: https://avd.aquasec.com/nvd/cve-2024-42158

[CVE-2024-42239] kernel: bpf: Fail bpf_timer_cancel when callback is being cancelled (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf: Fail bpf_timer_cancel when callback is being cancelled

Given a schedule:

timer1 cb timer2 cb

bpf_timer_cancel(timer2); bpf_timer_cancel(timer1);

Both bpf_timer_cancel calls would wait for the other callback to finish executing, introducing a lockup.

Add an atomic_t count named 'cancelling' in bpf_hrtimer. This keeps track of all in-flight cancellation requests for a given BPF timer. Whenever cancelling a BPF timer, we must check if we have outstanding cancellation requests, and if so, we must fail the operation with an error (-EDEADLK) since cancellation is synchronous and waits for the callback to finish executing. This implies that we can enter a deadlock situation involving two or more timer callbacks executing in parallel and attempting to cancel one another.

Note that we avoid incrementing the cancelling counter for the target timer (the one being cancelled) if bpf_timer_cancel is not invoked from a callback, to avoid spurious errors. The whole point of detecting cur->cancelling and returning -EDEADLK is to not enter a busy wait loop (which may or may not lead to a lockup). This does not apply in case the caller is in a non-callback context, the other side can continue to cancel as it sees fit without running into errors.

Background on prior attempts:

Earlier versions of this patch used a bool 'cancelling' bit and used the following pattern under timer->lock to publish cancellation status.

```
lock(t->lock);
t->cancelling = true;
mb();
if (cur->cancelling)
 return -EDEADLK;
unlock(t->lock);
hrtimer_cancel(t->timer);
t->cancelling = false;
```

The store outside the critical section could overwrite a parallel requests t->cancelling assignment to true, to ensure the parallely executing callback observes its cancellation status.

It would be necessary to clear this cancelling bit once hrtimer_cancel is done, but lack of serialization introduced races. Another option was explored where bpf_timer_start would clear the bit when (re)starting the timer under timer->lock. This would ensure serialized access to the cancelling bit, but may allow it to be cleared before in-flight hrtimer_cancel has finished executing, such that lockups can occur

again.

Thus, we choose an atomic counter to keep track of all outstanding
cancellation requests and use it to prevent lockups in case callbacks
attempt to cancel each other while executing in parallel.

More Info: https://avd.aquasec.com/nvd/cve-2024-42239

[CVE-2024-42241] kernel: mm/shmem: disable PMD-sized page cache if needed (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

mm/shmem: disable PMD-sized page cache if needed

For shmem files, it's possible that PMD-sized page cache can't be
supported by xarray. For example, 512MB page cache on ARM64 when the base
page size is 64KB can't be supported by xarray. It leads to errors as the
following messages indicate when this sort of xarray entry is split.

WARNING: CPU: 34 PID: 7578 at lib/xarray.c:1025 xas_split_alloc+0xf8/0x128
Modules linked in: binfmt_misc nft_fib_inet nft_fib_ipv4 nft_fib_ipv6 \
nft_fib nft_reject_inet nf_reject_ipv4 nf_reject_ipv6 nft_reject \
nft_ct nft_chain_nat nf_nat nf_conntrack nf_defrag_ipv6 nf_defrag_ipv4 \
ip_set rfkill nf_tables nfnetlink vfat fat virtio_balloon drm fuse xfs \
libcrc32c crct10dif_ce ghash_ce sha2_ce sha256_arm64 sha1_ce virtio_net \
net_failover virtio_console virtio_blk failover dimlib virtio_mmio
CPU: 34 PID: 7578 Comm: test Kdump: loaded Tainted: G W 6.10.0-rc5-gavin+ #9
Hardware name: QEMU KVM Virtual Machine, BIOS edk2-20240524-1.el9 05/24/2024
pstate: 83400005 (Nzcv daif +PAN -UAO +TCO +DIT -SSBS BTYPE=--)
pc : xas_split_alloc+0xf8/0x128
lr : split_huge_page_to_list_to_order+0x1c4/0x720
sp : ffff8000882af5f0
x29: ffff8000882af5f0 x28: ffff8000882af650 x27: ffff8000882af768
x26: 0000000000000cc0 x25: 000000000000000d x24: ffff00010625b858
x23: ffff8000882af650 x22: fffffffdfc0900000 x21: 0000000000000000
x20: 0000000000000000 x19: fffffffdfc0900000 x18: 0000000000000000
x17: 0000000000000000 x16: 0000018000000000 x15: 52f8004000000000
x14: 0000e00000000000 x13: 0000000000002000 x12: 0000000000000020
x11: 52f8000000000000 x10: 52f8e1c0ffff6000 x9 : ffffbeb9619a681c
x8 : 0000000000000003 x7 : 0000000000000000 x6 : ffff00010b02ddb0
x5 : ffffbeb96395e378 x4 : 0000000000000000 x3 : 0000000000000cc0
x2 : 000000000000000d x1 : 000000000000000c x0 : 0000000000000000
Call trace:
 xas_split_alloc+0xf8/0x128
 split_huge_page_to_list_to_order+0x1c4/0x720
 truncate_inode_partial_folio+0xdc/0x160
 shmem_undo_range+0x2bc/0x6a8
 shmem_fallocate+0x134/0x430
 vfs_fallocate+0x124/0x2e8
 ksys_fallocate+0x4c/0xa0

__arm64_sys_fallocate+0x24/0x38
invoke_syscall.constprop.0+0x7c/0xd8
do_el0_svc+0xb4/0xd0
el0_svc+0x44/0x1d8
el0t_64_sync_handler+0x134/0x150
el0t_64_sync+0x17c/0x180

Fix it by disabling PMD-sized page cache when HPAGE_PMD_ORDER is larger
than MAX_PAGECACHE_ORDER. As Matthew Wilcox pointed, the page cache in a
shmem file isn't represented by a multi-index entry and doesn't have this
limitation when the xarry entry is split until commit 6b24ca4a1a8d ("mm:
Use multi-index entries in the page cache").

More Info: https://avd.aquasec.com/nvd/cve-2024-42241

[CVE-2024-42243] kernel: mm/filemap: make MAX_PAGECACHE_ORDER acceptable to xarray (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

mm/filemap: make MAX_PAGECACHE_ORDER acceptable to xarray

Patch series "mm/filemap: Limit page cache size to that supported by
xarray", v2.

Currently, xarray can't support arbitrary page cache size. More details
can be found from the WARN_ON() statement in xas_split_alloc(). In our
test whose code is attached below, we hit the WARN_ON() on ARM64 system
where the base page size is 64KB and huge page size is 512MB. The issue
was reported long time ago and some discussions on it can be found here
[1].

[1] https://www.spinics.net/lists/linux-xfs/msg75404.html

In order to fix the issue, we need to adjust MAX_PAGECACHE_ORDER to one
supported by xarray and avoid PMD-sized page cache if needed. The code
changes are suggested by David Hildenbrand.

PATCH[1] adjusts MAX_PAGECACHE_ORDER to that supported by xarray
PATCH[2-3] avoids PMD-sized page cache in the synchronous readahead path
PATCH[4] avoids PMD-sized page cache for shmem files if needed

Test program
============
cat test.c
#define _GNU_SOURCE
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>

```
#include <string.h>
#include <fcntl.h>
#include <errno.h>
#include <sys/syscall.h>
#include <sys/mman.h>

#define TEST_XFS_FILENAME "/tmp/data"
#define TEST_SHMEM_FILENAME "/dev/shm/data"
#define TEST_MEM_SIZE  0x20000000

int main(int argc, char **argv)
{
 const char *filename;
 int fd = 0;
 void *buf = (void *)-1, *p;
 int pgsize = getpagesize();
 int ret;

 if (pgsize != 0x10000) {
  fprintf(stderr, "64KB base page size is required\n");
  return -EPERM;
 }

 system("echo force > /sys/kernel/mm/transparent_hugepage/shmem_enabled");
 system("rm -fr /tmp/data");
 system("rm -fr /dev/shm/data");
 system("echo 1 > /proc/sys/vm/drop_caches");

 /* Open xfs or shmem file */
 filename = TEST_XFS_FILENAME;
 if (argc > 1 && !strcmp(argv[1], "shmem"))
  filename = TEST_SHMEM_FILENAME;

 fd = open(filename, O_CREAT | O_RDWR | O_TRUNC);
 if (fd < 0) {
  fprintf(stderr, "Unable to open <%s>\n", filename);
  return -EIO;
 }

 /* Extend file size */
 ret = ftruncate(fd, TEST_MEM_SIZE);
 if (ret) {
  fprintf(stderr, "Error %d to ftruncate()\n", ret);
  goto cleanup;
 }

 /* Create VMA */
 buf = mmap(NULL, TEST_MEM_SIZE,
     PROT_READ | PROT_WRITE, MAP_SHARED, fd, 0);
 if (buf == (void *)-1) {
  fprintf(stderr, "Unable to mmap <%s>\n", filename);
  goto cleanup;
 }
```

```
 fprintf(stdout, "mapped buffer at 0x%p\n", buf);
 ret = madvise(buf, TEST_MEM_SIZE, MADV_HUGEPAGE);
       if (ret) {
  fprintf(stderr, "Unable to madvise(MADV_HUGEPAGE)\n");
  goto cleanup;
 }

 /* Populate VMA */
 ret = madvise(buf, TEST_MEM_SIZE, MADV_POPULATE_WRITE);
 if (ret) {
  fprintf(stderr, "Error %d to madvise(MADV_POPULATE_WRITE)\n", ret);
  goto cleanup;
 }

 /* Punch the file to enforce xarray split */
 ret = fallocate(fd, FALLOC_FL_KEEP_SIZE | FALLOC_FL_PUNCH_HOLE,
         TEST_MEM_SIZE - pgsize, pgsize);
 if (ret)
  fprintf(stderr, "Error %d to fallocate()\n", ret);

cleanup:
 if (buf != (void *)-1)
  munmap(buf, TEST_MEM_SIZE);
 if (fd > 0)
  close(fd);

 return 0;
}

# gcc test.c -o test
# cat /proc/1/smaps | grep KernelPageSize | head -n 1
KernelPageSize:       64 kB
# ./test shmem
   :
------------[ cut here ]------------
WARNING: CPU: 17 PID: 5253 at lib/xarray.c:1025 xas_split_alloc+0xf8/0x128
Modules linked in: nft_fib_inet nft_fib_ipv4 nft_fib_ipv6 nft_fib  \
nft_reject_inet nf_reject_ipv4 nf_reject_ipv6 nft_reject nft_ct    \
nft_chain_nat nf_nat nf_conntrack nf_defrag_ipv6 nf_defrag_ipv4    \
ip_set nf_tables rfkill nfnetlink vfat fat virtio_balloon          \
drm fuse xfs libcrc32c crct10dif_ce ghash_ce sha2_ce sha256_arm64  \
virtio_net sha1_ce net_failover failover virtio_console virtio_blk \
dimlib virtio_mmio
CPU: 17 PID: 5253 Comm: test Kdump: loaded Tainted: G W 6.10.0-rc5-gavin+ #12
Hardware name: QEMU KVM Virtual Machine, BIOS edk2-20240524-1.el9 05/24/2024
pstate: 83400005 (Nzcv daif +PAN -UAO +TC
---truncated---
```

More Info: https://avd.aquasec.com/nvd/cve-2024-42243

[CVE-2024-42279] kernel: spi: microchip-core: ensure TX and RX FIFOs are empty at start of a transfer (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

spi: microchip-core: ensure TX and RX FIFOs are empty at start of a transfer

While transmitting with rx_len == 0, the RX FIFO is not going to be
emptied in the interrupt handler. A subsequent transfer could then
read crap from the previous transfer out of the RX FIFO into the
start RX buffer. The core provides a register that will empty the RX and
TX FIFOs, so do that before each transfer.

More Info: https://avd.aquasec.com/nvd/cve-2024-42279

[CVE-2024-42317] kernel: mm/huge_memory: avoid PMD-size page cache if needed (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

mm/huge_memory: avoid PMD-size page cache if needed

xarray can't support arbitrary page cache size. the largest and supported
page cache size is defined as MAX_PAGECACHE_ORDER by commit 099d90642a71
("mm/filemap: make MAX_PAGECACHE_ORDER acceptable to xarray"). However,
it's possible to have 512MB page cache in the huge memory's collapsing
path on ARM64 system whose base page size is 64KB. 512MB page cache is
breaking the limitation and a warning is raised when the xarray entry is
split as shown in the following example.

```
[root@dhcp-10-26-1-207 ~]# cat /proc/1/smaps | grep KernelPageSize
KernelPageSize:       64 kB
[root@dhcp-10-26-1-207 ~]# cat /tmp/test.c
   :
int main(int argc, char **argv)
{
 const char *filename = TEST_XFS_FILENAME;
 int fd = 0;
 void *buf = (void *)-1, *p;
 int pgsize = getpagesize();
 int ret = 0;

 if (pgsize != 0x10000) {
  fprintf(stdout, "System with 64KB base page size is required!\n");
  return -EPERM;
 }

 system("echo 0 > /sys/devices/virtual/bdi/253:0/read_ahead_kb");
```

```
 system("echo 1 > /proc/sys/vm/drop_caches");

 /* Open the xfs file */
 fd = open(filename, O_RDONLY);
 assert(fd > 0);

 /* Create VMA */
 buf = mmap(NULL, TEST_MEM_SIZE, PROT_READ, MAP_SHARED, fd, 0);
 assert(buf != (void *)-1);
 fprintf(stdout, "mapped buffer at 0x%p\n", buf);

 /* Populate VMA */
 ret = madvise(buf, TEST_MEM_SIZE, MADV_NOHUGEPAGE);
 assert(ret == 0);
 ret = madvise(buf, TEST_MEM_SIZE, MADV_POPULATE_READ);
 assert(ret == 0);

 /* Collapse VMA */
 ret = madvise(buf, TEST_MEM_SIZE, MADV_HUGEPAGE);
 assert(ret == 0);
 ret = madvise(buf, TEST_MEM_SIZE, MADV_COLLAPSE);
 if (ret) {
  fprintf(stdout, "Error %d to madvise(MADV_COLLAPSE)\n", errno);
  goto out;
 }

 /* Split xarray entry. Write permission is needed */
 munmap(buf, TEST_MEM_SIZE);
 buf = (void *)-1;
 close(fd);
 fd = open(filename, O_RDWR);
 assert(fd > 0);
 fallocate(fd, FALLOC_FL_KEEP_SIZE | FALLOC_FL_PUNCH_HOLE,
     TEST_MEM_SIZE - pgsize, pgsize);
out:
 if (buf != (void *)-1)
  munmap(buf, TEST_MEM_SIZE);
 if (fd > 0)
  close(fd);

 return ret;
}

[root@dhcp-10-26-1-207 ~]# gcc /tmp/test.c -o /tmp/test
[root@dhcp-10-26-1-207 ~]# /tmp/test
 ------------[ cut here ]------------
 WARNING: CPU: 25 PID: 7560 at lib/xarray.c:1025 xas_split_alloc+0xf8/0x128
 Modules linked in: nft_fib_inet nft_fib_ipv4 nft_fib_ipv6 nft_fib     \
 nft_reject_inet nf_reject_ipv4 nf_reject_ipv6 nft_reject nft_ct       \
 nft_chain_nat nf_nat nf_conntrack nf_defrag_ipv6 nf_defrag_ipv4       \
 ip_set rfkill nf_tables nfnetlink vfat fat virtio_balloon drm fuse    \
 xfs libcrc32c crct10dif_ce ghash_ce sha2_ce sha256_arm64 virtio_net   \
 sha1_ce net_failover virtio_blk virtio_console failover dimlib virtio_mmio
```

CPU: 25 PID: 7560 Comm: test Kdump: loaded Not tainted 6.10.0-rc7-gavin+ #9
Hardware name: QEMU KVM Virtual Machine, BIOS edk2-20240524-1.el9 05/24/2024
pstate: 83400005 (Nzcv daif +PAN -UAO +TCO +DIT -SSBS BTYPE=--)
pc : xas_split_alloc+0xf8/0x128
lr : split_huge_page_to_list_to_order+0x1c4/0x780
sp : ffff8000ac32f660
x29: ffff8000ac32f660 x28: ffff0000e0969eb0 x27: ffff8000ac32f6c0
x26: 0000000000000c40 x25: ffff0000e0969eb0 x24: 000000000000000d
x23: ffff8000ac32f6c0 x22: fffffffdfc0700000 x21: 0000000000000000
x20: 0000000000000000 x19: fffffffdfc0700000 x18: 0000000000000000
x17: 0000000000000000 x16: ffffd5f3708ffc70 x15: 0000000000000000
x14: 0000000000000000 x13: 0000000000000000 x12: 0000000000000000
x11: fffffffffffffc0 x10: 0000000000000040 x9 : ffffd5f3708e692c
x8 : 0000000000000003 x7 : 0000000000000000 x6 : ffff0000e0969eb8
x5 : ffffd5f37289e378 x4 : 0000000000000000 x3 : 0000000000000c40
x2 : 000000000000000d x1 : 000000000000000c x0 : 0000000000000000
Call trace:
 xas_split_alloc+0xf8/0x128
 split_huge_page_to_list_to_order+0x1c4/0x780
 truncate_inode_partial_folio+0xdc/0x160
 truncate_inode_pages_range+0x1b4/0x4a8
 truncate_pagecache_range+0x84/0xa
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2024-42317

[CVE-2024-43819] kernel: kvm: s390: Reject memory region operations for ucontrol VMs (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

kvm: s390: Reject memory region operations for ucontrol VMs

This change rejects the KVM_SET_USER_MEMORY_REGION and
KVM_SET_USER_MEMORY_REGION2 ioctls when called on a ucontrol VM.
This is necessary since ucontrol VMs have kvm->arch.gmap set to 0 and
would thus result in a null pointer dereference further in.
Memory management needs to be performed in userspace and using the
ioctls KVM_S390_UCAS_MAP and KVM_S390_UCAS_UNMAP.

Also improve s390 specific documentation for KVM_SET_USER_MEMORY_REGION
and KVM_SET_USER_MEMORY_REGION2.

[frankja@linux.ibm.com: commit message spelling fix, subject prefix fix]

More Info: https://avd.aquasec.com/nvd/cve-2024-43819

[CVE-2024-43824] kernel: PCI: endpoint: pci-epf-test: Make use of cached 'epc_features' in pci_epf_test_core_init() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

PCI: endpoint: pci-epf-test: Make use of cached 'epc_features' in pci_epf_test_core_init()

Instead of getting the epc_features from pci_epc_get_features() API, use
the cached pci_epf_test::epc_features value to avoid the NULL check. Since
the NULL check is already performed in pci_epf_test_bind(), having one more
check in pci_epf_test_core_init() is redundant and it is not possible to
hit the NULL pointer dereference.

Also with commit a01e7214bef9 ("PCI: endpoint: Remove "core_init_notifier"
flag"), 'epc_features' got dereferenced without the NULL check, leading to
the following false positive Smatch warning:

drivers/pci/endpoint/functions/pci-epf-test.c:784 pci_epf_test_core_init() error: we previously assumed 'epc_features' could be null (see line 747)

Thus, remove the redundant NULL check and also use the epc_features::
{msix_capable/msi_capable} flags directly to avoid local variables.

[kwilczynski: commit log]

More Info: https://avd.aquasec.com/nvd/cve-2024-43824

[CVE-2024-43831] kernel: media: mediatek: vcodec: Handle invalid decoder vsi (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

media: mediatek: vcodec: Handle invalid decoder vsi

Handle an invalid decoder vsi in vpu_dec_init to ensure the decoder vsi
is valid for future use.

More Info: https://avd.aquasec.com/nvd/cve-2024-43831

[CVE-2024-43840] kernel: bpf, arm64: Fix trampoline for BPF_TRAMP_F_CALL_ORIG (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf, arm64: Fix trampoline for BPF_TRAMP_F_CALL_ORIG

When BPF_TRAMP_F_CALL_ORIG is set, the trampoline calls
__bpf_tramp_enter() and __bpf_tramp_exit() functions, passing them
the struct bpf_tramp_image *im pointer as an argument in R0.

The trampoline generation code uses emit_addr_mov_i64() to emit
instructions for moving the bpf_tramp_image address into R0, but
emit_addr_mov_i64() assumes the address to be in the vmalloc() space
and uses only 48 bits. Because bpf_tramp_image is allocated using
kzalloc(), its address can use more than 48-bits, in this case the
trampoline will pass an invalid address to __bpf_tramp_enter/exit()
causing a kernel crash.

Fix this by using emit_a64_mov_i64() in place of emit_addr_mov_i64()
as it can work with addresses that are greater than 48-bits.

More Info: https://avd.aquasec.com/nvd/cve-2024-43840

[CVE-2024-43850] kernel: soc: qcom: icc-bwmon: Fix refcount imbalance seen during bwmon_remove (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

soc: qcom: icc-bwmon: Fix refcount imbalance seen during bwmon_remove

The following warning is seen during bwmon_remove due to refcount
imbalance, fix this by releasing the OPPs after use.

Logs:
WARNING: at drivers/opp/core.c:1640 _opp_table_kref_release+0x150/0x158
Hardware name: Qualcomm Technologies, Inc. X1E80100 CRD (DT)
...
Call trace:
_opp_table_kref_release+0x150/0x158
dev_pm_opp_remove_table+0x100/0x1b4
devm_pm_opp_of_table_release+0x10/0x1c
devm_action_release+0x14/0x20
devres_release_all+0xa4/0x104
device_unbind_cleanup+0x18/0x60
device_release_driver_internal+0x1ec/0x228
driver_detach+0x50/0x98
bus_remove_driver+0x6c/0xbc
driver_unregister+0x30/0x60
platform_driver_unregister+0x14/0x20
bwmon_driver_exit+0x18/0x524 [icc_bwmon]
__arm64_sys_delete_module+0x184/0x264
invoke_syscall+0x48/0x118
el0_svc_common.constprop.0+0xc8/0xe8
do_el0_svc+0x20/0x2c
el0_svc+0x34/0xdc

el0t_64_sync_handler+0x13c/0x158
el0t_64_sync+0x190/0x194
--[end trace 0000000000000000]---

More Info: https://avd.aquasec.com/nvd/cve-2024-43850

[CVE-2024-43872] kernel: RDMA/hns: Fix soft lockup under heavy CEQE load (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

RDMA/hns: Fix soft lockup under heavy CEQE load

CEQEs are handled in interrupt handler currently. This may cause the
CPU core staying in interrupt context too long and lead to soft lockup
under heavy load.

Handle CEQEs in BH workqueue and set an upper limit for the number of
CEQE handled by a single call of work handler.

More Info: https://avd.aquasec.com/nvd/cve-2024-43872

[CVE-2024-43886] kernel: drm/amd/display: Add null check in resource_log_pipe_topology_update (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Add null check in resource_log_pipe_topology_update

[WHY]
When switching from "Extend" to "Second Display Only" we sometimes
call resource_get_otg_master_for_stream on a stream for the eDP,
which is disconnected. This leads to a null pointer dereference.

[HOW]
Added a null check in dc_resource.c/resource_log_pipe_topology_update.

More Info: https://avd.aquasec.com/nvd/cve-2024-43886

[CVE-2024-43899] kernel: drm/amd/display: Fix null pointer deref in dcn20_resource.c (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Fix null pointer deref in dcn20_resource.c

Fixes a hang thats triggered when MPV is run on a DCN401 dGPU:

mpv --hwdec=vaapi --vo=gpu --hwdec-codecs=all

and then enabling fullscreen playback (double click on the video)

The following calltrace will be seen:

[181.843989] BUG: kernel NULL pointer dereference, address: 0000000000000000
[181.843997] #PF: supervisor instruction fetch in kernel mode
[181.844003] #PF: error_code(0x0010) - not-present page
[181.844009] PGD 0 P4D 0
[181.844020] Oops: 0010 [#1] PREEMPT SMP NOPTI
[181.844028] CPU: 6 PID: 1892 Comm: gnome-shell Tainted: G W OE 6.5.0-41-generic #41~22.04.2-Ubuntu
[181.844038] Hardware name: System manufacturer System Product Name/CROSSHAIR VI HERO, BIOS 6302 10/23/2018
[181.844044] RIP: 0010:0x0
[181.844079] Code: Unable to access opcode bytes at 0xffffffffffffffd6.
[181.844084] RSP: 0018:ffffb593c2b8f7b0 EFLAGS: 00010246
[181.844093] RAX: 0000000000000000 RBX: 0000000000000000 RCX: 0000000000000004
[181.844099] RDX: ffffb593c2b8f804 RSI: ffffb593c2b8f7e0 RDI: ffff9e3c8e758400
[181.844105] RBP: ffffb593c2b8f7b8 R08: ffffb593c2b8f9c8 R09: ffffb593c2b8f96c
[181.844110] R10: 0000000000000000 R11: 0000000000000000 R12: ffffb593c2b8f9c8
[181.844115] R13: 0000000000000001 R14: ffff9e3c88000000 R15: 0000000000000005
[181.844121] FS: 00007c6e323bb5c0(0000) GS:ffff9e3f85f80000(0000) knlGS:0000000000000000
[181.844128] CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
[181.844134] CR2: ffffffffffffffd6 CR3: 0000000140fbe000 CR4: 00000000003506e0
[181.844141] Call Trace:
[181.844146] <TASK>
[181.844153] ? show_regs+0x6d/0x80
[181.844167] ? __die+0x24/0x80
[181.844179] ? page_fault_oops+0x99/0x1b0
[181.844192] ? do_user_addr_fault+0x31d/0x6b0
[181.844204] ? exc_page_fault+0x83/0x1b0
[181.844216] ? asm_exc_page_fault+0x27/0x30
[181.844237] dcn20_get_dcc_compression_cap+0x23/0x30 [amdgpu]
[181.845115] amdgpu_dm_plane_validate_dcc.constprop.0+0xe5/0x180 [amdgpu]
[181.845985] amdgpu_dm_plane_fill_plane_buffer_attributes+0x300/0x580 [amdgpu]
[181.846848] fill_dc_plane_info_and_addr+0x258/0x350 [amdgpu]
[181.847734] fill_dc_plane_attributes+0x162/0x350 [amdgpu]
[181.848748] dm_update_plane_state.constprop.0+0x4e3/0x6b0 [amdgpu]
[181.849791] ? dm_update_plane_state.constprop.0+0x4e3/0x6b0 [amdgpu]
[181.850840] amdgpu_dm_atomic_check+0xdfe/0x1760 [amdgpu]

More Info: https://avd.aquasec.com/nvd/cve-2024-43899

[CVE-2024-43901] kernel: drm/amd/display: Fix NULL pointer dereference for DTN log in DCN401 (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1

Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Fix NULL pointer dereference for DTN log in DCN401

When users run the command:

cat /sys/kernel/debug/dri/0/amdgpu_dm_dtn_log

The following NULL pointer dereference happens:

```
[  +0.000003] BUG: kernel NULL pointer dereference, address: NULL
[  +0.000005] #PF: supervisor instruction fetch in kernel mode
[  +0.000002] #PF: error_code(0x0010) - not-present page
[  +0.000002] PGD 0 P4D 0
[  +0.000004] Oops: 0010 [#1] PREEMPT SMP NOPTI
[  +0.000003] RIP: 0010:0x0
[  +0.000008] Code: Unable to access opcode bytes at 0xffffffffffffffd6.
[...]
[  +0.000002] PKRU: 55555554
[  +0.000002] Call Trace:
[  +0.000002]  <TASK>
[  +0.000003]  ? show_regs+0x65/0x70
[  +0.000006]  ? __die+0x24/0x70
[  +0.000004]  ? page_fault_oops+0x160/0x470
[  +0.000006]  ? do_user_addr_fault+0x2b5/0x690
[  +0.000003]  ? prb_read_valid+0x1c/0x30
[  +0.000005]  ? exc_page_fault+0x8c/0x1a0
[  +0.000005]  ? asm_exc_page_fault+0x27/0x30
[  +0.000012]  dcn10_log_color_state+0xf9/0x510 [amdgpu]
[  +0.000306]  ? srso_alias_return_thunk+0x5/0xfbef5
[  +0.000003]  ? vsnprintf+0x2fb/0x600
[  +0.000009]  dcn10_log_hw_state+0xfd0/0xfe0 [amdgpu]
[  +0.000218]  ? __mod_memcg_lruvec_state+0xe8/0x170
[  +0.000008]  ? srso_alias_return_thunk+0x5/0xfbef5
[  +0.000002]  ? debug_smp_processor_id+0x17/0x20
[  +0.000003]  ? srso_alias_return_thunk+0x5/0xfbef5
[  +0.000002]  ? srso_alias_return_thunk+0x5/0xfbef5
[  +0.000002]  ? set_ptes.isra.0+0x2b/0x90
[  +0.000004]  ? srso_alias_return_thunk+0x5/0xfbef5
[  +0.000002]  ? _raw_spin_unlock+0x19/0x40
[  +0.000004]  ? srso_alias_return_thunk+0x5/0xfbef5
[  +0.000002]  ? do_anonymous_page+0x337/0x700
[  +0.000004]  dtn_log_read+0x82/0x120 [amdgpu]
[  +0.000207]  full_proxy_read+0x66/0x90
[  +0.000007]  vfs_read+0xb0/0x340
[  +0.000005]  ? __count_memcg_events+0x79/0xe0
[  +0.000002]  ? srso_alias_return_thunk+0x5/0xfbef5
[  +0.000003]  ? count_memcg_events.constprop.0+0x1e/0x40
[  +0.000003]  ? handle_mm_fault+0xb2/0x370
[  +0.000003]  ksys_read+0x6b/0xf0
[  +0.000004]  __x64_sys_read+0x19/0x20
```

[+0.000003] do_syscall_64+0x60/0x130
[+0.000004] entry_SYSCALL_64_after_hwframe+0x6e/0x76
[+0.000003] RIP: 0033:0x7fdf32f147e2
[...]

This error happens when the color log tries to read the gamut remap
information from DCN401 which is not initialized in the dcn401_dpp_funcs
which leads to a null pointer dereference. This commit addresses this
issue by adding a proper guard to access the gamut_remap callback in
case the specific ASIC did not implement this function.

More Info: https://avd.aquasec.com/nvd/cve-2024-43901

[CVE-2024-43913] kernel: nvme: apple: fix device reference counting (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

nvme: apple: fix device reference counting

Drivers must call nvme_uninit_ctrl after a successful nvme_init_ctrl.
Split the allocation side out to make the error handling boundary easier
to navigate. The apple driver had been doing this wrong, leaking the
controller device memory on a tagset failure.

More Info: https://avd.aquasec.com/nvd/cve-2024-43913

[CVE-2024-44955] kernel: drm/amd/display: Don't refer to dc_sink in is_dsc_need_re_compute (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Don't refer to dc_sink in is_dsc_need_re_compute

[Why]
When unplug one of monitors connected after mst hub, encounter null pointer dereference.

It's due to dc_sink get released immediately in early_unregister() or detect_ctx(). When
commit new state which directly referring to info stored in dc_sink will cause null pointer
dereference.

[how]
Remove redundant checking condition. Relevant condition should already be covered by checking
if dsc_aux is null or not. Also reset dsc_aux to NULL when the connector is disconnected.

More Info: https://avd.aquasec.com/nvd/cve-2024-44955

[CVE-2024-44957] kernel: xen: privcmd: Switch from mutex to spinlock for irqfds (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

xen: privcmd: Switch from mutex to spinlock for irqfds

irqfd_wakeup() gets EPOLLHUP, when it is called by
eventfd_release() by way of wake_up_poll(&ctx->wqh, EPOLLHUP), which
gets called under spin_lock_irqsave(). We can't use a mutex here as it
will lead to a deadlock.

Fix it by switching over to a spin lock.

More Info: https://avd.aquasec.com/nvd/cve-2024-44957

[CVE-2024-44961] kernel: drm/amdgpu: Forward soft recovery errors to userspace (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amdgpu: Forward soft recovery errors to userspace

As we discussed before[1], soft recovery should be
forwarded to userspace, or we can get into a really
bad state where apps will keep submitting hanging
command buffers cascading us to a hard reset.

1: https://lore.kernel.org/all/bf23d5ed-9a6b-43e7-84ee-8cbfd0d60f18@froggi.es/
(cherry picked from commit 434967aadbbbe3ad9103cc29e9a327de20fdba01)

More Info: https://avd.aquasec.com/nvd/cve-2024-44961

[CVE-2024-44963] kernel: btrfs: do not BUG_ON() when freeing tree block after error (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

btrfs: do not BUG_ON() when freeing tree block after error

When freeing a tree block, at btrfs_free_tree_block(), if we fail to
create a delayed reference we don't deal with the error and just do a
BUG_ON(). The error most likely to happen is -ENOMEM, and we have a
comment mentioning that only -ENOMEM can happen, but that is not true,

because in case qgroups are enabled any error returned from
btrfs_qgroup_trace_extent_post() (can be -EUCLEAN or anything returned
from btrfs_search_slot() for example) can be propagated back to
btrfs_free_tree_block().

So stop doing a BUG_ON() and return the error to the callers and make
them abort the transaction to prevent leaking space. Syzbot was
triggering this, likely due to memory allocation failure injection.

More Info: https://avd.aquasec.com/nvd/cve-2024-44963

[CVE-2024-44972] kernel: btrfs: do not clear page dirty inside extent_write_locked_range() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

btrfs: do not clear page dirty inside extent_write_locked_range()

[BUG]
For subpage + zoned case, the following workload can lead to rsv data
leak at unmount time:

```
# mkfs.btrfs -f -s 4k $dev
# mount $dev $mnt
# fsstress -w -n 8 -d $mnt -s 1709539240
0/0: fiemap - no filename
0/1: copyrange read - no filename
0/2: write - no filename
0/3: rename - no source filename
0/4: creat f0 x:0 0 0
0/4: creat add id=0,parent=-1
0/5: writev f0[259 1 0 0 0 0] [778052,113,965] 0
0/6: ioctl(FIEMAP) f0[259 1 0 0 224 887097] [1294220,2291618343991484791,0x10000] -1
0/7: dwrite - xfsctl(XFS_IOC_DIOINFO) f0[259 1 0 0 224 887097] return 25, fallback to stat()
0/7: dwrite f0[259 1 0 0 224 887097] [696320,102400] 0
# umount $mnt
```

The dmesg includes the following rsv leak detection warning (all call
trace skipped):

```
------------[ cut here ]------------
WARNING: CPU: 2 PID: 4528 at fs/btrfs/inode.c:8653 btrfs_destroy_inode+0x1e0/0x200 [btrfs]
---[ end trace 0000000000000000 ]---
------------[ cut here ]------------
WARNING: CPU: 2 PID: 4528 at fs/btrfs/inode.c:8654 btrfs_destroy_inode+0x1a8/0x200 [btrfs]
---[ end trace 0000000000000000 ]---
------------[ cut here ]------------
WARNING: CPU: 2 PID: 4528 at fs/btrfs/inode.c:8660 btrfs_destroy_inode+0x1a0/0x200 [btrfs]
---[ end trace 0000000000000000 ]---
```

```
BTRFS info (device sda): last unmount of filesystem 1b4abba9-de34-4f07-9e7f-157cf12a18d6
------------[ cut here ]------------
WARNING: CPU: 3 PID: 4528 at fs/btrfs/block-group.c:4434 btrfs_free_block_groups+0x338/0x500 [btrfs]
---[ end trace 0000000000000000 ]---
BTRFS info (device sda): space_info DATA has 268218368 free, is not full
BTRFS info (device sda): space_info total=268435456, used=204800, pinned=0, reserved=0, may_use=12288, readonly=0 zone_unusable=0
BTRFS info (device sda): global_block_rsv: size 0 reserved 0
BTRFS info (device sda): trans_block_rsv: size 0 reserved 0
BTRFS info (device sda): chunk_block_rsv: size 0 reserved 0
BTRFS info (device sda): delayed_block_rsv: size 0 reserved 0
BTRFS info (device sda): delayed_refs_rsv: size 0 reserved 0
------------[ cut here ]------------
WARNING: CPU: 3 PID: 4528 at fs/btrfs/block-group.c:4434 btrfs_free_block_groups+0x338/0x500 [btrfs]
---[ end trace 0000000000000000 ]---
BTRFS info (device sda): space_info METADATA has 267796480 free, is not full
BTRFS info (device sda): space_info total=268435456, used=131072, pinned=0, reserved=0, may_use=262144, readonly=0 zone_unusable=245760
BTRFS info (device sda): global_block_rsv: size 0 reserved 0
BTRFS info (device sda): trans_block_rsv: size 0 reserved 0
BTRFS info (device sda): chunk_block_rsv: size 0 reserved 0
BTRFS info (device sda): delayed_block_rsv: size 0 reserved 0
BTRFS info (device sda): delayed_refs_rsv: size 0 reserved 0
```

Above $dev is a tcmu-runner emulated zoned HDD, which has a max zone
append size of 64K, and the system has 64K page size.

[CAUSE]
I have added several trace_printk() to show the events (header skipped):

```
> btrfs_dirty_pages: r/i=5/259 dirty start=774144 len=114688
> btrfs_dirty_pages: r/i=5/259 dirty part of page=720896 off_in_page=53248 len_in_page=12288
> btrfs_dirty_pages: r/i=5/259 dirty part of page=786432 off_in_page=0 len_in_page=65536
> btrfs_dirty_pages: r/i=5/259 dirty part of page=851968 off_in_page=0 len_in_page=36864
```

The above lines show our buffered write has dirtied 3 pages of inode
259 of root 5:

```
704K            768K            832K            896K
I       |////I////////////////////I///////////|    I
        756K                        868K
```

|///| is the dirtied range using subpage bitmaps. and 'I' is the page
boundary.

Meanwhile all three pages (704K, 768K, 832K) have their PageDirty
flag set.

```
> btrfs_direct_write: r/i=5/259 start dio filepos=696320 len=102400
```

Then direct IO writ
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2024-44972

[CVE-2024-45015] kernel: drm/msm/dpu: move dpu_encoder's connector assignment to atomic_enable() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/msm/dpu: move dpu_encoder's connector assignment to atomic_enable()

For cases where the crtc's connectors_changed was set without enable/active
getting toggled , there is an atomic_enable() call followed by an
atomic_disable() but without an atomic_mode_set().

This results in a NULL ptr access for the dpu_encoder_get_drm_fmt() call in
the atomic_enable() as the dpu_encoder's connector was cleared in the
atomic_disable() but not re-assigned as there was no atomic_mode_set() call.

Fix the NULL ptr access by moving the assignment for atomic_enable() and also
use drm_atomic_get_new_connector_for_encoder() to get the connector from
the atomic_state.

Patchwork: https://patchwork.freedesktop.org/patch/606729/

More Info: https://avd.aquasec.com/nvd/cve-2024-45015

[CVE-2024-46678] kernel: bonding: change ipsec_lock from spin lock to mutex (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bonding: change ipsec_lock from spin lock to mutex

In the cited commit, bond->ipsec_lock is added to protect ipsec_list,
hence xdo_dev_state_add and xdo_dev_state_delete are called inside
this lock. As ipsec_lock is a spin lock and such xfrmdev ops may sleep,
"scheduling while atomic" will be triggered when changing bond's
active slave.

[101.055189] BUG: scheduling while atomic: bash/902/0x00000200
[101.055726] Modules linked in:
[101.058211] CPU: 3 PID: 902 Comm: bash Not tainted 6.9.0-rc4+ #1
[101.058760] Hardware name:
[101.059434] Call Trace:
[101.059436] <TASK>
[101.060873] dump_stack_lvl+0x51/0x60
[101.061275] __schedule_bug+0x4e/0x60
[101.061682] __schedule+0x612/0x7c0

[101.062078] ? __mod_timer+0x25c/0x370
[101.062486] schedule+0x25/0xd0
[101.062845] schedule_timeout+0x77/0xf0
[101.063265] ? asm_common_interrupt+0x22/0x40
[101.063724] ? __bpf_trace_itimer_state+0x10/0x10
[101.064215] __wait_for_common+0x87/0x190
[101.064648] ? usleep_range_state+0x90/0x90
[101.065091] cmd_exec+0x437/0xb20 [mlx5_core]
[101.065569] mlx5_cmd_do+0x1e/0x40 [mlx5_core]
[101.066051] mlx5_cmd_exec+0x18/0x30 [mlx5_core]
[101.066552] mlx5_crypto_create_dek_key+0xea/0x120 [mlx5_core]
[101.067163] ? bonding_sysfs_store_option+0x4d/0x80 [bonding]
[101.067738] ? kmalloc_trace+0x4d/0x350
[101.068156] mlx5_ipsec_create_sa_ctx+0x33/0x100 [mlx5_core]
[101.068747] mlx5e_xfrm_add_state+0x47b/0xaa0 [mlx5_core]
[101.069312] bond_change_active_slave+0x392/0x900 [bonding]
[101.069868] bond_option_active_slave_set+0x1c2/0x240 [bonding]
[101.070454] __bond_opt_set+0xa6/0x430 [bonding]
[101.070935] __bond_opt_set_notify+0x2f/0x90 [bonding]
[101.071453] bond_opt_tryset_rtnl+0x72/0xb0 [bonding]
[101.071965] bonding_sysfs_store_option+0x4d/0x80 [bonding]
[101.072567] kernfs_fop_write_iter+0x10c/0x1a0
[101.073033] vfs_write+0x2d8/0x400
[101.073416] ? alloc_fd+0x48/0x180
[101.073798] ksys_write+0x5f/0xe0
[101.074175] do_syscall_64+0x52/0x110
[101.074576] entry_SYSCALL_64_after_hwframe+0x4b/0x53

As bond_ipsec_add_sa_all and bond_ipsec_del_sa_all are only called
from bond_change_active_slave, which requires holding the RTNL lock.
And bond_ipsec_add_sa and bond_ipsec_del_sa are xfrm state
xdo_dev_state_add and xdo_dev_state_delete APIs, which are in user
context. So ipsec_lock doesn't have to be spin lock, change it to
mutex, and thus the above issue can be resolved.

More Info: https://avd.aquasec.com/nvd/cve-2024-46678

[CVE-2024-46681] kernel: pktgen: use cpus_read_lock() in pg_net_init() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

pktgen: use cpus_read_lock() in pg_net_init()

I have seen the WARN_ON(smp_processor_id() != cpu) firing
in pktgen_thread_worker() during tests.

We must use cpus_read_lock()/cpus_read_unlock()
around the for_each_online_cpu(cpu) loop.

While we are at it use WARN_ON_ONCE() to avoid a possible syslog flood.

More Info: https://avd.aquasec.com/nvd/cve-2024-46681

[CVE-2024-46698] kernel: video/aperture: optionally match the device in sysfb_disable() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

video/aperture: optionally match the device in sysfb_disable()

In aperture_remove_conflicting_pci_devices(), we currently only
call sysfb_disable() on vga class devices. This leads to the
following problem when the pimary device is not VGA compatible:

1. A PCI device with a non-VGA class is the boot display
2. That device is probed first and it is not a VGA device so
   sysfb_disable() is not called, but the device resources
   are freed by aperture_detach_platform_device()
3. Non-primary GPU has a VGA class and it ends up calling sysfb_disable()
4. NULL pointer dereference via sysfb_disable() since the resources
   have already been freed by aperture_detach_platform_device() when
   it was called by the other device.

Fix this by passing a device pointer to sysfb_disable() and checking
the device to determine if we should execute it or not.

v2: Fix build when CONFIG_SCREEN_INFO is not set
v3: Move device check into the mutex
    Drop primary variable in aperture_remove_conflicting_pci_devices()
    Drop __init on pci sysfb_pci_dev_is_enabled()

More Info: https://avd.aquasec.com/nvd/cve-2024-46698

[CVE-2024-46727] kernel: drm/amd/display: Add otg_master NULL check within resource_log_pipe_topology_update (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Add otg_master NULL check within resource_log_pipe_topology_update

[Why]
Coverity reports NULL_RETURN warning.

[How]
Add otg_master NULL check.

More Info: https://avd.aquasec.com/nvd/cve-2024-46727

[CVE-2024-46728] kernel: drm/amd/display: Check index for aux_rd_interval before using (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Check index for aux_rd_interval before using

aux_rd_interval has size of 7 and should be checked.

This fixes 3 OVERRUN and 1 INTEGER_OVERFLOW issues reported by Coverity.

More Info: https://avd.aquasec.com/nvd/cve-2024-46728

[CVE-2024-46729] kernel: drm/amd/display: Fix incorrect size calculation for loop (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Fix incorrect size calculation for loop

[WHY]
fe_clk_en has size of 5 but sizeof(fe_clk_en) has byte size 20 which is
lager than the array size.

[HOW]
Divide byte size 20 by its element size.

This fixes 2 OVERRUN issues reported by Coverity.

More Info: https://avd.aquasec.com/nvd/cve-2024-46729

[CVE-2024-46730] kernel: drm/amd/display: Ensure array index tg_inst won't be -1 (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Ensure array index tg_inst won't be -1

[WHY & HOW]
tg_inst will be a negative if timing_generator_count equals 0, which
should be checked before used.

This fixes 2 OVERRUN issues reported by Coverity.

More Info: https://avd.aquasec.com/nvd/cve-2024-46730

[CVE-2024-46733] kernel: btrfs: fix qgroup reserve leaks in cow_file_range (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

btrfs: fix qgroup reserve leaks in cow_file_range

In the buffered write path, the dirty page owns the qgroup reserve until
it creates an ordered_extent.

Therefore, any errors that occur before the ordered_extent is created
must free that reservation, or else the space is leaked. The fstest
generic/475 exercises various IO error paths, and is able to trigger
errors in cow_file_range where we fail to get to allocating the ordered
extent. Note that because we *do* clear delalloc, we are likely to
remove the inode from the delalloc list, so the inodes/pages to not have
invalidate/launder called on them in the commit abort path.

This results in failures at the unmount stage of the test that look like:

```
 BTRFS: error (device dm-8 state EA) in cleanup_transaction:2018: errno=-5 IO failure
 BTRFS: error (device dm-8 state EA) in btrfs_replace_file_extents:2416: errno=-5 IO failure
 BTRFS warning (device dm-8 state EA): qgroup 0/5 has unreleased space, type 0 rsv 28672
 ------------[ cut here ]------------
 WARNING: CPU: 3 PID: 22588 at fs/btrfs/disk-io.c:4333 close_ctree+0x222/0x4d0 [btrfs]
 Modules linked in: btrfs blake2b_generic libcrc32c xor zstd_compress raid6_pq
 CPU: 3 PID: 22588 Comm: umount Kdump: loaded Tainted: G W          6.10.0-rc7-gab56fde445b8 #21
 Hardware name: QEMU Standard PC (i440FX + PIIX, 1996), BIOS Arch Linux 1.16.3-1-1 04/01/2014
 RIP: 0010:close_ctree+0x222/0x4d0 [btrfs]
 RSP: 0018:ffffb4465283be00 EFLAGS: 00010202
 RAX: 0000000000000001 RBX: ffffa1a1818e1000 RCX: 0000000000000001
 RDX: 0000000000000000 RSI: ffffb4465283bbe0 RDI: ffffa1a19374fcb8
 RBP: ffffa1a1818e13c0 R08: 0000000100028b16 R09: 0000000000000000
 R10: 0000000000000003 R11: 0000000000000003 R12: ffffa1a18ad7972c
 R13: 0000000000000000 R14: 0000000000000000 R15: 0000000000000000
 FS:  00007f9168312b80(0000) GS:ffffa1a4afcc0000(0000) knlGS:0000000000000000
 CS:  0010 DS: 0000 ES: 0000 CR0: 0000000080050033
 CR2: 00007f91683c9140 CR3: 000000010acaa000 CR4: 00000000000006f0
 Call Trace:
  <TASK>
  ? close_ctree+0x222/0x4d0 [btrfs]
  ? __warn.cold+0x8e/0xea
  ? close_ctree+0x222/0x4d0 [btrfs]
  ? report_bug+0xff/0x140
  ? handle_bug+0x3b/0x70
  ? exc_invalid_op+0x17/0x70
  ? asm_exc_invalid_op+0x1a/0x20
```

? close_ctree+0x222/0x4d0 [btrfs]
generic_shutdown_super+0x70/0x160
kill_anon_super+0x11/0x40
btrfs_kill_super+0x11/0x20 [btrfs]
deactivate_locked_super+0x2e/0xa0
cleanup_mnt+0xb5/0x150
task_work_run+0x57/0x80
syscall_exit_to_user_mode+0x121/0x130
do_syscall_64+0xab/0x1a0
entry_SYSCALL_64_after_hwframe+0x77/0x7f
RIP: 0033:0x7f916847a887
---[end trace 0000000000000000]---
BTRFS error (device dm-8 state EA): qgroup reserved space leaked

Cases 2 and 3 in the out_reserve path both pertain to this type of leak
and must free the reserved qgroup data. Because it is already an error
path, I opted not to handle the possible errors in
btrfs_free_qgroup_data.

More Info: https://avd.aquasec.com/nvd/cve-2024-46733

[CVE-2024-46742] kernel: smb/server: fix potential null-ptr-deref of lease_ctx_info in smb2_open() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

smb/server: fix potential null-ptr-deref of lease_ctx_info in smb2_open()

null-ptr-deref will occur when (req_op_level == SMB2_OPLOCK_LEVEL_LEASE)
and parse_lease_state() return NULL.

Fix this by check if 'lease_ctx_info' is NULL.

Additionally, remove the redundant parentheses in
parse_durable_handle_context().

More Info: https://avd.aquasec.com/nvd/cve-2024-46742

[CVE-2024-46748] kernel: cachefiles: Set the max subreq size for cache writes to MAX_RW_COUNT (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

cachefiles: Set the max subreq size for cache writes to MAX_RW_COUNT

Set the maximum size of a subrequest that writes to cachefiles to be

MAX_RW_COUNT so that we don't overrun the maximum write we can make to the
backing filesystem.

More Info: https://avd.aquasec.com/nvd/cve-2024-46748

[CVE-2024-46751] kernel: btrfs: don't BUG_ON() when 0 reference count at btrfs_lookup_extent_info() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

btrfs: don't BUG_ON() when 0 reference count at btrfs_lookup_extent_info()

Instead of doing a BUG_ON() handle the error by returning -EUCLEAN,
aborting the transaction and logging an error message.

More Info: https://avd.aquasec.com/nvd/cve-2024-46751

[CVE-2024-46753] kernel: btrfs: handle errors from btrfs_dec_ref() properly (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

btrfs: handle errors from btrfs_dec_ref() properly

In walk_up_proc() we BUG_ON(ret) from btrfs_dec_ref(). This is
incorrect, we have proper error handling here, return the error.

More Info: https://avd.aquasec.com/nvd/cve-2024-46753

[CVE-2024-46754] kernel: bpf: Remove tst_run from lwt_seg6local_prog_ops. (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf: Remove tst_run from lwt_seg6local_prog_ops.

The syzbot reported that the lwt_seg6 related BPF ops can be invoked
via bpf_test_run() without without entering input_action_end_bpf()
first.

Martin KaFai Lau said that self test for BPF_PROG_TYPE_LWT_SEG6LOCAL
probably didn't work since it was introduced in commit 04d4b274e2a
("ipv6: sr: Add seg6local action End.BPF"). The reason is that the
per-CPU variable seg6_bpf_srh_states::srh is never assigned in the self
test case but each BPF function expects it.

Remove test_run for BPF_PROG_TYPE_LWT_SEG6LOCAL.

More Info: https://avd.aquasec.com/nvd/cve-2024-46754

[CVE-2024-46760] kernel: wifi: rtw88: usb: schedule rx work after everything is set up (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

wifi: rtw88: usb: schedule rx work after everything is set up

Right now it's possible to hit NULL pointer dereference in
rtw_rx_fill_rx_status on hw object and/or its fields because
initialization routine can start getting USB replies before
rtw_dev is fully setup.

The stack trace looks like this:

rtw_rx_fill_rx_status
rtw8821c_query_rx_desc
rtw_usb_rx_handler
...
queue_work
rtw_usb_read_port_complete
...
usb_submit_urb
rtw_usb_rx_resubmit
rtw_usb_init_rx
rtw_usb_probe

So while we do the async stuff rtw_usb_probe continues and calls
rtw_register_hw, which does all kinds of initialization (e.g.
via ieee80211_register_hw) that rtw_rx_fill_rx_status relies on.

Fix this by moving the first usb_submit_urb after everything
is set up.

For me, this bug manifested as:
[8.893177] rtw_8821cu 1-1:1.2: band wrong, packet dropped
[8.910904] rtw_8821cu 1-1:1.2: hw->conf.chandef.chan NULL in rtw_rx_fill_rx_status
because I'm using Larry's backport of rtw88 driver with the NULL
checks in rtw_rx_fill_rx_status.

More Info: https://avd.aquasec.com/nvd/cve-2024-46760

[CVE-2024-46762] kernel: xen: privcmd: Fix possible access to a freed kirqfd instance (Severity: MEDIUM)

Package: linux-libc-dev

Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

xen: privcmd: Fix possible access to a freed kirqfd instance

Nothing prevents simultaneous ioctl calls to privcmd_irqfd_assign() and
privcmd_irqfd_deassign(). If that happens, it is possible that a kirqfd
created and added to the irqfds_list by privcmd_irqfd_assign() may get
removed by another thread executing privcmd_irqfd_deassign(), while the
former is still using it after dropping the locks.

This can lead to a situation where an already freed kirqfd instance may
be accessed and cause kernel oops.

Use SRCU locking to prevent the same, as is done for the KVM
implementation for irqfds.

More Info: https://avd.aquasec.com/nvd/cve-2024-46762

[CVE-2024-46765] kernel: ice: protect XDP configuration with a mutex (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ice: protect XDP configuration with a mutex

The main threat to data consistency in ice_xdp() is a possible asynchronous
PF reset. It can be triggered by a user or by TX timeout handler.

XDP setup and PF reset code access the same resources in the following
sections:
* ice_vsi_close() in ice_prepare_for_reset() - already rtnl-locked
* ice_vsi_rebuild() for the PF VSI - not protected
* ice_vsi_open() - already rtnl-locked

With an unfortunate timing, such accesses can result in a crash such as the
one below:

[+1.999878] ice 0000:b1:00.0: Registered XDP mem model MEM_TYPE_XSK_BUFF_POOL on Rx ring 14
[+2.002992] ice 0000:b1:00.0: Registered XDP mem model MEM_TYPE_XSK_BUFF_POOL on Rx ring 18
[Mar15 18:17] ice 0000:b1:00.0 ens801f0np0: NETDEV WATCHDOG: CPU: 38: transmit queue 14 timed out 80692736 ms
[+0.000093] ice 0000:b1:00.0 ens801f0np0: tx_timeout: VSI_num: 6, Q 14, NTC: 0x0, HW_HEAD: 0x0, NTU: 0x0, INT: 0x4000001
[+0.000012] ice 0000:b1:00.0 ens801f0np0: tx_timeout recovery level 1, txqueue 14
[+0.394718] ice 0000:b1:00.0: PTP reset successful
[+0.006184] BUG: kernel NULL pointer dereference, address: 0000000000000098
[+0.000045] #PF: supervisor read access in kernel mode
[+0.000023] #PF: error_code(0x0000) - not-present page

[+0.000023] PGD 0 P4D 0
[+0.000018] Oops: 0000 [#1] PREEMPT SMP NOPTI
[+0.000023] CPU: 38 PID: 7540 Comm: kworker/38:1 Not tainted 6.8.0-rc7 #1
[+0.000031] Hardware name: Intel Corporation S2600WFT/S2600WFT, BIOS SE5C620.86B.02.01.0014.082620210524 08/26/2021
[+0.000036] Workqueue: ice ice_service_task [ice]
[+0.000183] RIP: 0010:ice_clean_tx_ring+0xa/0xd0 [ice]
[...]
[+0.000013] Call Trace:
[+0.000016] <TASK>
[+0.000014] ? __die+0x1f/0x70
[+0.000029] ? page_fault_oops+0x171/0x4f0
[+0.000029] ? schedule+0x3b/0xd0
[+0.000027] ? exc_page_fault+0x7b/0x180
[+0.000022] ? asm_exc_page_fault+0x22/0x30
[+0.000031] ? ice_clean_tx_ring+0xa/0xd0 [ice]
[+0.000194] ice_free_tx_ring+0xe/0x60 [ice]
[+0.000186] ice_destroy_xdp_rings+0x157/0x310 [ice]
[+0.000151] ice_vsi_decfg+0x53/0xe0 [ice]
[+0.000180] ice_vsi_rebuild+0x239/0x540 [ice]
[+0.000186] ice_vsi_rebuild_by_type+0x76/0x180 [ice]
[+0.000145] ice_rebuild+0x18c/0x840 [ice]
[+0.000145] ? delay_tsc+0x4a/0xc0
[+0.000022] ? delay_tsc+0x92/0xc0
[+0.000020] ice_do_reset+0x140/0x180 [ice]
[+0.000886] ice_service_task+0x404/0x1030 [ice]
[+0.000824] process_one_work+0x171/0x340
[+0.000685] worker_thread+0x277/0x3a0
[+0.000675] ? preempt_count_add+0x6a/0xa0
[+0.000677] ? _raw_spin_lock_irqsave+0x23/0x50
[+0.000679] ? __pfx_worker_thread+0x10/0x10
[+0.000653] kthread+0xf0/0x120
[+0.000635] ? __pfx_kthread+0x10/0x10
[+0.000616] ret_from_fork+0x2d/0x50
[+0.000612] ? __pfx_kthread+0x10/0x10
[+0.000604] ret_from_fork_asm+0x1b/0x30
[+0.000604] </TASK>

The previous way of handling this through returning -EBUSY is not viable,
particularly when destroying AF_XDP socket, because the kernel proceeds
with removal anyway.

There is plenty of code between those calls and there is no need to create
a large critical section that covers all of them, same as there is no need
to protect ice_vsi_rebuild() with rtnl_lock().

Add xdp_state_lock mutex to protect ice_vsi_rebuild() and ice_xdp().

Leaving unprotected sections in between would result in two states that
have to be considered:
1. when the VSI is closed, but not yet rebuild
2. when VSI is already rebuild, but not yet open

The latter case is actually already handled through !netif_running() case, we just need to adjust flag checking a little. The former one is not as trivial, because between ice_vsi_close() and ice_vsi_rebuild(), a lot of hardware interaction happens, this can make adding/deleting rings exit with an error. Luckily, VSI rebuild is pending and can apply new configuration for us in a managed fashion.

Therefore, add an additional VSI state flag ICE_VSI_REBUILD_PENDING to indicate that ice_x
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2024-46765

[CVE-2024-46772] kernel: drm/amd/display: Check denominator crb_pipes before used (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Check denominator crb_pipes before used

[WHAT & HOW]
A denominator cannot be 0, and is checked before used.

This fixes 2 DIVIDE_BY_ZERO issues reported by Coverity.

More Info: https://avd.aquasec.com/nvd/cve-2024-46772

[CVE-2024-46775] kernel: drm/amd/display: Validate function returns (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Validate function returns

[WHAT & HOW]
Function return values must be checked before data can be used in subsequent functions.

This fixes 4 CHECKED_RETURN issues reported by Coverity.

More Info: https://avd.aquasec.com/nvd/cve-2024-46775

[CVE-2024-46776] kernel: drm/amd/display: Run DC_LOG_DC after checking link->link_enc (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Run DC_LOG_DC after checking link->link_enc

[WHAT]
The DC_LOG_DC should be run after link->link_enc is checked, not before.

This fixes 1 REVERSE_INULL issue reported by Coverity.

More Info: https://avd.aquasec.com/nvd/cve-2024-46776

[CVE-2024-46787] kernel: userfaultfd: fix checks for huge PMDs (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

userfaultfd: fix checks for huge PMDs

Patch series "userfaultfd: fix races around pmd_trans_huge() check", v2.

The pmd_trans_huge() code in mfill_atomic() is wrong in three different
ways depending on kernel version:

1. The pmd_trans_huge() check is racy and can lead to a BUG_ON() (if you hit
   the right two race windows) - I've tested this in a kernel build with
   some extra mdelay() calls. See the commit message for a description
   of the race scenario.
   On older kernels (before 6.5), I think the same bug can even
   theoretically lead to accessing transhuge page contents as a page table
   if you hit the right 5 narrow race windows (I haven't tested this case).
2. As pointed out by Qi Zheng, pmd_trans_huge() is not sufficient for
   detecting PMDs that don't point to page tables.
   On older kernels (before 6.5), you'd just have to win a single fairly
   wide race to hit this.
   I've tested this on 6.1 stable by racing migration (with a mdelay()
   patched into try_to_migrate()) against UFFDIO_ZEROPAGE - on my x86
   VM, that causes a kernel oops in ptlock_ptr().
3. On newer kernels (>=6.5), for shmem mappings, khugepaged is allowed
   to yank page tables out from under us (though I haven't tested that),
   so I think the BUG_ON() checks in mfill_atomic() are just wrong.

I decided to write two separate fixes for these (one fix for bugs 1+2, one
fix for bug 3), so that the first fix can be backported to kernels
affected by bugs 1+2.

This patch (of 2):

This fixes two issues.

I discovered that the following race can occur:

```
  mfill_atomic             other thread
  ============             ============
                       <zap PMD>
  pmdp_get_lockless() [reads none pmd]
  <bail if trans_huge>
  <if none:>
                       <pagefault creates transhuge zeropage>
    __pte_alloc [no-op]
                       <zap PMD>
  <bail if pmd_trans_huge(*dst_pmd)>
  BUG_ON(pmd_none(*dst_pmd))
```

I have experimentally verified this in a kernel with extra mdelay() calls;
the BUG_ON(pmd_none(*dst_pmd)) triggers.

On kernels newer than commit 0d940a9b270b ("mm/pgtable: allow
pte_offset_map[_lock]() to fail"), this can't lead to anything worse than
a BUG_ON(), since the page table access helpers are actually designed to
deal with page tables concurrently disappearing; but on older kernels
(<=6.4), I think we could probably theoretically race past the two
BUG_ON() checks and end up treating a hugepage as a page table.

The second issue is that, as Qi Zheng pointed out, there are other types
of huge PMDs that pmd_trans_huge() can't catch: devmap PMDs and swap PMDs
(in particular, migration PMDs).

On <=6.4, this is worse than the first issue: If mfill_atomic() runs on a
PMD that contains a migration entry (which just requires winning a single,
fairly wide race), it will pass the PMD to pte_offset_map_lock(), which
assumes that the PMD points to a page table.

Breakage follows: First, the kernel tries to take the PTE lock (which will
crash or maybe worse if there is no "struct page" for the address bits in
the migration entry PMD - I think at least on X86 there usually is no
corresponding "struct page" thanks to the PTE inversion mitigation, amd64
looks different).

If that didn't crash, the kernel would next try to write a PTE into what
it wrongly thinks is a page table.

As part of fixing these issues, get rid of the check for pmd_trans_huge()
before __pte_alloc() - that's redundant, we're going to have to check for
that after the __pte_alloc() anyway.

Backport note: pmdp_get_lockless() is pmd_read_atomic() in older kernels.

More Info: https://avd.aquasec.com/nvd/cve-2024-46787

[CVE-2024-46803] kernel: drm/amdkfd: Check debug trap enable before write dbg_ev_file (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amdkfd: Check debug trap enable before write dbg_ev_file

In interrupt context, write dbg_ev_file will be run by work queue. It
will cause write dbg_ev_file execution after debug_trap_disable, which
will cause NULL pointer access.
v2: cancel work "debug_event_workarea" before set dbg_ev_file as NULL.

More Info: https://avd.aquasec.com/nvd/cve-2024-46803

[CVE-2024-46806] kernel: drm/amdgpu: Fix the warning division or modulo by zero (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amdgpu: Fix the warning division or modulo by zero

Checks the partition mode and returns an error for an invalid mode.

More Info: https://avd.aquasec.com/nvd/cve-2024-46806

[CVE-2024-46808] kernel: drm/amd/display: Add missing NULL pointer check within dpcd_extend_address_range (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Add missing NULL pointer check within dpcd_extend_address_range

[Why & How]
ASSERT if return NULL from kcalloc.

More Info: https://avd.aquasec.com/nvd/cve-2024-46808

[CVE-2024-46816] kernel: drm/amd/display: Stop amdgpu_dm initialize when link nums greater than max_links (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Stop amdgpu_dm initialize when link nums greater than max_links

[Why]
Coverity report OVERRUN warning. There are
only max_links elements within dc->links. link
count could up to AMDGPU_DM_MAX_DISPLAY_INDEX 31.

[How]
Make sure link count less than max_links.

More Info: https://avd.aquasec.com/nvd/cve-2024-46816

[CVE-2024-46823] kernel: kunit/overflow: Fix UB in overflow_allocation_test (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

kunit/overflow: Fix UB in overflow_allocation_test

The 'device_name' array doesn't exist out of the
'overflow_allocation_test' function scope. However, it is being used as
a driver name when calling 'kunit_driver_create' from
'kunit_device_register'. It produces the kernel panic with KASAN
enabled.

Since this variable is used in one place only, remove it and pass the
device name into kunit_device_register directly as an ascii string.

More Info: https://avd.aquasec.com/nvd/cve-2024-46823

[CVE-2024-46825] kernel: wifi: iwlwifi: mvm: use IWL_FW_CHECK for link ID check (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

wifi: iwlwifi: mvm: use IWL_FW_CHECK for link ID check

The lookup function iwl_mvm_rcu_fw_link_id_to_link_conf() is
normally called with input from the firmware, so it should use
IWL_FW_CHECK() instead of WARN_ON().

More Info: https://avd.aquasec.com/nvd/cve-2024-46825

[CVE-2024-46834] kernel: ethtool: fail closed if we can't get max channel used in indirection tables (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1

Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ethtool: fail closed if we can't get max channel used in indirection tables

Commit 0d1b7d6c9274 ("bnxt: fix crashes when reducing ring count with
active RSS contexts") proves that allowing indirection table to contain
channels with out of bounds IDs may lead to crashes. Currently the
max channel check in the core gets skipped if driver can't fetch
the indirection table or when we can't allocate memory.

Both of those conditions should be extremely rare but if they do
happen we should try to be safe and fail the channel change.

More Info: https://avd.aquasec.com/nvd/cve-2024-46834

[CVE-2024-46842] kernel: scsi: lpfc: Handle mailbox timeouts in lpfc_get_sfp_info (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

scsi: lpfc: Handle mailbox timeouts in lpfc_get_sfp_info

The MBX_TIMEOUT return code is not handled in lpfc_get_sfp_info and the
routine unconditionally frees submitted mailbox commands regardless of
return status. The issue is that for MBX_TIMEOUT cases, when firmware
returns SFP information at a later time, that same mailbox memory region
references previously freed memory in its cmpl routine.

Fix by adding checks for the MBX_TIMEOUT return code. During mailbox
resource cleanup, check the mbox flag to make sure that the wait did not
timeout. If the MBOX_WAKE flag is not set, then do not free the resources
because it will be freed when firmware completes the mailbox at a later
time in its cmpl routine.

Also, increase the timeout from 30 to 60 seconds to accommodate boot
scripts requiring longer timeouts.

More Info: https://avd.aquasec.com/nvd/cve-2024-46842

[CVE-2024-46843] kernel: scsi: ufs: core: Remove SCSI host only if added (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

scsi: ufs: core: Remove SCSI host only if added

If host tries to remove ufshcd driver from a UFS device it would cause a kernel panic if ufshcd_async_scan fails during ufshcd_probe_hba before adding a SCSI host with scsi_add_host and MCQ is enabled since SCSI host has been defered after MCQ configuration introduced by commit 0cab4023ec7b ("scsi: ufs: core: Defer adding host to SCSI if MCQ is supported").

To guarantee that SCSI host is removed only if it has been added, set the scsi_host_added flag to true after adding a SCSI host and check whether it is set or not before removing it.

More Info: https://avd.aquasec.com/nvd/cve-2024-46843

[CVE-2024-46860] kernel: wifi: mt76: mt7921: fix NULL pointer access in mt7921_ipv6_addr_change (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

wifi: mt76: mt7921: fix NULL pointer access in mt7921_ipv6_addr_change

When disabling wifi mt7921_ipv6_addr_change() is called as a notifier.
At this point mvif->phy is already NULL so we cannot use it here.

More Info: https://avd.aquasec.com/nvd/cve-2024-46860

[CVE-2024-46870] kernel: drm/amd/display: Disable DMCUB timeout for DCN35 (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Disable DMCUB timeout for DCN35

[Why]
DMCUB can intermittently take longer than expected to process commands.

Old ASIC policy was to continue while logging a diagnostic error - which works fine for ASIC without IPS, but with IPS this could lead to a race condition where we attempt to access DCN state while it's inaccessible, leading to a system hang when the NIU port is not disabled or register accesses that timeout and the display configuration in an undefined state.

[How]
We need to investigate why these accesses take longer than expected, but for now we should disable the timeout on DCN35 to avoid this race condition. Since the waits happen only at lower interrupt levels the risk of taking too long at higher IRQ and causing a system watchdog timeout are minimal.

More Info: https://avd.aquasec.com/nvd/cve-2024-46870

[CVE-2024-47141] kernel: pinmux: Use sequential access to access desc->pinmux data (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

pinmux: Use sequential access to access desc->pinmux data

When two client of the same gpio call pinctrl_select_state() for the
same functionality, we are seeing NULL pointer issue while accessing
desc->mux_owner.

Let's say two processes A, B executing in pin_request() for the same pin
and process A updates the desc->mux_usecount but not yet updated the
desc->mux_owner while process B see the desc->mux_usecount which got
updated by A path and further executes strcmp and while accessing
desc->mux_owner it crashes with NULL pointer.

Serialize the access to mux related setting with a mutex lock.

```
 cpu0 (process A)    cpu1(process B)

pinctrl_select_state() {     pinctrl_select_state() {
  pin_request() {     pin_request() {
  ...
       ....
    } else {
         desc->mux_usecount++;
          desc->mux_usecount && strcmp(desc->mux_owner, owner)) {

         if (desc->mux_usecount > 1)
              return 0;
         desc->mux_owner = owner;

  }      }
```

More Info: https://avd.aquasec.com/nvd/cve-2024-47141

[CVE-2024-47658] kernel: crypto: stm32/cryp - call finalize with bh disabled (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

crypto: stm32/cryp - call finalize with bh disabled

The finalize operation in interrupt mode produce a produces a spinlock recursion warning. The reason is the fact that BH must be disabled during this process.

More Info: https://avd.aquasec.com/nvd/cve-2024-47658

[CVE-2024-47661] kernel: drm/amd/display: Avoid overflow from uint32_t to uint8_t (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Avoid overflow from uint32_t to uint8_t

[WHAT & HOW]
dmub_rb_cmd's ramping_boundary has size of uint8_t and it is assigned 0xFFFF. Fix it by changing it to uint8_t with value of 0xFF.

This fixes 2 INTEGER_OVERFLOW issues reported by Coverity.

More Info: https://avd.aquasec.com/nvd/cve-2024-47661

[CVE-2024-47662] kernel: drm/amd/display: Remove register from DCN35 DMCUB diagnostic collection (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Remove register from DCN35 DMCUB diagnostic collection

[Why]
These registers should not be read from driver and triggering the security violation when DMCUB work times out and diagnostics are collected blocks Z8 entry.

[How]
Remove the register read from DCN35.

More Info: https://avd.aquasec.com/nvd/cve-2024-47662

[CVE-2024-47664] kernel: spi: hisi-kunpeng: Add verification for the max_frequency provided by the firmware (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

spi: hisi-kunpeng: Add verification for the max_frequency provided by the firmware

If the value of max_speed_hz is 0, it may cause a division by zero
error in hisi_calc_effective_speed().
The value of max_speed_hz is provided by firmware.
Firmware is generally considered as a trusted domain. However, as
division by zero errors can cause system failure, for defense measure,
the value of max_speed is validated here. So 0 is regarded as invalid
and an error code is returned.

More Info: https://avd.aquasec.com/nvd/cve-2024-47664

[CVE-2024-47666] kernel: scsi: pm80xx: Set phy->enable_completion only when we wait for it (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

scsi: pm80xx: Set phy->enable_completion only when we wait for it

pm8001_phy_control() populates the enable_completion pointer with a stack
address, sends a PHY_LINK_RESET / PHY_HARD_RESET, waits 300 ms, and
returns. The problem arises when a phy control response comes late. After
300 ms the pm8001_phy_control() function returns and the passed
enable_completion stack address is no longer valid. Late phy control
response invokes complete() on a dangling enable_completion pointer which
leads to a kernel crash.

More Info: https://avd.aquasec.com/nvd/cve-2024-47666

[CVE-2024-47703] kernel: bpf, lsm: Add check for BPF LSM return value (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf, lsm: Add check for BPF LSM return value

A bpf prog returning a positive number attached to file_alloc_security
hook makes kernel panic.

This happens because file system can not filter out the positive number
returned by the LSM prog using IS_ERR, and misinterprets this positive
number as a file pointer.

Given that hook file_alloc_security never returned positive number
before the introduction of BPF LSM, and other BPF LSM hooks may
encounter similar issues, this patch adds LSM return value check
in verifier, to ensure no unexpected value is returned.

More Info: https://avd.aquasec.com/nvd/cve-2024-47703

[CVE-2024-47704] kernel: drm/amd/display: Check link_res->hpo_dp_link_enc before using it (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Check link_res->hpo_dp_link_enc before using it

[WHAT & HOW]
Functions dp_enable_link_phy and dp_disable_link_phy can pass link_res
without initializing hpo_dp_link_enc and it is necessary to check for
null before dereferencing.

This fixes 2 FORWARD_NULL issues reported by Coverity.

More Info: https://avd.aquasec.com/nvd/cve-2024-47704

[CVE-2024-47736] kernel: erofs: handle overlapped pclusters out of crafted images properly (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

erofs: handle overlapped pclusters out of crafted images properly

syzbot reported a task hang issue due to a deadlock case where it is
waiting for the folio lock of a cached folio that will be used for
cache I/Os.

After looking into the crafted fuzzed image, I found it's formed with
several overlapped big pclusters as below:

```
 Ext:   logical offset   |  length :     physical offset    |  length
   0:       0..   16384 |   16384 :     151552..    167936 |   16384
   1:   16384..   32768 |   16384 :     155648..    172032 |   16384
   2:   32768..   49152 |   16384 :  537223168.. 537239552 |   16384
...
```

Here, extent 0/1 are physically overlapped although it's entirely
impossible for normal filesystem images generated by mkfs.

First, managed folios containing compressed data will be marked as
up-to-date and then unlocked immediately (unlike in-place folios) when
compressed I/Os are complete. If physical blocks are not submitted in
the incremental order, there should be separate BIOs to avoid dependency

issues. However, the current code mis-arranges z_erofs_fill_bio_vec() and BIO submission which causes unexpected BIO waits.

Second, managed folios will be connected to their own pclusters for efficient inter-queries. However, this is somewhat hard to implement easily if overlapped big pclusters exist. Again, these only appear in fuzzed images so let's simply fall back to temporary short-lived pages for correctness.

Additionally, it justifies that referenced managed folios cannot be truncated for now and reverts part of commit 2080ca1ed3e4 ("erofs: tidy up `struct z_erofs_bvec`") for simplicity although it shouldn't be any difference.

More Info: https://avd.aquasec.com/nvd/cve-2024-47736

[CVE-2024-47752] kernel: media: mediatek: vcodec: Fix H264 stateless decoder smatch warning (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

media: mediatek: vcodec: Fix H264 stateless decoder smatch warning

Fix a smatch static checker warning on vdec_h264_req_if.c.
Which leads to a kernel crash when fb is NULL.

More Info: https://avd.aquasec.com/nvd/cve-2024-47752

[CVE-2024-47753] kernel: media: mediatek: vcodec: Fix VP8 stateless decoder smatch warning (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

media: mediatek: vcodec: Fix VP8 stateless decoder smatch warning

Fix a smatch static checker warning on vdec_vp8_req_if.c.
Which leads to a kernel crash when fb is NULL.

More Info: https://avd.aquasec.com/nvd/cve-2024-47753

[CVE-2024-47754] kernel: media: mediatek: vcodec: Fix H264 multi stateless decoder smatch warning (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

media: mediatek: vcodec: Fix H264 multi stateless decoder smatch warning

Fix a smatch static checker warning on vdec_h264_req_multi_if.c.
Which leads to a kernel crash when fb is NULL.

More Info: https://avd.aquasec.com/nvd/cve-2024-47754

[CVE-2024-47794] kernel: bpf: Prevent tailcall infinite loop caused by freplace (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf: Prevent tailcall infinite loop caused by freplace

There is a potential infinite loop issue that can occur when using a
combination of tail calls and freplace.

In an upcoming selftest, the attach target for entry_freplace of
tailcall_freplace.c is subprog_tc of tc_bpf2bpf.c, while the tail call in
entry_freplace leads to entry_tc. This results in an infinite loop:

entry_tc -> subprog_tc -> entry_freplace --tailcall-> entry_tc.

The problem arises because the tail_call_cnt in entry_freplace resets to
zero each time entry_freplace is executed, causing the tail call mechanism
to never terminate, eventually leading to a kernel panic.

To fix this issue, the solution is twofold:

1. Prevent updating a program extended by an freplace program to a
   prog_array map.
2. Prevent extending a program that is already part of a prog_array map
   with an freplace program.

This ensures that:

* If a program or its subprogram has been extended by an freplace program,
  it can no longer be updated to a prog_array map.
* If a program has been added to a prog_array map, neither it nor its
  subprograms can be extended by an freplace program.

Moreover, an extension program should not be tailcalled. As such, return
-EINVAL if the program has a type of BPF_PROG_TYPE_EXT when adding it to a
prog_array map.

Additionally, fix a minor code style issue by replacing eight spaces with a
tab for proper formatting.

More Info: https://avd.aquasec.com/nvd/cve-2024-47794

[CVE-2024-47809] kernel: dlm: fix possible lkb_resource null dereference (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

dlm: fix possible lkb_resource null dereference

This patch fixes a possible null pointer dereference when this function is
called from request_lock() as lkb->lkb_resource is not assigned yet,
only after validate_lock_args() by calling attach_lkb(). Another issue
is that a resource name could be a non printable bytearray and we cannot
assume to be ASCII coded.

The log functionality is probably never being hit when DLM is used in
normal way and no debug logging is enabled. The null pointer dereference
can only occur on a new created lkb that does not have the resource
assigned yet, it probably never hits the null pointer dereference but we
should be sure that other changes might not change this behaviour and we
actually can hit the mentioned null pointer dereference.

In this patch we just drop the printout of the resource name, the lkb id
is enough to make a possible connection to a resource name if this
exists.

More Info: https://avd.aquasec.com/nvd/cve-2024-47809

[CVE-2024-48875] kernel: btrfs: don't take dev_replace rwsem on task already holding it (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

btrfs: don't take dev_replace rwsem on task already holding it

Running fstests btrfs/011 with MKFS_OPTIONS="-O rst" to force the usage of
the RAID stripe-tree, we get the following splat from lockdep:

```
 BTRFS info (device sdd): dev_replace from /dev/sdd (devid 1) to /dev/sdb started

 ============================================
 WARNING: possible recursive locking detected
 6.11.0-rc3-btrfs-for-next #599 Not tainted
 --------------------------------------------
 btrfs/2326 is trying to acquire lock:
 ffff88810f215c98 (&fs_info->dev_replace.rwsem){++++}-{3:3}, at: btrfs_map_block+0x39f/0x2250

 but task is already holding lock:
 ffff88810f215c98 (&fs_info->dev_replace.rwsem){++++}-{3:3}, at: btrfs_map_block+0x39f/0x2250
```

other info that might help us debug this:
 Possible unsafe locking scenario:

       CPU0
       ----
  lock(&fs_info->dev_replace.rwsem);
  lock(&fs_info->dev_replace.rwsem);

 *** DEADLOCK ***

 May be due to missing lock nesting notation

1 lock held by btrfs/2326:
 #0: ffff88810f215c98 (&fs_info->dev_replace.rwsem){++++}-{3:3}, at: btrfs_map_block+0x39f/0x2250

stack backtrace:
CPU: 1 UID: 0 PID: 2326 Comm: btrfs Not tainted 6.11.0-rc3-btrfs-for-next #599
Hardware name: Bochs Bochs, BIOS Bochs 01/01/2011
Call Trace:
 <TASK>
 dump_stack_lvl+0x5b/0x80
 __lock_acquire+0x2798/0x69d0
 ? __pfx___lock_acquire+0x10/0x10
 ? __pfx___lock_acquire+0x10/0x10
 lock_acquire+0x19d/0x4a0
 ? btrfs_map_block+0x39f/0x2250
 ? __pfx_lock_acquire+0x10/0x10
 ? find_held_lock+0x2d/0x110
 ? lock_is_held_type+0x8f/0x100
 down_read+0x8e/0x440
 ? btrfs_map_block+0x39f/0x2250
 ? __pfx_down_read+0x10/0x10
 ? do_raw_read_unlock+0x44/0x70
 ? _raw_read_unlock+0x23/0x40
 btrfs_map_block+0x39f/0x2250
 ? btrfs_dev_replace_by_ioctl+0xd69/0x1d00
 ? btrfs_bio_counter_inc_blocked+0xd9/0x2e0
 ? __kasan_slab_alloc+0x6e/0x70
 ? __pfx_btrfs_map_block+0x10/0x10
 ? __pfx_btrfs_bio_counter_inc_blocked+0x10/0x10
 ? kmem_cache_alloc_noprof+0x1f2/0x300
 ? mempool_alloc_noprof+0xed/0x2b0
 btrfs_submit_chunk+0x28d/0x17e0
 ? __pfx_btrfs_submit_chunk+0x10/0x10
 ? bvec_alloc+0xd7/0x1b0
 ? bio_add_folio+0x171/0x270
 ? __pfx_bio_add_folio+0x10/0x10
 ? __kasan_check_read+0x20/0x20
 btrfs_submit_bio+0x37/0x80
 read_extent_buffer_pages+0x3df/0x6c0
 btrfs_read_extent_buffer+0x13e/0x5f0
 read_tree_block+0x81/0xe0

read_block_for_search+0x4bd/0x7a0
? __pfx_read_block_for_search+0x10/0x10
btrfs_search_slot+0x78d/0x2720
? __pfx_btrfs_search_slot+0x10/0x10
? lock_is_held_type+0x8f/0x100
? kasan_save_track+0x14/0x30
? __kasan_slab_alloc+0x6e/0x70
? kmem_cache_alloc_noprof+0x1f2/0x300
btrfs_get_raid_extent_offset+0x181/0x820
? __pfx_lock_acquire+0x10/0x10
? __pfx_btrfs_get_raid_extent_offset+0x10/0x10
? down_read+0x194/0x440
? __pfx_down_read+0x10/0x10
? do_raw_read_unlock+0x44/0x70
? _raw_read_unlock+0x23/0x40
btrfs_map_block+0x5b5/0x2250
? __pfx_btrfs_map_block+0x10/0x10
scrub_submit_initial_read+0x8fe/0x11b0
? __pfx_scrub_submit_initial_read+0x10/0x10
submit_initial_group_read+0x161/0x3a0
? lock_release+0x20e/0x710
? __pfx_submit_initial_group_read+0x10/0x10
? __pfx_lock_release+0x10/0x10
scrub_simple_mirror.isra.0+0x3eb/0x580
scrub_stripe+0xe4d/0x1440
? lock_release+0x20e/0x710
? __pfx_scrub_stripe+0x10/0x10
? __pfx_lock_release+0x10/0x10
? do_raw_read_unlock+0x44/0x70
? _raw_read_unlock+0x23/0x40
scrub_chunk+0x257/0x4a0
scrub_enumerate_chunks+0x64c/0xf70
? __mutex_unlock_slowpath+0x147/0x5f0
? __pfx_scrub_enumerate_chunks+0x10/0x10
? bit_wait_timeout+0xb0/0x170
? __up_read+0x189/0x700
? scrub_workers_get+0x231/0x300
? up_write+0x490/0x4f0
btrfs_scrub_dev+0x52e/0xcd0
? create_pending_snapshots+0x230/0x250
? __pfx_btrfs_scrub_dev+0x10/0x10
btrfs_dev_replace_by_ioctl+0xd69/0x1d00
? lock_acquire+0x19d/0x4a0
? __pfx_btrfs_dev_replace_by_ioctl+0x10/0x10
?
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2024-48875

[CVE-2024-49568] kernel: net/smc: check v2_ext_offset/eid_cnt/ism_gid_cnt when receiving proposal msg (Severity: MEDIUM)

Package: linux-libc-dev

Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net/smc: check v2_ext_offset/eid_cnt/ism_gid_cnt when receiving proposal msg

When receiving proposal msg in server, the fields v2_ext_offset/
eid_cnt/ism_gid_cnt in proposal msg are from the remote client
and can not be fully trusted. Especially the field v2_ext_offset,
once exceed the max value, there has the chance to access wrong
address, and crash may happen.

This patch checks the fields v2_ext_offset/eid_cnt/ism_gid_cnt
before using them.

More Info: https://avd.aquasec.com/nvd/cve-2024-49568

[CVE-2024-49569] kernel: nvme-rdma: unquiesce admin_q before destroy it (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

nvme-rdma: unquiesce admin_q before destroy it

Kernel will hang on destroy admin_q while we create ctrl failed, such
as following calltrace:

PID: 23644 TASK: ff2d52b40f439fc0 CPU: 2 COMMAND: "nvme"
 #0 [ff61d23de260fb78] __schedule at ffffffff8323bc15
 #1 [ff61d23de260fc08] schedule at ffffffff8323c014
 #2 [ff61d23de260fc28] blk_mq_freeze_queue_wait at ffffffff82a3dba1
 #3 [ff61d23de260fc78] blk_freeze_queue at ffffffff82a4113a
 #4 [ff61d23de260fc90] blk_cleanup_queue at ffffffff82a33006
 #5 [ff61d23de260fcb0] nvme_rdma_destroy_admin_queue at ffffffffc12686ce
 #6 [ff61d23de260fcc8] nvme_rdma_setup_ctrl at ffffffffc1268ced
 #7 [ff61d23de260fd28] nvme_rdma_create_ctrl at ffffffffc126919b
 #8 [ff61d23de260fd68] nvmf_dev_write at ffffffffc024f362
 #9 [ff61d23de260fe38] vfs_write at ffffffff827d5f25
    RIP: 00007fda7891d574 RSP: 00007ffe2ef06958 RFLAGS: 00000202
    RAX: ffffffffffffffda RBX: 000055e8122a4d90 RCX: 00007fda7891d574
    RDX: 000000000000012b RSI: 000055e8122a4d90 RDI: 0000000000000004
    RBP: 00007ffe2ef079c0 R8: 000000000000012b R9: 000055e8122a4d90
    R10: 0000000000000000 R11: 0000000000000202 R12: 0000000000000004
    R13: 000055e8122923c0 R14: 000000000000012b R15: 00007fda78a54500
    ORIG_RAX: 0000000000000001 CS: 0033 SS: 002b

This due to we have quiesced admi_q before cancel requests, but forgot
to unquiesce before destroy it, as a result we fail to drain the
pending requests, and hang on blk_mq_freeze_queue_wait() forever. Here
try to reuse nvme_rdma_teardown_admin_queue() to fix this issue and

simplify the code.

More Info: https://avd.aquasec.com/nvd/cve-2024-49569

[CVE-2024-49893] kernel: drm/amd/display: Check stream_status before it is used (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Check stream_status before it is used

[WHAT & HOW]
dc_state_get_stream_status can return null, and therefore null must be
checked before stream_status is used.

This fixes 1 NULL_RETURNS issue reported by Coverity.

More Info: https://avd.aquasec.com/nvd/cve-2024-49893

[CVE-2024-49901] kernel: drm/msm/adreno: Assign msm_gpu->pdev earlier to avoid nullptrs (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/msm/adreno: Assign msm_gpu->pdev earlier to avoid nullptrs

There are some cases, such as the one uncovered by Commit 46d4efcccc68
("drm/msm/a6xx: Avoid a nullptr dereference when speedbin setting fails")
where

msm_gpu_cleanup() : platform_set_drvdata(gpu->pdev, NULL);

is called on gpu->pdev == NULL, as the GPU device has not been fully
initialized yet.

Turns out that there's more than just the aforementioned path that
causes this to happen (e.g. the case when there's speedbin data in the
catalog, but opp-supported-hw is missing in DT).

Assigning msm_gpu->pdev earlier seems like the least painful solution
to this, therefore do so.

Patchwork: https://patchwork.freedesktop.org/patch/602742/

More Info: https://avd.aquasec.com/nvd/cve-2024-49901

[CVE-2024-49906] kernel: drm/amd/display: Check null pointer before try to access it (Severity:

MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Check null pointer before try to access it

[why & how]
Change the order of the pipe_ctx->plane_state check to ensure that
plane_state is not null before accessing it.

More Info: https://avd.aquasec.com/nvd/cve-2024-49906

[CVE-2024-49908] kernel: drm/amd/display: Add null check for 'afb' in amdgpu_dm_update_cursor (v2) (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Add null check for 'afb' in amdgpu_dm_update_cursor (v2)

This commit adds a null check for the 'afb' variable in the
amdgpu_dm_update_cursor function. Previously, 'afb' was assumed to be
null at line 8388, but was used later in the code without a null check.
This could potentially lead to a null pointer dereference.

Changes since v1:
- Moved the null check for 'afb' to the line where 'afb' is used. (Alex)

Fixes the below:
drivers/gpu/drm/amd/amdgpu/../display/amdgpu_dm/amdgpu_dm.c:8433 amdgpu_dm_update_cursor()
 error: we previously assumed 'afb' could be null (see line 8388)

More Info: https://avd.aquasec.com/nvd/cve-2024-49908

[CVE-2024-49910] kernel: drm/amd/display: Add NULL check for function pointer in dcn401_set_output_transfer_func (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Add NULL check for function pointer in dcn401_set_output_transfer_func

This commit adds a null check for the set_output_gamma function pointer
in the dcn401_set_output_transfer_func function. Previously,
set_output_gamma was being checked for null, but then it was being

dereferenced without any null check. This could lead to a null pointer dereference if set_output_gamma is null.

To fix this, we now ensure that set_output_gamma is not null before dereferencing it. We do this by adding a null check for set_output_gamma before the call to set_output_gamma.

More Info: https://avd.aquasec.com/nvd/cve-2024-49910

[CVE-2024-49914] kernel: drm/amd/display: Add null check for pipe_ctx->plane_state in dcn20_program_pipe (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Add null check for pipe_ctx->plane_state in dcn20_program_pipe

This commit addresses a null pointer dereference issue in the `dcn20_program_pipe` function. The issue could occur when `pipe_ctx->plane_state` is null.

The fix adds a check to ensure `pipe_ctx->plane_state` is not null before accessing. This prevents a null pointer dereference.

Reported by smatch:
drivers/gpu/drm/amd/amdgpu/../display/dc/hwss/dcn20/dcn20_hwseq.c:1925 dcn20_program_pipe() error: we previously assumed 'pipe_ctx->plane_state' could be null (see line 1877)

More Info: https://avd.aquasec.com/nvd/cve-2024-49914

[CVE-2024-49916] kernel: drm/amd/display: Add NULL check for clk_mgr and clk_mgr->funcs in dcn401_init_hw (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Add NULL check for clk_mgr and clk_mgr->funcs in dcn401_init_hw

This commit addresses a potential null pointer dereference issue in the `dcn401_init_hw` function. The issue could occur when `dc->clk_mgr` or `dc->clk_mgr->funcs` is null.

The fix adds a check to ensure `dc->clk_mgr` and `dc->clk_mgr->funcs` is not null before accessing its functions. This prevents a potential null pointer dereference.

Reported by smatch:
drivers/gpu/drm/amd/amdgpu/../display/dc/hwss/dcn401/dcn401_hwseq.c:416 dcn401_init_hw() error: we previously

assumed 'dc->clk_mgr' could be null (see line 225)

More Info: https://avd.aquasec.com/nvd/cve-2024-49916

[CVE-2024-49918] kernel: drm/amd/display: Add null check for head_pipe in dcn32_acquire_idle_pipe_for_head_pipe_in_layer (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Add null check for head_pipe in dcn32_acquire_idle_pipe_for_head_pipe_in_layer

This commit addresses a potential null pointer dereference issue in the
`dcn32_acquire_idle_pipe_for_head_pipe_in_layer` function. The issue
could occur when `head_pipe` is null.

The fix adds a check to ensure `head_pipe` is not null before asserting
it. If `head_pipe` is null, the function returns NULL to prevent a
potential null pointer dereference.

Reported by smatch:
drivers/gpu/drm/amd/amdgpu/../display/dc/resource/dcn32/dcn32_resource.c:2690
dcn32_acquire_idle_pipe_for_head_pipe_in_layer() error: we previously assumed 'head_pipe' could be null (see line 2681)

More Info: https://avd.aquasec.com/nvd/cve-2024-49918

[CVE-2024-49919] kernel: drm/amd/display: Add null check for head_pipe in dcn201_acquire_free_pipe_for_layer (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Add null check for head_pipe in dcn201_acquire_free_pipe_for_layer

This commit addresses a potential null pointer dereference issue in the
`dcn201_acquire_free_pipe_for_layer` function. The issue could occur
when `head_pipe` is null.

The fix adds a check to ensure `head_pipe` is not null before asserting
it. If `head_pipe` is null, the function returns NULL to prevent a
potential null pointer dereference.

Reported by smatch:
drivers/gpu/drm/amd/amdgpu/../display/dc/resource/dcn201/dcn201_resource.c:1016
dcn201_acquire_free_pipe_for_layer() error: we previously assumed 'head_pipe' could be null (see line 1010)

More Info: https://avd.aquasec.com/nvd/cve-2024-49919

[CVE-2024-49920] kernel: drm/amd/display: Check null pointers before multiple uses (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Check null pointers before multiple uses

[WHAT & HOW]
Poniters, such as stream_enc and dc->bw_vbios, are null checked previously
in the same function, so Coverity warns "implies that stream_enc and
dc->bw_vbios might be null". They are used multiple times in the
subsequent code and need to be checked.

This fixes 10 FORWARD_NULL issues reported by Coverity.

More Info: https://avd.aquasec.com/nvd/cve-2024-49920

[CVE-2024-49921] kernel: drm/amd/display: Check null pointers before used (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Check null pointers before used

[WHAT & HOW]
Poniters, such as dc->clk_mgr, are null checked previously in the same
function, so Coverity warns "implies that "dc->clk_mgr" might be null".
As a result, these pointers need to be checked when used again.

This fixes 10 FORWARD_NULL issues reported by Coverity.

More Info: https://avd.aquasec.com/nvd/cve-2024-49921

[CVE-2024-49922] kernel: drm/amd/display: Check null pointers before using them (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Check null pointers before using them

[WHAT & HOW]
These pointers are null checked previously in the same function,
indicating they might be null as reported by Coverity. As a result,
they need to be checked when used again.

This fixes 3 FORWARD_NULL issue reported by Coverity.

More Info: https://avd.aquasec.com/nvd/cve-2024-49922

[CVE-2024-49923] kernel: drm/amd/display: Pass non-null to dcn20_validate_apply_pipe_split_flags (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Pass non-null to dcn20_validate_apply_pipe_split_flags

[WHAT & HOW]
"dcn20_validate_apply_pipe_split_flags" dereferences merge, and thus it
cannot be a null pointer. Let's pass a valid pointer to avoid null
dereference.

This fixes 2 FORWARD_NULL issues reported by Coverity.

More Info: https://avd.aquasec.com/nvd/cve-2024-49923

[CVE-2024-49926] kernel: rcu-tasks: Fix access non-existent percpu rtpcp variable in rcu_tasks_need_gpcb() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

rcu-tasks: Fix access non-existent percpu rtpcp variable in rcu_tasks_need_gpcb()

For kernels built with CONFIG_FORCE_NR_CPUS=y, the nr_cpu_ids is
defined as NR_CPUS instead of the number of possible cpus, this
will cause the following system panic:

smpboot: Allowing 4 CPUs, 0 hotplug CPUs
...
setup_percpu: NR_CPUS:512 nr_cpumask_bits:512 nr_cpu_ids:512 nr_node_ids:1
...
BUG: unable to handle page fault for address: ffffffff9911c8c8
Oops: 0000 [#1] PREEMPT SMP PTI
CPU: 0 PID: 15 Comm: rcu_tasks_trace Tainted: G W
6.6.21 #1 5dc7acf91a5e8e9ac9dcfc35bee0245691283ea6
RIP: 0010:rcu_tasks_need_gpcb+0x25d/0x2c0
RSP: 0018:ffffa371c00a3e60 EFLAGS: 00010082
CR2: ffffffff9911c8c8 CR3: 000000040fa20005 CR4: 00000000001706f0
Call Trace:
<TASK>
? __die+0x23/0x80

? page_fault_oops+0xa4/0x180
? exc_page_fault+0x152/0x180
? asm_exc_page_fault+0x26/0x40
? rcu_tasks_need_gpcb+0x25d/0x2c0
? __pfx_rcu_tasks_kthread+0x40/0x40
rcu_tasks_one_gp+0x69/0x180
rcu_tasks_kthread+0x94/0xc0
kthread+0xe8/0x140
? __pfx_kthread+0x40/0x40
ret_from_fork+0x34/0x80
? __pfx_kthread+0x40/0x40
ret_from_fork_asm+0x1b/0x80
</TASK>

Considering that there may be holes in the CPU numbers, use the
maximum possible cpu number, instead of nr_cpu_ids, for configuring
enqueue and dequeue limits.

[neeraj.upadhyay: Fix htmldocs build error reported by Stephen Rothwell]

More Info: https://avd.aquasec.com/nvd/cve-2024-49926

[CVE-2024-49932] kernel: btrfs: don't readahead the relocation inode on RST (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

btrfs: don't readahead the relocation inode on RST

On relocation we're doing readahead on the relocation inode, but if the
filesystem is backed by a RAID stripe tree we can get ENOENT (e.g. due to
preallocated extents not being mapped in the RST) from the lookup.

But readahead doesn't handle the error and submits invalid reads to the
device, causing an assertion in the scatter-gather list code:

```
BTRFS info (device nvme1n1): balance: start -d -m -s
BTRFS info (device nvme1n1): relocating block group 6480920576 flags data|raid0
BTRFS error (device nvme1n1): cannot find raid-stripe for logical [6481928192, 6481969152] devid 2, profile raid0
------------[ cut here ]------------
kernel BUG at include/linux/scatterlist.h:115!
Oops: invalid opcode: 0000 [#1] PREEMPT SMP PTI
CPU: 0 PID: 1012 Comm: btrfs Not tainted 6.10.0-rc7+ #567
RIP: 0010:__blk_rq_map_sg+0x339/0x4a0
RSP: 0018:ffffc90001a43820 EFLAGS: 00010202
RAX: 0000000000000000 RBX: 0000000000000000 RCX: ffffea00045d4802
RDX: 0000000117520000 RSI: 0000000000000000 RDI: ffff8881027d1000
RBP: 0000000000003000 R08: ffffea00045d4902 R09: 0000000000000000
R10: 0000000000000000 R11: 0000000000001000 R12: ffff8881003d10b8
R13: ffffc90001a438f0 R14: 0000000000000000 R15: 0000000000003000
FS:  00007fcc048a6900(0000) GS:ffff88813bc00000(0000) knlGS:0000000000000000
```

```
CS:  0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 000000002cd11000 CR3: 00000001109ea001 CR4: 0000000000370eb0
Call Trace:
 <TASK>
 ? __die_body.cold+0x14/0x25
 ? die+0x2e/0x50
 ? do_trap+0xca/0x110
 ? do_error_trap+0x65/0x80
 ? __blk_rq_map_sg+0x339/0x4a0
 ? exc_invalid_op+0x50/0x70
 ? __blk_rq_map_sg+0x339/0x4a0
 ? asm_exc_invalid_op+0x1a/0x20
 ? __blk_rq_map_sg+0x339/0x4a0
 nvme_prep_rq.part.0+0x9d/0x770
 nvme_queue_rq+0x7d/0x1e0
 __blk_mq_issue_directly+0x2a/0x90
 ? blk_mq_get_budget_and_tag+0x61/0x90
 blk_mq_try_issue_list_directly+0x56/0xf0
 blk_mq_flush_plug_list.part.0+0x52b/0x5d0
 __blk_flush_plug+0xc6/0x110
 blk_finish_plug+0x28/0x40
 read_pages+0x160/0x1c0
 page_cache_ra_unbounded+0x109/0x180
 relocate_file_extent_cluster+0x611/0x6a0
 ? btrfs_search_slot+0xba4/0xd20
 ? balance_dirty_pages_ratelimited_flags+0x26/0xb00
 relocate_data_extent.constprop.0+0x134/0x160
 relocate_block_group+0x3f2/0x500
 btrfs_relocate_block_group+0x250/0x430
 btrfs_relocate_chunk+0x3f/0x130
 btrfs_balance+0x71b/0xef0
 ? kmalloc_trace_noprof+0x13b/0x280
 btrfs_ioctl+0x2c2e/0x3030
 ? kvfree_call_rcu+0x1e6/0x340
 ? list_lru_add_obj+0x66/0x80
 ? mntput_no_expire+0x3a/0x220
 __x64_sys_ioctl+0x96/0xc0
 do_syscall_64+0x54/0x110
 entry_SYSCALL_64_after_hwframe+0x76/0x7e
RIP: 0033:0x7fcc04514f9b
Code: Unable to access opcode bytes at 0x7fcc04514f71.
RSP: 002b:00007ffeba923370 EFLAGS: 00000246 ORIG_RAX: 0000000000000010
RAX: ffffffffffffffda RBX: 0000000000000003 RCX: 00007fcc04514f9b
RDX: 00007ffeba923460 RSI: 00000000c4009420 RDI: 0000000000000003
RBP: 0000000000000000 R08: 0000000000000013 R09: 0000000000000001
R10: 00007fcc043fbba8 R11: 0000000000000246 R12: 00007ffeba924fc5
R13: 00007ffeba923460 R14: 0000000000000002 R15: 00000000004d4bb0
 </TASK>
Modules linked in:
---[ end trace 0000000000000000 ]---
RIP: 0010:__blk_rq_map_sg+0x339/0x4a0
RSP: 0018:ffffc90001a43820 EFLAGS: 00010202
RAX: 0000000000000000 RBX: 0000000000000000 RCX: ffffea00045d4802
```

RDX: 0000000117520000 RSI: 0000000000000000 RDI: ffff8881027d1000
RBP: 0000000000003000 R08: ffffea00045d4902 R09: 0000000000000000
R10: 0000000000000000 R11: 0000000000001000 R12: ffff8881003d10b8
R13: ffffc90001a438f0 R14: 0000000000000000 R15: 0000000000003000
FS: 00007fcc048a6900(0000) GS:ffff88813bc00000(0000) knlGS:0000000000000000
CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 00007fcc04514f71 CR3: 00000001109ea001 CR4: 0000000000370eb0
Kernel p
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2024-49932

[CVE-2024-49940] kernel: l2tp: prevent possible tunnel refcount underflow (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

l2tp: prevent possible tunnel refcount underflow

When a session is created, it sets a backpointer to its tunnel. When the session refcount drops to 0, l2tp_session_free drops the tunnel refcount if session->tunnel is non-NULL. However, session->tunnel is set in l2tp_session_create, before the tunnel refcount is incremented by l2tp_session_register, which leaves a small window where session->tunnel is non-NULL when the tunnel refcount hasn't been bumped.

Moving the assignment to l2tp_session_register is trivial but l2tp_session_create calls l2tp_session_set_header_len which uses session->tunnel to get the tunnel's encap. Add an encap arg to l2tp_session_set_header_len to avoid using session->tunnel.

If l2tpv3 sessions have colliding IDs, it is possible for l2tp_v3_session_get to race with l2tp_session_register and fetch a session which doesn't yet have session->tunnel set. Add a check for this case.

More Info: https://avd.aquasec.com/nvd/cve-2024-49940

[CVE-2024-49945] kernel: net/ncsi: Disable the ncsi work before freeing the associated structure (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net/ncsi: Disable the ncsi work before freeing the associated structure

The work function can run after the ncsi device is freed, resulting

in use-after-free bugs or kernel panic.

More Info: https://avd.aquasec.com/nvd/cve-2024-49945

[CVE-2024-49968] kernel: ext4: filesystems without casefold feature cannot be mounted with siphash (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ext4: filesystems without casefold feature cannot be mounted with siphash

When mounting the ext4 filesystem, if the default hash version is set to
DX_HASH_SIPHASH but the casefold feature is not set, exit the mounting.

More Info: https://avd.aquasec.com/nvd/cve-2024-49968

[CVE-2024-49970] kernel: drm/amd/display: Implement bounds check for stream encoder creation in DCN401 (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Implement bounds check for stream encoder creation in DCN401

'stream_enc_regs' array is an array of dcn10_stream_enc_registers
structures. The array is initialized with four elements, corresponding
to the four calls to stream_enc_regs() in the array initializer. This
means that valid indices for this array are 0, 1, 2, and 3.

The error message 'stream_enc_regs' 4 <= 5 below, is indicating that
there is an attempt to access this array with an index of 5, which is
out of bounds. This could lead to undefined behavior

Here, eng_id is used as an index to access the stream_enc_regs array. If
eng_id is 5, this would result in an out-of-bounds access on the
stream_enc_regs array.

Thus fixing Buffer overflow error in dcn401_stream_encoder_create

Found by smatch:
drivers/gpu/drm/amd/amdgpu/../display/dc/resource/dcn401/dcn401_resource.c:1209 dcn401_stream_encoder_create()
error: buffer overflow 'stream_enc_regs' 4 <= 5

More Info: https://avd.aquasec.com/nvd/cve-2024-49970

[CVE-2024-49972] kernel: drm/amd/display: Deallocate DML memory if allocation fails (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Deallocate DML memory if allocation fails

[Why]
When DC state create DML memory allocation fails, memory is not
deallocated subsequently, resulting in uninitialized structure
that is not NULL.

[How]
Deallocate memory if DML memory allocation fails.

More Info: https://avd.aquasec.com/nvd/cve-2024-49972

[CVE-2024-49987] kernel: bpftool: Fix undefined behavior in qsort(NULL, 0, ...) (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpftool: Fix undefined behavior in qsort(NULL, 0, ...)

When netfilter has no entry to display, qsort is called with
qsort(NULL, 0, ...). This results in undefined behavior, as UBSan
reports:

net.c:827:2: runtime error: null pointer passed as argument 1, which is declared to never be null

Although the C standard does not explicitly state whether calling qsort
with a NULL pointer when the size is 0 constitutes undefined behavior,
Section 7.1.4 of the C standard (Use of library functions) mentions:

"Each of the following statements applies unless explicitly stated
otherwise in the detailed descriptions that follow: If an argument to a
function has an invalid value (such as a value outside the domain of
the function, or a pointer outside the address space of the program, or
a null pointer, or a pointer to non-modifiable storage when the
corresponding parameter is not const-qualified) or a type (after
promotion) not expected by a function with variable number of
arguments, the behavior is undefined."

To avoid this, add an early return when nf_link_info is NULL to prevent
calling qsort with a NULL pointer.

More Info: https://avd.aquasec.com/nvd/cve-2024-49987

[CVE-2024-49988] kernel: ksmbd: add refcnt to ksmbd_conn struct (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ksmbd: add refcnt to ksmbd_conn struct

When sending an oplock break request, opinfo->conn is used,
But freed ->conn can be used on multichannel.
This patch add a reference count to the ksmbd_conn struct
so that it can be freed when it is no longer used.

More Info: https://avd.aquasec.com/nvd/cve-2024-49988

[CVE-2024-49998] kernel: net: dsa: improve shutdown sequence (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net: dsa: improve shutdown sequence

Alexander Sverdlin presents 2 problems during shutdown with the
lan9303 driver. One is specific to lan9303 and the other just happens
to reproduce there.

The first problem is that lan9303 is unique among DSA drivers in that it
calls dev_get_drvdata() at "arbitrary runtime" (not probe, not shutdown,
not remove):

```
phy_state_machine()
-> ...
   -> dsa_user_phy_read()
      -> ds->ops->phy_read()
         -> lan9303_phy_read()
            -> chip->ops->phy_read()
               -> lan9303_mdio_phy_read()
                  -> dev_get_drvdata()
```

But we never stop the phy_state_machine(), so it may continue to run
after dsa_switch_shutdown(). Our common pattern in all DSA drivers is
to set drvdata to NULL to suppress the remove() method that may come
afterwards. But in this case it will result in an NPD.

The second problem is that the way in which we set
dp->conduit->dsa_ptr = NULL; is concurrent with receive packet
processing. dsa_switch_rcv() checks once whether dev->dsa_ptr is NULL,
but afterwards, rather than continuing to use that non-NULL value,
dev->dsa_ptr is dereferenced again and again without NULL checks:
dsa_conduit_find_user() and many other places. In between dereferences,
there is no locking to ensure that what was valid once continues to be

valid.

Both problems have the common aspect that closing the conduit interface
solves them.

In the first case, dev_close(conduit) triggers the NETDEV_GOING_DOWN
event in dsa_user_netdevice_event() which closes user ports as well.
dsa_port_disable_rt() calls phylink_stop(), which synchronously stops
the phylink state machine, and ds->ops->phy_read() will thus no longer
call into the driver after this point.

In the second case, dev_close(conduit) should do this, as per
Documentation/networking/driver.rst:

| Quiescence
| ----------
|
| After the ndo_stop routine has been called, the hardware must
| not receive or transmit any data. All in flight packets must
| be aborted. If necessary, poll or wait for completion of
| any reset commands.

So it should be sufficient to ensure that later, when we zeroize
conduit->dsa_ptr, there will be no concurrent dsa_switch_rcv() call
on this conduit.

The addition of the netif_device_detach() function is to ensure that
ioctls, rtnetlinks and ethtool requests on the user ports no longer
propagate down to the driver - we're no longer prepared to handle them.

The race condition actually did not exist when commit 0650bf52b31f
("net: dsa: be compatible with masters which unregister on shutdown")
first introduced dsa_switch_shutdown(). It was created later, when we
stopped unregistering the user interfaces from a bad spot, and we just
replaced that sequence with a racy zeroization of conduit->dsa_ptr
(one which doesn't ensure that the interfaces aren't up).

More Info: https://avd.aquasec.com/nvd/cve-2024-49998

[CVE-2024-50009] kernel: cpufreq: amd-pstate: add check for cpufreq_cpu_get's return value (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

cpufreq: amd-pstate: add check for cpufreq_cpu_get's return value

cpufreq_cpu_get may return NULL. To avoid NULL-dereference check it
and return in case of error.

Found by Linux Verification Center (linuxtesting.org) with SVACE.

More Info: https://avd.aquasec.com/nvd/cve-2024-50009

[CVE-2024-50016] kernel: drm/amd/display: Avoid overflow assignment in link_dp_cts (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Avoid overflow assignment in link_dp_cts

sampling_rate is an uint8_t but is assigned an unsigned int, and thus it
can overflow. As a result, sampling_rate is changed to uint32_t.

Similarly, LINK_QUAL_PATTERN_SET has a size of 2 bits, and it should
only be assigned to a value less or equal than 4.

This fixes 2 INTEGER_OVERFLOW issues reported by Coverity.

More Info: https://avd.aquasec.com/nvd/cve-2024-50016

[CVE-2024-50017] kernel: x86/mm/ident_map: Use gbpages only where full GB page should be mapped. (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

x86/mm/ident_map: Use gbpages only where full GB page should be mapped.

When ident_pud_init() uses only GB pages to create identity maps, large
ranges of addresses not actually requested can be included in the resulting
table; a 4K request will map a full GB. This can include a lot of extra
address space past that requested, including areas marked reserved by the
BIOS. That allows processor speculation into reserved regions, that on UV
systems can cause system halts.

Only use GB pages when map creation requests include the full GB page of
space. Fall back to using smaller 2M pages when only portions of a GB page
are included in the request.

No attempt is made to coalesce mapping requests. If a request requires a
map entry at the 2M (pmd) level, subsequent mapping requests within the
same 1G region will also be at the pmd level, even if adjacent or
overlapping such requests could have been combined to map a full GB page.
Existing usage starts with larger regions and then adds smaller regions, so
this should not have any great consequence.

More Info: https://avd.aquasec.com/nvd/cve-2024-50017

[CVE-2024-50028] kernel: thermal: core: Reference count the zone in thermal_zone_get_by_id() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

thermal: core: Reference count the zone in thermal_zone_get_by_id()

There are places in the thermal netlink code where nothing prevents
the thermal zone object from going away while being accessed after it
has been returned by thermal_zone_get_by_id().

To address this, make thermal_zone_get_by_id() get a reference on the
thermal zone device object to be returned with the help of get_device(),
under thermal_list_lock, and adjust all of its callers to this change
with the help of the cleanup.h infrastructure.

More Info: https://avd.aquasec.com/nvd/cve-2024-50028

[CVE-2024-50032] kernel: rcu/nocb: Fix rcuog wake-up from offline softirq (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

rcu/nocb: Fix rcuog wake-up from offline softirq

After a CPU has set itself offline and before it eventually calls
rcutree_report_cpu_dead(), there are still opportunities for callbacks
to be enqueued, for example from a softirq. When that happens on NOCB,
the rcuog wake-up is deferred through an IPI to an online CPU in order
not to call into the scheduler and risk arming the RT-bandwidth after
hrtimers have been migrated out and disabled.

But performing a synchronized IPI from a softirq is buggy as reported in
the following scenario:

```
WARNING: CPU: 1 PID: 26 at kernel/smp.c:633 smp_call_function_single
Modules linked in: rcutorture torture
CPU: 1 UID: 0 PID: 26 Comm: migration/1 Not tainted 6.11.0-rc1-00012-g9139f93209d1 #1
Stopper: multi_cpu_stop+0x0/0x320 <- __stop_cpus+0xd0/0x120
RIP: 0010:smp_call_function_single
<IRQ>
swake_up_one_online
__call_rcu_nocb_wake
__call_rcu_common
? rcu_torture_one_read
```

call_timer_fn
__run_timers
run_timer_softirq
handle_softirqs
irq_exit_rcu
? tick_handle_periodic
sysvec_apic_timer_interrupt
</IRQ>

Fix this with forcing deferred rcuog wake up through the NOCB timer when
the CPU is offline. The actual wake up will happen from
rcutree_report_cpu_dead().

More Info: https://avd.aquasec.com/nvd/cve-2024-50032

[CVE-2024-50056] kernel: usb: gadget: uvc: Fix ERR_PTR dereference in uvc_v4l2.c (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

usb: gadget: uvc: Fix ERR_PTR dereference in uvc_v4l2.c

Fix potential dereferencing of ERR_PTR() in find_format_by_pix()
and uvc_v4l2_enum_format().

Fix the following smatch errors:

drivers/usb/gadget/function/uvc_v4l2.c:124 find_format_by_pix()
error: 'fmtdesc' dereferencing possible ERR_PTR()

drivers/usb/gadget/function/uvc_v4l2.c:392 uvc_v4l2_enum_format()
error: 'fmtdesc' dereferencing possible ERR_PTR()

Also, fix similar issue in uvc_v4l2_try_format() for potential
dereferencing of ERR_PTR().

More Info: https://avd.aquasec.com/nvd/cve-2024-50056

[CVE-2024-50111] kernel: LoongArch: Enable IRQ if do_ale() triggered in irq-enabled context (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

LoongArch: Enable IRQ if do_ale() triggered in irq-enabled context

Unaligned access exception can be triggered in irq-enabled context such

as user mode, in this case do_ale() may call get_user() which may cause
sleep. Then we will get:

```
BUG: sleeping function called from invalid context at arch/loongarch/kernel/access-helper.h:7
in_atomic(): 0, irqs_disabled(): 1, non_block: 0, pid: 129, name: modprobe
preempt_count: 0, expected: 0
RCU nest depth: 0, expected: 0
CPU: 0 UID: 0 PID: 129 Comm: modprobe Tainted: G        W          6.12.0-rc1+ #1723
Tainted: [W]=WARN
Stack : 9000000105e0bd48 0000000000000000 9000000003803944 9000000105e08000
        9000000105e0bc70 9000000105e0bc78 0000000000000000 0000000000000000
        9000000105e0bc78 0000000000000001 9000000185e0ba07 9000000105e0b890
        ffffffffffffffff 9000000105e0bc78 73924b81763be05b 9000000100194500
        000000000000020c 000000000000000a 0000000000000000 0000000000000003
        00000000000023f0 00000000000e1401 00000000072f8000 0000007ffbb0e260
        0000000000000000 0000000000000000 9000000005437650 90000000055d5000
        0000000000000000 0000000000000003 0000007ffbb0e1f0 0000000000000000
        0000005567b00490 0000000000000000 9000000003803964 0000007ffbb0dfec
        00000000000000b0 0000000000000007 0000000000000003 0000000000071c1d
        ...
Call Trace:
[<9000000003803964>] show_stack+0x64/0x1a0
[<9000000004c57464>] dump_stack_lvl+0x74/0xb0
[<9000000003861ab4>] __might_resched+0x154/0x1a0
[<900000000380c96c>] emulate_load_store_insn+0x6c/0xf60
[<9000000004c58118>] do_ale+0x78/0x180
[<9000000003801bc8>] handle_ale+0x128/0x1e0
```

So enable IRQ if unaligned access exception is triggered in irq-enabled
context to fix it.

More Info: https://avd.aquasec.com/nvd/cve-2024-50111

[CVE-2024-50135] kernel: nvme-pci: fix race condition between reset and nvme_dev_disable() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

nvme-pci: fix race condition between reset and nvme_dev_disable()

nvme_dev_disable() modifies the dev->online_queues field, therefore
nvme_pci_update_nr_queues() should avoid racing against it, otherwise
we could end up passing invalid values to blk_mq_update_nr_hw_queues().

```
WARNING: CPU: 39 PID: 61303 at drivers/pci/msi/api.c:347
        pci_irq_get_affinity+0x187/0x210
Workqueue: nvme-reset-wq nvme_reset_work [nvme]
RIP: 0010:pci_irq_get_affinity+0x187/0x210
Call Trace:
```

<TASK>
? blk_mq_pci_map_queues+0x87/0x3c0
? pci_irq_get_affinity+0x187/0x210
blk_mq_pci_map_queues+0x87/0x3c0
nvme_pci_map_queues+0x189/0x460 [nvme]
blk_mq_update_nr_hw_queues+0x2a/0x40
nvme_reset_work+0x1be/0x2a0 [nvme]

Fix the bug by locking the shutdown_lock mutex before using
dev->online_queues. Give up if nvme_dev_disable() is running or if
it has been executed already.

More Info: https://avd.aquasec.com/nvd/cve-2024-50135

[CVE-2024-50166] kernel: fsl/fman: Fix refcount handling of fman-related devices (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

fsl/fman: Fix refcount handling of fman-related devices

In mac_probe() there are multiple calls to of_find_device_by_node(),
fman_bind() and fman_port_bind() which takes references to of_dev->dev.
Not all references taken by these calls are released later on error path
in mac_probe() and in mac_remove() which lead to reference leaks.

Add references release.

More Info: https://avd.aquasec.com/nvd/cve-2024-50166

[CVE-2024-50277] kernel: dm: fix a crash if blk_alloc_disk fails (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

dm: fix a crash if blk_alloc_disk fails

If blk_alloc_disk fails, the variable md->disk is set to an error value.
cleanup_mapped_device will see that md->disk is non-NULL and it will
attempt to access it, causing a crash on this statement
"md->disk->private_data = NULL;".

More Info: https://avd.aquasec.com/nvd/cve-2024-50277

[CVE-2024-50285] kernel: ksmbd: check outstanding simultaneous SMB operations (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1

Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ksmbd: check outstanding simultaneous SMB operations

If Client send simultaneous SMB operations to ksmbd, It exhausts too much
memory through the "ksmbd_work_cacheâ€•. It will cause OOM issue.
ksmbd has a credit mechanism but it can't handle this problem. This patch
add the check if it exceeds max credits to prevent this problem by assuming
that one smb request consumes at least one credit.

More Info: https://avd.aquasec.com/nvd/cve-2024-50285

[CVE-2024-50289] kernel: media: av7110: fix a spectre vulnerability (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

media: av7110: fix a spectre vulnerability

As warned by smatch:
 drivers/staging/media/av7110/av7110_ca.c:270 dvb_ca_ioctl() warn: potential spectre issue 'av7110->ci_slot' [w] (local cap)

There is a spectre-related vulnerability at the code. Fix it.

More Info: https://avd.aquasec.com/nvd/cve-2024-50289

[CVE-2024-50298] kernel: net: enetc: allocate vf_state during PF probes (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net: enetc: allocate vf_state during PF probes

In the previous implementation, vf_state is allocated memory only when VF
is enabled. However, net_device_ops::ndo_set_vf_mac() may be called before
VF is enabled to configure the MAC address of VF. If this is the case,
enetc_pf_set_vf_mac() will access vf_state, resulting in access to a null
pointer. The simplified error log is as follows.

root@ls1028ardb:~# ip link set eno0 vf 1 mac 00:0c:e7:66:77:89
[173.543315] Unable to handle kernel NULL pointer dereference at virtual address 0000000000000004
[173.637254] pc : enetc_pf_set_vf_mac+0x3c/0x80 Message from sy
[173.641973] lr : do_setlink+0x4a8/0xec8
[173.732292] Call trace:
[173.734740] enetc_pf_set_vf_mac+0x3c/0x80

[173.738847] __rtnl_newlink+0x530/0x89c
[173.742692] rtnl_newlink+0x50/0x7c
[173.746189] rtnetlink_rcv_msg+0x128/0x390
[173.750298] netlink_rcv_skb+0x60/0x130
[173.754145] rtnetlink_rcv+0x18/0x24
[173.757731] netlink_unicast+0x318/0x380
[173.761665] netlink_sendmsg+0x17c/0x3c8

More Info: https://avd.aquasec.com/nvd/cve-2024-50298

[CVE-2024-52559] kernel: drm/msm/gem: prevent integer overflow in msm_ioctl_gem_submit() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/msm/gem: prevent integer overflow in msm_ioctl_gem_submit()

The "submit->cmd[i].size" and "submit->cmd[i].offset" variables are u32
values that come from the user via the submit_lookup_cmds() function.
This addition could lead to an integer wrapping bug so use size_add()
to prevent that.

Patchwork: https://patchwork.freedesktop.org/patch/624696/

More Info: https://avd.aquasec.com/nvd/cve-2024-52559

[CVE-2024-52560] kernel: fs/ntfs3: Mark inode as bad as soon as error detected in mi_enum_attr() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

fs/ntfs3: Mark inode as bad as soon as error detected in mi_enum_attr()

Extended the `mi_enum_attr()` function interface with an additional
parameter, `struct ntfs_inode *ni`, to allow marking the inode
as bad as soon as an error is detected.

More Info: https://avd.aquasec.com/nvd/cve-2024-52560

[CVE-2024-53050] kernel: drm/i915/hdcp: Add encoder check in hdcp2_get_capability (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/i915/hdcp: Add encoder check in hdcp2_get_capability

Add encoder check in intel_hdcp2_get_capability to avoid
null pointer error.

More Info: https://avd.aquasec.com/nvd/cve-2024-53050

[CVE-2024-53051] kernel: drm/i915/hdcp: Add encoder check in intel_hdcp_get_capability (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/i915/hdcp: Add encoder check in intel_hdcp_get_capability

Sometimes during hotplug scenario or suspend/resume scenario encoder is
not always initialized when intel_hdcp_get_capability add
a check to avoid kernel null pointer dereference.

More Info: https://avd.aquasec.com/nvd/cve-2024-53051

[CVE-2024-53056] kernel: drm/mediatek: Fix potential NULL dereference in mtk_crtc_destroy() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/mediatek: Fix potential NULL dereference in mtk_crtc_destroy()

In mtk_crtc_create(), if the call to mbox_request_channel() fails then we
set the "mtk_crtc->cmdq_client.chan" pointer to NULL. In that situation,
we do not call cmdq_pkt_create().

During the cleanup, we need to check if the "mtk_crtc->cmdq_client.chan"
is NULL first before calling cmdq_pkt_destroy(). Calling
cmdq_pkt_destroy() is unnecessary if we didn't call cmdq_pkt_create() and
it will result in a NULL pointer dereference.

More Info: https://avd.aquasec.com/nvd/cve-2024-53056

[CVE-2024-53079] kernel: mm/thp: fix deferred split unqueue naming and locking (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

mm/thp: fix deferred split unqueue naming and locking

Recent changes are putting more pressure on THP deferred split queues:
under load revealing long-standing races, causing list_del corruptions,
"Bad page state"s and worse (I keep BUGs in both of those, so usually
don't get to see how badly they end up without). The relevant recent
changes being 6.8's mTHP, 6.10's mTHP swapout, and 6.12's mTHP swapin,
improved swap allocation, and underused THP splitting.

Before fixing locking: rename misleading folio_undo_large_rmappable(),
which does not undo large_rmappable, to folio_unqueue_deferred_split(),
which is what it does. But that and its out-of-line __callee are mm
internals of very limited usability: add comment and WARN_ON_ONCEs to
check usage; and return a bool to say if a deferred split was unqueued,
which can then be used in WARN_ON_ONCEs around safety checks (sparing
callers the arcane conditionals in __folio_unqueue_deferred_split()).

Just omit the folio_unqueue_deferred_split() from free_unref_folios(), all
of whose callers now call it beforehand (and if any forget then bad_page()
will tell) - except for its caller put_pages_list(), which itself no
longer has any callers (and will be deleted separately).

Swapout: mem_cgroup_swapout() has been resetting folio->memcg_data 0
without checking and unqueueing a THP folio from deferred split list;
which is unfortunate, since the split_queue_lock depends on the memcg
(when memcg is enabled); so swapout has been unqueueing such THPs later,
when freeing the folio, using the pgdat's lock instead: potentially
corrupting the memcg's list. __remove_mapping() has frozen refcount to 0
here, so no problem with calling folio_unqueue_deferred_split() before
resetting memcg_data.

That goes back to 5.4 commit 87eaceb3faa5 ("mm: thp: make deferred split
shrinker memcg aware"): which included a check on swapcache before adding
to deferred queue, but no check on deferred queue before adding THP to
swapcache. That worked fine with the usual sequence of events in reclaim
(though there were a couple of rare ways in which a THP on deferred queue
could have been swapped out), but 6.12 commit dafff3f4c850 ("mm: split
underused THPs") avoids splitting underused THPs in reclaim, which makes
swapcache THPs on deferred queue commonplace.

Keep the check on swapcache before adding to deferred queue? Yes: it is
no longer essential, but preserves the existing behaviour, and is likely
to be a worthwhile optimization (vmstat showed much more traffic on the
queue under swapping load if the check was removed); update its comment.

Memcg-v1 move (deprecated): mem_cgroup_move_account() has been changing
folio->memcg_data without checking and unqueueing a THP folio from the
deferred list, sometimes corrupting "from" memcg's list, like swapout.
Refcount is non-zero here, so folio_unqueue_deferred_split() can only be
used in a WARN_ON_ONCE to validate the fix, which must be done earlier:
mem_cgroup_move_charge_pte_range() first try to split the THP (splitting
of course unqueues), or skip it if that fails. Not ideal, but moving
charge has been requested, and khugepaged should repair the THP later:

nobody wants new custom unqueueing code just for this deprecated case.

The 87eaceb3faa5 commit did have the code to move from one deferred list
to another (but was not conscious of its unsafety while refcount non-0);
but that was removed by 5.6 commit fac0516b5534 ("mm: thp: don't need care
deferred split queue in memcg charge move path"), which argued that the
existence of a PMD mapping guarantees that the THP cannot be on a deferred
list. As above, false in rare cases, and now commonly false.

Backport to 6.11 should be straightforward. Earlier backports must take
care that other _deferred_list fixes and dependencies are included. There
is not a strong case for backports, but they can fix cornercases.

More Info: https://avd.aquasec.com/nvd/cve-2024-53079

[CVE-2024-53085] kernel: tpm: Lock TPM chip in tpm_pm_suspend() first (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

tpm: Lock TPM chip in tpm_pm_suspend() first

Setting TPM_CHIP_FLAG_SUSPENDED in the end of tpm_pm_suspend() can be racy
according, as this leaves window for tpm_hwrng_read() to be called while
the operation is in progress. The recent bug report gives also evidence of
this behaviour.

Aadress this by locking the TPM chip before checking any chip->flags both
in tpm_pm_suspend() and tpm_hwrng_read(). Move TPM_CHIP_FLAG_SUSPENDED
check inside tpm_get_random() so that it will be always checked only when
the lock is reserved.

More Info: https://avd.aquasec.com/nvd/cve-2024-53085

[CVE-2024-53089] kernel: LoongArch: KVM: Mark hrtimer to expire in hard interrupt context (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

LoongArch: KVM: Mark hrtimer to expire in hard interrupt context

Like commit 2c0d278f3293f ("KVM: LAPIC: Mark hrtimer to expire in hard
interrupt context") and commit 9090825fa9974 ("KVM: arm/arm64: Let the
timer expire in hardirq context on RT"), On PREEMPT_RT enabled kernels
unmarked hrtimers are moved into soft interrupt expiry mode by default.
Then the timers are canceled from an preempt-notifier which is invoked
with disabled preemption which is not allowed on PREEMPT_RT.

The timer callback is short so in could be invoked in hard-IRQ context.
So let the timer expire on hard-IRQ context even on -RT.

This fix a "scheduling while atomic" bug for PREEMPT_RT enabled kernels:

```
 BUG: scheduling while atomic: qemu-system-loo/1011/0x00000002
 Modules linked in: amdgpu rfkill nft_fib_inet nft_fib_ipv4 nft_fib_ipv6 nft_fib nft_reject_inet nf_reject_ipv4 nf_reject_ipv6 nft_reject nft_ct nft_chain_nat ns
 CPU: 1 UID: 0 PID: 1011 Comm: qemu-system-loo Tainted: G        W          6.12.0-rc2+ #1774
 Tainted: [W]=WARN
   Hardware name: Loongson Loongson-3A5000-7A1000-1w-CRB/Loongson-LS3A5000-7A1000-1w-CRB, BIOS vUDK2018-LoongArch-V2.0.0-prebeta9 10/21/2022
 Stack : ffffffffffffffff 0000000000000000 9000000004e3ea38 9000000116744000
         90000001167475a0 0000000000000000 90000001167475a8 9000000005644830
         90000000058dc000 90000000058dbff8 9000000116747420 0000000000000001
         0000000000000001 6a613fc938313980 000000000790c000 90000001001c1140
         00000000000003fe 0000000000000001 000000000000000d 0000000000000003
         0000000000000030 00000000000003f3 000000000790c000 9000000116747830
         90000000057ef000 0000000000000000 9000000005644830 0000000000000004
         0000000000000000 90000000057f4b58 0000000000000001 9000000116747868
         900000000451b600 9000000005644830 9000000003a13998 0000000010000020
         00000000000000b0 0000000000000004 0000000000000000 000000000071c1d
         ...
 Call Trace:
 [<9000000003a13998>] show_stack+0x38/0x180
 [<9000000004e3ea34>] dump_stack_lvl+0x84/0xc0
 [<9000000003a71708>] __schedule_bug+0x48/0x60
 [<9000000004e45734>] __schedule+0x1114/0x1660
 [<9000000004e46040>] schedule_rtlock+0x20/0x60
 [<9000000004e4e330>] rtlock_slowlock_locked+0x3f0/0x10a0
 [<9000000004e4f038>] rt_spin_lock+0x58/0x80
 [<9000000003b02d68>] hrtimer_cancel_wait_running+0x68/0xc0
 [<9000000003b02e30>] hrtimer_cancel+0x70/0x80
 [<ffff80000235eb70>] kvm_restore_timer+0x50/0x1a0 [kvm]
 [<ffff8000023616c8>] kvm_arch_vcpu_load+0x68/0x2a0 [kvm]
 [<ffff80000234c2d4>] kvm_sched_in+0x34/0x60 [kvm]
 [<9000000003a749a0>] finish_task_switch.isra.0+0x140/0x2e0
 [<9000000004e44a70>] __schedule+0x450/0x1660
 [<9000000004e45cb0>] schedule+0x30/0x180
 [<ffff800002354c70>] kvm_vcpu_block+0x70/0x120 [kvm]
 [<ffff800002354d80>] kvm_vcpu_halt+0x60/0x3e0 [kvm]
 [<ffff80000235b194>] kvm_handle_gspr+0x3f4/0x4e0 [kvm]
 [<ffff80000235f548>] kvm_handle_exit+0x1c8/0x260 [kvm]
```

More Info: https://avd.aquasec.com/nvd/cve-2024-53089

[CVE-2024-53090] kernel: afs: Fix lock recursion (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

afs: Fix lock recursion

afs_wake_up_async_call() can incur lock recursion. The problem is that it
is called from AF_RXRPC whilst holding the ->notify_lock, but it tries to
take a ref on the afs_call struct in order to pass it to a work queue - but
if the afs_call is already queued, we then have an extraneous ref that must
be put... calling afs_put_call() may call back down into AF_RXRPC through
rxrpc_kernel_shutdown_call(), however, which might try taking the
->notify_lock again.

This case isn't very common, however, so defer it to a workqueue. The oops
looks something like:

```
 BUG: spinlock recursion on CPU#0, krxrpcio/7001/1646
  lock: 0xffff888141399b30, .magic: dead4ead, .owner: krxrpcio/7001/1646, .owner_cpu: 0
 CPU: 0 UID: 0 PID: 1646 Comm: krxrpcio/7001 Not tainted 6.12.0-rc2-build3+ #4351
 Hardware name: ASUS All Series/H97-PLUS, BIOS 2306 10/09/2014
 Call Trace:
  <TASK>
  dump_stack_lvl+0x47/0x70
  do_raw_spin_lock+0x3c/0x90
  rxrpc_kernel_shutdown_call+0x83/0xb0
  afs_put_call+0xd7/0x180
  rxrpc_notify_socket+0xa0/0x190
  rxrpc_input_split_jumbo+0x198/0x1d0
  rxrpc_input_data+0x14b/0x1e0
  ? rxrpc_input_call_packet+0xc2/0x1f0
  rxrpc_input_call_event+0xad/0x6b0
  rxrpc_input_packet_on_conn+0x1e1/0x210
  rxrpc_input_packet+0x3f2/0x4d0
  rxrpc_io_thread+0x243/0x410
  ? __pfx_rxrpc_io_thread+0x10/0x10
  kthread+0xcf/0xe0
  ? __pfx_kthread+0x10/0x10
  ret_from_fork+0x24/0x40
  ? __pfx_kthread+0x10/0x10
  ret_from_fork_asm+0x1a/0x30
  </TASK>
```

More Info: https://avd.aquasec.com/nvd/cve-2024-53090

[CVE-2024-53091] kernel: bpf: Add sk_is_inet and IS_ICSK check in tls_sw_has_ctx_tx/rx (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf: Add sk_is_inet and IS_ICSK check in tls_sw_has_ctx_tx/rx

As the introduction of the support for vsock and unix sockets in sockmap,
tls_sw_has_ctx_tx/rx cannot presume the socket passed in must be IS_ICSK.
vsock and af_unix sockets have vsock_sock and unix_sock instead of
inet_connection_sock. For these sockets, tls_get_ctx may return an invalid
pointer and cause page fault in function tls_sw_ctx_rx.

BUG: unable to handle page fault for address: 0000000000040030
Workqueue: vsock-loopback vsock_loopback_work
RIP: 0010:sk_psock_strp_data_ready+0x23/0x60
Call Trace:
 ? __die+0x81/0xc3
 ? no_context+0x194/0x350
 ? do_page_fault+0x30/0x110
 ? async_page_fault+0x3e/0x50
 ? sk_psock_strp_data_ready+0x23/0x60
 virtio_transport_recv_pkt+0x750/0x800
 ? update_load_avg+0x7e/0x620
 vsock_loopback_work+0xd0/0x100
 process_one_work+0x1a7/0x360
 worker_thread+0x30/0x390
 ? create_worker+0x1a0/0x1a0
 kthread+0x112/0x130
 ? __kthread_cancel_work+0x40/0x40
 ret_from_fork+0x1f/0x40

v2:
  - Add IS_ICSK check
v3:
  - Update the commits in Fixes

More Info: https://avd.aquasec.com/nvd/cve-2024-53091

[CVE-2024-53094] kernel: RDMA/siw: Add sendpage_ok() check to disable MSG_SPLICE_PAGES (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

RDMA/siw: Add sendpage_ok() check to disable MSG_SPLICE_PAGES

While running ISER over SIW, the initiator machine encounters a warning
from skb_splice_from_iter() indicating that a slab page is being used in
send_page. To address this, it is better to add a sendpage_ok() check
within the driver itself, and if it returns 0, then MSG_SPLICE_PAGES flag
should be disabled before entering the network stack.

A similar issue has been discussed for NVMe in this thread:
https://lore.kernel.org/all/20240530142417.146696-1-ofir.gal@volumez.com/

  WARNING: CPU: 0 PID: 5342 at net/core/skbuff.c:7140 skb_splice_from_iter+0x173/0x320

Call Trace:
tcp_sendmsg_locked+0x368/0xe40
siw_tx_hdt+0x695/0xa40 [siw]
siw_qp_sq_process+0x102/0xb00 [siw]
siw_sq_resume+0x39/0x110 [siw]
siw_run_sq+0x74/0x160 [siw]
kthread+0xd2/0x100
ret_from_fork+0x34/0x40
ret_from_fork_asm+0x1a/0x30

More Info: https://avd.aquasec.com/nvd/cve-2024-53094

[CVE-2024-53095] kernel: smb: client: Fix use-after-free of network namespace. (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

smb: client: Fix use-after-free of network namespace.

Recently, we got a customer report that CIFS triggers oops while
reconnecting to a server. [0]

The workload runs on Kubernetes, and some pods mount CIFS servers
in non-root network namespaces. The problem rarely happened, but
it was always while the pod was dying.

The root cause is wrong reference counting for network namespace.

CIFS uses kernel sockets, which do not hold refcnt of the netns that
the socket belongs to. That means CIFS must ensure the socket is
always freed before its netns; otherwise, use-after-free happens.

The repro steps are roughly:

1. mount CIFS in a non-root netns
2. drop packets from the netns
3. destroy the netns
4. unmount CIFS

We can reproduce the issue quickly with the script [1] below and see
the splat [2] if CONFIG_NET_NS_REFCNT_TRACKER is enabled.

When the socket is TCP, it is hard to guarantee the netns lifetime
without holding refcnt due to async timers.

Let's hold netns refcnt for each socket as done for SMC in commit
9744d2bf1976 ("smc: Fix use-after-free in tcp_write_timer_handler().").

Note that we need to move put_net() from cifs_put_tcp_session() to
clean_demultiplex_info(); otherwise, __sock_create() still could touch a
freed netns while cifsd tries to reconnect from cifs_demultiplex_thread().

Also, maybe_get_net() cannot be put just before __sock_create() because
the code is not under RCU and there is a small chance that the same
address happened to be reallocated to another netns.

[0]:
CIFS: VFS: \\XXXXXXXXXXX has not responded in 15 seconds. Reconnecting...
CIFS: Serverclose failed 4 times, giving up
Unable to handle kernel paging request at virtual address 14de99e461f84a07
Mem abort info:
  ESR = 0x0000000096000004
  EC = 0x25: DABT (current EL), IL = 32 bits
  SET = 0, FnV = 0
  EA = 0, S1PTW = 0
  FSC = 0x04: level 0 translation fault
Data abort info:
  ISV = 0, ISS = 0x00000004
  CM = 0, WnR = 0
[14de99e461f84a07] address between user and kernel address ranges
Internal error: Oops: 0000000096000004 [#1] SMP
Modules linked in: cls_bpf sch_ingress nls_utf8 cifs cifs_arc4 cifs_md4 dns_resolver tcp_diag inet_diag veth xt_state xt_connmark nf_conntrack_netlink xt_nat xt_statistic xt_MASQUERADE xt_mark xt_addrtype ipt_REJECT nf_reject_ipv4 nft_chain_nat nf_nat xt_conntrack nf_conntrack nf_defrag_ipv6 nf_defrag_ipv4 xt_comment nft_compat nf_tables nfnetlink overlay nls_ascii nls_cp437 sunrpc vfat fat aes_ce_blk aes_ce_cipher ghash_ce sm4_ce_cipher sm4 sm3_ce sm3 sha3_ce sha512_ce sha512_arm64 sha1_ce ena button sch_fq_codel loop fuse configfs dmi_sysfs sha2_ce sha256_arm64 dm_mirror dm_region_hash dm_log dm_mod dax efivarfs
CPU: 5 PID: 2690970 Comm: cifsd Not tainted 6.1.103-109.184.amzn2023.aarch64 #1
Hardware name: Amazon EC2 r7g.4xlarge/, BIOS 1.0 11/1/2018
pstate: 00400005 (nzcv daif +PAN -UAO -TCO -DIT -SSBS BTYPE=--)
pc : fib_rules_lookup+0x44/0x238
lr : __fib_lookup+0x64/0xbc
sp : ffff8000265db790
x29: ffff8000265db790 x28: 0000000000000000 x27: 000000000000bd01
x26: 0000000000000000 x25: ffff000b4baf8000 x24: ffff00047b5e4580
x23: ffff8000265db7e0 x22: 0000000000000000 x21: ffff00047b5e4500
x20: ffff0010e3f694f8 x19: 14de99e461f849f7 x18: 0000000000000000
x17: 0000000000000000 x16: 0000000000000000 x15: 0000000000000000
x14: 0000000000000000 x13: 0000000000000000 x12: 3f92800abd010002
x11: 0000000000000001 x10: ffff0010e3f69420 x9 : ffff800008a6f294
x8 : 0000000000000000 x7 : 0000000000000006 x6 : 0000000000000000
x5 : 0000000000000001 x4 : ffff001924354280 x3 : ffff8000265db7e0
x2 : 0000000000000000 x1 : ffff0010e3f694f8 x0 : ffff00047b5e4500
Call trace:
 fib_rules_lookup+0x44/0x238
 __fib_lookup+0x64/0xbc
 ip_route_output_key_hash_rcu+0x2c4/0x398
 ip_route_output_key_hash+0x60/0x8c
 tcp_v4_connect+0x290/0x488
 __inet_stream_connect+0x108/0x3d0
 inet_stream_connect+0x50/0x78
 kernel_connect+0x6c/0xac
 generic_ip_conne
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2024-53095

[CVE-2024-53114] kernel: x86/CPU/AMD: Clear virtualized VMLOAD/VMSAVE on Zen4 client (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

x86/CPU/AMD: Clear virtualized VMLOAD/VMSAVE on Zen4 client

A number of Zen4 client SoCs advertise the ability to use virtualized
VMLOAD/VMSAVE, but using these instructions is reported to be a cause
of a random host reboot.

These instructions aren't intended to be advertised on Zen4 client
so clear the capability.

More Info: https://avd.aquasec.com/nvd/cve-2024-53114

[CVE-2024-53134] kernel: pmdomain: imx93-blk-ctrl: correct remove path (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

pmdomain: imx93-blk-ctrl: correct remove path

The check condition should be 'i < bc->onecell_data.num_domains', not
'bc->onecell_data.num_domains' which will make the look never finish
and cause kernel panic.

Also disable runtime to address
"imx93-blk-ctrl 4ac10000.system-controller: Unbalanced pm_runtime_enable!"

More Info: https://avd.aquasec.com/nvd/cve-2024-53134

[CVE-2024-53147] kernel: exfat: fix out-of-bounds access of directory entries (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

exfat: fix out-of-bounds access of directory entries

In the case of the directory size is greater than or equal to
the cluster size, if start_clu becomes an EOF cluster(an invalid
cluster) due to file system corruption, then the directory entry

where ei->hint_femp.eidx hint is outside the directory, resulting
in an out-of-bounds access, which may cause further file system
corruption.

This commit adds a check for start_clu, if it is an invalid cluster,
the file or directory will be treated as empty.

More Info: https://avd.aquasec.com/nvd/cve-2024-53147

[CVE-2024-53176] kernel: smb: During unmount, ensure all cached dir instances drop their dentry (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

smb: During unmount, ensure all cached dir instances drop their dentry

The unmount process (cifs_kill_sb() calling close_all_cached_dirs()) can
race with various cached directory operations, which ultimately results
in dentries not being dropped and these kernel BUGs:

BUG: Dentry ffff88814f37e358{i=1000000000080,n=/} still in use (2) [unmount of cifs cifs]
VFS: Busy inodes after unmount of cifs (cifs)
------------[cut here]------------
kernel BUG at fs/super.c:661!

This happens when a cfid is in the process of being cleaned up when, and
has been removed from the cfids->entries list, including:

- Receiving a lease break from the server
- Server reconnection triggers invalidate_all_cached_dirs(), which
  removes all the cfids from the list
- The laundromat thread decides to expire an old cfid.

To solve these problems, dropping the dentry is done in queued work done
in a newly-added cfid_put_wq workqueue, and close_all_cached_dirs()
flushes that workqueue after it drops all the dentries of which it's
aware. This is a global workqueue (rather than scoped to a mount), but
the queued work is minimal.

The final cleanup work for cleaning up a cfid is performed via work
queued in the serverclose_wq workqueue; this is done separate from
dropping the dentries so that close_all_cached_dirs() doesn't block on
any server operations.

Both of these queued works expect to invoked with a cfid reference and
a tcon reference to avoid those objects from being freed while the work
is ongoing.

While we're here, add proper locking to close_all_cached_dirs(), and

locking around the freeing of cfid->dentry.

More Info: https://avd.aquasec.com/nvd/cve-2024-53176

[CVE-2024-53177] kernel: smb: prevent use-after-free due to open_cached_dir error paths (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

smb: prevent use-after-free due to open_cached_dir error paths

If open_cached_dir() encounters an error parsing the lease from the
server, the error handling may race with receiving a lease break,
resulting in open_cached_dir() freeing the cfid while the queued work is
pending.

Update open_cached_dir() to drop refs rather than directly freeing the
cfid.

Have cached_dir_lease_break(), cfids_laundromat_worker(), and
invalidate_all_cached_dirs() clear has_lease immediately while still
holding cfids->cfid_list_lock, and then use this to also simplify the
reference counting in cfids_laundromat_worker() and
invalidate_all_cached_dirs().

Fixes this KASAN splat (which manually injects an error and lease break
in open_cached_dir()):

==
BUG: KASAN: slab-use-after-free in smb2_cached_lease_break+0x27/0xb0
Read of size 8 at addr ffff88811cc24c10 by task kworker/3:1/65

CPU: 3 UID: 0 PID: 65 Comm: kworker/3:1 Not tainted 6.12.0-rc6-g255cf264e6e5-dirty #87
Hardware name: VMware, Inc. VMware Virtual Platform/440BX Desktop Reference Platform, BIOS 6.00 11/12/2020
Workqueue: cifsiod smb2_cached_lease_break
Call Trace:
 <TASK>
 dump_stack_lvl+0x77/0xb0
 print_report+0xce/0x660
 kasan_report+0xd3/0x110
 smb2_cached_lease_break+0x27/0xb0
 process_one_work+0x50a/0xc50
 worker_thread+0x2ba/0x530
 kthread+0x17c/0x1c0
 ret_from_fork+0x34/0x60
 ret_from_fork_asm+0x1a/0x30
 </TASK>

Allocated by task 2464:

kasan_save_stack+0x33/0x60
kasan_save_track+0x14/0x30
__kasan_kmalloc+0xaa/0xb0
open_cached_dir+0xa7d/0x1fb0
smb2_query_path_info+0x43c/0x6e0
cifs_get_fattr+0x346/0xf10
cifs_get_inode_info+0x157/0x210
cifs_revalidate_dentry_attr+0x2d1/0x460
cifs_getattr+0x173/0x470
vfs_statx_path+0x10f/0x160
vfs_statx+0xe9/0x150
vfs_fstatat+0x5e/0xc0
__do_sys_newfstatat+0x91/0xf0
do_syscall_64+0x95/0x1a0
entry_SYSCALL_64_after_hwframe+0x76/0x7e

Freed by task 2464:
kasan_save_stack+0x33/0x60
kasan_save_track+0x14/0x30
kasan_save_free_info+0x3b/0x60
__kasan_slab_free+0x51/0x70
kfree+0x174/0x520
open_cached_dir+0x97f/0x1fb0
smb2_query_path_info+0x43c/0x6e0
cifs_get_fattr+0x346/0xf10
cifs_get_inode_info+0x157/0x210
cifs_revalidate_dentry_attr+0x2d1/0x460
cifs_getattr+0x173/0x470
vfs_statx_path+0x10f/0x160
vfs_statx+0xe9/0x150
vfs_fstatat+0x5e/0xc0
__do_sys_newfstatat+0x91/0xf0
do_syscall_64+0x95/0x1a0
entry_SYSCALL_64_after_hwframe+0x76/0x7e

Last potentially related work creation:
kasan_save_stack+0x33/0x60
__kasan_record_aux_stack+0xad/0xc0
insert_work+0x32/0x100
__queue_work+0x5c9/0x870
queue_work_on+0x82/0x90
open_cached_dir+0x1369/0x1fb0
smb2_query_path_info+0x43c/0x6e0
cifs_get_fattr+0x346/0xf10
cifs_get_inode_info+0x157/0x210
cifs_revalidate_dentry_attr+0x2d1/0x460
cifs_getattr+0x173/0x470
vfs_statx_path+0x10f/0x160
vfs_statx+0xe9/0x150
vfs_fstatat+0x5e/0xc0
__do_sys_newfstatat+0x91/0xf0
do_syscall_64+0x95/0x1a0
entry_SYSCALL_64_after_hwframe+0x76/0x7e

The buggy address belongs to the object at ffff88811cc24c00
 which belongs to the cache kmalloc-1k of size 1024
The buggy address is located 16 bytes inside of
 freed 1024-byte region [ffff88811cc24c00, ffff88811cc25000)

More Info: https://avd.aquasec.com/nvd/cve-2024-53177

[CVE-2024-53178] kernel: smb: Don't leak cfid when reconnect races with open_cached_dir (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

smb: Don't leak cfid when reconnect races with open_cached_dir

open_cached_dir() may either race with the tcon reconnection even before
compound_send_recv() or directly trigger a reconnection via
SMB2_open_init() or SMB_query_info_init().

The reconnection process invokes invalidate_all_cached_dirs() via
cifs_mark_open_files_invalid(), which removes all cfids from the
cfids->entries list but doesn't drop a ref if has_lease isn't true. This
results in the currently-being-constructed cfid not being on the list,
but still having a refcount of 2. It leaks if returned from
open_cached_dir().

Fix this by setting cfid->has_lease when the ref is actually taken; the
cfid will not be used by other threads until it has a valid time.

Addresses these kmemleaks:

```
unreferenced object 0xffff8881090c4000 (size 1024):
  comm "bash", pid 1860, jiffies 4295126592
  hex dump (first 32 bytes):
    00 01 00 00 00 00 ad de 22 01 00 00 00 00 ad de  ........".......
    00 ca 45 22 81 88 ff ff f8 dc 4f 04 81 88 ff ff  ..E".....O.....
  backtrace (crc 6f58c20f):
    [<ffffffff8b895a1e>] __kmalloc_cache_noprof+0x2be/0x350
    [<ffffffff8bda06e3>] open_cached_dir+0x993/0x1fb0
    [<ffffffff8bdaa750>] cifs_readdir+0x15a0/0x1d50
    [<ffffffff8b9a853f>] iterate_dir+0x28f/0x4b0
    [<ffffffff8b9a9aed>] __x64_sys_getdents64+0xfd/0x200
    [<ffffffff8cf6da05>] do_syscall_64+0x95/0x1a0
    [<ffffffff8d00012f>] entry_SYSCALL_64_after_hwframe+0x76/0x7e
unreferenced object 0xffff8881044fdcf8 (size 8):
  comm "bash", pid 1860, jiffies 4295126592
  hex dump (first 8 bytes):
    00 cc cc cc cc cc cc cc                          ........
  backtrace (crc 10c106a9):
```

[<ffffffff8b89a3d3>] __kmalloc_node_track_caller_noprof+0x363/0x480
[<ffffffff8b7d7256>] kstrdup+0x36/0x60
[<ffffffff8bda0700>] open_cached_dir+0x9b0/0x1fb0
[<ffffffff8bdaa750>] cifs_readdir+0x15a0/0x1d50
[<ffffffff8b9a853f>] iterate_dir+0x28f/0x4b0
[<ffffffff8b9a9aed>] __x64_sys_getdents64+0xfd/0x200
[<ffffffff8cf6da05>] do_syscall_64+0x95/0x1a0
[<ffffffff8d00012f>] entry_SYSCALL_64_after_hwframe+0x76/0x7e

And addresses these BUG splats when unmounting the SMB filesystem:

BUG: Dentry ffff888140590ba0{i=1000000000080,n=/} still in use (2) [unmount of cifs cifs]
WARNING: CPU: 3 PID: 3433 at fs/dcache.c:1536 umount_check+0xd0/0x100
Modules linked in:
CPU: 3 UID: 0 PID: 3433 Comm: bash Not tainted 6.12.0-rc4-g850925a8133c-dirty #49
Hardware name: VMware, Inc. VMware Virtual Platform/440BX Desktop Reference Platform, BIOS 6.00 11/12/2020
RIP: 0010:umount_check+0xd0/0x100
Code: 8d 7c 24 40 e8 31 5a f4 ff 49 8b 54 24 40 41 56 49 89 e9 45 89 e8 48 89 d9 41 57 48 89 de 48 c7 c7 80 e7 db ac e8 f0 72 9a ff <0f> 0b 58 31 c0 5a 5b 5d 41 5c 41 5d 41 5e 41 5f e9 2b e5 5d 01 41
RSP: 0018:ffff88811cc27978 EFLAGS: 00010286
RAX: 0000000000000000 RBX: ffff888140590ba0 RCX: ffffffffaaf20bae
RDX: dfffc0000000000 RSI: 0000000000000008 RDI: ffff8881f6fb6f40
RBP: ffff8881462ec000 R08: 0000000000000001 R09: ffffed1023984ee3
R10: ffff88811cc2771f R11: 00000000016cfcc0 R12: ffff888134383e08
R13: 0000000000000002 R14: ffff8881462ec668 R15: ffffffffaceab4c0
FS: 00007f23bfa98740(0000) GS:ffff8881f6f80000(0000) knlGS:0000000000000000
CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 0000556de4a6f808 CR3: 0000000123c80000 CR4: 0000000000350ef0
Call Trace:
 <TASK>
 d_walk+0x6a/0x530
 shrink_dcache_for_umount+0x6a/0x200
 generic_shutdown_super+0x52/0x2a0
 kill_anon_super+0x22/0x40
 cifs_kill_sb+0x159/0x1e0
 deactivate_locked_super+0x66/0xe0
 cleanup_mnt+0x140/0x210
 task_work_run+0xfb/0x170
 syscall_exit_to_user_mode+0x29f/0x2b0
 do_syscall_64+0xa1/0x1a0
 entry_SYSCALL_64_after_hwframe+0x76/0x7e
RIP: 0033:0x7f23bfb93ae7
Code: ff ff ff ff c3 66 0f 1f 44 00 00 48 8b 0d 11 93 0d 00 f7 d8 64 89 01 b8 ff ff ff ff eb bf 0f 1f 44 00 00 b8 50 00 00 00 0f 05 <48> 3d 01 f0 ff ff 73 01 c3 48 8b 0d e9 92 0d 00 f7 d8 64 89
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2024-53178

[CVE-2024-53187] kernel: io_uring: check for overflows in io_pin_pages (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

io_uring: check for overflows in io_pin_pages

WARNING: CPU: 0 PID: 5834 at io_uring/memmap.c:144 io_pin_pages+0x149/0x180 io_uring/memmap.c:144
CPU: 0 UID: 0 PID: 5834 Comm: syz-executor825 Not tainted 6.12.0-next-20241118-syzkaller #0
Call Trace:
 <TASK>
 __io_uaddr_map+0xfb/0x2d0 io_uring/memmap.c:183
 io_rings_map io_uring/io_uring.c:2611 [inline]
 io_allocate_scq_urings+0x1c0/0x650 io_uring/io_uring.c:3470
 io_uring_create+0x5b5/0xc00 io_uring/io_uring.c:3692
 io_uring_setup io_uring/io_uring.c:3781 [inline]
 ...
 </TASK>

io_pin_pages()'s uaddr parameter came directly from the user and can be
garbage. Don't just add size to it as it can overflow.

More Info: https://avd.aquasec.com/nvd/cve-2024-53187

[CVE-2024-53195] kernel: KVM: arm64: Get rid of userspace_irqchip_in_use (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

KVM: arm64: Get rid of userspace_irqchip_in_use

Improper use of userspace_irqchip_in_use led to syzbot hitting the
following WARN_ON() in kvm_timer_update_irq():

WARNING: CPU: 0 PID: 3281 at arch/arm64/kvm/arch_timer.c:459
kvm_timer_update_irq+0x21c/0x394
Call trace:
  kvm_timer_update_irq+0x21c/0x394 arch/arm64/kvm/arch_timer.c:459
  kvm_timer_vcpu_reset+0x158/0x684 arch/arm64/kvm/arch_timer.c:968
  kvm_reset_vcpu+0x3b4/0x560 arch/arm64/kvm/reset.c:264
  kvm_vcpu_set_target arch/arm64/kvm/arm.c:1553 [inline]
  kvm_arch_vcpu_ioctl_vcpu_init arch/arm64/kvm/arm.c:1573 [inline]
  kvm_arch_vcpu_ioctl+0x112c/0x1b3c arch/arm64/kvm/arm.c:1695
  kvm_vcpu_ioctl+0x4ec/0xf74 virt/kvm/kvm_main.c:4658
  vfs_ioctl fs/ioctl.c:51 [inline]
  __do_sys_ioctl fs/ioctl.c:907 [inline]
  __se_sys_ioctl fs/ioctl.c:893 [inline]
  __arm64_sys_ioctl+0x108/0x184 fs/ioctl.c:893
  __invoke_syscall arch/arm64/kernel/syscall.c:35 [inline]
  invoke_syscall+0x78/0x1b8 arch/arm64/kernel/syscall.c:49
  el0_svc_common+0xe8/0x1b0 arch/arm64/kernel/syscall.c:132
  do_el0_svc+0x40/0x50 arch/arm64/kernel/syscall.c:151
  el0_svc+0x54/0x14c arch/arm64/kernel/entry-common.c:712
  el0t_64_sync_handler+0x84/0xfc arch/arm64/kernel/entry-common.c:730

el0t_64_sync+0x190/0x194 arch/arm64/kernel/entry.S:598

The following sequence led to the scenario:
- Userspace creates a VM and a vCPU.
- The vCPU is initialized with KVM_ARM_VCPU_PMU_V3 during KVM_ARM_VCPU_INIT.
- Without any other setup, such as vGIC or vPMU, userspace issues KVM_RUN on the vCPU. Since the vPMU is requested, but not setup, kvm_arm_pmu_v3_enable() fails in kvm_arch_vcpu_run_pid_change(). As a result, KVM_RUN returns after enabling the timer, but before incrementing 'userspace_irqchip_in_use':

```
kvm_arch_vcpu_run_pid_change()
    ret = kvm_arm_pmu_v3_enable()
        if (!vcpu->arch.pmu.created)
            return -EINVAL;
    if (ret)
        return ret;
    [...]
    if (!irqchip_in_kernel(kvm))
        static_branch_inc(&userspace_irqchip_in_use);
```

- Userspace ignores the error and issues KVM_ARM_VCPU_INIT again. Since the timer is already enabled, control moves through the following flow, ultimately hitting the WARN_ON():

```
kvm_timer_vcpu_reset()
    if (timer->enabled)
      kvm_timer_update_irq()
          if (!userspace_irqchip())
              ret = kvm_vgic_inject_irq()
                  ret = vgic_lazy_init()
                      if (unlikely(!vgic_initialized(kvm)))
                          if (kvm->arch.vgic.vgic_model !=
                              KVM_DEV_TYPE_ARM_VGIC_V2)
                              return -EBUSY;
              WARN_ON(ret);
```

Theoretically, since userspace_irqchip_in_use's functionality can be simply replaced by '!irqchip_in_kernel()', get rid of the static key to avoid the mismanagement, which also helps with the syzbot issue.

More Info: https://avd.aquasec.com/nvd/cve-2024-53195

[CVE-2024-53209] kernel: bnxt_en: Fix receive ring space parameters when XDP is active (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bnxt_en: Fix receive ring space parameters when XDP is active

The MTU setting at the time an XDP multi-buffer is attached

determines whether the aggregation ring will be used and the
rx_skb_func handler. This is done in bnxt_set_rx_skb_mode().

If the MTU is later changed, the aggregation ring setting may need
to be changed and it may become out-of-sync with the settings
initially done in bnxt_set_rx_skb_mode(). This may result in
random memory corruption and crashes as the HW may DMA data larger
than the allocated buffer size, such as:

BUG: kernel NULL pointer dereference, address: 00000000000003c0
PGD 0 P4D 0
Oops: 0000 [#1] PREEMPT SMP NOPTI
CPU: 17 PID: 0 Comm: swapper/17 Kdump: loaded Tainted: G S   OE   6.1.0-226bf9805506 #1
Hardware name: Wiwynn Delta Lake PVT BZA.02601.0150/Delta Lake-Class1, BIOS F0E_3A12 08/26/2021
RIP: 0010:bnxt_rx_pkt+0xe97/0x1ae0 [bnxt_en]
Code: 8b 95 70 ff ff ff 4c 8b 9d 48 ff ff ff 66 41 89 87 b4 00 00 00 e9 0b f7 ff ff 0f b7 43 0a 49 8b 95 a8 04 00 00 25 ff 0f 00 00 <0f> b7 14 42 48 c1 e2 06 49 03 95 a0 04 00 00 0f b6 42 33f
RSP: 0018:ffffa19f40cc0d18 EFLAGS: 00010202
RAX: 00000000000001e0 RBX: ffff8e2c805c6100 RCX: 00000000000007ff
RDX: 0000000000000000 RSI: ffff8e2c271ab990 RDI: ffff8e2c84f12380
RBP: ffffa19f40cc0e48 R08: 000000000001000d R09: 974ea2fcddfa4cbf
R10: 0000000000000000 R11: ffffa19f40cc0ff8 R12: ffff8e2c94b58980
R13: ffff8e2c952d6600 R14: 0000000000000016 R15: ffff8e2c271ab990
FS: 0000000000000000(0000) GS:ffff8e3b3f840000(0000) knlGS:0000000000000000
CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 00000000000003c0 CR3: 0000000e8580a004 CR4: 00000000007706e0
DR0: 0000000000000000 DR1: 0000000000000000 DR2: 0000000000000000
DR3: 0000000000000000 DR6: 00000000fffe0ff0 DR7: 0000000000000400
PKRU: 55555554
Call Trace:
 <IRQ>
 __bnxt_poll_work+0x1c2/0x3e0 [bnxt_en]

To address the issue, we now call bnxt_set_rx_skb_mode() within
bnxt_change_mtu() to properly set the AGG rings configuration and
update rx_skb_func based on the new MTU value.
Additionally, BNXT_FLAG_NO_AGG_RINGS is cleared at the beginning of
bnxt_set_rx_skb_mode() to make sure it gets set or cleared based on
the current MTU.

More Info: https://avd.aquasec.com/nvd/cve-2024-53209

[CVE-2024-53218] kernel: f2fs: fix race in concurrent f2fs_stop_gc_thread (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

f2fs: fix race in concurrent f2fs_stop_gc_thread

In my test case, concurrent calls to f2fs shutdown report the following
stack trace:

```
Oops: general protection fault, probably for non-canonical address 0xc6cfff63bb5513fc: 0000 [#1] PREEMPT SMP PTI
CPU: 0 UID: 0 PID: 678 Comm: f2fs_rep_shutdo Not tainted 6.12.0-rc5-next-20241029-g6fb2fa9805c5-dirty #85
Call Trace:
 <TASK>
 ? show_regs+0x8b/0xa0
 ? __die_body+0x26/0xa0
 ? die_addr+0x54/0x90
 ? exc_general_protection+0x24b/0x5c0
 ? asm_exc_general_protection+0x26/0x30
 ? kthread_stop+0x46/0x390
 f2fs_stop_gc_thread+0x6c/0x110
 f2fs_do_shutdown+0x309/0x3a0
 f2fs_ioc_shutdown+0x150/0x1c0
 __f2fs_ioctl+0xffd/0x2ac0
 f2fs_ioctl+0x76/0xe0
 vfs_ioctl+0x23/0x60
 __x64_sys_ioctl+0xce/0xf0
 x64_sys_call+0x2b1b/0x4540
 do_syscall_64+0xa7/0x240
 entry_SYSCALL_64_after_hwframe+0x76/0x7e
```

The root cause is a race condition in f2fs_stop_gc_thread() called from
different f2fs shutdown paths:

```
 [CPU0]                    [CPU1]
 ----------------------    ----------------------
 f2fs_stop_gc_thread       f2fs_stop_gc_thread
                           gc_th = sbi->gc_thread
   gc_th = sbi->gc_thread
   kfree(gc_th)
   sbi->gc_thread = NULL
                           < gc_th != NULL >
                           kthread_stop(gc_th->f2fs_gc_task) //UAF
```

The commit c7f114d864ac ("f2fs: fix to avoid use-after-free in
f2fs_stop_gc_thread()") attempted to fix this issue by using a read
semaphore to prevent races between shutdown and remount threads, but
it fails to prevent all race conditions.

Fix it by converting to write lock of s_umount in f2fs_do_shutdown().

More Info: https://avd.aquasec.com/nvd/cve-2024-53218

[CVE-2024-53219] kernel: virtiofs: use pages instead of pointer for kernel direct IO (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

virtiofs: use pages instead of pointer for kernel direct IO

When trying to insert a 10MB kernel module kept in a virtio-fs with cache disabled, the following warning was reported:

```
 ------------[ cut here ]------------
 WARNING: CPU: 1 PID: 404 at mm/page_alloc.c:4551 ......
 Modules linked in:
 CPU: 1 PID: 404 Comm: insmod Not tainted 6.9.0-rc5+ #123
 Hardware name: QEMU Standard PC (i440FX + PIIX, 1996) ......
 RIP: 0010:__alloc_pages+0x2bf/0x380
 ......
 Call Trace:
  <TASK>
  ? __warn+0x8e/0x150
  ? __alloc_pages+0x2bf/0x380
  __kmalloc_large_node+0x86/0x160
  __kmalloc+0x33c/0x480
  virtio_fs_enqueue_req+0x240/0x6d0
  virtio_fs_wake_pending_and_unlock+0x7f/0x190
  queue_request_and_unlock+0x55/0x60
  fuse_simple_request+0x152/0x2b0
  fuse_direct_io+0x5d2/0x8c0
  fuse_file_read_iter+0x121/0x160
  __kernel_read+0x151/0x2d0
  kernel_read+0x45/0x50
  kernel_read_file+0x1a9/0x2a0
  init_module_from_file+0x6a/0xe0
  idempotent_init_module+0x175/0x230
  __x64_sys_finit_module+0x5d/0xb0
  x64_sys_call+0x1c3/0x9e0
  do_syscall_64+0x3d/0xc0
  entry_SYSCALL_64_after_hwframe+0x4b/0x53
  ......
  </TASK>
 ---[ end trace 0000000000000000 ]---
```

The warning is triggered as follows:

1) syscall finit_module() handles the module insertion and it invokes kernel_read_file() to read the content of the module first.

2) kernel_read_file() allocates a 10MB buffer by using vmalloc() and passes it to kernel_read(). kernel_read() constructs a kvec iter by using iov_iter_kvec() and passes it to fuse_file_read_iter().

3) virtio-fs disables the cache, so fuse_file_read_iter() invokes fuse_direct_io(). As for now, the maximal read size for kvec iter is only limited by fc->max_read. For virtio-fs, max_read is UINT_MAX, so fuse_direct_io() doesn't split the 10MB buffer. It saves the address and the size of the 10MB-sized buffer in out_args[0] of a fuse request and passes the fuse request to virtio_fs_wake_pending_and_unlock().

4) virtio_fs_wake_pending_and_unlock() uses virtio_fs_enqueue_req() to queue the request. Because virtiofs need DMA-able address, so

virtio_fs_enqueue_req() uses kmalloc() to allocate a bounce buffer for
all fuse args, copies these args into the bounce buffer and passed the
physical address of the bounce buffer to virtiofsd. The total length of
these fuse args for the passed fuse request is about 10MB, so
copy_args_to_argbuf() invokes kmalloc() with a 10MB size parameter and
it triggers the warning in __alloc_pages():

 if (WARN_ON_ONCE_GFP(order > MAX_PAGE_ORDER, gfp))
  return NULL;

5) virtio_fs_enqueue_req() will retry the memory allocation in a
kworker, but it won't help, because kmalloc() will always return NULL
due to the abnormal size and finit_module() will hang forever.

A feasible solution is to limit the value of max_read for virtio-fs, so
the length passed to kmalloc() will be limited. However it will affect
the maximal read size for normal read. And for virtio-fs write initiated
from kernel, it has the similar problem but now there is no way to limit
fc->max_write in kernel.

So instead of limiting both the values of max_read and max_write in
kernel, introducing use_pages_for_kvec_io in fuse_conn and setting it as
true in virtiofs. When use_pages_for_kvec_io is enabled, fuse will use
pages instead of pointer to pass the KVEC_IO data.

After switching to pages for KVEC_IO data, these pages will be used for
DMA through virtio-fs. If these pages are backed by vmalloc(),
{flush|invalidate}_kernel_vmap_range() are necessary to flush or
invalidate the cache before the DMA operation. So add two new fields in
fuse_args_pages to record the base address of vmalloc area and the
condition indicating whether invalidation is needed. Perform the flush
in fuse_get_user_pages() for write operations and the invalidation in
fuse_release_user_pages() for read operations.

It may seem necessary to introduce another fie
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2024-53219

[CVE-2024-53221] kernel: f2fs: fix null-ptr-deref in f2fs_submit_page_bio() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

f2fs: fix null-ptr-deref in f2fs_submit_page_bio()

There's issue as follows when concurrently installing the f2fs.ko
module and mounting the f2fs file system:
KASAN: null-ptr-deref in range [0x0000000000000020-0x0000000000000027]
RIP: 0010:__bio_alloc+0x2fb/0x6c0 [f2fs]
Call Trace:

<TASK>
f2fs_submit_page_bio+0x126/0x8b0 [f2fs]
__get_meta_page+0x1d4/0x920 [f2fs]
get_checkpoint_version.constprop.0+0x2b/0x3c0 [f2fs]
validate_checkpoint+0xac/0x290 [f2fs]
f2fs_get_valid_checkpoint+0x207/0x950 [f2fs]
f2fs_fill_super+0x1007/0x39b0 [f2fs]
mount_bdev+0x183/0x250
legacy_get_tree+0xf4/0x1e0
vfs_get_tree+0x88/0x340
do_new_mount+0x283/0x5e0
path_mount+0x2b2/0x15b0
__x64_sys_mount+0x1fe/0x270
do_syscall_64+0x5f/0x170
entry_SYSCALL_64_after_hwframe+0x76/0x7e

Above issue happens as the biset of the f2fs file system is not
initialized before register "f2fs_fs_type".
To address above issue just register "f2fs_fs_type" at the last in
init_f2fs_fs(). Ensure that all f2fs file system resources are
initialized.

More Info: https://avd.aquasec.com/nvd/cve-2024-53221

[CVE-2024-53224] kernel: RDMA/mlx5: Move events notifier registration to be after device registration (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

RDMA/mlx5: Move events notifier registration to be after device registration

Move pkey change work initialization and cleanup from device resources
stage to notifier stage, since this is the stage which handles this work
events.

Fix a race between the device deregistration and pkey change work by moving
MLX5_IB_STAGE_DEVICE_NOTIFIER to be after MLX5_IB_STAGE_IB_REG in order to
ensure that the notifier is deregistered before the device during cleanup.
Which ensures there are no works that are being executed after the
device has already unregistered which can cause the panic below.

BUG: kernel NULL pointer dereference, address: 0000000000000000
PGD 0 P4D 0
Oops: 0000 [#1] PREEMPT SMP PTI
CPU: 1 PID: 630071 Comm: kworker/1:2 Kdump: loaded Tainted: G W OE --------- --- 5.14.0-162.6.1.el9_1.x86_64 #1
Hardware name: Microsoft Corporation Virtual Machine/Virtual Machine, BIOS 090008 02/27/2023
Workqueue: events pkey_change_handler [mlx5_ib]
RIP: 0010:setup_qp+0x38/0x1f0 [mlx5_ib]
Code: ee 41 54 45 31 e4 55 89 f5 53 48 89 fb 48 83 ec 20 8b 77 08 65 48 8b 04 25 28 00 00 00 48 89 44 24 18 48 8b

07 48 8d 4c 24 16 <4c> 8b 38 49 8b 87 80 0b 00 00 4c 89 ff 48 8b 80 08 05 00 00 8b 40
RSP: 0018:ffffbcc54068be20 EFLAGS: 00010282
RAX: 0000000000000000 RBX: ffff954054494128 RCX: ffffbcc54068be36
RDX: ffff954004934000 RSI: 0000000000000001 RDI: ffff954054494128
RBP: 0000000000000023 R08: ffff954001be2c20 R09: 0000000000000001
R10: ffff954001be2c20 R11: ffff9540260133c0 R12: 0000000000000000
R13: 0000000000000023 R14: 0000000000000000 R15: ffff9540ffcb0905
FS: 0000000000000000(0000) GS:ffff9540ffc80000(0000) knlGS:0000000000000000
CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 0000000000000000 CR3: 000000010625c001 CR4: 00000000003706e0
DR0: 0000000000000000 DR1: 0000000000000000 DR2: 0000000000000000
DR3: 0000000000000000 DR6: 00000000fffe0ff0 DR7: 0000000000000400
Call Trace:
mlx5_ib_gsi_pkey_change+0x20/0x40 [mlx5_ib]
process_one_work+0x1e8/0x3c0
worker_thread+0x50/0x3b0
? rescuer_thread+0x380/0x380
kthread+0x149/0x170
? set_kthread_struct+0x50/0x50
ret_from_fork+0x22/0x30
Modules linked in: rdma_ucm(OE) rdma_cm(OE) iw_cm(OE) ib_ipoib(OE) ib_cm(OE) ib_umad(OE) mlx5_ib(OE) mlx5_fwctl(OE) fwctl(OE) ib_uverbs(OE) mlx5_core(OE) mlxdevm(OE) ib_core(OE) mlx_compat(OE) psample mlxfw(OE) tls knem(OE) netconsole nfsv3 nfs_acl nfs lockd grace fscache netfs qrtr rfkill sunrpc intel_rapl_msr intel_rapl_common rapl hv_balloon hv_utils i2c_piix4 pcspkr joydev fuse ext4 mbcache jbd2 sr_mod sd_mod cdrom t10_pi sg ata_generic pci_hyperv pci_hyperv_intf hyperv_drm drm_shmem_helper drm_kms_helper hv_storvsc syscopyarea hv_netvsc sysfillrect sysimgblt hid_hyperv fb_sys_fops scsi_transport_fc hyperv_keyboard drm ata_piix crct10dif_pclmul crc32_pclmul crc32c_intel libata ghash_clmulni_intel hv_vmbus serio_raw [last unloaded: ib_core]
CR2: 0000000000000000
---[end trace f6f8be4eae12f7bc]---

More Info: https://avd.aquasec.com/nvd/cve-2024-53224

[CVE-2024-53687] kernel: riscv: Fix IPIs usage in kfence_protect_page() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

riscv: Fix IPIs usage in kfence_protect_page()

flush_tlb_kernel_range() may use IPIs to flush the TLBs of all the
cores, which triggers the following warning when the irqs are disabled:

[3.455330] WARNING: CPU: 1 PID: 0 at kernel/smp.c:815 smp_call_function_many_cond+0x452/0x520
[3.456647] Modules linked in:
[3.457218] CPU: 1 UID: 0 PID: 0 Comm: swapper/1 Not tainted 6.12.0-rc7-00010-g91d3de7240b8 #1
[3.457416] Hardware name: QEMU QEMU Virtual Machine, BIOS
[3.457633] epc : smp_call_function_many_cond+0x452/0x520
[3.457736] ra : on_each_cpu_cond_mask+0x1e/0x30
[3.457786] epc : ffffffff800b669a ra : ffffffff800b67c2 sp : ff2000000000bb50
[3.457824] gp : ffffffff815212b8 tp : ff6000008014f080 t0 : 000000000000003f
[3.457859] t1 : ffffffff815221e0 t2 : 000000000000000f s0 : ff2000000000bc10

[3.457920] s1 : 0000000000000040 a0 : ffffffff815221e0 a1 : 0000000000000001
[3.457953] a2 : 0000000000010000 a3 : 0000000000000003 a4 : 0000000000000000
[3.458006] a5 : 0000000000000000 a6 : ffffffffffffffff a7 : 0000000000000000
[3.458042] s2 : ffffffff815223be s3 : 00ffffffffff000 s4 : ff600001ffe38fc0
[3.458076] s5 : ff600001ff950d00 s6 : 0000000200000120 s7 : 0000000000000001
[3.458109] s8 : 0000000000000001 s9 : ff60000080841ef0 s10: 0000000000000001
[3.458141] s11: ffffffff81524812 t3 : 0000000000000001 t4 : ff60000080092bc0
[3.458172] t5 : 0000000000000000 t6 : ff200000000236d0
[3.458203] status: 0000000200000100 badaddr: ffffffff800b669a cause: 0000000000000003
[3.458373] [<ffffffff800b669a>] smp_call_function_many_cond+0x452/0x520
[3.458593] [<ffffffff800b67c2>] on_each_cpu_cond_mask+0x1e/0x30
[3.458625] [<ffffffff8000e4ca>] __flush_tlb_range+0x118/0x1ca
[3.458656] [<ffffffff8000e6b2>] flush_tlb_kernel_range+0x1e/0x26
[3.458683] [<ffffffff801ea56a>] kfence_protect+0xc0/0xce
[3.458717] [<ffffffff801e9456>] kfence_guarded_free+0xc6/0x1c0
[3.458742] [<ffffffff801e9d6c>] __kfence_free+0x62/0xc6
[3.458764] [<ffffffff801c57d8>] kfree+0x106/0x32c
[3.458786] [<ffffffff80588cf2>] detach_buf_split+0x188/0x1a8
[3.458816] [<ffffffff8058708c>] virtqueue_get_buf_ctx+0xb6/0x1f6
[3.458839] [<ffffffff805871da>] virtqueue_get_buf+0xe/0x16
[3.458880] [<ffffffff80613d6a>] virtblk_done+0x5c/0xe2
[3.458908] [<ffffffff8058766e>] vring_interrupt+0x6a/0x74
[3.458930] [<ffffffff800747d8>] __handle_irq_event_percpu+0x7c/0xe2
[3.458956] [<ffffffff800748f0>] handle_irq_event+0x3c/0x86
[3.458978] [<ffffffff800786cc>] handle_simple_irq+0x9e/0xbe
[3.459004] [<ffffffff80073934>] generic_handle_domain_irq+0x1c/0x2a
[3.459027] [<ffffffff804bf87c>] imsic_handle_irq+0xba/0x120
[3.459056] [<ffffffff80073934>] generic_handle_domain_irq+0x1c/0x2a
[3.459080] [<ffffffff804bdb76>] riscv_intc_aia_irq+0x24/0x34
[3.459103] [<ffffffff809d0452>] handle_riscv_irq+0x2e/0x4c
[3.459133] [<ffffffff809d923e>] call_on_irq_stack+0x32/0x40

So only flush the local TLB and let the lazy kfence page fault handling
deal with the faults which could happen when a core has an old protected
pte version cached in its TLB. That leads to potential inaccuracies which
can be tolerated when using kfence.

More Info: https://avd.aquasec.com/nvd/cve-2024-53687

[CVE-2024-54456] kernel: NFS: Fix potential buffer overflowin nfs_sysfs_link_rpc_client() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

NFS: Fix potential buffer overflowin nfs_sysfs_link_rpc_client()

name is char[64] where the size of clnt->cl_program->name remains
unknown. Invoking strcat() directly will also lead to potential buffer
overflow. Change them to strscpy() and strncat() to fix potential

issues.

More Info: https://avd.aquasec.com/nvd/cve-2024-54456

[CVE-2024-54683] kernel: netfilter: IDLETIMER: Fix for possible ABBA deadlock (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

netfilter: IDLETIMER: Fix for possible ABBA deadlock

Deletion of the last rule referencing a given idletimer may happen at
the same time as a read of its file in sysfs:

```
| ======================================================
| WARNING: possible circular locking dependency detected
| 6.12.0-rc7-01692-g5e9a28f41134-dirty #594 Not tainted
| ------------------------------------------------------
| iptables/3303 is trying to acquire lock:
| ffff8881057e04b8 (kn->active#48){++++}-{0:0}, at: __kernfs_remove+0x20
|
| but task is already holding lock:
| ffffffffa0249068 (list_mutex){+.+.}-{3:3}, at: idletimer_tg_destroy_v]
|
| which lock already depends on the new lock.
```

A simple reproducer is:

```
| #!/bin/bash
|
| while true; do
|         iptables -A INPUT -i foo -j IDLETIMER --timeout 10 --label "testme"
|         iptables -D INPUT -i foo -j IDLETIMER --timeout 10 --label "testme"
| done &
| while true; do
|         cat /sys/class/xt_idletimer/timers/testme >/dev/null
| done
```

Avoid this by freeing list_mutex right after deleting the element from
the list, then continuing with the teardown.

More Info: https://avd.aquasec.com/nvd/cve-2024-54683

[CVE-2024-56544] kernel: udmabuf: change folios array from kmalloc to kvmalloc (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

udmabuf: change folios array from kmalloc to kvmalloc

When PAGE_SIZE 4096, MAX_PAGE_ORDER 10, 64bit machine,
page_alloc only support 4MB.
If above this, trigger this warn and return NULL.

udmabuf can change size limit, if change it to 3072(3GB), and then alloc
3GB udmabuf, will fail create.

[4080.876581] ------------[cut here]------------
[4080.876843] WARNING: CPU: 3 PID: 2015 at mm/page_alloc.c:4556 __alloc_pages+0x2c8/0x350
[4080.878839] RIP: 0010:__alloc_pages+0x2c8/0x350
[4080.879470] Call Trace:
[4080.879473] <TASK>
[4080.879473] ? __alloc_pages+0x2c8/0x350
[4080.879475] ? __warn.cold+0x8e/0xe8
[4080.880647] ? __alloc_pages+0x2c8/0x350
[4080.880909] ? report_bug+0xff/0x140
[4080.881175] ? handle_bug+0x3c/0x80
[4080.881556] ? exc_invalid_op+0x17/0x70
[4080.881559] ? asm_exc_invalid_op+0x1a/0x20
[4080.882077] ? udmabuf_create+0x131/0x400

Because MAX_PAGE_ORDER, kmalloc can max alloc 4096 * (1 << 10), 4MB
memory, each array entry is pointer(8byte), so can save 524288 pages(2GB).

Further more, costly order(order 3) may not be guaranteed that it can be
applied for, due to fragmentation.

This patch change udmabuf array use kvmalloc_array, this can fallback
alloc into vmalloc, which can guarantee allocation for any size and does
not affect the performance of kmalloc allocations.

More Info: https://avd.aquasec.com/nvd/cve-2024-56544

[CVE-2024-56565] kernel: f2fs: fix to drop all discards after creating snapshot on lvm device (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

f2fs: fix to drop all discards after creating snapshot on lvm device

Piergiorgio reported a bug in bugzilla as below:

------------[cut here]------------
WARNING: CPU: 2 PID: 969 at fs/f2fs/segment.c:1330
RIP: 0010:__submit_discard_cmd+0x27d/0x400 [f2fs]
Call Trace:
 __issue_discard_cmd+0x1ca/0x350 [f2fs]

issue_discard_thread+0x191/0x480 [f2fs]
kthread+0xcf/0x100
ret_from_fork+0x31/0x50
ret_from_fork_asm+0x1a/0x30

w/ below testcase, it can reproduce this bug quickly:
- pvcreate /dev/vdb
- vgcreate myvg1 /dev/vdb
- lvcreate -L 1024m -n mylv1 myvg1
- mount /dev/myvg1/mylv1 /mnt/f2fs
- dd if=/dev/zero of=/mnt/f2fs/file bs=1M count=20
- sync
- rm /mnt/f2fs/file
- sync
- lvcreate -L 1024m -s -n mylv1-snapshot /dev/myvg1/mylv1
- umount /mnt/f2fs

The root cause is: it will update discard_max_bytes of mounted lvm
device to zero after creating snapshot on this lvm device, then,
__submit_discard_cmd() will pass parameter @nr_sects w/ zero value
to __blkdev_issue_discard(), it returns a NULL bio pointer, result
in panic.

This patch changes as below for fixing:
1. Let's drop all remained discards in f2fs_unfreeze() if snapshot
of lvm device is created.
2. Checking discard_max_bytes before submitting discard during
__submit_discard_cmd().

More Info: https://avd.aquasec.com/nvd/cve-2024-56565

[CVE-2024-56566] kernel: mm/slub: Avoid list corruption when removing a slab from the full list (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

mm/slub: Avoid list corruption when removing a slab from the full list

Boot with slub_debug=UFPZ.

If allocated object failed in alloc_consistency_checks, all objects of
the slab will be marked as used, and then the slab will be removed from
the partial list.

When an object belonging to the slab got freed later, the remove_full()
function is called. Because the slab is neither on the partial list nor
on the full list, it eventually lead to a list corruption (actually a
list poison being detected).

So we need to mark and isolate the slab page with metadata corruption,
do not put it back in circulation.

Because the debug caches avoid all the fastpaths, reusing the frozen bit
to mark slab page with metadata corruption seems to be fine.

[4277.385669] list_del corruption, ffffea00044b3e50->next is LIST_POISON1 (dead000000000100)
[4277.387023] ------------[cut here]------------
[4277.387880] kernel BUG at lib/list_debug.c:56!
[4277.388680] invalid opcode: 0000 [#1] PREEMPT SMP PTI
[4277.389562] CPU: 5 PID: 90 Comm: kworker/5:1 Kdump: loaded Tainted: G OE 6.6.1-1 #1
[4277.392113] Workqueue: xfs-inodegc/vda1 xfs_inodegc_worker [xfs]
[4277.393551] RIP: 0010:__list_del_entry_valid_or_report+0x7b/0xc0
[4277.394518] Code: 48 91 82 e8 37 f9 9a ff 0f 0b 48 89 fe 48 c7 c7 28 49 91 82 e8 26 f9 9a ff 0f 0b 48 89 fe 48 c7 c7 58 49 91
[4277.397292] RSP: 0018:ffffc90000333b38 EFLAGS: 00010082
[4277.398202] RAX: 000000000000004e RBX: ffffea00044b3e50 RCX: 0000000000000000
[4277.399340] RDX: 0000000000000002 RSI: ffffffff828f8715 RDI: 00000000ffffffff
[4277.400545] RBP: ffffea00044b3e40 R08: 0000000000000000 R09: ffffc900003339f0
[4277.401710] R10: 0000000000000003 R11: ffffffff82d44088 R12: ffff888112cf9910
[4277.402887] R13: 0000000000000001 R14: 0000000000000001 R15: ffff8881000424c0
[4277.404049] FS: 0000000000000000(0000) GS:ffff88842fd40000(0000) knlGS:0000000000000000
[4277.405357] CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
[4277.406389] CR2: 00007f2ad0b24000 CR3: 0000000102a3a006 CR4: 00000000007706e0
[4277.407589] DR0: 0000000000000000 DR1: 0000000000000000 DR2: 0000000000000000
[4277.408780] DR3: 0000000000000000 DR6: 00000000fffe0ff0 DR7: 0000000000000400
[4277.410000] PKRU: 55555554
[4277.410645] Call Trace:
[4277.411234] <TASK>
[4277.411777] ? die+0x32/0x80
[4277.412439] ? do_trap+0xd6/0x100
[4277.413150] ? __list_del_entry_valid_or_report+0x7b/0xc0
[4277.414158] ? do_error_trap+0x6a/0x90
[4277.414948] ? __list_del_entry_valid_or_report+0x7b/0xc0
[4277.415915] ? exc_invalid_op+0x4c/0x60
[4277.416710] ? __list_del_entry_valid_or_report+0x7b/0xc0
[4277.417675] ? asm_exc_invalid_op+0x16/0x20
[4277.418482] ? __list_del_entry_valid_or_report+0x7b/0xc0
[4277.419466] ? __list_del_entry_valid_or_report+0x7b/0xc0
[4277.420410] free_to_partial_list+0x515/0x5e0
[4277.421242] ? xfs_iext_remove+0x41a/0xa10 [xfs]
[4277.422298] xfs_iext_remove+0x41a/0xa10 [xfs]
[4277.423316] ? xfs_inodegc_worker+0xb4/0x1a0 [xfs]
[4277.424383] xfs_bmap_del_extent_delay+0x4fe/0x7d0 [xfs]
[4277.425490] __xfs_bunmapi+0x50d/0x840 [xfs]
[4277.426445] xfs_itruncate_extents_flags+0x13a/0x490 [xfs]
[4277.427553] xfs_inactive_truncate+0xa3/0x120 [xfs]
[4277.428567] xfs_inactive+0x22d/0x290 [xfs]
[4277.429500] xfs_inodegc_worker+0xb4/0x1a0 [xfs]
[4277.430479] process_one_work+0x171/0x340
[4277.431227] worker_thread+0x277/0x390
[4277.431962] ? __pfx_worker_thread+0x10/0x10
[4277.432752] kthread+0xf0/0x120

[4277.433382] ? __pfx_kthread+0x10/0x10
[4277.434134] ret_from_fork+0x2d/0x50
[4277.434837] ? __pfx_kthread+0x10/0x10
[4277.435566] ret_from_fork_asm+0x1b/0x30
[4277.436280] </TASK>

More Info: https://avd.aquasec.com/nvd/cve-2024-56566

[CVE-2024-56583] kernel: sched/deadline: Fix warning in migrate_enable for boosted tasks (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

sched/deadline: Fix warning in migrate_enable for boosted tasks

When running the following command:

```
while true; do
   stress-ng --cyclic 30 --timeout 30s --minimize --quiet
done
```

a warning is eventually triggered:

```
WARNING: CPU: 43 PID: 2848 at kernel/sched/deadline.c:794
setup_new_dl_entity+0x13e/0x180
...
Call Trace:
 <TASK>
 ? show_trace_log_lvl+0x1c4/0x2df
 ? enqueue_dl_entity+0x631/0x6e0
 ? setup_new_dl_entity+0x13e/0x180
 ? __warn+0x7e/0xd0
 ? report_bug+0x11a/0x1a0
 ? handle_bug+0x3c/0x70
 ? exc_invalid_op+0x14/0x70
 ? asm_exc_invalid_op+0x16/0x20
 enqueue_dl_entity+0x631/0x6e0
 enqueue_task_dl+0x7d/0x120
 __do_set_cpus_allowed+0xe3/0x280
 __set_cpus_allowed_ptr_locked+0x140/0x1d0
 __set_cpus_allowed_ptr+0x54/0xa0
 migrate_enable+0x7e/0x150
 rt_spin_unlock+0x1c/0x90
 group_send_sig_info+0xf7/0x1a0
 ? kill_pid_info+0x1f/0x1d0
 kill_pid_info+0x78/0x1d0
 kill_proc_info+0x5b/0x110
 __x64_sys_kill+0x93/0xc0
 do_syscall_64+0x5c/0xf0
```

entry_SYSCALL_64_after_hwframe+0x6e/0x76
RIP: 0033:0x7f0dab31f92b

This warning occurs because set_cpus_allowed dequeues and enqueues tasks
with the ENQUEUE_RESTORE flag set. If the task is boosted, the warning
is triggered. A boosted task already had its parameters set by
rt_mutex_setprio, and a new call to setup_new_dl_entity is unnecessary,
hence the WARN_ON call.

Check if we are requeueing a boosted task and avoid calling
setup_new_dl_entity if that's the case.

More Info: https://avd.aquasec.com/nvd/cve-2024-56583

[CVE-2024-56588] kernel: scsi: hisi_sas: Create all dump files during debugfs initialization (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

scsi: hisi_sas: Create all dump files during debugfs initialization

For the current debugfs of hisi_sas, after user triggers dump, the
driver allocate memory space to save the register information and create
debugfs files to display the saved information. In this process, the
debugfs files created after each dump.

Therefore, when the dump is triggered while the driver is unbind, the
following hang occurs:

[67840.853907] Unable to handle kernel NULL pointer dereference at virtual address 00000000000000a0
[67840.862947] Mem abort info:
[67840.865855]   ESR = 0x0000000096000004
[67840.869713]   EC = 0x25: DABT (current EL), IL = 32 bits
[67840.875125]   SET = 0, FnV = 0
[67840.878291]   EA = 0, S1PTW = 0
[67840.881545]   FSC = 0x04: level 0 translation fault
[67840.886528] Data abort info:
[67840.889524]   ISV = 0, ISS = 0x00000004, ISS2 = 0x00000000
[67840.895117]   CM = 0, WnR = 0, TnD = 0, TagAccess = 0
[67840.900284]   GCS = 0, Overlay = 0, DirtyBit = 0, Xs = 0
[67840.905709] user pgtable: 4k pages, 48-bit VAs, pgdp=0000002803a1f000
[67840.912263] [00000000000000a0] pgd=0000000000000000, p4d=0000000000000000
[67840.919177] Internal error: Oops: 0000000096000004 [#1] PREEMPT SMP
[67840.996435] pstate: 80400009 (Nzcv daif +PAN -UAO -TCO -DIT -SSBS BTYPE=--)
[67841.003628] pc : down_write+0x30/0x98
[67841.007546] lr : start_creating.part.0+0x60/0x198
[67841.012495] sp : ffff8000b979ba20
[67841.016046] x29: ffff8000b979ba20 x28: 0000000000000010 x27: 0000000000024b40
[67841.023412] x26: 0000000000000012 x25: ffff20202b355ae8 x24: ffff20202b35a8c8

[67841.030779] x23: ffffa36877928208 x22: ffffa368b4972240 x21: ffff8000b979bb18
[67841.038147] x20: ffff00281dc1e3c0 x19: fffffffffffffffe x18: 0000000000000020
[67841.045515] x17: 0000000000000000 x16: ffffa368b128a530 x15: ffffffffffffffff
[67841.052888] x14: ffff8000b979bc18 x13: ffffffffffffffff x12: ffff8000b979bb18
[67841.060263] x11: 0000000000000000 x10: 0000000000000000 x9 : ffffa368b1289b18
[67841.067640] x8 : 0000000000000012 x7 : 0000000000000000 x6 : 00000000000003a9
[67841.075014] x5 : 0000000000000000 x4 : ffff002818c5cb00 x3 : 0000000000000001
[67841.082388] x2 : 0000000000000000 x1 : ffff002818c5cb00 x0 : 00000000000000a0
[67841.089759] Call trace:
[67841.092456] down_write+0x30/0x98
[67841.096017] start_creating.part.0+0x60/0x198
[67841.100613] debugfs_create_dir+0x48/0x1f8
[67841.104950] debugfs_create_files_v3_hw+0x88/0x348 [hisi_sas_v3_hw]
[67841.111447] debugfs_snapshot_regs_v3_hw+0x708/0x798 [hisi_sas_v3_hw]
[67841.118111] debugfs_trigger_dump_v3_hw_write+0x9c/0x120 [hisi_sas_v3_hw]
[67841.125115] full_proxy_write+0x68/0xc8
[67841.129175] vfs_write+0xd8/0x3f0
[67841.132708] ksys_write+0x70/0x108
[67841.136317] __arm64_sys_write+0x24/0x38
[67841.140440] invoke_syscall+0x50/0x128
[67841.144385] el0_svc_common.constprop.0+0xc8/0xf0
[67841.149273] do_el0_svc+0x24/0x38
[67841.152773] el0_svc+0x38/0xd8
[67841.156009] el0t_64_sync_handler+0xc0/0xc8
[67841.160361] el0t_64_sync+0x1a4/0x1a8
[67841.164189] Code: b9000882 d2800002 d2800023 f9800011 (c85ffc05)
[67841.170443] ---[end trace 0000000000000000]---

To fix this issue, create all directories and files during debugfs
initialization. In this way, the driver only needs to allocate memory
space to save information each time the user triggers dumping.

More Info: https://avd.aquasec.com/nvd/cve-2024-56588

[CVE-2024-56591] kernel: Bluetooth: hci_conn: Use disable_delayed_work_sync (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

Bluetooth: hci_conn: Use disable_delayed_work_sync

This makes use of disable_delayed_work_sync instead
cancel_delayed_work_sync as it not only cancel the ongoing work but also
disables new submit which is disarable since the object holding the work
is about to be freed.

More Info: https://avd.aquasec.com/nvd/cve-2024-56591

[CVE-2024-56592] kernel: bpf: Call free_htab_elem() after htab_unlock_bucket() (Severity: MEDIUM)

Package: linux-libc-dev

Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf: Call free_htab_elem() after htab_unlock_bucket()

For htab of maps, when the map is removed from the htab, it may hold the
last reference of the map. bpf_map_fd_put_ptr() will invoke
bpf_map_free_id() to free the id of the removed map element. However,
bpf_map_fd_put_ptr() is invoked while holding a bucket lock
(raw_spin_lock_t), and bpf_map_free_id() attempts to acquire map_idr_lock
(spinlock_t), triggering the following lockdep warning:

```
  ============================
  [ BUG: Invalid wait context ]
  6.11.0-rc4+ #49 Not tainted
  -----------------------------
  test_maps/4881 is trying to lock:
  ffffffff84884578 (map_idr_lock){+...}-{3:3}, at: bpf_map_free_id.part.0+0x21/0x70
  other info that might help us debug this:
  context-{5:5}
  2 locks held by test_maps/4881:
   #0: ffffffff846caf60 (rcu_read_lock){....}-{1:3}, at: bpf_fd_htab_map_update_elem+0xf9/0x270
   #1: ffff888149ced148 (&htab->lockdep_key#2){....}-{2:2}, at: htab_map_update_elem+0x178/0xa80
  stack backtrace:
  CPU: 0 UID: 0 PID: 4881 Comm: test_maps Not tainted 6.11.0-rc4+ #49
  Hardware name: QEMU Standard PC (i440FX + PIIX, 1996), ...
  Call Trace:
   <TASK>
   dump_stack_lvl+0x6e/0xb0
   dump_stack+0x10/0x20
   __lock_acquire+0x73e/0x36c0
   lock_acquire+0x182/0x450
   _raw_spin_lock_irqsave+0x43/0x70
   bpf_map_free_id.part.0+0x21/0x70
   bpf_map_put+0xcf/0x110
   bpf_map_fd_put_ptr+0x9a/0xb0
   free_htab_elem+0x69/0xe0
   htab_map_update_elem+0x50f/0xa80
   bpf_fd_htab_map_update_elem+0x131/0x270
   htab_map_update_elem+0x50f/0xa80
   bpf_fd_htab_map_update_elem+0x131/0x270
   bpf_map_update_value+0x266/0x380
   __sys_bpf+0x21bb/0x36b0
   __x64_sys_bpf+0x45/0x60
   x64_sys_call+0x1b2a/0x20d0
   do_syscall_64+0x5d/0x100
   entry_SYSCALL_64_after_hwframe+0x76/0x7e
```

One way to fix the lockdep warning is using raw_spinlock_t for
map_idr_lock as well. However, bpf_map_alloc_id() invokes
idr_alloc_cyclic() after acquiring map_idr_lock, it will trigger a

similar lockdep warning because the slab's lock (s->cpu_slab->lock) is
still a spinlock.

Instead of changing map_idr_lock's type, fix the issue by invoking
htab_put_fd_value() after htab_unlock_bucket(). However, only deferring
the invocation of htab_put_fd_value() is not enough, because the old map
pointers in htab of maps can not be saved during batched deletion.
Therefore, also defer the invocation of free_htab_elem(), so these
to-be-freed elements could be linked together similar to lru map.

There are four callers for ->map_fd_put_ptr:

(1) alloc_htab_elem() (through htab_put_fd_value())
It invokes ->map_fd_put_ptr() under a raw_spinlock_t. The invocation of
htab_put_fd_value() can not simply move after htab_unlock_bucket(),
because the old element has already been stashed in htab->extra_elems.
It may be reused immediately after htab_unlock_bucket() and the
invocation of htab_put_fd_value() after htab_unlock_bucket() may release
the newly-added element incorrectly. Therefore, saving the map pointer
of the old element for htab of maps before unlocking the bucket and
releasing the map_ptr after unlock. Beside the map pointer in the old
element, should do the same thing for the special fields in the old
element as well.

(2) free_htab_elem() (through htab_put_fd_value())
Its caller includes __htab_map_lookup_and_delete_elem(),
htab_map_delete_elem() and __htab_map_lookup_and_delete_batch().

For htab_map_delete_elem(), simply invoke free_htab_elem() after
htab_unlock_bucket(). For __htab_map_lookup_and_delete_batch(), just
like lru map, linking the to-be-freed element into node_to_free list
and invoking free_htab_elem() for these element after unlock. It is safe
to reuse batch_flink as the link for node_to_free, because these
elements have been removed from the hash llist.

Because htab of maps doesn't support lookup_and_delete operation,
__htab_map_lookup_and_delete_elem() doesn't have the problem, so kept
it as
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2024-56592

[CVE-2024-56609] kernel: wifi: rtw88: use ieee80211_purge_tx_queue() to purge TX skb (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

wifi: rtw88: use ieee80211_purge_tx_queue() to purge TX skb

When removing kernel modules by:
  rmmod rtw88_8723cs rtw88_8703b rtw88_8723x rtw88_sdio rtw88_core

Driver uses skb_queue_purge() to purge TX skb, but not report tx status
causing "Have pending ack frames!" warning. Use ieee80211_purge_tx_queue()
to correct this.

Since ieee80211_purge_tx_queue() doesn't take locks, to prevent racing
between TX work and purge TX queue, flush and destroy TX work in advance.

  wlan0: deauthenticating from aa:f5:fd:60:4c:a8 by local
    choice (Reason: 3=DEAUTH_LEAVING)
  ------------[cut here]------------
  Have pending ack frames!
  WARNING: CPU: 3 PID: 9232 at net/mac80211/main.c:1691
      ieee80211_free_ack_frame+0x5c/0x90 [mac80211]
  CPU: 3 PID: 9232 Comm: rmmod Tainted: G   C
      6.10.1-200.fc40.aarch64 #1
  Hardware name: pine64 Pine64 PinePhone Braveheart
    (1.1)/Pine64 PinePhone Braveheart (1.1), BIOS 2024.01 01/01/2024
  pstate: 60400005 (nZCv daif +PAN -UAO -TCO -DIT -SSBS BTYPE=--)
  pc : ieee80211_free_ack_frame+0x5c/0x90 [mac80211]
  lr : ieee80211_free_ack_frame+0x5c/0x90 [mac80211]
  sp : ffff80008c1b37b0
  x29: ffff80008c1b37b0 x28: ffff000003be8000 x27: 0000000000000000
  x26: 0000000000000000 x25: ffff000003dc14b8 x24: ffff80008c1b37d0
  x23: ffff000000ff9f80 x22: 0000000000000000 x21: 000000007fffffff
  x20: ffff80007c7e93d8 x19: ffff00006e66f400 x18: 0000000000000000
  x17: ffff7ffffd2b3000 x16: ffff800083fc0000 x15: 0000000000000000
  x14: 0000000000000000 x13: 2173656d61726620 x12: 6b636120676e6964
  x11: 0000000000000000 x10: 000000000000005d x9 : ffff8000802af2b0
  x8 : ffff80008c1b3430 x7 : 0000000000000001 x6 : 0000000000000001
  x5 : 0000000000000000 x4 : 0000000000000000 x3 : 0000000000000000
  x2 : 0000000000000000 x1 : 0000000000000000 x0 : ffff000003be8000
  Call trace:
   ieee80211_free_ack_frame+0x5c/0x90 [mac80211]
   idr_for_each+0x74/0x110
   ieee80211_free_hw+0x44/0xe8 [mac80211]
   rtw_sdio_remove+0x9c/0xc0 [rtw88_sdio]
   sdio_bus_remove+0x44/0x180
   device_remove+0x54/0x90
   device_release_driver_internal+0x1d4/0x238
   driver_detach+0x54/0xc0
   bus_remove_driver+0x78/0x108
   driver_unregister+0x38/0x78
   sdio_unregister_driver+0x2c/0x40
   rtw_8723cs_driver_exit+0x18/0x1000 [rtw88_8723cs]
   __do_sys_delete_module.isra.0+0x190/0x338
   __arm64_sys_delete_module+0x1c/0x30
   invoke_syscall+0x74/0x100
   el0_svc_common.constprop.0+0x48/0xf0
   do_el0_svc+0x24/0x38
   el0_svc+0x3c/0x158

el0t_64_sync_handler+0x120/0x138
el0t_64_sync+0x194/0x198
---[end trace 0000000000000000]---

More Info: https://avd.aquasec.com/nvd/cve-2024-56609

[CVE-2024-56611] kernel: mm/mempolicy: fix migrate_to_node() assuming there is at least one VMA in a MM (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

mm/mempolicy: fix migrate_to_node() assuming there is at least one VMA in a MM

We currently assume that there is at least one VMA in a MM, which isn't
true.

So we might end up having find_vma() return NULL, to then de-reference
NULL. So properly handle find_vma() returning NULL.

This fixes the report:

Oops: general protection fault, probably for non-canonical address 0xdffffc0000000000: 0000 [#1] PREEMPT SMP KASAN PTI
KASAN: null-ptr-deref in range [0x0000000000000000-0x0000000000000007]
CPU: 1 UID: 0 PID: 6021 Comm: syz-executor284 Not tainted 6.12.0-rc7-syzkaller-00187-gf868cd251776 #0
Hardware name: Google Google Compute Engine/Google Compute Engine, BIOS Google 10/30/2024
RIP: 0010:migrate_to_node mm/mempolicy.c:1090 [inline]
RIP: 0010:do_migrate_pages+0x403/0x6f0 mm/mempolicy.c:1194
Code: ...
RSP: 0018:ffffc9000375fd08 EFLAGS: 00010246
RAX: 0000000000000000 RBX: ffffc9000375fd78 RCX: 0000000000000000
RDX: ffff88807e171300 RSI: dfffffc0000000000 RDI: ffff88803390c044
RBP: ffff88807e171428 R08: 0000000000000014 R09: fffffbfff2039ef1
R10: ffffffff901cf78f R11: 0000000000000000 R12: 0000000000000003
R13: ffffc9000375fe90 R14: ffffc9000375fe98 R15: ffffc9000375fdf8
FS: 00005555919e1380(0000) GS:ffff8880b8700000(0000) knlGS:0000000000000000
CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 00005555919e1ca8 CR3: 000000007f12a000 CR4: 00000000003526f0
DR0: 0000000000000000 DR1: 0000000000000000 DR2: 0000000000000000
DR3: 0000000000000000 DR6: 00000000fffe0ff0 DR7: 0000000000000400
Call Trace:
 <TASK>
 kernel_migrate_pages+0x5b2/0x750 mm/mempolicy.c:1709
 __do_sys_migrate_pages mm/mempolicy.c:1727 [inline]
 __se_sys_migrate_pages mm/mempolicy.c:1723 [inline]
 __x64_sys_migrate_pages+0x96/0x100 mm/mempolicy.c:1723
 do_syscall_x64 arch/x86/entry/common.c:52 [inline]
 do_syscall_64+0xcd/0x250 arch/x86/entry/common.c:83
 entry_SYSCALL_64_after_hwframe+0x77/0x7f

[akpm@linux-foundation.org: add unlikely()]

More Info: https://avd.aquasec.com/nvd/cve-2024-56611

[CVE-2024-56647] kernel: net: Fix icmp host relookup triggering ip_rt_bug (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net: Fix icmp host relookup triggering ip_rt_bug

arp link failure may trigger ip_rt_bug while xfrm enabled, call trace is:

WARNING: CPU: 0 PID: 0 at net/ipv4/route.c:1241 ip_rt_bug+0x14/0x20
Modules linked in:
CPU: 0 UID: 0 PID: 0 Comm: swapper/0 Not tainted 6.12.0-rc6-00077-g2e1b3cc9d7f7
Hardware name: QEMU Standard PC (i440FX + PIIX, 1996),
BIOS rel-1.13.0-0-gf21b5a4aeb02-prebuilt.qemu.org 04/01/2014
RIP: 0010:ip_rt_bug+0x14/0x20
Call Trace:
 <IRQ>
 ip_send_skb+0x14/0x40
 __icmp_send+0x42d/0x6a0
 ipv4_link_failure+0xe2/0x1d0
 arp_error_report+0x3c/0x50
 neigh_invalidate+0x8d/0x100
 neigh_timer_handler+0x2e1/0x330
 call_timer_fn+0x21/0x120
 __run_timer_base.part.0+0x1c9/0x270
 run_timer_softirq+0x4c/0x80
 handle_softirqs+0xac/0x280
 irq_exit_rcu+0x62/0x80
 sysvec_apic_timer_interrupt+0x77/0x90

The script below reproduces this scenario:
ip xfrm policy add src 0.0.0.0/0 dst 0.0.0.0/0 \
 dir out priority 0 ptype main flag localok icmp
ip l a veth1 type veth
ip a a 192.168.141.111/24 dev veth0
ip l s veth0 up
ping 192.168.141.155 -c 1

icmp_route_lookup() create input routes for locally generated packets
while xfrm relookup ICMP traffic.Then it will set input route
(dst->out = ip_rt_bug) to skb for DESTUNREACH.

For ICMP err triggered by locally generated packets, dst->dev of output
route is loopback. Generally, xfrm relookup verification is not required
on loopback interfaces (net.ipv4.conf.lo.disable_xfrm = 1).

Skip icmp relookup for locally generated packets to fix it.

More Info: https://avd.aquasec.com/nvd/cve-2024-56647

[CVE-2024-56657] kernel: ALSA: control: Avoid WARN() for symlink errors (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ALSA: control: Avoid WARN() for symlink errors

Using WARN() for showing the error of symlink creations don't give
more information than telling that something goes wrong, since the
usual code path is a lregister callback from each control element
creation. More badly, the use of WARN() rather confuses fuzzer as if
it were serious issues.

This patch downgrades the warning messages to use the normal dev_err()
instead of WARN(). For making it clearer, add the function name to
the prefix, too.

More Info: https://avd.aquasec.com/nvd/cve-2024-56657

[CVE-2024-56692] kernel: f2fs: fix to do sanity check on node blkaddr in truncate_node() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

f2fs: fix to do sanity check on node blkaddr in truncate_node()

syzbot reports a f2fs bug as below:

------------[cut here]------------
kernel BUG at fs/f2fs/segment.c:2534!
RIP: 0010:f2fs_invalidate_blocks+0x35f/0x370 fs/f2fs/segment.c:2534
Call Trace:
 truncate_node+0x1ae/0x8c0 fs/f2fs/node.c:909
 f2fs_remove_inode_page+0x5c2/0x870 fs/f2fs/node.c:1288
 f2fs_evict_inode+0x879/0x15c0 fs/f2fs/inode.c:856
 evict+0x4e8/0x9b0 fs/inode.c:723
 f2fs_handle_failed_inode+0x271/0x2e0 fs/f2fs/inode.c:986
 f2fs_create+0x357/0x530 fs/f2fs/namei.c:394
 lookup_open fs/namei.c:3595 [inline]
 open_last_lookups fs/namei.c:3694 [inline]
 path_openat+0x1c03/0x3590 fs/namei.c:3930
 do_filp_open+0x235/0x490 fs/namei.c:3960
 do_sys_openat2+0x13e/0x1d0 fs/open.c:1415

do_sys_open fs/open.c:1430 [inline]
__do_sys_openat fs/open.c:1446 [inline]
__se_sys_openat fs/open.c:1441 [inline]
__x64_sys_openat+0x247/0x2a0 fs/open.c:1441
do_syscall_x64 arch/x86/entry/common.c:52 [inline]
do_syscall_64+0xf3/0x230 arch/x86/entry/common.c:83
entry_SYSCALL_64_after_hwframe+0x77/0x7f
RIP: 0010:f2fs_invalidate_blocks+0x35f/0x370 fs/f2fs/segment.c:2534

The root cause is: on a fuzzed image, blkaddr in nat entry may be
corrupted, then it will cause system panic when using it in
f2fs_invalidate_blocks(), to avoid this, let's add sanity check on
nat blkaddr in truncate_node().

More Info: https://avd.aquasec.com/nvd/cve-2024-56692

[CVE-2024-56712] kernel: udmabuf: fix memory leak on last export_udmabuf() error path (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

udmabuf: fix memory leak on last export_udmabuf() error path

In export_udmabuf(), if dma_buf_fd() fails because the FD table is full, a
dma_buf owning the udmabuf has already been created; but the error handling
in udmabuf_create() will tear down the udmabuf without doing anything about
the containing dma_buf.

This leaves a dma_buf in memory that contains a dangling pointer; though
that doesn't seem to lead to anything bad except a memory leak.

Fix it by moving the dma_buf_fd() call out of export_udmabuf() so that we
can give it different error handling.

Note that the shape of this code changed a lot in commit 5e72b2b41a21
("udmabuf: convert udmabuf driver to use folios"); but the memory leak
seems to have existed since the introduction of udmabuf.

More Info: https://avd.aquasec.com/nvd/cve-2024-56712

[CVE-2024-56719] kernel: net: stmmac: fix TSO DMA API usage causing oops (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net: stmmac: fix TSO DMA API usage causing oops

Commit 66600fac7a98 ("net: stmmac: TSO: Fix unbalanced DMA map/unmap for non-paged SKB data") moved the assignment of tx_skbuff_dma[]'s members to be later in stmmac_tso_xmit().

The buf (dma cookie) and len stored in this structure are passed to dma_unmap_single() by stmmac_tx_clean(). The DMA API requires that the dma cookie passed to dma_unmap_single() is the same as the value returned from dma_map_single(). However, by moving the assignment later, this is not the case when priv->dma_cap.addr64 > 32 as "des" is offset by proto_hdr_len.

This causes problems such as:

dwc-eth-dwmac 2490000.ethernet eth0: Tx DMA map failed

and with DMA_API_DEBUG enabled:

DMA-API: dwc-eth-dwmac 2490000.ethernet: device driver tries to +free DMA memory it has not allocated [device address=0x000000ffffcf65c0] [size=66 bytes]

Fix this by maintaining "des" as the original DMA cookie, and use tso_des to pass the offset DMA cookie to stmmac_tso_allocator().

Full details of the crashes can be found at:
https://lore.kernel.org/all/d8112193-0386-4e14-b516-37c2d838171a@nvidia.com/
https://lore.kernel.org/all/klkzp5yn5kq5efgtrow6wbvnc46bcqfxs65nz3qy77ujr5turc@bwwhelz2l4dw/

More Info: https://avd.aquasec.com/nvd/cve-2024-56719

[CVE-2024-56729] kernel: smb: Initialize cfid->tcon before performing network ops (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

smb: Initialize cfid->tcon before performing network ops

Avoid leaking a tcon ref when a lease break races with opening the cached directory. Processing the leak break might take a reference to the tcon in cached_dir_lease_break() and then fail to release the ref in cached_dir_offload_close, since cfid->tcon is still NULL.

More Info: https://avd.aquasec.com/nvd/cve-2024-56729

[CVE-2024-56742] kernel: vfio/mlx5: Fix an unwind issue in mlx5vf_add_migration_pages() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

vfio/mlx5: Fix an unwind issue in mlx5vf_add_migration_pages()

Fix an unwind issue in mlx5vf_add_migration_pages().

If a set of pages is allocated but fails to be added to the SG table,
they need to be freed to prevent a memory leak.

Any pages successfully added to the SG table will be freed as part of
mlx5vf_free_data_buffer().

More Info: https://avd.aquasec.com/nvd/cve-2024-56742

[CVE-2024-56757] kernel: Bluetooth: btusb: mediatek: add intf release flow when usb disconnect (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

Bluetooth: btusb: mediatek: add intf release flow when usb disconnect

MediaTek claim an special usb intr interface for ISO data transmission.
The interface need to be released before unregistering hci device when
usb disconnect. Removing BT usb dongle without properly releasing the
interface may cause Kernel panic while unregister hci device.

More Info: https://avd.aquasec.com/nvd/cve-2024-56757

[CVE-2024-56758] kernel: btrfs: check folio mapping after unlock in relocate_one_folio() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

btrfs: check folio mapping after unlock in relocate_one_folio()

When we call btrfs_read_folio() to bring a folio uptodate, we unlock the
folio. The result of that is that a different thread can modify the
mapping (like remove it with invalidate) before we call folio_lock().
This results in an invalid page and we need to try again.

In particular, if we are relocating concurrently with aborting a
transaction, this can result in a crash like the following:

```
BUG: kernel NULL pointer dereference, address: 0000000000000000
PGD 0 P4D 0
Oops: 0000 [#1] SMP
```

CPU: 76 PID: 1411631 Comm: kworker/u322:5
Workqueue: events_unbound btrfs_reclaim_bgs_work
RIP: 0010:set_page_extent_mapped+0x20/0xb0
RSP: 0018:ffffc900516a7be8 EFLAGS: 00010246
RAX: ffffea009e851d08 RBX: ffffea009e0b1880 RCX: 0000000000000000
RDX: 0000000000000000 RSI: ffffc900516a7b90 RDI: ffffea009e0b1880
RBP: 0000000003573000 R08: 0000000000000001 R09: ffff88c07fd2f3f0
R10: 0000000000000000 R11: 0000194754b575be R12: 0000000003572000
R13: 0000000003572fff R14: 0000000000100cca R15: 0000000005582fff
FS: 0000000000000000(0000) GS:ffff88c07fd00000(0000) knlGS:0000000000000000
CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 0000000000000000 CR3: 000000407d00f002 CR4: 00000000007706f0
DR0: 0000000000000000 DR1: 0000000000000000 DR2: 0000000000000000
DR3: 0000000000000000 DR6: 00000000fffe0ff0 DR7: 0000000000000400
PKRU: 55555554
Call Trace:
<TASK>
? __die+0x78/0xc0
? page_fault_oops+0x2a8/0x3a0
? __switch_to+0x133/0x530
? wq_worker_running+0xa/0x40
? exc_page_fault+0x63/0x130
? asm_exc_page_fault+0x22/0x30
? set_page_extent_mapped+0x20/0xb0
relocate_file_extent_cluster+0x1a7/0x940
relocate_data_extent+0xaf/0x120
relocate_block_group+0x20f/0x480
btrfs_relocate_block_group+0x152/0x320
btrfs_relocate_chunk+0x3d/0x120
btrfs_reclaim_bgs_work+0x2ae/0x4e0
process_scheduled_works+0x184/0x370
worker_thread+0xc6/0x3e0
? blk_add_timer+0xb0/0xb0
kthread+0xae/0xe0
? flush_tlb_kernel_range+0x90/0x90
ret_from_fork+0x2f/0x40
? flush_tlb_kernel_range+0x90/0x90
ret_from_fork_asm+0x11/0x20
</TASK>

This occurs because cleanup_one_transaction() calls
destroy_delalloc_inodes() which calls invalidate_inode_pages2() which
takes the folio_lock before setting mapping to NULL. We fail to check
this, and subsequently call set_extent_mapping(), which assumes that
mapping != NULL (in fact it asserts that in debug mode)

Note that the "fixes" patch here is not the one that introduced the
race (the very first iteration of this code from 2009) but a more recent
change that made this particular crash happen in practice.

More Info: https://avd.aquasec.com/nvd/cve-2024-56758

[CVE-2024-56782] kernel: ACPI: x86: Add adev NULL check to acpi_quirk_skip_serdev_enumeration()

(Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ACPI: x86: Add adev NULL check to acpi_quirk_skip_serdev_enumeration()

acpi_dev_hid_match() does not check for adev == NULL, dereferencing
it unconditional.

Add a check for adev being NULL before calling acpi_dev_hid_match().

At the moment acpi_quirk_skip_serdev_enumeration() is never called with
a controller_parent without an ACPI companion, but better safe than sorry.

More Info: https://avd.aquasec.com/nvd/cve-2024-56782

[CVE-2024-56786] kernel: bpf: put bpf_link's program when link is safe to be deallocated (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf: put bpf_link's program when link is safe to be deallocated

In general, BPF link's underlying BPF program should be considered to be
reachable through attach hook -> link -> prog chain, and, pessimistically,
we have to assume that as long as link's memory is not safe to free,
attach hook's code might hold a pointer to BPF program and use it.

As such, it's not (generally) correct to put link's program early before
waiting for RCU GPs to go through. More eager bpf_prog_put() that we
currently do is mostly correct due to BPF program's release code doing
similar RCU GP waiting, but as will be shown in the following patches,
BPF program can be non-sleepable (and, thus, reliant on only "classic"
RCU GP), while BPF link's attach hook can have sleepable semantics and
needs to be protected by RCU Tasks Trace, and for such cases BPF link
has to go through RCU Tasks Trace + "classic" RCU GPs before being
deallocated. And so, if we put BPF program early, we might free BPF
program before we free BPF link, leading to use-after-free situation.

So, this patch defers bpf_prog_put() until we are ready to perform
bpf_link's deallocation. At worst, this delays BPF program freeing by
one extra RCU GP, but that seems completely acceptable. Alternatively,
we'd need more elaborate ways to determine BPF hook, BPF link, and BPF
program lifetimes, and how they relate to each other, which seems like
an unnecessary complication.

Note, for most BPF links we still will perform eager bpf_prog_put() and
link dealloc, so for those BPF links there are no observable changes
whatsoever. Only BPF links that use deferred dealloc might notice
slightly delayed freeing of BPF programs.

Also, to reduce code and logic duplication, extract program put + link
dealloc logic into bpf_link_dealloc() helper.

More Info: https://avd.aquasec.com/nvd/cve-2024-56786

[CVE-2024-57795] kernel: RDMA/rxe: Remove the direct link to net_device (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

RDMA/rxe: Remove the direct link to net_device

The similar patch in siw is in the link:
https://git.kernel.org/rdma/rdma/c/16b87037b48889

This problem also occurred in RXE. The following analyze this problem.
In the following Call Traces:
"
BUG: KASAN: slab-use-after-free in dev_get_flags+0x188/0x1d0 net/core/dev.c:8782
Read of size 4 at addr ffff8880554640b0 by task kworker/1:4/5295

CPU: 1 UID: 0 PID: 5295 Comm: kworker/1:4 Not tainted
6.12.0-rc3-syzkaller-00399-g9197b73fd7bb #0
Hardware name: Google Compute Engine/Google Compute Engine,
BIOS Google 09/13/2024
Workqueue: infiniband ib_cache_event_task
Call Trace:
 <TASK>
 __dump_stack lib/dump_stack.c:94 [inline]
 dump_stack_lvl+0x241/0x360 lib/dump_stack.c:120
 print_address_description mm/kasan/report.c:377 [inline]
 print_report+0x169/0x550 mm/kasan/report.c:488
 kasan_report+0x143/0x180 mm/kasan/report.c:601
 dev_get_flags+0x188/0x1d0 net/core/dev.c:8782
 rxe_query_port+0x12d/0x260 drivers/infiniband/sw/rxe/rxe_verbs.c:60
 __ib_query_port drivers/infiniband/core/device.c:2111 [inline]
 ib_query_port+0x168/0x7d0 drivers/infiniband/core/device.c:2143
 ib_cache_update+0x1a9/0xb80 drivers/infiniband/core/cache.c:1494
 ib_cache_event_task+0xf3/0x1e0 drivers/infiniband/core/cache.c:1568
 process_one_work kernel/workqueue.c:3229 [inline]
 process_scheduled_works+0xa65/0x1850 kernel/workqueue.c:3310
 worker_thread+0x870/0xd30 kernel/workqueue.c:3391
 kthread+0x2f2/0x390 kernel/kthread.c:389
 ret_from_fork+0x4d/0x80 arch/x86/kernel/process.c:147
 ret_from_fork_asm+0x1a/0x30 arch/x86/entry/entry_64.S:244
 </TASK>

"

1). In the link [1],

"
 infiniband syz2: set down
"

This means that on 839.350575, the event ib_cache_event_task was sent andi
queued in ib_wq.

2). In the link [1],

"
 team0 (unregistering): Port device team_slave_0 removed
"

It indicates that before 843.251853, the net device should be freed.

3). In the link [1],

"
 BUG: KASAN: slab-use-after-free in dev_get_flags+0x188/0x1d0
"

This means that on 850.559070, this slab-use-after-free problem occurred.

In all, on 839.350575, the event ib_cache_event_task was sent and queued
in ib_wq,

before 843.251853, the net device veth was freed.

on 850.559070, this event was executed, and the mentioned freed net device
was called. Thus, the above call trace occurred.

[1] https://syzkaller.appspot.com/x/log.txt?x=12e7025f980000

More Info: https://avd.aquasec.com/nvd/cve-2024-57795

[CVE-2024-57804] kernel: scsi: mpi3mr: Fix corrupt config pages PHY state is switched in sysfs (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

scsi: mpi3mr: Fix corrupt config pages PHY state is switched in sysfs

The driver, through the SAS transport, exposes a sysfs interface to
enable/disable PHYs in a controller/expander setup. When multiple PHYs
are disabled and enabled in rapid succession, the persistent and current

config pages related to SAS IO unit/SAS Expander pages could get
corrupted.

Use separate memory for each config request.

More Info: https://avd.aquasec.com/nvd/cve-2024-57804

[CVE-2024-57809] kernel: PCI: imx6: Fix suspend/resume support on i.MX6QDL (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

PCI: imx6: Fix suspend/resume support on i.MX6QDL

The suspend/resume functionality is currently broken on the i.MX6QDL
platform, as documented in the NXP errata (ERR005723):

  https://www.nxp.com/docs/en/errata/IMX6DQCE.pdf

This patch addresses the issue by sharing most of the suspend/resume
sequences used by other i.MX devices, while avoiding modifications to
critical registers that disrupt the PCIe functionality. It targets the
same problem as the following downstream commit:

  https://github.com/nxp-imx/linux-imx/commit/4e92355e1f79d225ea842511fcfd42b343b32995

Unlike the downstream commit, this patch also resets the connected PCIe
device if possible. Without this reset, certain drivers, such as ath10k
or iwlwifi, will crash on resume. The device reset is also done by the
driver on other i.MX platforms, making this patch consistent with
existing practices.

Upon resuming, the kernel will hang and display an error. Here's an
example of the error encountered with the ath10k driver:

  ath10k_pci 0000:01:00.0: Unable to change power state from D3hot to D0, device inaccessible
  Unhandled fault: imprecise external abort (0x1406) at 0x0106f944

Without this patch, suspend/resume will fail on i.MX6QDL devices if a
PCIe device is connected.

[kwilczynski: commit log, added tag for stable releases]

More Info: https://avd.aquasec.com/nvd/cve-2024-57809

[CVE-2024-57843] kernel: virtio-net: fix overflow inside virtnet_rq_alloc (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

virtio-net: fix overflow inside virtnet_rq_alloc

When the frag just got a page, then may lead to regression on VM.
Specially if the sysctl net.core.high_order_alloc_disable value is 1,
then the frag always get a page when do refill.

Which could see reliable crashes or scp failure (scp a file 100M in size
to VM).

The issue is that the virtnet_rq_dma takes up 16 bytes at the beginning
of a new frag. When the frag size is larger than PAGE_SIZE,
everything is fine. However, if the frag is only one page and the
total size of the buffer and virtnet_rq_dma is larger than one page, an
overflow may occur.

The commit f9dac92ba908 ("virtio_ring: enable premapped mode whatever
use_dma_api") introduced this problem. And we reverted some commits to
fix this in last linux version. Now we try to enable it and fix this
bug directly.

Here, when the frag size is not enough, we reduce the buffer len to fix
this problem.

More Info: https://avd.aquasec.com/nvd/cve-2024-57843

[CVE-2024-57852] kernel: firmware: qcom: scm: smc: Handle missing SCM device (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

firmware: qcom: scm: smc: Handle missing SCM device

Commit ca61d6836e6f ("firmware: qcom: scm: fix a NULL-pointer
dereference") makes it explicit that qcom_scm_get_tzmem_pool() can
return NULL, therefore its users should handle this.

More Info: https://avd.aquasec.com/nvd/cve-2024-57852

[CVE-2024-57857] kernel: RDMA/siw: Remove direct link to net_device (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

RDMA/siw: Remove direct link to net_device

Do not manage a per device direct link to net_device. Rely

on associated ib_devices net_device management, not doubling
the effort locally. A badly managed local link to net_device
was causing a 'KASAN: slab-use-after-free' exception during
siw_query_port() call.

More Info: https://avd.aquasec.com/nvd/cve-2024-57857

[CVE-2024-57872] kernel: scsi: ufs: pltfrm: Dellocate HBA during ufshcd_pltfrm_remove() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

scsi: ufs: pltfrm: Dellocate HBA during ufshcd_pltfrm_remove()

This will ensure that the scsi host is cleaned up properly using
scsi_host_dev_release(). Otherwise, it may lead to memory leaks.

More Info: https://avd.aquasec.com/nvd/cve-2024-57872

[CVE-2024-57875] kernel: block: RCU protect disk->conv_zones_bitmap (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

block: RCU protect disk->conv_zones_bitmap

Ensure that a disk revalidation changing the conventional zones bitmap
of a disk does not cause invalid memory references when using the
disk_zone_is_conv() helper by RCU protecting the disk->conv_zones_bitmap
pointer.

disk_zone_is_conv() is modified to operate under the RCU read lock and
the function disk_set_conv_zones_bitmap() is added to update a disk
conv_zones_bitmap pointer using rcu_replace_pointer() with the disk
zone_wplugs_lock spinlock held.

disk_free_zone_resources() is modified to call
disk_update_zone_resources() with a NULL bitmap pointer to free the disk
conv_zones_bitmap. disk_set_conv_zones_bitmap() is also used in
disk_update_zone_resources() to set the new (revalidated) bitmap and
free the old one.

More Info: https://avd.aquasec.com/nvd/cve-2024-57875

[CVE-2024-57883] kernel: mm: hugetlb: independent PMD page table shared count (Severity: MEDIUM)

Package: linux-libc-dev

Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

mm: hugetlb: independent PMD page table shared count

The folio refcount may be increased unexpectly through try_get_folio() by
caller such as split_huge_pages. In huge_pmd_unshare(), we use refcount
to check whether a pmd page table is shared. The check is incorrect if
the refcount is increased by the above caller, and this can cause the page
table leaked:

```
 BUG: Bad page state in process sh  pfn:109324
 page: refcount:0 mapcount:0 mapping:0000000000000000 index:0x66 pfn:0x109324
 flags: 0x17ffff800000000(node=0|zone=2|lastcpupid=0xfffff)
 page_type: f2(table)
 raw: 017ffff800000000 0000000000000000 0000000000000000 0000000000000000
 raw: 0000000000000066 0000000000000000 00000000f2000000 0000000000000000
 page dumped because: nonzero mapcount
 ...
 CPU: 31 UID: 0 PID: 7515 Comm: sh Kdump: loaded Tainted: G    B             6.13.0-rc2master+ #7
 Tainted: [B]=BAD_PAGE
 Hardware name: QEMU KVM Virtual Machine, BIOS 0.0.0 02/06/2015
 Call trace:
  show_stack+0x20/0x38 (C)
  dump_stack_lvl+0x80/0xf8
  dump_stack+0x18/0x28
  bad_page+0x8c/0x130
  free_page_is_bad_report+0xa4/0xb0
  free_unref_page+0x3cc/0x620
  __folio_put+0xf4/0x158
  split_huge_pages_all+0x1e0/0x3e8
  split_huge_pages_write+0x25c/0x2d8
  full_proxy_write+0x64/0xd8
  vfs_write+0xcc/0x280
  ksys_write+0x70/0x110
  __arm64_sys_write+0x24/0x38
  invoke_syscall+0x50/0x120
  el0_svc_common.constprop.0+0xc8/0xf0
  do_el0_svc+0x24/0x38
  el0_svc+0x34/0x128
  el0t_64_sync_handler+0xc8/0xd0
  el0t_64_sync+0x190/0x198
```

The issue may be triggered by damon, offline_page, page_idle, etc, which
will increase the refcount of page table.

1. The page table itself will be discarded after reporting the
   "nonzero mapcount".

2. The HugeTLB page mapped by the page table miss freeing since we
   treat the page table as shared and a shared page table will not be

unmapped.

Fix it by introducing independent PMD page table shared count. As
described by comment, pt_index/pt_mm/pt_frag_refcount are used for s390
gmap, x86 pgds and powerpc, pt_share_count is used for x86/arm64/riscv
pmds, so we can reuse the field as pt_share_count.

More Info: https://avd.aquasec.com/nvd/cve-2024-57883

[CVE-2024-57888] kernel: workqueue: Do not warn when cancelling WQ_MEM_RECLAIM work from !WQ_MEM_RECLAIM worker (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

workqueue: Do not warn when cancelling WQ_MEM_RECLAIM work from !WQ_MEM_RECLAIM worker

After commit
746ae46c1113 ("drm/sched: Mark scheduler work queues with WQ_MEM_RECLAIM")
amdgpu started seeing the following warning:

[ ] workqueue: WQ_MEM_RECLAIM sdma0:drm_sched_run_job_work [gpu_sched] is flushing !WQ_MEM_RECLAIM events:amdgpu_device_delay_enable_gfx_off [amdgpu]
...
[ ] Workqueue: sdma0 drm_sched_run_job_work [gpu_sched]
...
[ ] Call Trace:
[ ] <TASK>
...
[ ] ? check_flush_dependency+0xf5/0x110
...
[ ] cancel_delayed_work_sync+0x6e/0x80
[ ] amdgpu_gfx_off_ctrl+0xab/0x140 [amdgpu]
[ ] amdgpu_ring_alloc+0x40/0x50 [amdgpu]
[ ] amdgpu_ib_schedule+0xf4/0x810 [amdgpu]
[ ] ? drm_sched_run_job_work+0x22c/0x430 [gpu_sched]
[ ] amdgpu_job_run+0xaa/0x1f0 [amdgpu]
[ ] drm_sched_run_job_work+0x257/0x430 [gpu_sched]
[ ] process_one_work+0x217/0x720
...
[ ] </TASK>

The intent of the verifcation done in check_flush_depedency is to ensure
forward progress during memory reclaim, by flagging cases when either a
memory reclaim process, or a memory reclaim work item is flushed from a
context not marked as memory reclaim safe.

This is correct when flushing, but when called from the
cancel(_delayed)_work_sync() paths it is a false positive because work is
either already running, or will not be running at all. Therefore

cancelling it is safe and we can relax the warning criteria by letting the
helper know of the calling context.

References: 746ae46c1113 ("drm/sched: Mark scheduler work queues with WQ_MEM_RECLAIM")

More Info: https://avd.aquasec.com/nvd/cve-2024-57888

[CVE-2024-57895] kernel: ksmbd: set ATTR_CTIME flags when setting mtime (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ksmbd: set ATTR_CTIME flags when setting mtime

David reported that the new warning from setattr_copy_mgtime is coming
like the following.

[113.215316] ------------[cut here]------------
[113.215974] WARNING: CPU: 1 PID: 31 at fs/attr.c:300 setattr_copy+0x1ee/0x200
[113.219192] CPU: 1 UID: 0 PID: 31 Comm: kworker/1:1 Not tainted 6.13.0-rc1+ #234
[113.220127] Hardware name: QEMU Standard PC (i440FX + PIIX, 1996), BIOS rel-1.16.2-3-gd478f380-rebuilt.opensuse.org 04/01/2014
[113.221530] Workqueue: ksmbd-io handle_ksmbd_work [ksmbd]
[113.222220] RIP: 0010:setattr_copy+0x1ee/0x200
[113.222833] Code: 24 28 49 8b 44 24 30 48 89 53 58 89 43 6c 5b 41 5c 41 5d 41 5e 41 5f 5d c3 cc cc cc cc 48 89 df e8 77 d6 ff ff e9 cd fe ff ff <0f> 0b e9 be fe ff ff 66 0
[113.225110] RSP: 0018:ffffaf218010fb68 EFLAGS: 00010202
[113.225765] RAX: 0000000000000120 RBX: ffffa446815f8568 RCX: 0000000000000003
[113.226667] RDX: ffffaf218010fd38 RSI: ffffa446815f8568 RDI: ffffffff94eb03a0
[113.227531] RBP: ffffaf218010fb90 R08: 0000001a251e217d R09: 00000000675259fa
[113.228426] R10: 0000000002ba8a6d R11: ffffa4468196c7a8 R12: ffffaf218010fd38
[113.229304] R13: 0000000000000120 R14: ffffffff94eb03a0 R15: 0000000000000000
[113.230210] FS: 0000000000000000(0000) GS:ffffa44739d00000(0000) knlGS:0000000000000000
[113.231215] CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
[113.232055] CR2: 00007efe0053d27e CR3: 000000000331a000 CR4: 00000000000006b0
[113.232926] DR0: 0000000000000000 DR1: 0000000000000000 DR2: 0000000000000000
[113.233812] DR3: 0000000000000000 DR6: 00000000fffe0ff0 DR7: 0000000000000400
[113.234797] Call Trace:
[113.235116] <TASK>
[113.235393] ? __warn+0x73/0xd0
[113.235802] ? setattr_copy+0x1ee/0x200
[113.236299] ? report_bug+0xf3/0x1e0
[113.236757] ? handle_bug+0x4d/0x90
[113.237202] ? exc_invalid_op+0x13/0x60
[113.237689] ? asm_exc_invalid_op+0x16/0x20
[113.238185] ? setattr_copy+0x1ee/0x200
[113.238692] btrfs_setattr+0x80/0x820 [btrfs]
[113.239285] ? get_stack_info_noinstr+0x12/0xf0
[113.239857] ? __module_address+0x22/0xa0
[113.240368] ? handle_ksmbd_work+0x6e/0x460 [ksmbd]
[113.240993] ? __module_text_address+0x9/0x50

[113.241545] ? __module_address+0x22/0xa0
[113.242033] ? unwind_next_frame+0x10e/0x920
[113.242600] ? __pfx_stack_trace_consume_entry+0x10/0x10
[113.243268] notify_change+0x2c2/0x4e0
[113.243746] ? stack_depot_save_flags+0x27/0x730
[113.244339] ? set_file_basic_info+0x130/0x2b0 [ksmbd]
[113.244993] set_file_basic_info+0x130/0x2b0 [ksmbd]
[113.245613] ? process_scheduled_works+0xbe/0x310
[113.246181] ? worker_thread+0x100/0x240
[113.246696] ? kthread+0xc8/0x100
[113.247126] ? ret_from_fork+0x2b/0x40
[113.247606] ? ret_from_fork_asm+0x1a/0x30
[113.248132] smb2_set_info+0x63f/0xa70 [ksmbd]

ksmbd is trying to set the atime and mtime via notify_change without also
setting the ctime. so This patch add ATTR_CTIME flags when setting mtime
to avoid a warning.

More Info: https://avd.aquasec.com/nvd/cve-2024-57895

[CVE-2024-57898] kernel: wifi: cfg80211: clear link ID from bitmap during link delete after clean up (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

wifi: cfg80211: clear link ID from bitmap during link delete after clean up

Currently, during link deletion, the link ID is first removed from the
valid_links bitmap before performing any clean-up operations. However, some
functions require the link ID to remain in the valid_links bitmap. One
such example is cfg80211_cac_event(). The flow is -

```
nl80211_remove_link()
   cfg80211_remove_link()
      ieee80211_del_intf_link()
         ieee80211_vif_set_links()
            ieee80211_vif_update_links()
               ieee80211_link_stop()
                  cfg80211_cac_event()
```

cfg80211_cac_event() requires link ID to be present but it is cleared
already in cfg80211_remove_link(). Ultimately, WARN_ON() is hit.

Therefore, clear the link ID from the bitmap only after completing the link
clean-up.

More Info: https://avd.aquasec.com/nvd/cve-2024-57898

[CVE-2024-57899] kernel: wifi: mac80211: fix mbss changed flags corruption on 32 bit systems

(Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

wifi: mac80211: fix mbss changed flags corruption on 32 bit systems

On 32-bit systems, the size of an unsigned long is 4 bytes,
while a u64 is 8 bytes. Therefore, when using
or_each_set_bit(bit, &bits, sizeof(changed) * BITS_PER_BYTE),
the code is incorrectly searching for a bit in a 32-bit
variable that is expected to be 64 bits in size,
leading to incorrect bit finding.

Solution: Ensure that the size of the bits variable is correctly
adjusted for each architecture.

Call Trace:
? show_regs+0x54/0x58
? __warn+0x6b/0xd4
? ieee80211_link_info_change_notify+0xcc/0xd4 [mac80211]
? report_bug+0x113/0x150
? exc_overflow+0x30/0x30
? handle_bug+0x27/0x44
? exc_invalid_op+0x18/0x50
? handle_exception+0xf6/0xf6
? exc_overflow+0x30/0x30
? ieee80211_link_info_change_notify+0xcc/0xd4 [mac80211]
? exc_overflow+0x30/0x30
? ieee80211_link_info_change_notify+0xcc/0xd4 [mac80211]
? ieee80211_mesh_work+0xff/0x260 [mac80211]
? cfg80211_wiphy_work+0x72/0x98 [cfg80211]
? process_one_work+0xf1/0x1fc
? worker_thread+0x2c0/0x3b4
? kthread+0xc7/0xf0
? mod_delayed_work_on+0x4c/0x4c
? kthread_complete_and_exit+0x14/0x14
? ret_from_fork+0x24/0x38
? kthread_complete_and_exit+0x14/0x14
? ret_from_fork_asm+0xf/0x14
? entry_INT80_32+0xf0/0xf0

[restore no-op path for no changes]

More Info: https://avd.aquasec.com/nvd/cve-2024-57899

[CVE-2024-57924] kernel: fs: relax assertions on failure to encode file handles (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

fs: relax assertions on failure to encode file handles

Encoding file handles is usually performed by a filesystem >encode_fh()
method that may fail for various reasons.

The legacy users of exportfs_encode_fh(), namely, nfsd and
name_to_handle_at(2) syscall are ready to cope with the possibility
of failure to encode a file handle.

There are a few other users of exportfs_encode_{fh,fid}() that
currently have a WARN_ON() assertion when ->encode_fh() fails.
Relax those assertions because they are wrong.

The second linked bug report states commit 16aac5ad1fa9 ("ovl: support
encoding non-decodable file handles") in v6.6 as the regressing commit,
but this is not accurate.

The aforementioned commit only increases the chances of the assertion
and allows triggering the assertion with the reproducer using overlayfs,
inotify and drop_caches.

Triggering this assertion was always possible with other filesystems and
other reasons of ->encode_fh() failures and more particularly, it was
also possible with the exact same reproducer using overlayfs that is
mounted with options index=on,nfs_export=on also on kernels < v6.6.
Therefore, I am not listing the aforementioned commit as a Fixes commit.

Backport hint: this patch will have a trivial conflict applying to
v6.6.y, and other trivial conflicts applying to stable kernels < v6.6.

More Info: https://avd.aquasec.com/nvd/cve-2024-57924

[CVE-2024-57945] kernel: riscv: mm: Fix the out of bound issue of vmemmap address (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

riscv: mm: Fix the out of bound issue of vmemmap address

In sparse vmemmap model, the virtual address of vmemmap is calculated as:
((struct page *)VMEMMAP_START - (phys_ram_base >> PAGE_SHIFT)).
And the struct page's va can be calculated with an offset:
(vmemmap + (pfn)).

However, when initializing struct pages, kernel actually starts from the
first page from the same section that phys_ram_base belongs to. If the

first page's physical address is not (phys_ram_base >> PAGE_SHIFT), then
we get an va below VMEMMAP_START when calculating va for it's struct page.

For example, if phys_ram_base starts from 0x82000000 with pfn 0x82000, the
first page in the same section is actually pfn 0x80000. During
init_unavailable_range(), we will initialize struct page for pfn 0x80000
with virtual address ((struct page *)VMEMMAP_START - 0x2000), which is
below VMEMMAP_START as well as PCI_IO_END.

This commit fixes this bug by introducing a new variable
'vmemmap_start_pfn' which is aligned with memory section size and using
it to calculate vmemmap address instead of phys_ram_base.

More Info: https://avd.aquasec.com/nvd/cve-2024-57945

[CVE-2024-57950] kernel: drm/amd/display: Initialize denominator defaults to 1 (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Initialize denominator defaults to 1

[WHAT & HOW]
Variables, used as denominators and maybe not assigned to other values,
should be initialized to non-zero to avoid DIVIDE_BY_ZERO, as reported
by Coverity.

(cherry picked from commit e2c4c6c10542ccfe4a0830bb6c9fd5b177b7bbb7)

More Info: https://avd.aquasec.com/nvd/cve-2024-57950

[CVE-2024-57952] kernel: Revert "libfs: fix infinite directory reads for offset dir" (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

Revert "libfs: fix infinite directory reads for offset dir"

The current directory offset allocator (based on mtree_alloc_cyclic)
stores the next offset value to return in octx->next_offset. This
mechanism typically returns values that increase monotonically over
time. Eventually, though, the newly allocated offset value wraps
back to a low number (say, 2) which is smaller than other already-
allocated offset values.

Yu Kuai <yukuai3@huawei.com> reports that, after commit 64a7ce76fb90
("libfs: fix infinite directory reads for offset dir"), if a
directory's offset allocator wraps, existing entries are no longer

visible via readdir/getdents because offset_readdir() stops listing
entries once an entry's offset is larger than octx->next_offset.
These entries vanish persistently -- they can be looked up, but will
never again appear in readdir(3) output.

The reason for this is that the commit treats directory offsets as
monotonically increasing integer values rather than opaque cookies,
and introduces this comparison:

 if (dentry2offset(dentry) >= last_index) {

On 64-bit platforms, the directory offset value upper bound is
2^63 - 1. Directory offsets will monotonically increase for millions
of years without wrapping.

On 32-bit platforms, however, LONG_MAX is 2^31 - 1. The allocator
can wrap after only a few weeks (at worst).

Revert commit 64a7ce76fb90 ("libfs: fix infinite directory reads for
offset dir") to prepare for a fix that can work properly on 32-bit
systems and might apply to recent LTS kernels where shmem employs
the simple_offset mechanism.

More Info: https://avd.aquasec.com/nvd/cve-2024-57952

[CVE-2024-57974] kernel: udp: Deal with race between UDP socket address change and rehash (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

udp: Deal with race between UDP socket address change and rehash

If a UDP socket changes its local address while it's receiving
datagrams, as a result of connect(), there is a period during which
a lookup operation might fail to find it, after the address is changed
but before the secondary hash (port and address) and the four-tuple
hash (local and remote ports and addresses) are updated.

Secondary hash chains were introduced by commit 30fff9231fad ("udp:
bind() optimisation") and, as a result, a rehash operation became
needed to make a bound socket reachable again after a connect().

This operation was introduced by commit 719f835853a9 ("udp: add
rehash on connect()") which isn't however a complete fix: the
socket will be found once the rehashing completes, but not while
it's pending.

This is noticeable with a socat(1) server in UDP4-LISTEN mode, and a
client sending datagrams to it. After the server receives the first

datagram (cf. _xioopen_ipdgram_listen()), it issues a connect() to
the address of the sender, in order to set up a directed flow.

Now, if the client, running on a different CPU thread, happens to
send a (subsequent) datagram while the server's socket changes its
address, but is not rehashed yet, this will result in a failed
lookup and a port unreachable error delivered to the client, as
apparent from the following reproducer:

```
LEN=$(($(cat /proc/sys/net/core/wmem_default) / 4))
dd if=/dev/urandom bs=1 count=${LEN} of=tmp.in

while :; do
 taskset -c 1 socat UDP4-LISTEN:1337,null-eof OPEN:tmp.out,create,trunc &
 sleep 0.1 || sleep 1
 taskset -c 2 socat OPEN:tmp.in UDP4:localhost:1337,shut-null
 wait
done
```

where the client will eventually get ECONNREFUSED on a write()
(typically the second or third one of a given iteration):

```
2024/11/13 21:28:23 socat[46901] E write(6, 0x556db2e3c000, 8192): Connection refused
```

This issue was first observed as a seldom failure in Podman's tests
checking UDP functionality while using pasta(1) to connect the
container's network namespace, which leads us to a reproducer with
the lookup error resulting in an ICMP packet on a tap device:

```
LOCAL_ADDR="$(ip -j -4 addr show|jq -rM '.[] | .addr_info[0] | select(.scope == "global").local')"

while :; do
 ./pasta --config-net -p pasta.pcap -u 1337 socat UDP4-LISTEN:1337,null-eof OPEN:tmp.out,create,trunc &
 sleep 0.2 || sleep 1
 socat OPEN:tmp.in UDP4:${LOCAL_ADDR}:1337,shut-null
 wait
 cmp tmp.in tmp.out
done
```

Once this fails:

```
tmp.in tmp.out differ: char 8193, line 29
```

we can finally have a look at what's going on:

```
$ tshark -r pasta.pcap
    1   0.000000          :: ? ff02::16     ICMPv6 110 Multicast Listener Report Message v2
    2   0.168690 88.198.0.161 ? 88.198.0.164 UDP 8234 60260 ? 1337 Len=8192
    3   0.168767 88.198.0.161 ? 88.198.0.164 UDP 8234 60260 ? 1337 Len=8192
    4   0.168806 88.198.0.161 ? 88.198.0.164 UDP 8234 60260 ? 1337 Len=8192
    5   0.168827 c6:47:05:8d:dc:04 ? Broadcast    ARP 42 Who has 88.198.0.161? Tell 88.198.0.164
    6   0.168851 9a:55:9a:55:9a:55 ? c6:47:05:8d:dc:04 ARP 42 88.198.0.161 is at 9a:55:9a:55:9a:55
    7   0.168875 88.198.0.161 ? 88.198.0.164 UDP 8234 60260 ? 1337 Len=8192
```

```
 8   0.168896 88.198.0.164 ? 88.198.0.161 ICMP 590 Destination unreachable (Port unreachable)
 9   0.168926 88.198.0.161 ? 88.198.0.164 UDP 8234 60260 ? 1337 Len=8192
10   0.168959 88.198.0.161 ? 88.198.0.164 UDP 8234 60260 ? 1337 Len=8192
11   0.168989 88.198.0.161 ? 88.198.0.164 UDP 4138 60260 ? 1337 Len=4096
12   0.169010 88.198.0.161 ? 88.198.0.164 UDP 42 60260 ? 1337 Len=0
```

On the third datagram received, the network namespace of the container
initiates an ARP lookup to deliver the ICMP message.

In another variant of this reproducer, starting the client with:

```
 strace -f pasta --config-net -u 1337 socat UDP4-LISTEN:1337,null-eof OPEN:tmp.out,create,tru
---truncated---
```

More Info: https://avd.aquasec.com/nvd/cve-2024-57974

[CVE-2024-57975] kernel: btrfs: do proper folio cleanup when run_delalloc_nocow() failed (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

btrfs: do proper folio cleanup when run_delalloc_nocow() failed

[BUG]
With CONFIG_DEBUG_VM set, test case generic/476 has some chance to crash
with the following VM_BUG_ON_FOLIO():

```
 BTRFS error (device dm-3): cow_file_range failed, start 1146880 end 1253375 len 106496 ret -28
 BTRFS error (device dm-3): run_delalloc_nocow failed, start 1146880 end 1253375 len 106496 ret -28
 page: refcount:4 mapcount:0 mapping:00000000592787cc index:0x12 pfn:0x10664
 aops:btrfs_aops [btrfs] ino:101 dentry name(?):"f1774"
 flags: 0x2fffff80004028(uptodate|lru|private|node=0|zone=2|lastcpupid=0xfffff)
 page dumped because: VM_BUG_ON_FOLIO(!folio_test_locked(folio))
 ------------[ cut here ]------------
 kernel BUG at mm/page-writeback.c:2992!
 Internal error: Oops - BUG: 00000000f2000800 [#1] SMP
 CPU: 2 UID: 0 PID: 3943513 Comm: kworker/u24:15 Tainted: G           OE      6.12.0-rc7-custom+ #87
 Tainted: [O]=OOT_MODULE, [E]=UNSIGNED_MODULE
 Hardware name: QEMU KVM Virtual Machine, BIOS unknown 2/2/2022
 Workqueue: events_unbound btrfs_async_reclaim_data_space [btrfs]
 pc : folio_clear_dirty_for_io+0x128/0x258
 lr : folio_clear_dirty_for_io+0x128/0x258
 Call trace:
  folio_clear_dirty_for_io+0x128/0x258
  btrfs_folio_clamp_clear_dirty+0x80/0xd0 [btrfs]
  __process_folios_contig+0x154/0x268 [btrfs]
  extent_clear_unlock_delalloc+0x5c/0x80 [btrfs]
  run_delalloc_nocow+0x5f8/0x760 [btrfs]
  btrfs_run_delalloc_range+0xa8/0x220 [btrfs]
```

```
 writepage_delalloc+0x230/0x4c8 [btrfs]
 extent_writepage+0xb8/0x358 [btrfs]
 extent_write_cache_pages+0x21c/0x4e8 [btrfs]
 btrfs_writepages+0x94/0x150 [btrfs]
 do_writepages+0x74/0x190
 filemap_fdatawrite_wbc+0x88/0xc8
 start_delalloc_inodes+0x178/0x3a8 [btrfs]
 btrfs_start_delalloc_roots+0x174/0x280 [btrfs]
 shrink_delalloc+0x114/0x280 [btrfs]
 flush_space+0x250/0x2f8 [btrfs]
 btrfs_async_reclaim_data_space+0x180/0x228 [btrfs]
 process_one_work+0x164/0x408
 worker_thread+0x25c/0x388
 kthread+0x100/0x118
 ret_from_fork+0x10/0x20
Code: 910a8021 a90363f7 a9046bf9 94012379 (d4210000)
---[ end trace 0000000000000000 ]---
```

[CAUSE]
The first two lines of extra debug messages show the problem is caused
by the error handling of run_delalloc_nocow().

E.g. we have the following dirtied range (4K blocksize 4K page size):

```
 0               16K               32K
 |////////////////////////////////////|
 |  Pre-allocated  |
```

And the range [0, 16K) has a preallocated extent.

- Enter run_delalloc_nocow() for range [0, 16K)
  Which found range [0, 16K) is preallocated, can do the proper NOCOW
  write.

- Enter fallback_to_fow() for range [16K, 32K)
  Since the range [16K, 32K) is not backed by preallocated extent, we
  have to go COW.

- cow_file_range() failed for range [16K, 32K)
  So cow_file_range() will do the clean up by clearing folio dirty,
  unlock the folios.

  Now the folios in range [16K, 32K) is unlocked.

- Enter extent_clear_unlock_delalloc() from run_delalloc_nocow()
  Which is called with PAGE_START_WRITEBACK to start page writeback.
  But folios can only be marked writeback when it's properly locked,
  thus this triggered the VM_BUG_ON_FOLIO().

Furthermore there is another hidden but common bug that
run_delalloc_nocow() is not clearing the folio dirty flags in its error
handling path.
This is the common bug shared between run_delalloc_nocow() and

cow_file_range().

[FIX]
- Clear folio dirty for range [@start, @cur_offset)
  Introduce a helper, cleanup_dirty_folios(), which
  will find and lock the folio in the range, clear the dirty flag and
  start/end the writeback, with the extra handling for the
  @locked_folio.

- Introduce a helper to clear folio dirty, start and end writeback

- Introduce a helper to record the last failed COW range end
  This is to trace which range we should skip, to avoid double
  unlocking.

- Skip the failed COW range for the e
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2024-57975

[CVE-2024-57976] kernel: btrfs: do proper folio cleanup when cow_file_range() failed (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

btrfs: do proper folio cleanup when cow_file_range() failed

[BUG]
When testing with COW fixup marked as BUG_ON() (this is involved with the
new pin_user_pages*() change, which should not result new out-of-band
dirty pages), I hit a crash triggered by the BUG_ON() from hitting COW
fixup path.

This BUG_ON() happens just after a failed btrfs_run_delalloc_range():

  BTRFS error (device dm-2): failed to run delalloc range, root 348 ino 405 folio 65536 submit_bitmap 6-15 start 90112 len 106496: -28
  ------------[cut here]------------
  kernel BUG at fs/btrfs/extent_io.c:1444!
  Internal error: Oops - BUG: 00000000f2000800 [#1] SMP
  CPU: 0 UID: 0 PID: 434621 Comm: kworker/u24:8 Tainted: G   OE   6.12.0-rc7-custom+ #86
  Hardware name: QEMU KVM Virtual Machine, BIOS unknown 2/2/2022
  Workqueue: events_unbound btrfs_async_reclaim_data_space [btrfs]
  pc : extent_writepage_io+0x2d4/0x308 [btrfs]
  lr : extent_writepage_io+0x2d4/0x308 [btrfs]
  Call trace:
   extent_writepage_io+0x2d4/0x308 [btrfs]
   extent_writepage+0x218/0x330 [btrfs]
   extent_write_cache_pages+0x1d4/0x4b0 [btrfs]

```
 btrfs_writepages+0x94/0x150 [btrfs]
 do_writepages+0x74/0x190
 filemap_fdatawrite_wbc+0x88/0xc8
 start_delalloc_inodes+0x180/0x3b0 [btrfs]
 btrfs_start_delalloc_roots+0x174/0x280 [btrfs]
 shrink_delalloc+0x114/0x280 [btrfs]
 flush_space+0x250/0x2f8 [btrfs]
 btrfs_async_reclaim_data_space+0x180/0x228 [btrfs]
 process_one_work+0x164/0x408
 worker_thread+0x25c/0x388
 kthread+0x100/0x118
 ret_from_fork+0x10/0x20
Code: aa1403e1 9402f3ef aa1403e0 9402f36f (d4210000)
---[ end trace 0000000000000000 ]---
```

[CAUSE]
That failure is mostly from cow_file_range(), where we can hit -ENOSPC.

Although the -ENOSPC is already a bug related to our space reservation code, let's just focus on the error handling.

For example, we have the following dirty range [0, 64K) of an inode, with 4K sector size and 4K page size:

```
 0       16K       32K       48K       64K
 |/////////////////////////////////////////|
 |#########################################|
```

Where |///| means page are still dirty, and |###| means the extent io tree has EXTENT_DELALLOC flag.

- Enter extent_writepage() for page 0

- Enter btrfs_run_delalloc_range() for range [0, 64K)

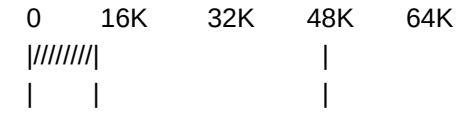
- Enter cow_file_range() for range [0, 64K)

- Function btrfs_reserve_extent() only reserved one 16K extent
  So we created extent map and ordered extent for range [0, 16K)

```
 0       16K       32K       48K       64K
 |////////|/////////////////////////////|
 |<- OE ->|#############################|
```

  And range [0, 16K) has its delalloc flag cleared.
  But since we haven't yet submit any bio, involved 4 pages are still
  dirty.

- Function btrfs_reserve_extent() returns with -ENOSPC
  Now we have to run error cleanup, which will clear all
  EXTENT_DELALLOC* flags and clear the dirty flags for the remaining
  ranges:



Note that range [0, 16K) still has its pages dirty.

- Some time later, writeback is triggered again for the range [0, 16K)
since the page range still has dirty flags.

- btrfs_run_delalloc_range() will do nothing because there is no
EXTENT_DELALLOC flag.

- extent_writepage_io() finds page 0 has no ordered flag
Which falls into the COW fixup path, triggering the BUG_ON().

Unfortunately this error handling bug dates back to the introduction of
btrfs. Thankfully with the abuse of COW fixup, at least it won't crash
the kernel.

[FIX]
Instead of immediately unlocking the extent and folios, we keep the extent
and folios locked until either erroring out or the whole delalloc range
finished.

When the whole delalloc range finished without error, we just unlock the
whole range with PAGE_SET_ORDERED (and PAGE_UNLOCK for !keep_locked
cases)
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2024-57976

[CVE-2024-57977] kernel: memcg: fix soft lockup in the OOM process (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

memcg: fix soft lockup in the OOM process

A soft lockup issue was found in the product with about 56,000 tasks were
in the OOM cgroup, it was traversing them when the soft lockup was
triggered.

watchdog: BUG: soft lockup - CPU#2 stuck for 23s! [VM Thread:1503066]
CPU: 2 PID: 1503066 Comm: VM Thread Kdump: loaded Tainted: G
Hardware name: Huawei Cloud OpenStack Nova, BIOS
RIP: 0010:console_unlock+0x343/0x540
RSP: 0000:ffffb751447db9a0 EFLAGS: 00000247 ORIG_RAX: ffffffffffffff13
RAX: 0000000000000001 RBX: 0000000000000000 RCX: 00000000ffffffff
RDX: 0000000000000000 RSI: 0000000000000004 RDI: 0000000000000247
RBP: ffffffffafc71f90 R08: 0000000000000000 R09: 0000000000000040
R10: 0000000000000080 R11: 0000000000000000 R12: ffffffffafc74bd0

R13: ffffffffaf60a220 R14: 0000000000000247 R15: 0000000000000000
CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 00007f2fe6ad91f0 CR3: 00000004b2076003 CR4: 0000000000360ee0
DR0: 0000000000000000 DR1: 0000000000000000 DR2: 0000000000000000
DR3: 0000000000000000 DR6: 00000000fffe0ff0 DR7: 0000000000000400
Call Trace:
 vprintk_emit+0x193/0x280
 printk+0x52/0x6e
 dump_task+0x114/0x130
 mem_cgroup_scan_tasks+0x76/0x100
 dump_header+0x1fe/0x210
 oom_kill_process+0xd1/0x100
 out_of_memory+0x125/0x570
 mem_cgroup_out_of_memory+0xb5/0xd0
 try_charge+0x720/0x770
 mem_cgroup_try_charge+0x86/0x180
 mem_cgroup_try_charge_delay+0x1c/0x40
 do_anonymous_page+0xb5/0x390
 handle_mm_fault+0xc4/0x1f0

This is because thousands of processes are in the OOM cgroup, it takes a
long time to traverse all of them. As a result, this lead to soft lockup
in the OOM process.

To fix this issue, call 'cond_resched' in the 'mem_cgroup_scan_tasks'
function per 1000 iterations. For global OOM, call
'touch_softlockup_watchdog' per 1000 iterations to avoid this issue.

More Info: https://avd.aquasec.com/nvd/cve-2024-57977

[CVE-2024-57999] kernel: powerpc/pseries/iommu: IOMMU incorrectly marks MMIO range in DDW (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

powerpc/pseries/iommu: IOMMU incorrectly marks MMIO range in DDW

Power Hypervisor can possibily allocate MMIO window intersecting with
Dynamic DMA Window (DDW) range, which is over 32-bit addressing.

These MMIO pages needs to be marked as reserved so that IOMMU doesn't map
DMA buffers in this range.

The current code is not marking these pages correctly which is resulting
in LPAR to OOPS while booting. The stack is at below

BUG: Unable to handle kernel data access on read at 0xc00800005cd40000
Faulting instruction address: 0xc00000000005cdac
Oops: Kernel access of bad area, sig: 11 [#1]

LE PAGE_SIZE=64K MMU=Hash SMP NR_CPUS=2048 NUMA pSeries
Modules linked in: af_packet rfkill ibmveth(X) lpfc(+) nvmet_fc nvmet nvme_keyring crct10dif_vpmsum nvme_fc nvme_fabrics nvme_core be2net(+) nvme_auth rtc_generic nfsd auth_rpcgss nfs_acl lockd grace sunrpc fuse configfs ip_tables x_tables xfs libcrc32c dm_service_time ibmvfc(X) scsi_transport_fc vmx_crypto gf128mul crc32c_vpmsum dm_mirror dm_region_hash dm_log dm_multipath dm_mod sd_mod scsi_dh_emc scsi_dh_rdac scsi_dh_alua t10_pi crc64_rocksoft_generic crc64_rocksoft sg crc64 scsi_mod
Supported: Yes, External
CPU: 8 PID: 241 Comm: kworker/8:1 Kdump: loaded Not tainted 6.4.0-150600.23.14-default #1 SLE15-SP6 b44ee71c81261b9e4bab5e0cde1f2ed891d5359b
Hardware name: IBM,9080-M9S POWER9 (raw) 0x4e2103 0xf000005 of:IBM,FW950.B0 (VH950_149) hv:phyp pSeries
Workqueue: events work_for_cpu_fn
NIP: c00000000005cdac LR: c00000000005e830 CTR: 0000000000000000
REGS: c00001400c9ff770 TRAP: 0300   Not tainted (6.4.0-150600.23.14-default)
MSR: 800000000280b033 <SF,VEC,VSX,EE,FP,ME,IR,DR,RI,LE> CR: 24228448 XER: 00000001
CFAR: c00000000005cdd4 DAR: c00800005cd40000 DSISR: 40000000 IRQMASK: 0
GPR00: c00000000005e830 c00001400c9ffa10 c000000001987d00 c00001400c4fe800
GPR04: 0000080000000000 0000000000000001 0000000004000000 0000000000800000
GPR08: 0000000004000000 0000000000000001 c00800005cd40000 ffffffffffffffff
GPR12: 0000000084228882 c00000000a4c4f00 0000000000000010 0000080000000000
GPR16: c00001400c4fe800 0000000004000000 0800000000000000 c00000006088b800
GPR20: c00001401a7be980 c00001400eff3800 c000000002a2da68 000000000000002b
GPR24: c0000000026793a8 c000000002679368 000000000000002a c0000000026793c8
GPR28: 000008007effffff 0000080000000000 0000000000800000 c00001400c4fe800
NIP [c00000000005cdac] iommu_table_reserve_pages+0xac/0x100
LR [c00000000005e830] iommu_init_table+0x80/0x1e0
Call Trace:
[c00001400c9ffa10] [c00000000005e810] iommu_init_table+0x60/0x1e0 (unreliable)
[c00001400c9ffa90] [c00000000010356c] iommu_bypass_supported_pSeriesLP+0x9cc/0xe40
[c00001400c9ffc30] [c00000000005c300] dma_iommu_dma_supported+0xf0/0x230
[c00001400c9ffcb0] [c00000000024b0c4] dma_supported+0x44/0x90
[c00001400c9ffcd0] [c00000000024b14c] dma_set_mask+0x3c/0x80
[c00001400c9ffd00] [c0080000555b715c] be_probe+0xc4/0xb90 [be2net]
[c00001400c9ffdc0] [c000000000986f3c] local_pci_probe+0x6c/0x110
[c00001400c9ffe40] [c000000000188f28] work_for_cpu_fn+0x38/0x60
[c00001400c9ffe70] [c00000000018e454] process_one_work+0x314/0x620
[c00001400c9fff10] [c00000000018f280] worker_thread+0x2b0/0x620
[c00001400c9fff90] [c00000000019bb18] kthread+0x148/0x150
[c00001400c9fffe0] [c00000000000ded8] start_kernel_thread+0x14/0x18

There are 2 issues in the code

1. The index is "int" while the address is "unsigned long". This results in
   negative value when setting the bitmap.

2. The DMA offset is page shifted but the MMIO range is used as-is (64-bit
   address). MMIO address needs to be page shifted as well.

More Info: https://avd.aquasec.com/nvd/cve-2024-57999

[CVE-2024-58005] kernel: tpm: Change to kvalloc() in eventlog/acpi.c (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

tpm: Change to kvalloc() in eventlog/acpi.c

The following failure was reported on HPE ProLiant D320:

[10.693310][T1] tpm_tis STM0925:00: 2.0 TPM (device-id 0x3, rev-id 0)
[10.848132][T1] ------------[cut here]------------
[10.853559][T1] WARNING: CPU: 59 PID: 1 at mm/page_alloc.c:4727 __alloc_pages_noprof+0x2ca/0x330
[10.862827][T1] Modules linked in:
[10.866671][T1] CPU: 59 UID: 0 PID: 1 Comm: swapper/0 Not tainted 6.12.0-lp155.2.g52785e2-default #1 openSUSE Tumbleweed (unreleased) 588cd98293a7c9eba9013378d807364c088c9375
[10.882741][T1] Hardware name: HPE ProLiant DL320 Gen12/ProLiant DL320 Gen12, BIOS 1.20 10/28/2024
[10.892170][T1] RIP: 0010:__alloc_pages_noprof+0x2ca/0x330
[10.898103][T1] Code: 24 08 e9 4a fe ff ff e8 34 36 fa ff e9 88 fe ff ff 83 fe 0a 0f 86 b3 fd ff ff 80 3d 01 e7 ce 01 00 75 09 c6 05 f8 e6 ce 01 01 <0f> 0b 45 31 ff e9 e5 fe ff ff f7 c2 00 00 08 00 75 42 89 d9 80 e1
[10.917750][T1] RSP: 0000:ffffb7cf40077980 EFLAGS: 00010246
[10.923777][T1] RAX: 0000000000000000 RBX: 0000000000040cc0 RCX: 0000000000000000
[10.931727][T1] RDX: 0000000000000000 RSI: 000000000000000c RDI: 0000000000040cc0

The above transcript shows that ACPI pointed a 16 MiB buffer for the log
events because RSI maps to the 'order' parameter of __alloc_pages_noprof().
Address the bug by moving from devm_kmalloc() to devm_add_action() and
kvmalloc() and devm_add_action().

More Info: https://avd.aquasec.com/nvd/cve-2024-58005

[CVE-2024-58006] kernel: PCI: dwc: ep: Prevent changing BAR size/flags in pci_epc_set_bar() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

PCI: dwc: ep: Prevent changing BAR size/flags in pci_epc_set_bar()

In commit 4284c88fff0e ("PCI: designware-ep: Allow pci_epc_set_bar() update
inbound map address") set_bar() was modified to support dynamically
changing the backing physical address of a BAR that was already configured.

This means that set_bar() can be called twice, without ever calling
clear_bar() (as calling clear_bar() would clear the BAR's PCI address
assigned by the host).

This can only be done if the new BAR size/flags does not differ from the
existing BAR configuration. Add these missing checks.

If we allow set_bar() to set e.g. a new BAR size that differs from the
existing BAR size, the new address translation range will be smaller than
the BAR size already determined by the host, which would mean that a read

past the new BAR size would pass the iATU untranslated, which could allow
the host to read memory not belonging to the new struct pci_epf_bar.

While at it, add comments which clarifies the support for dynamically
changing the physical address of a BAR. (Which was also missing.)

More Info: https://avd.aquasec.com/nvd/cve-2024-58006

[CVE-2024-58012] kernel: ASoC: SOF: Intel: hda-dai: Ensure DAI widget is valid during params (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ASoC: SOF: Intel: hda-dai: Ensure DAI widget is valid during params

Each cpu DAI should associate with a widget. However, the topology might
not create the right number of DAI widgets for aggregated amps. And it
will cause NULL pointer deference.
Check that the DAI widget associated with the CPU DAI is valid to prevent
NULL pointer deference due to missing DAI widgets in topologies with
aggregated amps.

More Info: https://avd.aquasec.com/nvd/cve-2024-58012

[CVE-2024-58053] kernel: rxrpc: Fix handling of received connection abort (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

rxrpc: Fix handling of received connection abort

Fix the handling of a connection abort that we've received. Though the
abort is at the connection level, it needs propagating to the calls on that
connection. Whilst the propagation bit is performed, the calls aren't then
woken up to go and process their termination, and as no further input is
forthcoming, they just hang.

Also add some tracing for the logging of connection aborts.

More Info: https://avd.aquasec.com/nvd/cve-2024-58053

[CVE-2024-58079] kernel: media: uvcvideo: Fix crash during unbind if gpio unit is in use (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

media: uvcvideo: Fix crash during unbind if gpio unit is in use

We used the wrong device for the device managed functions. We used the
usb device, when we should be using the interface device.

If we unbind the driver from the usb interface, the cleanup functions
are never called. In our case, the IRQ is never disabled.

If an IRQ is triggered, it will try to access memory sections that are
already free, causing an OOPS.

We cannot use the function devm_request_threaded_irq here. The devm_*
clean functions may be called after the main structure is released by
uvc_delete.

Luckily this bug has small impact, as it is only affected by devices
with gpio units and the user has to unbind the device, a disconnect will
not trigger this error.

More Info: https://avd.aquasec.com/nvd/cve-2024-58079

[CVE-2024-58089] kernel: btrfs: fix double accounting race when btrfs_run_delalloc_range() failed (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

btrfs: fix double accounting race when btrfs_run_delalloc_range() failed

[BUG]
When running btrfs with block size (4K) smaller than page size (64K,
aarch64), there is a very high chance to crash the kernel at
generic/750, with the following messages:
(before the call traces, there are 3 extra debug messages added)

```
 BTRFS warning (device dm-3): read-write for sector size 4096 with page size 65536 is experimental
 BTRFS info (device dm-3): checking UUID tree
 hrtimer: interrupt took 5451385 ns
 BTRFS error (device dm-3): cow_file_range failed, root=4957 inode=257 start=1605632 len=69632: -28
 BTRFS error (device dm-3): run_delalloc_nocow failed, root=4957 inode=257 start=1605632 len=69632: -28
  BTRFS error (device dm-3): failed to run delalloc range, root=4957 ino=257 folio=1572864 submit_bitmap=8-15 start=1605632 len=69632: -28
 ------------[ cut here ]------------
 WARNING: CPU: 2 PID: 3020984 at ordered-data.c:360 can_finish_ordered_extent+0x370/0x3b8 [btrfs]
 CPU: 2 UID: 0 PID: 3020984 Comm: kworker/u24:1 Tainted: G           OE      6.13.0-rc1-custom+ #89
 Tainted: [O]=OOT_MODULE, [E]=UNSIGNED_MODULE
 Hardware name: QEMU KVM Virtual Machine, BIOS unknown 2/2/2022
 Workqueue: events_unbound btrfs_async_reclaim_data_space [btrfs]
```

```
 pc : can_finish_ordered_extent+0x370/0x3b8 [btrfs]
 lr : can_finish_ordered_extent+0x1ec/0x3b8 [btrfs]
 Call trace:
  can_finish_ordered_extent+0x370/0x3b8 [btrfs] (P)
  can_finish_ordered_extent+0x1ec/0x3b8 [btrfs] (L)
  btrfs_mark_ordered_io_finished+0x130/0x2b8 [btrfs]
  extent_writepage+0x10c/0x3b8 [btrfs]
  extent_write_cache_pages+0x21c/0x4e8 [btrfs]
  btrfs_writepages+0x94/0x160 [btrfs]
  do_writepages+0x74/0x190
  filemap_fdatawrite_wbc+0x74/0xa0
  start_delalloc_inodes+0x17c/0x3b0 [btrfs]
  btrfs_start_delalloc_roots+0x17c/0x288 [btrfs]
  shrink_delalloc+0x11c/0x280 [btrfs]
  flush_space+0x288/0x328 [btrfs]
  btrfs_async_reclaim_data_space+0x180/0x228 [btrfs]
  process_one_work+0x228/0x680
  worker_thread+0x1bc/0x360
  kthread+0x100/0x118
  ret_from_fork+0x10/0x20
 ---[ end trace 0000000000000000 ]---
  BTRFS critical (device dm-3): bad ordered extent accounting, root=4957 ino=257 OE offset=1605632 OE len=16384
to_dec=16384 left=0
  BTRFS critical (device dm-3): bad ordered extent accounting, root=4957 ino=257 OE offset=1622016 OE len=12288
to_dec=12288 left=0
 Unable to handle kernel NULL pointer dereference at virtual address 0000000000000008
  BTRFS critical (device dm-3): bad ordered extent accounting, root=4957 ino=257 OE offset=1634304 OE len=8192
to_dec=4096 left=0
 CPU: 1 UID: 0 PID: 3286940 Comm: kworker/u24:3 Tainted: G        W  OE      6.13.0-rc1-custom+ #89
 Hardware name: QEMU KVM Virtual Machine, BIOS unknown 2/2/2022
 Workqueue:  btrfs_work_helper [btrfs] (btrfs-endio-write)
 pstate: 404000c5 (nZcv daIF +PAN -UAO -TCO -DIT -SSBS BTYPE=--)
 pc : process_one_work+0x110/0x680
 lr : worker_thread+0x1bc/0x360
 Call trace:
  process_one_work+0x110/0x680 (P)
  worker_thread+0x1bc/0x360 (L)
  worker_thread+0x1bc/0x360
  kthread+0x100/0x118
  ret_from_fork+0x10/0x20
 Code: f84086a1 f9000fe1 53041c21 b9003361 (f9400661)
 ---[ end trace 0000000000000000 ]---
 Kernel panic - not syncing: Oops: Fatal exception
 SMP: stopping secondary CPUs
 SMP: failed to stop secondary CPUs 2-3
 Dumping ftrace buffer:
    (ftrace buffer empty)
 Kernel Offset: 0x275bb9540000 from 0xffff800080000000
 PHYS_OFFSET: 0xffff8fbba0000000
 CPU features: 0x100,00000070,00801250,8201720b
```

[CAUSE]
The above warning is triggered immediately after the delalloc range

failure, this happens in the following sequence:

- Range [1568K, 1636K) is dirty

```
  1536K  1568K     1600K    1636K  1664K
  |      |/////////|////////|      |
```

  Where 1536K, 1600K and 1664K are page boundaries (64K page size)

- Enter extent_writepage() for page 1536K

- Enter run_delalloc_nocow() with locke
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2024-58089

[CVE-2024-58090] kernel: sched/core: Prevent rescheduling when interrupts are disabled (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

sched/core: Prevent rescheduling when interrupts are disabled

David reported a warning observed while loop testing kexec jump:

```
  Interrupts enabled after irqrouter_resume+0x0/0x50
  WARNING: CPU: 0 PID: 560 at drivers/base/syscore.c:103 syscore_resume+0x18a/0x220
   kernel_kexec+0xf6/0x180
   __do_sys_reboot+0x206/0x250
   do_syscall_64+0x95/0x180
```

The corresponding interrupt flag trace:

```
  hardirqs last  enabled at (15573): [<ffffffffa8281b8e>] __up_console_sem+0x7e/0x90
  hardirqs last disabled at (15580): [<ffffffffa8281b73>] __up_console_sem+0x63/0x90
```

That means __up_console_sem() was invoked with interrupts enabled. Further
instrumentation revealed that in the interrupt disabled section of kexec
jump one of the syscore_suspend() callbacks woke up a task, which set the
NEED_RESCHED flag. A later callback in the resume path invoked
cond_resched() which in turn led to the invocation of the scheduler:

```
  __cond_resched+0x21/0x60
  down_timeout+0x18/0x60
  acpi_os_wait_semaphore+0x4c/0x80
  acpi_ut_acquire_mutex+0x3d/0x100
  acpi_ns_get_node+0x27/0x60
  acpi_ns_evaluate+0x1cb/0x2d0
  acpi_rs_set_srs_method_data+0x156/0x190
```

acpi_pci_link_set+0x11c/0x290
irqrouter_resume+0x54/0x60
syscore_resume+0x6a/0x200
kernel_kexec+0x145/0x1c0
__do_sys_reboot+0xeb/0x240
do_syscall_64+0x95/0x180

This is a long standing problem, which probably got more visible with
the recent printk changes. Something does a task wakeup and the
scheduler sets the NEED_RESCHED flag. cond_resched() sees it set and
invokes schedule() from a completely bogus context. The scheduler
enables interrupts after context switching, which causes the above
warning at the end.

Quite some of the code paths in syscore_suspend()/resume() can result in
triggering a wakeup with the exactly same consequences. They might not
have done so yet, but as they share a lot of code with normal operations
it's just a question of time.

The problem only affects the PREEMPT_NONE and PREEMPT_VOLUNTARY scheduling
models. Full preemption is not affected as cond_resched() is disabled and
the preemption check preemptible() takes the interrupt disabled flag into
account.

Cure the problem by adding a corresponding check into cond_resched().

More Info: https://avd.aquasec.com/nvd/cve-2024-58090

[CVE-2025-21634] kernel: cgroup/cpuset: remove kernfs active break (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

cgroup/cpuset: remove kernfs active break

A warning was found:

WARNING: CPU: 10 PID: 3486953 at fs/kernfs/file.c:828
CPU: 10 PID: 3486953 Comm: rmdir Kdump: loaded Tainted: G
RIP: 0010:kernfs_should_drain_open_files+0x1a1/0x1b0
RSP: 0018:ffff8881107ef9e0 EFLAGS: 00010202
RAX: 0000000080000002 RBX: ffff888154738c00 RCX: dfffc0000000000
RDX: 0000000000000007 RSI: 0000000000000004 RDI: ffff888154738c04
RBP: ffff888154738c04 R08: ffffffffaf27fa15 R09: ffffed102a8e7180
R10: ffff888154738c07 R11: 0000000000000000 R12: ffff888154738c08
R13: ffff888750f8c000 R14: ffff888750f8c0e8 R15: ffff888154738ca0
FS: 00007f84cd0be740(0000) GS:ffff8887ddc00000(0000) knlGS:0000000000000000
CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 0000555f9fbe00c8 CR3: 0000000153eec001 CR4: 0000000000370ee0
DR0: 0000000000000000 DR1: 0000000000000000 DR2: 0000000000000000
DR3: 0000000000000000 DR6: 00000000fffe0ff0 DR7: 0000000000000400

Call Trace:
 kernfs_drain+0x15e/0x2f0
 __kernfs_remove+0x165/0x300
 kernfs_remove_by_name_ns+0x7b/0xc0
 cgroup_rm_file+0x154/0x1c0
 cgroup_addrm_files+0x1c2/0x1f0
 css_clear_dir+0x77/0x110
 kill_css+0x4c/0x1b0
 cgroup_destroy_locked+0x194/0x380
 cgroup_rmdir+0x2a/0x140

It can be explained by:
rmdir   echo 1 > cpuset.cpus
    kernfs_fop_write_iter // active=0
cgroup_rm_file
kernfs_remove_by_name_ns kernfs_get_active // active=1
__kernfs_remove   // active=0x80000002
kernfs_drain   cpuset_write_resmask
wait_event
//waiting (active == 0x80000001)
    kernfs_break_active_protection
    // active = 0x80000001
// continue
    kernfs_unbreak_active_protection
    // active = 0x80000002
...
kernfs_should_drain_open_files
// warning occurs
    kernfs_put_active

This warning is caused by 'kernfs_break_active_protection' when it is
writing to cpuset.cpus, and the cgroup is removed concurrently.

The commit 3a5a6d0c2b03 ("cpuset: don't nest cgroup_mutex inside
get_online_cpus()") made cpuset_hotplug_workfn asynchronous, This change
involves calling flush_work(), which can create a multiple processes
circular locking dependency that involve cgroup_mutex, potentially leading
to a deadlock. To avoid deadlock. the commit 76bb5ab8f6e3 ("cpuset: break
kernfs active protection in cpuset_write_resmask()") added
'kernfs_break_active_protection' in the cpuset_write_resmask. This could
lead to this warning.

After the commit 2125c0034c5d ("cgroup/cpuset: Make cpuset hotplug
processing synchronous"), the cpuset_write_resmask no longer needs to
wait the hotplug to finish, which means that concurrent hotplug and cpuset
operations are no longer possible. Therefore, the deadlock doesn't exist
anymore and it does not have to 'break active protection' now. To fix this
warning, just remove kernfs_break_active_protection operation in the
'cpuset_write_resmask'.

More Info: https://avd.aquasec.com/nvd/cve-2025-21634

[CVE-2025-21635] kernel: rds: sysctl: rds_tcp_{rcv,snd}buf: avoid using current->nsproxy (Severity:

MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

rds: sysctl: rds_tcp_{rcv,snd}buf: avoid using current->nsproxy

As mentioned in a previous commit of this series, using the 'net'
structure via 'current' is not recommended for different reasons:

- Inconsistency: getting info from the reader's/writer's netns vs only
  from the opener's netns.

- current->nsproxy can be NULL in some cases, resulting in an 'Oops'
  (null-ptr-deref), e.g. when the current task is exiting, as spotted by
  syzbot [1] using acct(2).

The per-netns structure can be obtained from the table->data using
container_of(), then the 'net' one can be retrieved from the listen
socket (if available).

More Info: https://avd.aquasec.com/nvd/cve-2025-21635

[CVE-2025-21645] kernel: platform/x86/amd/pmc: Only disable IRQ1 wakeup where i8042 actually enabled it (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

platform/x86/amd/pmc: Only disable IRQ1 wakeup where i8042 actually enabled it

Wakeup for IRQ1 should be disabled only in cases where i8042 had
actually enabled it, otherwise "wake_depth" for this IRQ will try to
drop below zero and there will be an unpleasant WARN() logged:

kernel: atkbd serio0: Disabling IRQ1 wakeup source to avoid platform firmware bug
kernel: ------------[cut here]------------
kernel: Unbalanced IRQ 1 wake disable
kernel: WARNING: CPU: 10 PID: 6431 at kernel/irq/manage.c:920 irq_set_irq_wake+0x147/0x1a0

The PMC driver uses DEFINE_SIMPLE_DEV_PM_OPS() to define its dev_pm_ops
which sets amd_pmc_suspend_handler() to the .suspend, .freeze, and
.poweroff handlers. i8042_pm_suspend(), however, is only set as
the .suspend handler.

Fix the issue by call PMC suspend handler only from the same set of
dev_pm_ops handlers as i8042_pm_suspend(), which currently means just
the .suspend handler.

To reproduce this issue try hibernating (S4) the machine after a fresh boot
without putting it into s2idle first.

[ij: edited the commit message.]

More Info: https://avd.aquasec.com/nvd/cve-2025-21645

[CVE-2025-21649] kernel: net: hns3: fix kernel crash when 1588 is sent on HIP08 devices (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net: hns3: fix kernel crash when 1588 is sent on HIP08 devices

Currently, HIP08 devices does not register the ptp devices, so the
hdev->ptp is NULL. But the tx process would still try to set hardware time
stamp info with SKBTX_HW_TSTAMP flag and cause a kernel crash.

[128.087798] Unable to handle kernel NULL pointer dereference at virtual address 0000000000000018
...
[128.280251] pc : hclge_ptp_set_tx_info+0x2c/0x140 [hclge]
[128.286600] lr : hclge_ptp_set_tx_info+0x20/0x140 [hclge]
[128.292938] sp : ffff800059b93140
[128.297200] x29: ffff800059b93140 x28: 0000000000003280
[128.303455] x27: ffff800020d48280 x26: ffff0cb9dc814080
[128.309715] x25: ffff0cb9cde93fa0 x24: 0000000000000001
[128.315969] x23: 0000000000000000 x22: 0000000000000194
[128.322219] x21: ffff0cd94f986000 x20: 0000000000000000
[128.328462] x19: ffff0cb9d2a166c0 x18: 0000000000000000
[128.334698] x17: 0000000000000000 x16: ffffcf1fc523ed24
[128.340934] x15: 0000ffffd530a518 x14: 0000000000000000
[128.347162] x13: ffff0cd6bdb31310 x12: 0000000000000368
[128.353388] x11: ffff0cb9cfbc7070 x10: ffff2cf55dd11e02
[128.359606] x9 : ffffcf1f85a212b4 x8 : ffff0cd7cf27dab0
[128.365831] x7 : 0000000000000a20 x6 : ffff0cd7cf27d000
[128.372040] x5 : 0000000000000000 x4 : 000000000000ffff
[128.378243] x3 : 0000000000000400 x2 : ffffcf1f85a21294
[128.384437] x1 : ffff0cb9db520080 x0 : ffff0cb9db500080
[128.390626] Call trace:
[128.393964] hclge_ptp_set_tx_info+0x2c/0x140 [hclge]
[128.399893] hns3_nic_net_xmit+0x39c/0x4c4 [hns3]
[128.405468] xmit_one.constprop.0+0xc4/0x200
[128.410600] dev_hard_start_xmit+0x54/0xf0
[128.415556] sch_direct_xmit+0xe8/0x634
[128.420246] __dev_queue_xmit+0x224/0xc70
[128.425101] dev_queue_xmit+0x1c/0x40
[128.429608] ovs_vport_send+0xac/0x1a0 [openvswitch]
[128.435409] do_output+0x60/0x17c [openvswitch]

[128.440770] do_execute_actions+0x898/0x8c4 [openvswitch]
[128.446993] ovs_execute_actions+0x64/0xf0 [openvswitch]
[128.453129] ovs_dp_process_packet+0xa0/0x224 [openvswitch]
[128.459530] ovs_vport_receive+0x7c/0xfc [openvswitch]
[128.465497] internal_dev_xmit+0x34/0xb0 [openvswitch]
[128.471460] xmit_one.constprop.0+0xc4/0x200
[128.476561] dev_hard_start_xmit+0x54/0xf0
[128.481489] __dev_queue_xmit+0x968/0xc70
[128.486330] dev_queue_xmit+0x1c/0x40
[128.490856] ip_finish_output2+0x250/0x570
[128.495810] __ip_finish_output+0x170/0x1e0
[128.500832] ip_finish_output+0x3c/0xf0
[128.505504] ip_output+0xbc/0x160
[128.509654] ip_send_skb+0x58/0xd4
[128.513892] udp_send_skb+0x12c/0x354
[128.518387] udp_sendmsg+0x7a8/0x9c0
[128.522793] inet_sendmsg+0x4c/0x8c
[128.527116] __sock_sendmsg+0x48/0x80
[128.531609] __sys_sendto+0x124/0x164
[128.536099] __arm64_sys_sendto+0x30/0x5c
[128.540935] invoke_syscall+0x50/0x130
[128.545508] el0_svc_common.constprop.0+0x10c/0x124
[128.551205] do_el0_svc+0x34/0xdc
[128.555347] el0_svc+0x20/0x30
[128.559227] el0_sync_handler+0xb8/0xc0
[128.563883] el0_sync+0x160/0x180

More Info: https://avd.aquasec.com/nvd/cve-2025-21649

[CVE-2025-21651] kernel: net: hns3: don't auto enable misc vector (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net: hns3: don't auto enable misc vector

Currently, there is a time window between misc irq enabled
and service task inited. If an interrupte is reported at
this time, it will cause warning like below:

[16.324639] Call trace:
[16.324641] __queue_delayed_work+0xb8/0xe0
[16.324643] mod_delayed_work_on+0x78/0xd0
[16.324655] hclge_errhand_task_schedule+0x58/0x90 [hclge]
[16.324662] hclge_misc_irq_handle+0x168/0x240 [hclge]
[16.324666] __handle_irq_event_percpu+0x64/0x1e0
[16.324667] handle_irq_event+0x80/0x170
[16.324670] handle_fasteoi_edge_irq+0x110/0x2bc
[16.324671] __handle_domain_irq+0x84/0xfc
[16.324673] gic_handle_irq+0x88/0x2c0
[16.324674] el1_irq+0xb8/0x140

[16.324677] arch_cpu_idle+0x18/0x40
[16.324679] default_idle_call+0x5c/0x1bc
[16.324682] cpuidle_idle_call+0x18c/0x1c4
[16.324684] do_idle+0x174/0x17c
[16.324685] cpu_startup_entry+0x30/0x6c
[16.324687] secondary_start_kernel+0x1a4/0x280
[16.324688] ---[end trace 6aa0bff672a964aa]---

So don't auto enable misc vector when request irq..

More Info: https://avd.aquasec.com/nvd/cve-2025-21651

[CVE-2025-21656] kernel: hwmon: (drivetemp) Fix driver producing garbage data when SCSI errors occur (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

hwmon: (drivetemp) Fix driver producing garbage data when SCSI errors occur

scsi_execute_cmd() function can return both negative (linux codes) and
positive (scsi_cmnd result field) error codes.

Currently the driver just passes error codes of scsi_execute_cmd() to
hwmon core, which is incorrect because hwmon only checks for negative
error codes. This leads to hwmon reporting uninitialized data to
userspace in case of SCSI errors (for example if the disk drive was
disconnected).

This patch checks scsi_execute_cmd() output and returns -EIO if it's
error code is positive.

[groeck: Avoid inline variable declaration for portability]

More Info: https://avd.aquasec.com/nvd/cve-2025-21656

[CVE-2025-21658] kernel: btrfs: avoid NULL pointer dereference if no valid extent tree (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

btrfs: avoid NULL pointer dereference if no valid extent tree

[BUG]
Syzbot reported a crash with the following call trace:

BTRFS info (device loop0): scrub: started on devid 1

```
BUG: kernel NULL pointer dereference, address: 0000000000000208
#PF: supervisor read access in kernel mode
#PF: error_code(0x0000) - not-present page
PGD 106e70067 P4D 106e70067 PUD 107143067 PMD 0
Oops: Oops: 0000 [#1] PREEMPT SMP NOPTI
CPU: 1 UID: 0 PID: 689 Comm: repro Kdump: loaded Tainted: G           O       6.13.0-rc4-custom+ #206
Tainted: [O]=OOT_MODULE
Hardware name: QEMU Standard PC (Q35 + ICH9, 2009), BIOS unknown 02/02/2022
RIP: 0010:find_first_extent_item+0x26/0x1f0 [btrfs]
Call Trace:
 <TASK>
 scrub_find_fill_first_stripe+0x13d/0x3b0 [btrfs]
 scrub_simple_mirror+0x175/0x260 [btrfs]
 scrub_stripe+0x5d4/0x6c0 [btrfs]
 scrub_chunk+0xbb/0x170 [btrfs]
 scrub_enumerate_chunks+0x2f4/0x5f0 [btrfs]
 btrfs_scrub_dev+0x240/0x600 [btrfs]
 btrfs_ioctl+0x1dc8/0x2fa0 [btrfs]
 ? do_sys_openat2+0xa5/0xf0
 __x64_sys_ioctl+0x97/0xc0
 do_syscall_64+0x4f/0x120
 entry_SYSCALL_64_after_hwframe+0x76/0x7e
 </TASK>
```

[CAUSE]
The reproducer is using a corrupted image where extent tree root is corrupted, thus forcing to use "rescue=all,ro" mount option to mount the image.

Then it triggered a scrub, but since scrub relies on extent tree to find where the data/metadata extents are, scrub_find_fill_first_stripe() relies on an non-empty extent root.

But unfortunately scrub_find_fill_first_stripe() doesn't really expect an NULL pointer for extent root, it use extent_root to grab fs_info and triggered a NULL pointer dereference.

[FIX]
Add an extra check for a valid extent root at the beginning of scrub_find_fill_first_stripe().

The new error path is introduced by 42437a6386ff ("btrfs: introduce mount option rescue=ignorebadroots"), but that's pretty old, and later commit b979547513ff ("btrfs: scrub: introduce helper to find and fill sector info for a scrub_stripe") changed how we do scrub.

So for kernels older than 6.6, the fix will need manual backport.

More Info: https://avd.aquasec.com/nvd/cve-2025-21658

[CVE-2025-21673] kernel: smb: client: fix double free of TCP_Server_Info::hostname (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

smb: client: fix double free of TCP_Server_Info::hostname

When shutting down the server in cifs_put_tcp_session(), cifsd thread
might be reconnecting to multiple DFS targets before it realizes it
should exit the loop, so @server->hostname can't be freed as long as
cifsd thread isn't done. Otherwise the following can happen:

```
RIP: 0010:__slab_free+0x223/0x3c0
Code: 5e 41 5f c3 cc cc cc cc 4c 89 de 4c 89 cf 44 89 44 24 08 4c 89
1c 24 e8 fb cf 8e 00 44 8b 44 24 08 4c 8b 1c 24 e9 5f fe ff ff <0f>
0b 41 f7 45 08 00 0d 21 00 0f 85 2d ff ff ff e9 1f ff ff ff 80
RSP: 0018:ffffb26180dbfd08 EFLAGS: 00010246
RAX: ffff8ea34728e510 RBX: ffff8ea34728e500 RCX: 0000000000800068
RDX: 0000000000800068 RSI: 0000000000000000 RDI: ffff8ea340042400
RBP: ffffe112041ca380 R08: 0000000000000001 R09: 0000000000000000
R10: 6170732e31303000 R11: 70726f632e786563 R12: ffff8ea34728e500
R13: ffff8ea340042400 R14: ffff8ea34728e500 R15: 0000000000800068
FS: 0000000000000000(0000) GS:ffff8ea66fd80000(0000)
000000
CS:  0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 00007ffc25376080 CR3: 000000012a2ba001 CR4:
PKRU: 55555554
Call Trace:
 <TASK>
 ? show_trace_log_lvl+0x1c4/0x2df
 ? show_trace_log_lvl+0x1c4/0x2df
 ? __reconnect_target_unlocked+0x3e/0x160 [cifs]
 ? __die_body.cold+0x8/0xd
 ? die+0x2b/0x50
 ? do_trap+0xce/0x120
 ? __slab_free+0x223/0x3c0
 ? do_error_trap+0x65/0x80
 ? __slab_free+0x223/0x3c0
 ? exc_invalid_op+0x4e/0x70
 ? __slab_free+0x223/0x3c0
 ? asm_exc_invalid_op+0x16/0x20
 ? __slab_free+0x223/0x3c0
 ? extract_hostname+0x5c/0xa0 [cifs]
 ? extract_hostname+0x5c/0xa0 [cifs]
 ? __kmalloc+0x4b/0x140
 __reconnect_target_unlocked+0x3e/0x160 [cifs]
 reconnect_dfs_server+0x145/0x430 [cifs]
 cifs_handle_standard+0x1ad/0x1d0 [cifs]
 cifs_demultiplex_thread+0x592/0x730 [cifs]
 ? __pfx_cifs_demultiplex_thread+0x10/0x10 [cifs]
 kthread+0xdd/0x100
 ? __pfx_kthread+0x10/0x10
```

ret_from_fork+0x29/0x50
</TASK>

More Info: https://avd.aquasec.com/nvd/cve-2025-21673

[CVE-2025-21676] kernel: net: fec: handle page_pool_dev_alloc_pages error (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net: fec: handle page_pool_dev_alloc_pages error

The fec_enet_update_cbd function calls page_pool_dev_alloc_pages but did
not handle the case when it returned NULL. There was a WARN_ON(!new_page)
but it would still proceed to use the NULL pointer and then crash.

This case does seem somewhat rare but when the system is under memory
pressure it can happen. One case where I can duplicate this with some
frequency is when writing over a smbd share to a SATA HDD attached to an
imx6q.

Setting /proc/sys/vm/min_free_kbytes to higher values also seems to solve
the problem for my test case. But it still seems wrong that the fec driver
ignores the memory allocation error and can crash.

This commit handles the allocation error by dropping the current packet.

More Info: https://avd.aquasec.com/nvd/cve-2025-21676

[CVE-2025-21682] kernel: eth: bnxt: always recalculate features after XDP clearing, fix null-deref (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

eth: bnxt: always recalculate features after XDP clearing, fix null-deref

Recalculate features when XDP is detached.

Before:
```
# ip li set dev eth0 xdp obj xdp_dummy.bpf.o sec xdp
# ip li set dev eth0 xdp off
# ethtool -k eth0 | grep gro
rx-gro-hw: off [requested on]
```

After:
```
# ip li set dev eth0 xdp obj xdp_dummy.bpf.o sec xdp
# ip li set dev eth0 xdp off
```

```
# ethtool -k eth0 | grep gro
rx-gro-hw: on
```

The fact that HW-GRO doesn't get re-enabled automatically is just
a minor annoyance. The real issue is that the features will randomly
come back during another reconfiguration which just happens to invoke
netdev_update_features(). The driver doesn't handle reconfiguring
two things at a time very robustly.

Starting with commit 98ba1d931f61 ("bnxt_en: Fix RSS logic in
__bnxt_reserve_rings()") we only reconfigure the RSS hash table
if the "effective" number of Rx rings has changed. If HW-GRO is
enabled "effective" number of rings is 2x what user sees.
So if we are in the bad state, with HW-GRO re-enablement "pending"
after XDP off, and we lower the rings by / 2 - the HW-GRO rings
doing 2x and the ethtool -L doing / 2 may cancel each other out,
and the:

```
if (old_rx_rings != bp->hw_resc.resv_rx_rings &&
```

condition in __bnxt_reserve_rings() will be false.
The RSS map won't get updated, and we'll crash with:

```
BUG: kernel NULL pointer dereference, address: 0000000000000168
RIP: 0010:__bnxt_hwrm_vnic_set_rss+0x13a/0x1a0
  bnxt_hwrm_vnic_rss_cfg_p5+0x47/0x180
  __bnxt_setup_vnic_p5+0x58/0x110
  bnxt_init_nic+0xb72/0xf50
  __bnxt_open_nic+0x40d/0xab0
  bnxt_open_nic+0x2b/0x60
  ethtool_set_channels+0x18c/0x1d0
```

As we try to access a freed ring.

The issue is present since XDP support was added, really, but
prior to commit 98ba1d931f61 ("bnxt_en: Fix RSS logic in
__bnxt_reserve_rings()") it wasn't causing major issues.

More Info: https://avd.aquasec.com/nvd/cve-2025-21682

[CVE-2025-21693] kernel: mm: zswap: properly synchronize freeing resources during CPU hotunplug (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

mm: zswap: properly synchronize freeing resources during CPU hotunplug

In zswap_compress() and zswap_decompress(), the per-CPU acomp_ctx of the
current CPU at the beginning of the operation is retrieved and used

throughout. However, since neither preemption nor migration are disabled,
it is possible that the operation continues on a different CPU.

If the original CPU is hotunplugged while the acomp_ctx is still in use,
we run into a UAF bug as some of the resources attached to the acomp_ctx
are freed during hotunplug in zswap_cpu_comp_dead() (i.e.
acomp_ctx.buffer, acomp_ctx.req, or acomp_ctx.acomp).

The problem was introduced in commit 1ec3b5fe6eec ("mm/zswap: move to use
crypto_acomp API for hardware acceleration") when the switch to the
crypto_acomp API was made. Prior to that, the per-CPU crypto_comp was
retrieved using get_cpu_ptr() which disables preemption and makes sure the
CPU cannot go away from under us. Preemption cannot be disabled with the
crypto_acomp API as a sleepable context is needed.

Use the acomp_ctx.mutex to synchronize CPU hotplug callbacks allocating
and freeing resources with compression/decompression paths. Make sure
that acomp_ctx.req is NULL when the resources are freed. In the
compression/decompression paths, check if acomp_ctx.req is NULL after
acquiring the mutex (meaning the CPU was offlined) and retry on the new
CPU.

The initialization of acomp_ctx.mutex is moved from the CPU hotplug
callback to the pool initialization where it belongs (where the mutex is
allocated). In addition to adding clarity, this makes sure that CPU
hotplug cannot reinitialize a mutex that is already locked by
compression/decompression.

Previously a fix was attempted by holding cpus_read_lock() [1]. This
would have caused a potential deadlock as it is possible for code already
holding the lock to fall into reclaim and enter zswap (causing a
deadlock). A fix was also attempted using SRCU for synchronization, but
Johannes pointed out that synchronize_srcu() cannot be used in CPU hotplug
notifiers [2].

Alternative fixes that were considered/attempted and could have worked:
- Refcounting the per-CPU acomp_ctx. This involves complexity in
  handling the race between the refcount dropping to zero in
  zswap_[de]compress() and the refcount being re-initialized when the
  CPU is onlined.
- Disabling migration before getting the per-CPU acomp_ctx [3], but
  that's discouraged and is a much bigger hammer than needed, and could
  result in subtle performance issues.

[1]https://lkml.kernel.org/20241219212437.2714151-1-yosryahmed@google.com/
[2]https://lkml.kernel.org/20250107074724.1756696-2-yosryahmed@google.com/
[3]https://lkml.kernel.org/20250107222236.2715883-2-yosryahmed@google.com/

[yosryahmed@google.com: remove comment]
  Link: https://lkml.kernel.org/r/CAJD7tkaxS1wjn+swugt8QCvQ-rVF5RZnjxwPGX17k8x9zSManA@mail.gmail.com

More Info: https://avd.aquasec.com/nvd/cve-2025-21693

[CVE-2025-21696] kernel: mm: clear uffd-wp PTE/PMD state on mremap() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

mm: clear uffd-wp PTE/PMD state on mremap()

When mremap()ing a memory region previously registered with userfaultfd as
write-protected but without UFFD_FEATURE_EVENT_REMAP, an inconsistency in
flag clearing leads to a mismatch between the vma flags (which have
uffd-wp cleared) and the pte/pmd flags (which do not have uffd-wp
cleared). This mismatch causes a subsequent mprotect(PROT_WRITE) to
trigger a warning in page_table_check_pte_flags() due to setting the pte
to writable while uffd-wp is still set.

Fix this by always explicitly clearing the uffd-wp pte/pmd flags on any
such mremap() so that the values are consistent with the existing clearing
of VM_UFFD_WP. Be careful to clear the logical flag regardless of its
physical form; a PTE bit, a swap PTE bit, or a PTE marker. Cover PTE,
huge PMD and hugetlb paths.

More Info: https://avd.aquasec.com/nvd/cve-2025-21696

[CVE-2025-21712] kernel: md/md-bitmap: Synchronize bitmap_get_stats() with bitmap lifetime (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

md/md-bitmap: Synchronize bitmap_get_stats() with bitmap lifetime

After commit ec6bb299c7c3 ("md/md-bitmap: add 'sync_size' into struct
md_bitmap_stats"), following panic is reported:

Oops: general protection fault, probably for non-canonical address
RIP: 0010:bitmap_get_stats+0x2b/0xa0
Call Trace:
 <TASK>
 md_seq_show+0x2d2/0x5b0
 seq_read_iter+0x2b9/0x470
 seq_read+0x12f/0x180
 proc_reg_read+0x57/0xb0
 vfs_read+0xf6/0x380
 ksys_read+0x6c/0xf0
 do_syscall_64+0x82/0x170
 entry_SYSCALL_64_after_hwframe+0x76/0x7e

Root cause is that bitmap_get_stats() can be called at anytime if mddev

is still there, even if bitmap is destroyed, or not fully initialized.
Deferenceing bitmap in this case can crash the kernel. Meanwhile, the
above commit start to deferencing bitmap->storage, make the problem
easier to trigger.

Fix the problem by protecting bitmap_get_stats() with bitmap_info.mutex.

More Info: https://avd.aquasec.com/nvd/cve-2025-21712

[CVE-2025-21714] kernel: RDMA/mlx5: Fix implicit ODP use after free (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

RDMA/mlx5: Fix implicit ODP use after free

Prevent double queueing of implicit ODP mr destroy work by using
__xa_cmpxchg() to make sure this is the only time we are destroying this
specific mr.

Without this change, we could try to invalidate this mr twice, which in
turn could result in queuing a MR work destroy twice, and eventually the
second work could execute after the MR was freed due to the first work,
causing a user after free and trace below.

refcount_t: underflow; use-after-free.
WARNING: CPU: 2 PID: 12178 at lib/refcount.c:28 refcount_warn_saturate+0x12b/0x130
Modules linked in: bonding ib_ipoib vfio_pci ip_gre geneve nf_tables ip6_gre gre ip6_tunnel tunnel6 ipip tunnel4 ib_umad rdma_ucm mlx5_vfio_pci vfio_pci_core vfio_iommu_type1 mlx5_ib vfio ib_uverbs mlx5_core iptable_raw openvswitch nsh rpcrdma ib_iser libiscsi scsi_transport_iscsi rdma_cm iw_cm ib_cm ib_core xt_conntrack xt_MASQUERADE nf_conntrack_netlink nfnetlink xt_addrtype iptable_nat nf_nat br_netfilter rpcsec_gss_krb5 auth_rpcgss oid_registry overlay zram zsmalloc fuse [last unloaded: ib_uverbs]
CPU: 2 PID: 12178 Comm: kworker/u20:5 Not tainted 6.5.0-rc1_net_next_mlx5_58c644e #1
Hardware name: QEMU Standard PC (Q35 + ICH9, 2009), BIOS rel-1.13.0-0-gf21b5a4aeb02-prebuilt.qemu.org 04/01/2014
Workqueue: events_unbound free_implicit_child_mr_work [mlx5_ib]
RIP: 0010:refcount_warn_saturate+0x12b/0x130
Code: 48 c7 c7 38 95 2a 82 c6 05 bc c6 fe 00 01 e8 0c 66 aa ff 0f 0b 5b c3 48 c7 c7 e0 94 2a 82 c6 05 a7 c6 fe 00 01 e8 f5 65 aa ff <0f> 0b 5b c3 90 8b 07 3d 00 00 00 c0 74 12 83 f8 01 74 13 8d 50 ff
RSP: 0018:ffff8881008e3e40 EFLAGS: 00010286
RAX: 0000000000000000 RBX: 0000000000000000 RCX: 0000000000000027
RDX: ffff88852c91b5c8 RSI: 0000000000000001 RDI: ffff88852c91b5c0
RBP: ffff8881dacd4e00 R08: 00000000ffffffff R09: 0000000000000019
R10: 000000000000072e R11: 0000000063666572 R12: ffff88812bfd9e00
R13: ffff8881c792d200 R14: ffff88810011c005 R15: ffff8881002099c0
FS: 0000000000000000(0000) GS:ffff88852c900000(0000) knlGS:0000000000000000
CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 00007f5694b5e000 CR3: 00000001153f6003 CR4: 0000000000370ea0
DR0: 0000000000000000 DR1: 0000000000000000 DR2: 0000000000000000
DR3: 0000000000000000 DR6: 00000000fffe0ff0 DR7: 0000000000000400
Call Trace:

<TASK>
? refcount_warn_saturate+0x12b/0x130
free_implicit_child_mr_work+0x180/0x1b0 [mlx5_ib]
process_one_work+0x1cc/0x3c0
worker_thread+0x218/0x3c0
kthread+0xc6/0xf0
ret_from_fork+0x1f/0x30
</TASK>

More Info: https://avd.aquasec.com/nvd/cve-2025-21714

[CVE-2025-21721] kernel: nilfs2: handle errors that nilfs_prepare_chunk() may return (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

nilfs2: handle errors that nilfs_prepare_chunk() may return

Patch series "nilfs2: fix issues with rename operations".

This series fixes BUG_ON check failures reported by syzbot around rename operations, and a minor behavioral issue where the mtime of a child directory changes when it is renamed instead of moved.

This patch (of 2):

The directory manipulation routines nilfs_set_link() and nilfs_delete_entry() rewrite the directory entry in the folio/page previously read by nilfs_find_entry(), so error handling is omitted on the assumption that nilfs_prepare_chunk(), which prepares the buffer for rewriting, will always succeed for these. And if an error is returned, it triggers the legacy BUG_ON() checks in each routine.

This assumption is wrong, as proven by syzbot: the buffer layer called by nilfs_prepare_chunk() may call nilfs_get_block() if necessary, which may fail due to metadata corruption or other reasons. This has been there all along, but improved sanity checks and error handling may have made it more reproducible in fuzzing tests.

Fix this issue by adding missing error paths in nilfs_set_link(), nilfs_delete_entry(), and their caller nilfs_rename().

More Info: https://avd.aquasec.com/nvd/cve-2025-21721

[CVE-2025-21723] kernel: scsi: mpi3mr: Fix possible crash when setting up bsg fails (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1

Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

scsi: mpi3mr: Fix possible crash when setting up bsg fails

If bsg_setup_queue() fails, the bsg_queue is assigned a non-NULL value.
Consequently, in mpi3mr_bsg_exit(), the condition "if(!mrioc->bsg_queue)"
will not be satisfied, preventing execution from entering
bsg_remove_queue(), which could lead to the following crash:

BUG: kernel NULL pointer dereference, address: 000000000000041c
Call Trace:
 <TASK>
 mpi3mr_bsg_exit+0x1f/0x50 [mpi3mr]
 mpi3mr_remove+0x6f/0x340 [mpi3mr]
 pci_device_remove+0x3f/0xb0
 device_release_driver_internal+0x19d/0x220
 unbind_store+0xa4/0xb0
 kernfs_fop_write_iter+0x11f/0x200
 vfs_write+0x1fc/0x3e0
 ksys_write+0x67/0xe0
 do_syscall_64+0x38/0x80
 entry_SYSCALL_64_after_hwframe+0x78/0xe2

More Info: https://avd.aquasec.com/nvd/cve-2025-21723

[CVE-2025-21729] kernel: wifi: rtw89: fix race between cancel_hw_scan and hw_scan completion (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

wifi: rtw89: fix race between cancel_hw_scan and hw_scan completion

The rtwdev->scanning flag isn't protected by mutex originally, so
cancel_hw_scan can pass the condition, but suddenly hw_scan completion
unset the flag and calls ieee80211_scan_completed() that will free
local->hw_scan_req. Then, cancel_hw_scan raises null-ptr-deref and
use-after-free. Fix it by moving the check condition to where
protected by mutex.

 KASAN: null-ptr-deref in range [0x0000000000000088-0x000000000000008f]
 CPU: 2 PID: 6922 Comm: kworker/2:2 Tainted: G   OE
 Hardware name: LENOVO 2356AD1/2356AD1, BIOS G7ETB6WW (2.76) 09/10/2019
 Workqueue: events cfg80211_conn_work [cfg80211]
 RIP: 0010:rtw89_fw_h2c_scan_offload_be+0xc33/0x13c3 [rtw89_core]
 Code: 00 45 89 6c 24 1c 0f 85 23 01 00 00 48 8b 85 20 ff ff ff 48 8d
 RSP: 0018:ffff88811fd9f068 EFLAGS: 00010206
 RAX: dfffc0000000000 RBX: ffff88811fd9f258 RCX: 0000000000000001

RDX: 0000000000000011 RSI: 0000000000000001 RDI: 0000000000000089
RBP: ffff88811fd9f170 R08: 0000000000000000 R09: 0000000000000000
R10: ffff88811fd9f108 R11: 0000000000000000 R12: ffff88810e47f960
R13: 0000000000000000 R14: 000000000000ffff R15: 0000000000000000
FS: 0000000000000000(0000) GS:ffff8881d6f00000(0000) knlGS:0000000000000000
CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 00007531dfca55b0 CR3: 00000001be296004 CR4: 00000000001706e0
Call Trace:
 <TASK>
 ? show_regs+0x61/0x73
 ? __die_body+0x20/0x73
 ? die_addr+0x4f/0x7b
 ? exc_general_protection+0x191/0x1db
 ? asm_exc_general_protection+0x27/0x30
 ? rtw89_fw_h2c_scan_offload_be+0xc33/0x13c3 [rtw89_core]
 ? rtw89_fw_h2c_scan_offload_be+0x458/0x13c3 [rtw89_core]
 ? __pfx_rtw89_fw_h2c_scan_offload_be+0x10/0x10 [rtw89_core]
 ? do_raw_spin_lock+0x75/0xdb
 ? __pfx_do_raw_spin_lock+0x10/0x10
 rtw89_hw_scan_offload+0xb5e/0xbf7 [rtw89_core]
 ? _raw_spin_unlock+0xe/0x24
 ? __mutex_lock.constprop.0+0x40c/0x471
 ? __pfx_rtw89_hw_scan_offload+0x10/0x10 [rtw89_core]
 ? __mutex_lock_slowpath+0x13/0x1f
 ? mutex_lock+0xa2/0xdc
 ? __pfx_mutex_lock+0x10/0x10
 rtw89_hw_scan_abort+0x58/0xb7 [rtw89_core]
 rtw89_ops_cancel_hw_scan+0x120/0x13b [rtw89_core]
 ieee80211_scan_cancel+0x468/0x4d0 [mac80211]
 ieee80211_prep_connection+0x858/0x899 [mac80211]
 ieee80211_mgd_auth+0xbea/0xdde [mac80211]
 ? __pfx_ieee80211_mgd_auth+0x10/0x10 [mac80211]
 ? cfg80211_find_elem+0x15/0x29 [cfg80211]
 ? is_bss+0x1b7/0x1d7 [cfg80211]
 ieee80211_auth+0x18/0x27 [mac80211]
 cfg80211_mlme_auth+0x3bb/0x3e7 [cfg80211]
 cfg80211_conn_do_work+0x410/0xb81 [cfg80211]
 ? __pfx_cfg80211_conn_do_work+0x10/0x10 [cfg80211]
 ? __kasan_check_read+0x11/0x1f
 ? psi_group_change+0x8bc/0x944
 ? __kasan_check_write+0x14/0x22
 ? mutex_lock+0x8e/0xdc
 ? __pfx_mutex_lock+0x10/0x10
 ? __pfx___radix_tree_lookup+0x10/0x10
 cfg80211_conn_work+0x245/0x34d [cfg80211]
 ? __pfx_cfg80211_conn_work+0x10/0x10 [cfg80211]
 ? update_cfs_rq_load_avg+0x3bc/0x3d7
 ? sched_clock_noinstr+0x9/0x1a
 ? sched_clock+0x10/0x24
 ? sched_clock_cpu+0x7e/0x42e
 ? newidle_balance+0x796/0x937
 ? __pfx_sched_clock_cpu+0x10/0x10
 ? __pfx_newidle_balance+0x10/0x10

? __kasan_check_read+0x11/0x1f
? psi_group_change+0x8bc/0x944
? _raw_spin_unlock+0xe/0x24
? raw_spin_rq_unlock+0x47/0x54
? raw_spin_rq_unlock_irq+0x9/0x1f
? finish_task_switch.isra.0+0x347/0x586
? __schedule+0x27bf/0x2892
? mutex_unlock+0x80/0xd0
? do_raw_spin_lock+0x75/0xdb
? __pfx___schedule+0x10/0x10
process_scheduled_works+0x58c/0x821
worker_thread+0x4c7/0x586
? __kasan_check_read+0x11/0x1f
kthread+0x285/0x294
? __pfx_worker_thread+0x10/0x10
? __pfx_kthread+0x10/0x10
ret_from_fork+0x29/0x6f
? __pfx_kthread+0x10/0x10
ret_from_fork_asm+0x1b/0x30
</TASK>

More Info: https://avd.aquasec.com/nvd/cve-2025-21729

[CVE-2025-21732] kernel: RDMA/mlx5: Fix a race for an ODP MR which leads to CQE with error (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

RDMA/mlx5: Fix a race for an ODP MR which leads to CQE with error

This patch addresses a race condition for an ODP MR that can result in a
CQE with an error on the UMR QP.

During the __mlx5_ib_dereg_mr() flow, the following sequence of calls
occurs:

mlx5_revoke_mr()
 mlx5r_umr_revoke_mr()
 mlx5r_umr_post_send_wait()

At this point, the lkey is freed from the hardware's perspective.

However, concurrently, mlx5_ib_invalidate_range() might be triggered by
another task attempting to invalidate a range for the same freed lkey.

This task will:
 - Acquire the umem_odp->umem_mutex lock.
 - Call mlx5r_umr_update_xlt() on the UMR QP.
 - Since the lkey has already been freed, this can lead to a CQE error,

causing the UMR QP to enter an error state [1].

To resolve this race condition, the umem_odp->umem_mutex lock is now also
acquired as part of the mlx5_revoke_mr() scope. Upon successful revoke,
we set umem_odp->private which points to that MR to NULL, preventing any
further invalidation attempts on its lkey.

[1] From dmesg:

infiniband rocep8s0f0: dump_cqe:277:(pid 0): WC error: 6, Message: memory bind operation error
cqe_dump: 00000000: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
cqe_dump: 00000010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
cqe_dump: 00000020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
cqe_dump: 00000030: 00 00 00 00 08 00 78 06 25 00 11 b9 00 0e dd d2

WARNING: CPU: 15 PID: 1506 at drivers/infiniband/hw/mlx5/umr.c:394 mlx5r_umr_post_send_wait+0x15a/0x2b0 [mlx5_ib]
Modules linked in: ip6table_mangle ip6table_natip6table_filter ip6_tables iptable_mangle xt_conntrack xt_MASQUERADE nf_conntrack_netlink nfnetlink xt_addrtype iptable_nat nf_nat br_netfilter rpcsec_gss_krb5 auth_rpcgss oid_registry overlay rpcrdma rdma_ucm ib_iser libiscsi scsi_transport_iscsi rdma_cm iw_cm ib_umad ib_ipoib ib_cm mlx5_ib ib_uverbs ib_core fuse mlx5_core
CPU: 15 UID: 0 PID: 1506 Comm: ibv_rc_pingpong Not tainted 6.12.0-rc7+ #1626
Hardware name: QEMU Standard PC (Q35 + ICH9, 2009), BIOS rel-1.13.0-0-gf21b5a4aeb02-prebuilt.qemu.org 04/01/2014
RIP: 0010:mlx5r_umr_post_send_wait+0x15a/0x2b0 [mlx5_ib]
[..]
Call Trace:
<TASK>
mlx5r_umr_update_xlt+0x23c/0x3e0 [mlx5_ib]
mlx5_ib_invalidate_range+0x2e1/0x330 [mlx5_ib]
__mmu_notifier_invalidate_range_start+0x1e1/0x240
zap_page_range_single+0xf1/0x1a0
madvise_vma_behavior+0x677/0x6e0
do_madvise+0x1a2/0x4b0
__x64_sys_madvise+0x25/0x30
do_syscall_64+0x6b/0x140
entry_SYSCALL_64_after_hwframe+0x76/0x7e

More Info: https://avd.aquasec.com/nvd/cve-2025-21732

[CVE-2025-21739] kernel: scsi: ufs: core: Fix use-after free in init error and remove paths (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

scsi: ufs: core: Fix use-after free in init error and remove paths

devm_blk_crypto_profile_init() registers a cleanup handler to run when
the associated (platform-) device is being released. For UFS, the

crypto private data and pointers are stored as part of the ufs_hba's
data structure 'struct ufs_hba::crypto_profile'. This structure is
allocated as part of the underlying ufshcd and therefore Scsi_host
allocation.

During driver release or during error handling in ufshcd_pltfrm_init(),
this structure is released as part of ufshcd_dealloc_host() before the
(platform-) device associated with the crypto call above is released.
Once this device is released, the crypto cleanup code will run, using
the just-released 'struct ufs_hba::crypto_profile'. This causes a
use-after-free situation:

```
 Call trace:
  kfree+0x60/0x2d8 (P)
  kvfree+0x44/0x60
  blk_crypto_profile_destroy_callback+0x28/0x70
  devm_action_release+0x1c/0x30
  release_nodes+0x6c/0x108
  devres_release_all+0x98/0x100
  device_unbind_cleanup+0x20/0x70
  really_probe+0x218/0x2d0
```

In other words, the initialisation code flow is:

```
 platform-device probe
   ufshcd_pltfrm_init()
     ufshcd_alloc_host()
       scsi_host_alloc()
         allocation of struct ufs_hba
         creation of scsi-host devices
   devm_blk_crypto_profile_init()
     devm registration of cleanup handler using platform-device
```

and during error handling of ufshcd_pltfrm_init() or during driver
removal:

```
 ufshcd_dealloc_host()
   scsi_host_put()
     put_device(scsi-host)
       release of struct ufs_hba
 put_device(platform-device)
   crypto cleanup handler
```

To fix this use-after free, change ufshcd_alloc_host() to register a
devres action to automatically cleanup the underlying SCSI device on
ufshcd destruction, without requiring explicit calls to
ufshcd_dealloc_host(). This way:

* the crypto profile and all other ufs_hba-owned resources are
  destroyed before SCSI (as they've been registered after)
* a memleak is plugged in tc-dwc-g210-pci.c remove() as a
  side-effect
* EXPORT_SYMBOL_GPL(ufshcd_dealloc_host) can be removed fully as

it's not needed anymore
* no future drivers using ufshcd_alloc_host() could ever forget
adding the cleanup

More Info: https://avd.aquasec.com/nvd/cve-2025-21739

[CVE-2025-21751] kernel: net/mlx5: HWS, change error flow on matcher disconnect (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net/mlx5: HWS, change error flow on matcher disconnect

Currently, when firmware failure occurs during matcher disconnect flow,
the error flow of the function reconnects the matcher back and returns
an error, which continues running the calling function and eventually
frees the matcher that is being disconnected.
This leads to a case where we have a freed matcher on the matchers list,
which in turn leads to use-after-free and eventual crash.

This patch fixes that by not trying to reconnect the matcher back when
some FW command fails during disconnect.

Note that we're dealing here with FW error. We can't overcome this
problem. This might lead to bad steering state (e.g. wrong connection
between matchers), and will also lead to resource leakage, as it is
the case with any other error handling during resource destruction.

However, the goal here is to allow the driver to continue and not crash
the machine with use-after-free error.

More Info: https://avd.aquasec.com/nvd/cve-2025-21751

[CVE-2025-21756] kernel: vsock: Keep the binding until socket destruction (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

vsock: Keep the binding until socket destruction

Preserve sockets bindings; this includes both resulting from an explicit
bind() and those implicitly bound through autobind during connect().

Prevents socket unbinding during a transport reassignment, which fixes a
use-after-free:

1. vsock_create() (refcnt=1) calls vsock_insert_unbound() (refcnt=2)

2. transport->release() calls vsock_remove_bound() without checking if
   sk was bound and moved to bound list (refcnt=1)
3. vsock_bind() assumes sk is in unbound list and before
   __vsock_insert_bound(vsock_bound_sockets()) calls
   __vsock_remove_bound() which does:
      list_del_init(&vsk->bound_table); // nop
      sock_put(&vsk->sk);   // refcnt=0

BUG: KASAN: slab-use-after-free in __vsock_bind+0x62e/0x730
Read of size 4 at addr ffff88816b46a74c by task a.out/2057
 dump_stack_lvl+0x68/0x90
 print_report+0x174/0x4f6
 kasan_report+0xb9/0x190
 __vsock_bind+0x62e/0x730
 vsock_bind+0x97/0xe0
 __sys_bind+0x154/0x1f0
 __x64_sys_bind+0x6e/0xb0
 do_syscall_64+0x93/0x1b0
 entry_SYSCALL_64_after_hwframe+0x76/0x7e

Allocated by task 2057:
 kasan_save_stack+0x1e/0x40
 kasan_save_track+0x10/0x30
 __kasan_slab_alloc+0x85/0x90
 kmem_cache_alloc_noprof+0x131/0x450
 sk_prot_alloc+0x5b/0x220
 sk_alloc+0x2c/0x870
 __vsock_create.constprop.0+0x2e/0xb60
 vsock_create+0xe4/0x420
 __sock_create+0x241/0x650
 __sys_socket+0xf2/0x1a0
 __x64_sys_socket+0x6e/0xb0
 do_syscall_64+0x93/0x1b0
 entry_SYSCALL_64_after_hwframe+0x76/0x7e

Freed by task 2057:
 kasan_save_stack+0x1e/0x40
 kasan_save_track+0x10/0x30
 kasan_save_free_info+0x37/0x60
 __kasan_slab_free+0x4b/0x70
 kmem_cache_free+0x1a1/0x590
 __sk_destruct+0x388/0x5a0
 __vsock_bind+0x5e1/0x730
 vsock_bind+0x97/0xe0
 __sys_bind+0x154/0x1f0
 __x64_sys_bind+0x6e/0xb0
 do_syscall_64+0x93/0x1b0
 entry_SYSCALL_64_after_hwframe+0x76/0x7e

refcount_t: addition on 0; use-after-free.
WARNING: CPU: 7 PID: 2057 at lib/refcount.c:25 refcount_warn_saturate+0xce/0x150
RIP: 0010:refcount_warn_saturate+0xce/0x150
 __vsock_bind+0x66d/0x730

vsock_bind+0x97/0xe0
__sys_bind+0x154/0x1f0
__x64_sys_bind+0x6e/0xb0
do_syscall_64+0x93/0x1b0
entry_SYSCALL_64_after_hwframe+0x76/0x7e

refcount_t: underflow; use-after-free.
WARNING: CPU: 7 PID: 2057 at lib/refcount.c:28 refcount_warn_saturate+0xee/0x150
RIP: 0010:refcount_warn_saturate+0xee/0x150
vsock_remove_bound+0x187/0x1e0
__vsock_release+0x383/0x4a0
vsock_release+0x90/0x120
__sock_release+0xa3/0x250
sock_close+0x14/0x20
__fput+0x359/0xa80
task_work_run+0x107/0x1d0
do_exit+0x847/0x2560
do_group_exit+0xb8/0x250
__x64_sys_exit_group+0x3a/0x50
x64_sys_call+0xfec/0x14f0
do_syscall_64+0x93/0x1b0
entry_SYSCALL_64_after_hwframe+0x76/0x7e

More Info: https://avd.aquasec.com/nvd/cve-2025-21756

[CVE-2025-21759] kernel: ipv6: mcast: extend RCU protection in igmp6_send() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ipv6: mcast: extend RCU protection in igmp6_send()

igmp6_send() can be called without RTNL or RCU being held.

Extend RCU protection so that we can safely fetch the net pointer
and avoid a potential UAF.

Note that we no longer can use sock_alloc_send_skb() because
ipv6.igmp_sk uses GFP_KERNEL allocations which can sleep.

Instead use alloc_skb() and charge the net->ipv6.igmp_sk
socket under RCU protection.

More Info: https://avd.aquasec.com/nvd/cve-2025-21759

[CVE-2025-21768] kernel: net: ipv6: fix dst ref loops in rpl, seg6 and ioam6 lwtunnels (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net: ipv6: fix dst ref loops in rpl, seg6 and ioam6 lwtunnels

Some lwtunnels have a dst cache for post-transformation dst.
If the packet destination did not change we may end up recording
a reference to the lwtunnel in its own cache, and the lwtunnel
state will never be freed.

Discovered by the ioam6.sh test, kmemleak was recently fixed
to catch per-cpu memory leaks. I'm not sure if rpl and seg6
can actually hit this, but in principle I don't see why not.

More Info: https://avd.aquasec.com/nvd/cve-2025-21768

[CVE-2025-21801] kernel: net: ravb: Fix missing rtnl lock in suspend/resume path (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net: ravb: Fix missing rtnl lock in suspend/resume path

Fix the suspend/resume path by ensuring the rtnl lock is held where
required. Calls to ravb_open, ravb_close and wol operations must be
performed under the rtnl lock to prevent conflicts with ongoing ndo
operations.

Without this fix, the following warning is triggered:
[39.032969] ============================
[39.032983] WARNING: suspicious RCU usage
[39.033019] ----------------------------
[39.033033] drivers/net/phy/phy_device.c:2004 suspicious
rcu_dereference_protected() usage!
...
[39.033597] stack backtrace:
[39.033613] CPU: 0 UID: 0 PID: 174 Comm: python3 Not tainted
6.13.0-rc7-next-20250116-arm64-renesas-00002-g35245dfdc62c #7
[39.033623] Hardware name: Renesas SMARC EVK version 2 based on
r9a08g045s33 (DT)
[39.033628] Call trace:
[39.033633] show_stack+0x14/0x1c (C)
[39.033652] dump_stack_lvl+0xb4/0xc4
[39.033664] dump_stack+0x14/0x1c
[39.033671] lockdep_rcu_suspicious+0x16c/0x22c
[39.033682] phy_detach+0x160/0x190
[39.033694] phy_disconnect+0x40/0x54
[39.033703] ravb_close+0x6c/0x1cc
[39.033714] ravb_suspend+0x48/0x120
[39.033721] dpm_run_callback+0x4c/0x14c
[39.033731] device_suspend+0x11c/0x4dc

[39.033740] dpm_suspend+0xdc/0x214
[39.033748] dpm_suspend_start+0x48/0x60
[39.033758] suspend_devices_and_enter+0x124/0x574
[39.033769] pm_suspend+0x1ac/0x274
[39.033778] state_store+0x88/0x124
[39.033788] kobj_attr_store+0x14/0x24
[39.033798] sysfs_kf_write+0x48/0x6c
[39.033808] kernfs_fop_write_iter+0x118/0x1a8
[39.033817] vfs_write+0x27c/0x378
[39.033825] ksys_write+0x64/0xf4
[39.033833] __arm64_sys_write+0x18/0x20
[39.033841] invoke_syscall+0x44/0x104
[39.033852] el0_svc_common.constprop.0+0xb4/0xd4
[39.033862] do_el0_svc+0x18/0x20
[39.033870] el0_svc+0x3c/0xf0
[39.033880] el0t_64_sync_handler+0xc0/0xc4
[39.033888] el0t_64_sync+0x154/0x158
[39.041274] ravb 11c30000.ethernet eth0: Link is Down

More Info: https://avd.aquasec.com/nvd/cve-2025-21801

[CVE-2025-21816] kernel: hrtimers: Force migrate away hrtimers queued after CPUHP_AP_HRTIMERS_DYING (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

hrtimers: Force migrate away hrtimers queued after CPUHP_AP_HRTIMERS_DYING

hrtimers are migrated away from the dying CPU to any online target at
the CPUHP_AP_HRTIMERS_DYING stage in order not to delay bandwidth timers
handling tasks involved in the CPU hotplug forward progress.

However wakeups can still be performed by the outgoing CPU after
CPUHP_AP_HRTIMERS_DYING. Those can result again in bandwidth timers being
armed. Depending on several considerations (crystal ball power management
based election, earliest timer already enqueued, timer migration enabled or
not), the target may eventually be the current CPU even if offline. If that
happens, the timer is eventually ignored.

The most notable example is RCU which had to deal with each and every of
those wake-ups by deferring them to an online CPU, along with related
workarounds:

_ e787644caf76 (rcu: Defer RCU kthreads wakeup when CPU is dying)
_ 9139f93209d1 (rcu/nocb: Fix RT throttling hrtimer armed from offline CPU)
_ f7345ccc62a4 (rcu/nocb: Fix rcuog wake-up from offline softirq)

The problem isn't confined to RCU though as the stop machine kthread
(which runs CPUHP_AP_HRTIMERS_DYING) reports its completion at the end

of its work through cpu_stop_signal_done() and performs a wake up that
eventually arms the deadline server timer:

```
WARNING: CPU: 94 PID: 588 at kernel/time/hrtimer.c:1086 hrtimer_start_range_ns+0x289/0x2d0
CPU: 94 UID: 0 PID: 588 Comm: migration/94 Not tainted
Stopper: multi_cpu_stop+0x0/0x120 <- stop_machine_cpuslocked+0x66/0xc0
RIP: 0010:hrtimer_start_range_ns+0x289/0x2d0
Call Trace:
<TASK>
 start_dl_timer
 enqueue_dl_entity
 dl_server_start
 enqueue_task_fair
 enqueue_task
 ttwu_do_activate
 try_to_wake_up
 complete
 cpu_stopper_thread
```

Instead of providing yet another bandaid to work around the situation, fix
it in the hrtimers infrastructure instead: always migrate away a timer to
an online target whenever it is enqueued from an offline CPU.

This will also allow to revert all the above RCU disgraceful hacks.

More Info: https://avd.aquasec.com/nvd/cve-2025-21816

[CVE-2025-21817] kernel: block: mark GFP_NOIO around sysfs ->store() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

block: mark GFP_NOIO around sysfs ->store()

sysfs ->store is called with queue freezed, meantime we have several
->store() callbacks(update_nr_requests, wbt, scheduler) to allocate
memory with GFP_KERNEL which may run into direct reclaim code path,
then potential deadlock can be caused.

Fix the issue by marking NOIO around sysfs ->store()

More Info: https://avd.aquasec.com/nvd/cve-2025-21817

[CVE-2025-21831] kernel: PCI: Avoid putting some root ports into D3 on TUXEDO Sirius Gen1 (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

PCI: Avoid putting some root ports into D3 on TUXEDO Sirius Gen1

commit 9d26d3a8f1b0 ("PCI: Put PCIe ports into D3 during suspend") sets the policy that all PCIe ports are allowed to use D3. When the system is suspended if the port is not power manageable by the platform and won't be used for wakeup via a PME this sets up the policy for these ports to go into D3hot.

This policy generally makes sense from an OSPM perspective but it leads to problems with wakeup from suspend on the TUXEDO Sirius 16 Gen 1 with a specific old BIOS. This manifests as a system hang.

On the affected Device + BIOS combination, add a quirk for the root port of the problematic controller to ensure that these root ports are not put into D3hot at suspend.

This patch is based on

https://lore.kernel.org/linux-pci/20230708214457.1229-2-mario.limonciello@amd.com

but with the added condition both in the documentation and in the code to apply only to the TUXEDO Sirius 16 Gen 1 with a specific old BIOS and only the affected root ports.

More Info: https://avd.aquasec.com/nvd/cve-2025-21831

[CVE-2025-21833] kernel: iommu/vt-d: Avoid use of NULL after WARN_ON_ONCE (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

iommu/vt-d: Avoid use of NULL after WARN_ON_ONCE

There is a WARN_ON_ONCE to catch an unlikely situation when domain_remove_dev_pasid can't find the `pasid`. In case it nevertheless happens we must avoid using a NULL pointer.

More Info: https://avd.aquasec.com/nvd/cve-2025-21833

[CVE-2025-21836] kernel: io_uring/kbuf: re-using old struct io_buffer_list may lead to a use-after-free situation (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

io_uring/kbuf: reallocate buf lists on upgrade

IORING_REGISTER_PBUF_RING can reuse an old struct io_buffer_list if it was created for legacy selected buffer and has been emptied. It violates the requirement that most of the field should stay stable after publish. Always reallocate it instead.

More Info: https://avd.aquasec.com/nvd/cve-2025-21836

[CVE-2025-21838] kernel: usb: gadget: core: flush gadget workqueue after device removal (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

usb: gadget: core: flush gadget workqueue after device removal

device_del() can lead to new work being scheduled in gadget->work workqueue. This is observed, for example, with the dwc3 driver with the following call stack:

```
  device_del()
    gadget_unbind_driver()
      usb_gadget_disconnect_locked()
        dwc3_gadget_pullup()
   dwc3_gadget_soft_disconnect()
     usb_gadget_set_state()
       schedule_work(&gadget->work)
```

Move flush_work() after device_del() to ensure the workqueue is cleaned up.

More Info: https://avd.aquasec.com/nvd/cve-2025-21838

[CVE-2025-21839] kernel: KVM: x86: Load DR6 with guest value only before entering .vcpu_run() loop (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

KVM: x86: Load DR6 with guest value only before entering .vcpu_run() loop

Move the conditional loading of hardware DR6 with the guest's DR6 value out of the core .vcpu_run() loop to fix a bug where KVM can load hardware with a stale vcpu->arch.dr6.

When the guest accesses a DR and host userspace isn't debugging the guest, KVM disables DR interception and loads the guest's values into hardware on VM-Enter and saves them on VM-Exit. This allows the guest to access DRs at will, e.g. so that a sequence of DR accesses to configure a breakpoint only generates one VM-Exit.

For DR0-DR3, the logic/behavior is identical between VMX and SVM, and also
identical between KVM_DEBUGREG_BP_ENABLED (userspace debugging the guest)
and KVM_DEBUGREG_WONT_EXIT (guest using DRs), and so KVM handles loading
DR0-DR3 in common code, _outside_ of the core kvm_x86_ops.vcpu_run() loop.

But for DR6, the guest's value doesn't need to be loaded into hardware for
KVM_DEBUGREG_BP_ENABLED, and SVM provides a dedicated VMCB field whereas
VMX requires software to manually load the guest value, and so loading the
guest's value into DR6 is handled by {svm,vmx}_vcpu_run(), i.e. is done
inside the core run loop.

Unfortunately, saving the guest values on VM-Exit is initiated by common
x86, again outside of the core run loop. If the guest modifies DR6 (in
hardware, when DR interception is disabled), and then the next VM-Exit is
a fastpath VM-Exit, KVM will reload hardware DR6 with vcpu->arch.dr6 and
clobber the guest's actual value.

The bug shows up primarily with nested VMX because KVM handles the VMX
preemption timer in the fastpath, and the window between hardware DR6
being modified (in guest context) and DR6 being read by guest software is
orders of magnitude larger in a nested setup. E.g. in non-nested, the
VMX preemption timer would need to fire precisely between #DB injection
and the #DB handler's read of DR6, whereas with a KVM-on-KVM setup, the
window where hardware DR6 is "dirty" extends all the way from L1 writing
DR6 to VMRESUME (in L1).

```
   L1's view:
   ==========
   <L1 disables DR interception>
        CPU 0/KVM-7289    [023] d....  2925.640961: kvm_entry: vcpu 0
A:  L1 Writes DR6
        CPU 0/KVM-7289    [023] d....  2925.640963: <hack>: Set DRs, DR6 = 0xffff0ff1

B:          CPU 0/KVM-7289     [023] d....  2925.640967: kvm_exit: vcpu 0 reason EXTERNAL_INTERRUPT intr_info
0x800000ec

D: L1 reads DR6, arch.dr6 = 0
        CPU 0/KVM-7289    [023] d....  2925.640969: <hack>: Sync DRs, DR6 = 0xffff0ff0

        CPU 0/KVM-7289    [023] d....  2925.640976: kvm_entry: vcpu 0
   L2 reads DR6, L1 disables DR interception
        CPU 0/KVM-7289    [023] d....  2925.640980: kvm_exit: vcpu 0 reason DR_ACCESS info1 0x0000000000000216
        CPU 0/KVM-7289    [023] d....  2925.640983: kvm_entry: vcpu 0

        CPU 0/KVM-7289    [023] d....  2925.640983: <hack>: Set DRs, DR6 = 0xffff0ff0

   L2 detects failure
        CPU 0/KVM-7289    [023] d....  2925.640987: kvm_exit: vcpu 0 reason HLT
   L1 reads DR6 (confirms failure)
        CPU 0/KVM-7289    [023] d....  2925.640990: <hack>: Sync DRs, DR6 = 0xffff0ff0

   L0's view:
```

==========
L2 reads DR6, arch.dr6 = 0
CPU 23/KVM-5046 [001] d.... 3410.005610: kvm_exit: vcpu 23 reason DR_ACCESS info1 0x0000000000000216
CPU 23/KVM-5046 [001] ..... 3410.005610: kvm_nested_vmexit: vcpu 23 reason DR_ACCESS info1 0x0000000000000216

L2 => L1 nested VM-Exit
CPU 23/KVM-5046 [001] ..... 3410.005610: kvm_nested_vmexit_inject: reason: DR_ACCESS ext_inf1: 0x0000000000000216

CPU 23/KVM-5046 [001] d.... 3410.005610: kvm_entry: vcpu 23
CPU 23/KVM-5046 [001] d.... 3410.005611: kvm_exit: vcpu 23 reason VMREAD
CPU 23/KVM-5046 [001] d.... 3410.005611: kvm_entry: vcpu 23
CPU 23/KVM-5046 [001] d.... 3410.
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2025-21839

[CVE-2025-21844] kernel: smb: client: Add check for next_buffer in receive_encrypted_standard() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

smb: client: Add check for next_buffer in receive_encrypted_standard()

Add check for the return value of cifs_buf_get() and cifs_small_buf_get()
in receive_encrypted_standard() to prevent null pointer dereference.

More Info: https://avd.aquasec.com/nvd/cve-2025-21844

[CVE-2025-21846] kernel: acct: perform last write from workqueue (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

acct: perform last write from workqueue

In [1] it was reported that the acct(2) system call can be used to
trigger NULL deref in cases where it is set to write to a file that
triggers an internal lookup. This can e.g., happen when pointing acc(2)
to /sys/power/resume. At the point the where the write to this file
happens the calling task has already exited and called exit_fs(). A
lookup will thus trigger a NULL-deref when accessing current->fs.

Reorganize the code so that the the final write happens from the
workqueue but with the caller's credentials. This preserves the

(strange) permission model and has almost no regression risk.

This api should stop to exist though.

More Info: https://avd.aquasec.com/nvd/cve-2025-21846

[CVE-2025-21848] kernel: nfp: bpf: Add check for nfp_app_ctrl_msg_alloc() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

nfp: bpf: Add check for nfp_app_ctrl_msg_alloc()

Add check for the return value of nfp_app_ctrl_msg_alloc() in
nfp_bpf_cmsg_alloc() to prevent null pointer dereference.

More Info: https://avd.aquasec.com/nvd/cve-2025-21848

[CVE-2025-21853] kernel: bpf: avoid holding freeze_mutex during mmap operation (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf: avoid holding freeze_mutex during mmap operation

We use map->freeze_mutex to prevent races between map_freeze() and
memory mapping BPF map contents with writable permissions. The way we
naively do this means we'll hold freeze_mutex for entire duration of all
the mm and VMA manipulations, which is completely unnecessary. This can
potentially also lead to deadlocks, as reported by syzbot in [0].

So, instead, hold freeze_mutex only during writeability checks, bump
(proactively) "write active" count for the map, unlock the mutex and
proceed with mmap logic. And only if something went wrong during mmap
logic, then undo that "write active" counter increment.

[0] https://lore.kernel.org/bpf/678dcbc9.050a0220.303755.0066.GAE@google.com/

More Info: https://avd.aquasec.com/nvd/cve-2025-21853

[CVE-2025-21859] kernel: USB: gadget: f_midi: f_midi_complete to call queue_work (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

USB: gadget: f_midi: f_midi_complete to call queue_work

When using USB MIDI, a lock is attempted to be acquired twice through a
re-entrant call to f_midi_transmit, causing a deadlock.

Fix it by using queue_work() to schedule the inner f_midi_transmit() via
a high priority work queue from the completion handler.

More Info: https://avd.aquasec.com/nvd/cve-2025-21859

[CVE-2025-21861] kernel: mm/migrate_device: don't add folio to be freed to LRU in migrate_device_finalize() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

mm/migrate_device: don't add folio to be freed to LRU in migrate_device_finalize()

If migration succeeded, we called
folio_migrate_flags()->mem_cgroup_migrate() to migrate the memcg from the
old to the new folio. This will set memcg_data of the old folio to 0.

Similarly, if migration failed, memcg_data of the dst folio is left unset.

If we call folio_putback_lru() on such folios (memcg_data == 0), we will
add the folio to be freed to the LRU, making memcg code unhappy. Running
the hmm selftests:

```
 # ./hmm-tests
 ...
 #  RUN           hmm.hmm_device_private.migrate ...
 [  102.078007][T14893] page: refcount:1 mapcount:0 mapping:0000000000000000 index:0x7ff27d200 pfn:0x13cc00
 [  102.079974][T14893] anon flags: 0x17ff00000020018(uptodate|dirty|swapbacked|node=0|zone=2|lastcpupid=0x7ff)
 [  102.082037][T14893] raw: 017ff00000020018 dead000000000100 dead000000000122 ffff8881353896c9
 [  102.083687][T14893] raw: 00000007ff27d200 0000000000000000 00000001ffffffff 0000000000000000
 [  102.085331][T14893] page dumped because: VM_WARN_ON_ONCE_FOLIO(!memcg && !mem_cgroup_disabled())
 [  102.087230][T14893] ------------[ cut here ]------------
       [  102.088279][T14893] WARNING: CPU: 0 PID: 14893 at ./include/linux/memcontrol.h:726
folio_lruvec_lock_irqsave+0x10e/0x170
 [  102.090478][T14893] Modules linked in:
 [  102.091244][T14893] CPU: 0 UID: 0 PID: 14893 Comm: hmm-tests Not tainted 6.13.0-09623-g6c216bc522fd #151
 [  102.093089][T14893] Hardware name: QEMU Standard PC (Q35 + ICH9, 2009), BIOS 1.16.3-2.fc40 04/01/2014
 [  102.094848][T14893] RIP: 0010:folio_lruvec_lock_irqsave+0x10e/0x170
 [  102.096104][T14893] Code: ...
 [  102.099908][T14893] RSP: 0018:ffffc900236c37b0 EFLAGS: 00010293
 [  102.101152][T14893] RAX: 0000000000000000 RBX: ffffea0004f30000 RCX: ffffffff8183f426
 [  102.102684][T14893] RDX: ffff8881063cb880 RSI: ffffffff81b8117f RDI: ffff8881063cb880
 [  102.104227][T14893] RBP: 0000000000000000 R08: 0000000000000005 R09: 0000000000000000
 [  102.105757][T14893] R10: 0000000000000001 R11: 0000000000000002 R12: ffffc900236c37d8
```

[102.107296][T14893] R13: ffff888277a2bcb0 R14: 000000000000001f R15: 0000000000000000
[102.108830][T14893] FS: 00007ff27dbdd740(0000) GS:ffff888277a00000(0000) knlGS:0000000000000000
[102.110643][T14893] CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
[102.111924][T14893] CR2: 00007ff27d400000 CR3: 000000010866e000 CR4: 0000000000750ef0
[102.113478][T14893] PKRU: 55555554
[102.114172][T14893] Call Trace:
[102.114805][T14893] <TASK>
[102.115397][T14893] ? folio_lruvec_lock_irqsave+0x10e/0x170
[102.116547][T14893] ? __warn.cold+0x110/0x210
[102.117461][T14893] ? folio_lruvec_lock_irqsave+0x10e/0x170
[102.118667][T14893] ? report_bug+0x1b9/0x320
[102.119571][T14893] ? handle_bug+0x54/0x90
[102.120494][T14893] ? exc_invalid_op+0x17/0x50
[102.121433][T14893] ? asm_exc_invalid_op+0x1a/0x20
[102.122435][T14893] ? __wake_up_klogd.part.0+0x76/0xd0
[102.123506][T14893] ? dump_page+0x4f/0x60
[102.124352][T14893] ? folio_lruvec_lock_irqsave+0x10e/0x170
[102.125500][T14893] folio_batch_move_lru+0xd4/0x200
[102.126577][T14893] ? __pfx_lru_add+0x10/0x10
[102.127505][T14893] __folio_batch_add_and_move+0x391/0x720
[102.128633][T14893] ? __pfx_lru_add+0x10/0x10
[102.129550][T14893] folio_putback_lru+0x16/0x80
[102.130564][T14893] migrate_device_finalize+0x9b/0x530
[102.131640][T14893] dmirror_migrate_to_device.constprop.0+0x7c5/0xad0
[102.133047][T14893] dmirror_fops_unlocked_ioctl+0x89b/0xc80

Likely, nothing else goes wrong: putting the last folio reference will
remove the folio from the LRU again. So besides memcg complaining, adding
the folio to be freed to the LRU is just an unnecessary step.

The new flow resembles what we have in migrate_folio_move(): add the dst
to the lru, rem
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2025-21861

[CVE-2025-21862] kernel: drop_monitor: fix incorrect initialization order (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

drop_monitor: fix incorrect initialization order

Syzkaller reports the following bug:

BUG: spinlock bad magic on CPU#1, syz-executor.0/7995
 lock: 0xffff88805303f3e0, .magic: 00000000, .owner: <none>/-1, .owner_cpu: 0
CPU: 1 PID: 7995 Comm: syz-executor.0 Tainted: G   E   5.10.209+ #1
Hardware name: VMware, Inc. VMware Virtual Platform/440BX Desktop Reference Platform, BIOS 6.00 11/12/2020
Call Trace:
 __dump_stack lib/dump_stack.c:77 [inline]

dump_stack+0x119/0x179 lib/dump_stack.c:118
debug_spin_lock_before kernel/locking/spinlock_debug.c:83 [inline]
do_raw_spin_lock+0x1f6/0x270 kernel/locking/spinlock_debug.c:112
__raw_spin_lock_irqsave include/linux/spinlock_api_smp.h:117 [inline]
_raw_spin_lock_irqsave+0x50/0x70 kernel/locking/spinlock.c:159
reset_per_cpu_data+0xe6/0x240 [drop_monitor]
net_dm_cmd_trace+0x43d/0x17a0 [drop_monitor]
genl_family_rcv_msg_doit+0x22f/0x330 net/netlink/genetlink.c:739
genl_family_rcv_msg net/netlink/genetlink.c:783 [inline]
genl_rcv_msg+0x341/0x5a0 net/netlink/genetlink.c:800
netlink_rcv_skb+0x14d/0x440 net/netlink/af_netlink.c:2497
genl_rcv+0x29/0x40 net/netlink/genetlink.c:811
netlink_unicast_kernel net/netlink/af_netlink.c:1322 [inline]
netlink_unicast+0x54b/0x800 net/netlink/af_netlink.c:1348
netlink_sendmsg+0x914/0xe00 net/netlink/af_netlink.c:1916
sock_sendmsg_nosec net/socket.c:651 [inline]
__sock_sendmsg+0x157/0x190 net/socket.c:663
____sys_sendmsg+0x712/0x870 net/socket.c:2378
___sys_sendmsg+0xf8/0x170 net/socket.c:2432
__sys_sendmsg+0xea/0x1b0 net/socket.c:2461
do_syscall_64+0x30/0x40 arch/x86/entry/common.c:46
entry_SYSCALL_64_after_hwframe+0x62/0xc7
RIP: 0033:0x7f3f9815aee9
Code: ff ff c3 66 2e 0f 1f 84 00 00 00 00 00 0f 1f 40 00 48 89 f8 48 89 f7 48 89 d6 48 89 ca 4d 89 c2 4d 89 c8 4c 8b 4c 24 08 0f 05 <48> 3d 01 f0 ff ff 73 01 c3 48 c7 c1 b0 ff ff ff f7 d8 64 89 01 48
RSP: 002b:00007f3f972bf0c8 EFLAGS: 00000246 ORIG_RAX: 000000000000002e
RAX: ffffffffffffffda RBX: 00007f3f9826d050 RCX: 00007f3f9815aee9
RDX: 0000000020000000 RSI: 0000000020001300 RDI: 0000000000000007
RBP: 00007f3f981b63bd R08: 0000000000000000 R09: 0000000000000000
R10: 0000000000000000 R11: 0000000000000246 R12: 0000000000000000
R13: 000000000000006e R14: 00007f3f9826d050 R15: 00007ffe01ee6768

If drop_monitor is built as a kernel module, syzkaller may have time
to send a netlink NET_DM_CMD_START message during the module loading.
This will call the net_dm_monitor_start() function that uses
a spinlock that has not yet been initialized.

To fix this, let's place resource initialization above the registration
of a generic netlink family.

Found by InfoTeCS on behalf of Linux Verification Center
(linuxtesting.org) with Syzkaller.

More Info: https://avd.aquasec.com/nvd/cve-2025-21862

[CVE-2025-21864] kernel: tcp: drop secpath at the same time as we currently drop dst (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

tcp: drop secpath at the same time as we currently drop dst

Xiumei reported hitting the WARN in xfrm6_tunnel_net_exit while
running tests that boil down to:
 - create a pair of netns
 - run a basic TCP test over ipcomp6
 - delete the pair of netns

The xfrm_state found on spi_byaddr was not deleted at the time we
delete the netns, because we still have a reference on it. This
lingering reference comes from a secpath (which holds a ref on the
xfrm_state), which is still attached to an skb. This skb is not
leaked, it ends up on sk_receive_queue and then gets defer-free'd by
skb_attempt_defer_free.

The problem happens when we defer freeing an skb (push it on one CPU's
defer_list), and don't flush that list before the netns is deleted. In
that case, we still have a reference on the xfrm_state that we don't
expect at this point.

We already drop the skb's dst in the TCP receive path when it's no
longer needed, so let's also drop the secpath. At this point,
tcp_filter has already called into the LSM hooks that may require the
secpath, so it should not be needed anymore. However, in some of those
places, the MPTCP extension has just been attached to the skb, so we
cannot simply drop all extensions.

More Info: https://avd.aquasec.com/nvd/cve-2025-21864

[CVE-2025-21865] kernel: gtp: Suppress list corruption splat in gtp_net_exit_batch_rtnl(). (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

gtp: Suppress list corruption splat in gtp_net_exit_batch_rtnl().

Brad Spengler reported the list_del() corruption splat in
gtp_net_exit_batch_rtnl(). [0]

Commit eb28fd76c0a0 ("gtp: Destroy device along with udp socket's netns
dismantle.") added the for_each_netdev() loop in gtp_net_exit_batch_rtnl()
to destroy devices in each netns as done in geneve and ip tunnels.

However, this could trigger ->dellink() twice for the same device during
->exit_batch_rtnl().

Say we have two netns A & B and gtp device B that resides in netns B but
whose UDP socket is in netns A.

1. cleanup_net() processes netns A and then B.

2. gtp_net_exit_batch_rtnl() finds the device B while iterating
   netns A's gn->gtp_dev_list and calls ->dellink().

[device B is not yet unlinked from netns B
  as unregister_netdevice_many() has not been called.]

3. gtp_net_exit_batch_rtnl() finds the device B while iterating
   netns B's for_each_netdev() and calls ->dellink().

gtp_dellink() cleans up the device's hash table, unlinks the dev from
gn->gtp_dev_list, and calls unregister_netdevice_queue().

Basically, calling gtp_dellink() multiple times is fine unless
CONFIG_DEBUG_LIST is enabled.

Let's remove for_each_netdev() in gtp_net_exit_batch_rtnl() and
delegate the destruction to default_device_exit_batch() as done
in bareudp.

[0]:
list_del corruption, ffff8880aaa62c00->next (autoslab_size_M_dev_P_net_core_dev_11127_8_1328_8_S_4096_A_64_n_139+0xc00/0x1000 [slab object]) is LIST_POISON1 (ffffffffffffff02) (prev is 0xffffffffffffff04)
kernel BUG at lib/list_debug.c:58!
Oops: invalid opcode: 0000 [#1] PREEMPT SMP KASAN
CPU: 1 UID: 0 PID: 1804 Comm: kworker/u8:7 Tainted: G T 6.12.13-grsec-full-20250211091339 #1
Tainted: [T]=RANDSTRUCT
Hardware name: QEMU Standard PC (i440FX + PIIX, 1996), BIOS 1.15.0-1 04/01/2014
Workqueue: netns cleanup_net
RIP: 0010:[<ffffffff84947381>] __list_del_entry_valid_or_report+0x141/0x200 lib/list_debug.c:58
Code: c2 76 91 31 c0 e8 9f b1 f7 fc 0f 0b 4d 89 f0 48 c7 c1 02 ff ff ff 48 89 ea 48 89 ee 48 c7 c7 e0 c2 76 91 31 c0 e8 7f b1 f7 fc <0f> 0b 4d 89 e8 48 c7 c1 04 ff ff ff 48 89 ea 48 89 ee 48 c7 c7 60
RSP: 0018:fffffe8040b4fbd0 EFLAGS: 00010283
RAX: 00000000000000cc RBX: dffffc0000000000 RCX: ffffffff818c4054
RDX: ffffffff84947381 RSI: ffffffff818d1512 RDI: 0000000000000000
RBP: ffff8880aaa62c00 R08: 0000000000000001 R09: fffffbd008169f32
R10: fffffe8040b4f997 R11: 0000000000000001 R12: a1988d84f24943e4
R13: ffffffffffffff02 R14: ffffffffffffff04 R15: ffff8880aaa62c08
RBX: kasan shadow of 0x0
RCX: __wake_up_klogd.part.0+0x74/0xe0 kernel/printk/printk.c:4554
RDX: __list_del_entry_valid_or_report+0x141/0x200 lib/list_debug.c:58
RSI: vprintk+0x72/0x100 kernel/printk/printk_safe.c:71
RBP: autoslab_size_M_dev_P_net_core_dev_11127_8_1328_8_S_4096_A_64_n_139+0xc00/0x1000 [slab object]
RSP: process kstack fffffe8040b4fbd0+0x7bd0/0x8000 [kworker/u8:7+netns 1804]
R09: kasan shadow of process kstack fffffe8040b4f990+0x7990/0x8000 [kworker/u8:7+netns 1804]
R10: process kstack fffffe8040b4f997+0x7997/0x8000 [kworker/u8:7+netns 1804]
R15: autoslab_size_M_dev_P_net_core_dev_11127_8_1328_8_S_4096_A_64_n_139+0xc08/0x1000 [slab object]
FS: 0000000000000000(0000) GS:ffff888116000000(0000) knlGS:0000000000000000
CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 0000748f5372c000 CR3: 0000000015408000 CR4: 00000000003406f0 shadow CR4: 00000000003406f0

Stack:
 0000000000000000 ffffffff8a0c35e7 ffffffff8a0c3603 ffff8880aaa62c00
 ffff8880aaa62c00 0000000000000004 ffff88811145311c 0000000000000005
 0000000000000001 ffff8880aaa62000 fffffe8040b4fd40 ffffffff8a0c360d
Call Trace:
 <TASK>
 [<ffffffff8a0c360d>] __list_del_entry_valid include/linux/list.h:131 [inline] fffffe8040b4fc28
 [<ffffffff8a0c360d>] __list_del_entry include/linux/list.h:248 [inline] fffffe8040b4fc28
 [<ffffffff8a0c360d>] list_del include/linux/list.h:262 [inl
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2025-21865

[CVE-2025-21866] kernel: powerpc/code-patching: Fix KASAN hit by not flagging text patching area as VM_ALLOC (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

powerpc/code-patching: Fix KASAN hit by not flagging text patching area as VM_ALLOC

Erhard reported the following KASAN hit while booting his PowerMac G4
with a KASAN-enabled kernel 6.13-rc6:

  BUG: KASAN: vmalloc-out-of-bounds in copy_to_kernel_nofault+0xd8/0x1c8
  Write of size 8 at addr f1000000 by task chronyd/1293

  CPU: 0 UID: 123 PID: 1293 Comm: chronyd Tainted: G   W   6.13.0-rc6-PMacG4 #2
  Tainted: [W]=WARN
  Hardware name: PowerMac3,6 7455 0x80010303 PowerMac
  Call Trace:
  [c2437590] [c1631a84] dump_stack_lvl+0x70/0x8c (unreliable)
  [c24375b0] [c0504998] print_report+0xdc/0x504
  [c2437610] [c050475c] kasan_report+0xf8/0x108
  [c2437690] [c0505a3c] kasan_check_range+0x24/0x18c
  [c24376a0] [c03fb5e4] copy_to_kernel_nofault+0xd8/0x1c8
  [c24376c0] [c004c014] patch_instructions+0x15c/0x16c
  [c2437710] [c00731a8] bpf_arch_text_copy+0x60/0x7c
  [c2437730] [c0281168] bpf_jit_binary_pack_finalize+0x50/0xac
  [c2437750] [c0073cf4] bpf_int_jit_compile+0xb30/0xdec
  [c2437880] [c0280394] bpf_prog_select_runtime+0x15c/0x478
  [c24378d0] [c1263428] bpf_prepare_filter+0xbf8/0xc14
  [c2437990] [c12677ec] bpf_prog_create_from_user+0x258/0x2b4
  [c24379d0] [c027111c] do_seccomp+0x3dc/0x1890
  [c2437ac0] [c001d8e0] system_call_exception+0x2dc/0x420
  [c2437f30] [c00281ac] ret_from_syscall+0x0/0x2c
  --- interrupt: c00 at 0x5a1274
  NIP: 005a1274 LR: 006a3b3c CTR: 005296c8
  REGS: c2437f40 TRAP: 0c00   Tainted: G   W   (6.13.0-rc6-PMacG4)
  MSR: 0200f932 <VEC,EE,PR,FP,ME,IR,DR,RI> CR: 24004422 XER: 00000000

```
GPR00: 00000166 af8f3fa0 a7ee3540 00000001 00000000 013b6500 005a5858 0200f932
GPR08: 00000000 00001fe9 013d5fc8 005296c8 2822244c 00b2fcd8 00000000 af8f4b57
GPR16: 00000000 00000001 00000000 00000000 00000000 00000001 00000000 00000002
GPR24: 00afdbb0 00000000 00000000 00000000 006e0004 013ce060 006e7c1c 00000001
NIP [005a1274] 0x5a1274
LR [006a3b3c] 0x6a3b3c
--- interrupt: c00

The buggy address belongs to the virtual mapping at
 [f1000000, f1002000) created by:
 text_area_cpu_up+0x20/0x190

The buggy address belongs to the physical page:
page: refcount:1 mapcount:0 mapping:00000000 index:0x0 pfn:0x76e30
flags: 0x80000000(zone=2)
raw: 80000000 00000000 00000122 00000000 00000000 00000000 ffffffff 00000001
raw: 00000000
page dumped because: kasan: bad access detected

Memory state around the buggy address:
 f0ffff00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 f0ffff80: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
>f1000000: f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8
          ^
 f1000080: f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8
 f1000100: f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8 f8
==================================================================
```

f8 corresponds to KASAN_VMALLOC_INVALID which means the area is not
initialised hence not supposed to be used yet.

Powerpc text patching infrastructure allocates a virtual memory area
using get_vm_area() and flags it as VM_ALLOC. But that flag is meant
to be used for vmalloc() and vmalloc() allocated memory is not
supposed to be used before a call to __vmalloc_node_range() which is
never called for that area.

That went undetected until commit e4137f08816b ("mm, kasan, kmsan:
instrument copy_from/to_kernel_nofault")

The area allocated by text_area_cpu_up() is not vmalloc memory, it is
mapped directly on demand when needed by map_kernel_page(). There is
no VM flag corresponding to such usage, so just pass no flag. That way
the area will be unpoisonned and usable immediately.

More Info: https://avd.aquasec.com/nvd/cve-2025-21866

[CVE-2025-21867] kernel: bpf, test_run: Fix use-after-free issue in eth_skb_pkt_type() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1

Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

bpf, test_run: Fix use-after-free issue in eth_skb_pkt_type()

KMSAN reported a use-after-free issue in eth_skb_pkt_type()[1]. The
cause of the issue was that eth_skb_pkt_type() accessed skb's data
that didn't contain an Ethernet header. This occurs when
bpf_prog_test_run_xdp() passes an invalid value as the user_data
argument to bpf_test_init().

Fix this by returning an error when user_data is less than ETH_HLEN in
bpf_test_init(). Additionally, remove the check for "if (user_size >
size)" as it is unnecessary.

[1]
BUG: KMSAN: use-after-free in eth_skb_pkt_type include/linux/etherdevice.h:627 [inline]
BUG: KMSAN: use-after-free in eth_type_trans+0x4ee/0x980 net/ethernet/eth.c:165
 eth_skb_pkt_type include/linux/etherdevice.h:627 [inline]
 eth_type_trans+0x4ee/0x980 net/ethernet/eth.c:165
 __xdp_build_skb_from_frame+0x5a8/0xa50 net/core/xdp.c:635
 xdp_recv_frames net/bpf/test_run.c:272 [inline]
 xdp_test_run_batch net/bpf/test_run.c:361 [inline]
 bpf_test_run_xdp_live+0x2954/0x3330 net/bpf/test_run.c:390
 bpf_prog_test_run_xdp+0x148e/0x1b10 net/bpf/test_run.c:1318
 bpf_prog_test_run+0x5b7/0xa30 kernel/bpf/syscall.c:4371
 __sys_bpf+0x6a6/0xe20 kernel/bpf/syscall.c:5777
 __do_sys_bpf kernel/bpf/syscall.c:5866 [inline]
 __se_sys_bpf kernel/bpf/syscall.c:5864 [inline]
 __x64_sys_bpf+0xa4/0xf0 kernel/bpf/syscall.c:5864
 x64_sys_call+0x2ea0/0x3d90 arch/x86/include/generated/asm/syscalls_64.h:322
 do_syscall_x64 arch/x86/entry/common.c:52 [inline]
 do_syscall_64+0xd9/0x1d0 arch/x86/entry/common.c:83
 entry_SYSCALL_64_after_hwframe+0x77/0x7f

Uninit was created at:
 free_pages_prepare mm/page_alloc.c:1056 [inline]
 free_unref_page+0x156/0x1320 mm/page_alloc.c:2657
 __free_pages+0xa3/0x1b0 mm/page_alloc.c:4838
 bpf_ringbuf_free kernel/bpf/ringbuf.c:226 [inline]
 ringbuf_map_free+0xff/0x1e0 kernel/bpf/ringbuf.c:235
 bpf_map_free kernel/bpf/syscall.c:838 [inline]
 bpf_map_free_deferred+0x17c/0x310 kernel/bpf/syscall.c:862
 process_one_work kernel/workqueue.c:3229 [inline]
 process_scheduled_works+0xa2b/0x1b60 kernel/workqueue.c:3310
 worker_thread+0xedf/0x1550 kernel/workqueue.c:3391
 kthread+0x535/0x6b0 kernel/kthread.c:389
 ret_from_fork+0x6e/0x90 arch/x86/kernel/process.c:147
 ret_from_fork_asm+0x1a/0x30 arch/x86/entry/entry_64.S:244

CPU: 1 UID: 0 PID: 17276 Comm: syz.1.16450 Not tainted 6.12.0-05490-g9bb88c659673 #8
Hardware name: QEMU Standard PC (i440FX + PIIX, 1996), BIOS 1.16.3-3.fc41 04/01/2014

More Info: https://avd.aquasec.com/nvd/cve-2025-21867

[CVE-2025-21870] kernel: ASoC: SOF: ipc4-topology: Harden loops for looking up ALH copiers (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ASoC: SOF: ipc4-topology: Harden loops for looking up ALH copiers

Other, non DAI copier widgets could have the same stream name (sname) as
the ALH copier and in that case the copier->data is NULL, no alh_data is
attached, which could lead to NULL pointer dereference.
We could check for this NULL pointer in sof_ipc4_prepare_copier_module()
and avoid the crash, but a similar loop in sof_ipc4_widget_setup_comp_dai()
will miscalculate the ALH device count, causing broken audio.

The correct fix is to harden the matching logic by making sure that the
1. widget is a DAI widget - so dai = w->private is valid
2. the dai (and thus the copier) is ALH copier

More Info: https://avd.aquasec.com/nvd/cve-2025-21870

[CVE-2025-21871] kernel: tee: optee: Fix supplicant wait loop (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

tee: optee: Fix supplicant wait loop

OP-TEE supplicant is a user-space daemon and it's possible for it
be hung or crashed or killed in the middle of processing an OP-TEE
RPC call. It becomes more complicated when there is incorrect shutdown
ordering of the supplicant process vs the OP-TEE client application which
can eventually lead to system hang-up waiting for the closure of the
client application.

Allow the client process waiting in kernel for supplicant response to
be killed rather than indefinitely waiting in an unkillable state. Also,
a normal uninterruptible wait should not have resulted in the hung-task
watchdog getting triggered, but the endless loop would.

This fixes issues observed during system reboot/shutdown when supplicant
got hung for some reason or gets crashed/killed which lead to client
getting hung in an unkillable state. It in turn lead to system being in
hung up state requiring hard power off/on to recover.

More Info: https://avd.aquasec.com/nvd/cve-2025-21871

[CVE-2025-21872] kernel: efi: Don't map the entire mokvar table to determine its size (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

efi: Don't map the entire mokvar table to determine its size

Currently, when validating the mokvar table, we (re)map the entire table
on each iteration of the loop, adding space as we discover new entries.
If the table grows over a certain size, this fails due to limitations of
early_memmap(), and we get a failure and traceback:

```
------------[ cut here ]------------
WARNING: CPU: 0 PID: 0 at mm/early_ioremap.c:139 __early_ioremap+0xef/0x220
...
Call Trace:
 <TASK>
 ? __early_ioremap+0xef/0x220
 ? __warn.cold+0x93/0xfa
 ? __early_ioremap+0xef/0x220
 ? report_bug+0xff/0x140
 ? early_fixup_exception+0x5d/0xb0
 ? early_idt_handler_common+0x2f/0x3a
 ? __early_ioremap+0xef/0x220
 ? efi_mokvar_table_init+0xce/0x1d0
 ? setup_arch+0x864/0xc10
 ? start_kernel+0x6b/0xa10
 ? x86_64_start_reservations+0x24/0x30
 ? x86_64_start_kernel+0xed/0xf0
 ? common_startup_64+0x13e/0x141
 </TASK>
---[ end trace 0000000000000000 ]---
mokvar: Failed to map EFI MOKvar config table pa=0x7c4c3000, size=265187.
```

Mapping the entire structure isn't actually necessary, as we don't ever
need more than one entry header mapped at once.

Changes efi_mokvar_table_init() to only map each entry header, not the
entire table, when determining the table size. Since we're not mapping
any data past the variable name, it also changes the code to enforce
that each variable name is NUL terminated, rather than attempting to
verify it in place.

More Info: https://avd.aquasec.com/nvd/cve-2025-21872

[CVE-2025-21875] kernel: mptcp: always handle address removal under msk socket lock (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

mptcp: always handle address removal under msk socket lock

Syzkaller reported a lockdep splat in the PM control path:

```
  WARNING: CPU: 0 PID: 6693 at ./include/net/sock.h:1711 sock_owned_by_me include/net/sock.h:1711 [inline]
  WARNING: CPU: 0 PID: 6693 at ./include/net/sock.h:1711 msk_owned_by_me net/mptcp/protocol.h:363 [inline]
      WARNING: CPU: 0 PID: 6693 at ./include/net/sock.h:1711 mptcp_pm_nl_addr_send_ack+0x57c/0x610
net/mptcp/pm_netlink.c:788
  Modules linked in:
  CPU: 0 UID: 0 PID: 6693 Comm: syz.0.205 Not tainted 6.14.0-rc2-syzkaller-00303-gad1b832bf1cf #0
  Hardware name: Google Compute Engine/Google Compute Engine, BIOS Google 12/27/2024
  RIP: 0010:sock_owned_by_me include/net/sock.h:1711 [inline]
  RIP: 0010:msk_owned_by_me net/mptcp/protocol.h:363 [inline]
  RIP: 0010:mptcp_pm_nl_addr_send_ack+0x57c/0x610 net/mptcp/pm_netlink.c:788
  Code: 5b 41 5c 41 5d 41 5e 41 5f 5d c3 cc cc cc cc e8 ca 7b d3 f5 eb b9 e8 c3 7b d3 f5 90 0f 0b 90 e9 dd fb ff ff e8 b5
7b d3 f5 90 <0f> 0b 90 e9 3e fb ff ff 44 89 f1 80 e1 07 38 c1 0f 8c eb fb ff ff
  RSP: 0000:ffffc900034f6f60 EFLAGS: 00010283
  RAX: ffffffff8bee3c2b RBX: 0000000000000001 RCX: 0000000000080000
  RDX: ffffc90004d42000 RSI: 000000000000a407 RDI: 000000000000a408
  RBP: ffffc900034f7030 R08: ffffffff8bee37f6 R09: 0100000000000000
  R10: dfffffc0000000000 R11: ffffed100bcc62e4 R12: ffff88805e6316e0
  R13: ffff88805e630c00 R14: dfffffc0000000000 R15: ffff88805e630c00
  FS:  00007f7e9a7e96c0(0000) GS:ffff8880b8600000(0000) knlGS:0000000000000000
  CS:  0010 DS: 0000 ES: 0000 CR0: 0000000080050033
  CR2: 0000001b2fd18ff8 CR3: 0000000032c24000 CR4: 00000000003526f0
  DR0: 0000000000000000 DR1: 0000000000000000 DR2: 0000000000000000
  DR3: 0000000000000000 DR6: 00000000fffe0ff0 DR7: 0000000000000400
  Call Trace:
   <TASK>
   mptcp_pm_remove_addr+0x103/0x1d0 net/mptcp/pm.c:59
   mptcp_pm_remove_anno_addr+0x1f4/0x2f0 net/mptcp/pm_netlink.c:1486
   mptcp_nl_remove_subflow_and_signal_addr net/mptcp/pm_netlink.c:1518 [inline]
   mptcp_pm_nl_del_addr_doit+0x118d/0x1af0 net/mptcp/pm_netlink.c:1629
   genl_family_rcv_msg_doit net/netlink/genetlink.c:1115 [inline]
   genl_family_rcv_msg net/netlink/genetlink.c:1195 [inline]
   genl_rcv_msg+0xb1f/0xec0 net/netlink/genetlink.c:1210
   netlink_rcv_skb+0x206/0x480 net/netlink/af_netlink.c:2543
   genl_rcv+0x28/0x40 net/netlink/genetlink.c:1219
   netlink_unicast_kernel net/netlink/af_netlink.c:1322 [inline]
   netlink_unicast+0x7f6/0x990 net/netlink/af_netlink.c:1348
   netlink_sendmsg+0x8de/0xcb0 net/netlink/af_netlink.c:1892
   sock_sendmsg_nosec net/socket.c:718 [inline]
   __sock_sendmsg+0x221/0x270 net/socket.c:733
   ____sys_sendmsg+0x53a/0x860 net/socket.c:2573
   ___sys_sendmsg net/socket.c:2627 [inline]
   __sys_sendmsg+0x269/0x350 net/socket.c:2659
   do_syscall_x64 arch/x86/entry/common.c:52 [inline]
```

do_syscall_64+0xf3/0x230 arch/x86/entry/common.c:83
entry_SYSCALL_64_after_hwframe+0x77/0x7f
RIP: 0033:0x7f7e9998cde9
Code: ff ff c3 66 2e 0f 1f 84 00 00 00 00 00 0f 1f 40 00 48 89 f8 48 89 f7 48 89 d6 48 89 ca 4d 89 c2 4d 89 c8 4c 8b 4c 24 08 0f 05 <48> 3d 01 f0 ff ff 73 01 c3 48 c7 c1 a8 ff ff ff f7 d8 64 89 01 48
RSP: 002b:00007f7e9a7e9038 EFLAGS: 00000246 ORIG_RAX: 000000000000002e
RAX: ffffffffffffffda RBX: 00007f7e99ba5fa0 RCX: 00007f7e9998cde9
RDX: 000000002000c094 RSI: 0000400000000000 RDI: 0000000000000007
RBP: 00007f7e99a0e2a0 R08: 0000000000000000 R09: 0000000000000000
R10: 0000000000000000 R11: 0000000000000246 R12: 0000000000000000
R13: 0000000000000000 R14: 00007f7e99ba5fa0 R15: 00007fff49231088

Indeed the PM can try to send a RM_ADDR over a msk without acquiring
first the msk socket lock.

The bugged code-path comes from an early optimization: when there
are no subflows, the PM should (usually) not send RM_ADDR
notifications.

The above statement is incorrect, as without locks another process
could concur
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2025-21875

[CVE-2025-21877] kernel: usbnet: gl620a: fix endpoint checking in genelink_bind() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

usbnet: gl620a: fix endpoint checking in genelink_bind()

Syzbot reports [1] a warning in usb_submit_urb() triggered by
inconsistencies between expected and actually present endpoints
in gl620a driver. Since genelink_bind() does not properly
verify whether specified eps are in fact provided by the device,
in this case, an artificially manufactured one, one may get a
mismatch.

Fix the issue by resorting to a usbnet utility function
usbnet_get_endpoints(), usually reserved for this very problem.
Check for endpoints and return early before proceeding further if
any are missing.

[1] Syzbot report:
usb 5-1: Manufacturer: syz
usb 5-1: SerialNumber: syz
usb 5-1: config 0 descriptor??
gl620a 5-1:0.23 usb0: register 'gl620a' at usb-dummy_hcd.0-1, ...

------------[cut here]------------
usb 5-1: BOGUS urb xfer, pipe 3 != type 1
WARNING: CPU: 2 PID: 1841 at drivers/usb/core/urb.c:503 usb_submit_urb+0xe4b/0x1730 drivers/usb/core/urb.c:503
Modules linked in:
CPU: 2 UID: 0 PID: 1841 Comm: kworker/2:2 Not tainted 6.12.0-syzkaller-07834-g06afb0f36106 #0
Hardware name: QEMU Standard PC (Q35 + ICH9, 2009), BIOS 1.16.3-debian-1.16.3-2~bpo12+1 04/01/2014
Workqueue: mld mld_ifc_work
RIP: 0010:usb_submit_urb+0xe4b/0x1730 drivers/usb/core/urb.c:503
...
Call Trace:
 <TASK>
 usbnet_start_xmit+0x6be/0x2780 drivers/net/usb/usbnet.c:1467
 __netdev_start_xmit include/linux/netdevice.h:5002 [inline]
 netdev_start_xmit include/linux/netdevice.h:5011 [inline]
 xmit_one net/core/dev.c:3590 [inline]
 dev_hard_start_xmit+0x9a/0x7b0 net/core/dev.c:3606
 sch_direct_xmit+0x1ae/0xc30 net/sched/sch_generic.c:343
 __dev_xmit_skb net/core/dev.c:3827 [inline]
 __dev_queue_xmit+0x13d4/0x43e0 net/core/dev.c:4400
 dev_queue_xmit include/linux/netdevice.h:3168 [inline]
 neigh_resolve_output net/core/neighbour.c:1514 [inline]
 neigh_resolve_output+0x5bc/0x950 net/core/neighbour.c:1494
 neigh_output include/net/neighbour.h:539 [inline]
 ip6_finish_output2+0xb1b/0x2070 net/ipv6/ip6_output.c:141
 __ip6_finish_output net/ipv6/ip6_output.c:215 [inline]
 ip6_finish_output+0x3f9/0x1360 net/ipv6/ip6_output.c:226
 NF_HOOK_COND include/linux/netfilter.h:303 [inline]
 ip6_output+0x1f8/0x540 net/ipv6/ip6_output.c:247
 dst_output include/net/dst.h:450 [inline]
 NF_HOOK include/linux/netfilter.h:314 [inline]
 NF_HOOK include/linux/netfilter.h:308 [inline]
 mld_sendpack+0x9f0/0x11d0 net/ipv6/mcast.c:1819
 mld_send_cr net/ipv6/mcast.c:2120 [inline]
 mld_ifc_work+0x740/0xca0 net/ipv6/mcast.c:2651
 process_one_work+0x9c5/0x1ba0 kernel/workqueue.c:3229
 process_scheduled_works kernel/workqueue.c:3310 [inline]
 worker_thread+0x6c8/0xf00 kernel/workqueue.c:3391
 kthread+0x2c1/0x3a0 kernel/kthread.c:389
 ret_from_fork+0x45/0x80 arch/x86/kernel/process.c:147
 ret_from_fork_asm+0x1a/0x30 arch/x86/entry/entry_64.S:244
 </TASK>

More Info: https://avd.aquasec.com/nvd/cve-2025-21877

[CVE-2025-21878] kernel: i2c: npcm: disable interrupt enable bit before devm_request_irq (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

i2c: npcm: disable interrupt enable bit before devm_request_irq

The customer reports that there is a soft lockup issue related to
the i2c driver. After checking, the i2c module was doing a tx transfer
and the bmc machine reboots in the middle of the i2c transaction, the i2c
module keeps the status without being reset.

Due to such an i2c module status, the i2c irq handler keeps getting
triggered since the i2c irq handler is registered in the kernel booting
process after the bmc machine is doing a warm rebooting.
The continuous triggering is stopped by the soft lockup watchdog timer.

Disable the interrupt enable bit in the i2c module before calling
devm_request_irq to fix this issue since the i2c relative status bit
is read-only.

Here is the soft lockup log.
[28.176395] watchdog: BUG: soft lockup - CPU#0 stuck for 26s! [swapper/0:1]
[28.183351] Modules linked in:
[28.186407] CPU: 0 PID: 1 Comm: swapper/0 Not tainted 5.15.120-yocto-s-dirty-bbebc78 #1
[28.201174] pstate: 40000005 (nZcv daif -PAN -UAO -TCO -DIT -SSBS BTYPE=--)
[28.208128] pc : __do_softirq+0xb0/0x368
[28.212055] lr : __do_softirq+0x70/0x368
[28.215972] sp : ffffff8035ebca00
[28.219278] x29: ffffff8035ebca00 x28: 0000000000000002 x27: ffffff80071a3780
[28.226412] x26: ffffffc008bdc000 x25: ffffffc008bcc640 x24: ffffffc008be50c0
[28.233546] x23: ffffffc00800200c x22: 0000000000000000 x21: 000000000000001b
[28.240679] x20: 0000000000000000 x19: ffffff80001c3200 x18: ffffffffffffffff
[28.247812] x17: ffffffc02d2e0000 x16: ffffff8035eb8b40 x15: 00001e8480000000
[28.254945] x14: 02c3647e37dbfcb6 x13: 02c364f2ab14200c x12: 0000000002c364f2
[28.262078] x11: 00000000fa83b2da x10: 000000000000b67e x9 : ffffffc008010250
[28.269211] x8 : 000000009d983d00 x7 : 7fffffffffffffff x6 : 0000036d74732434
[28.276344] x5 : 00ffffffffffffff x4 : 0000000000000015 x3 : 0000000000000198
[28.283476] x2 : ffffffc02d2e0000 x1 : 00000000000000e0 x0 : ffffffc008bdcb40
[28.290611] Call trace:
[28.293052] __do_softirq+0xb0/0x368
[28.296625] __irq_exit_rcu+0xe0/0x100
[28.300374] irq_exit+0x14/0x20
[28.303513] handle_domain_irq+0x68/0x90
[28.307440] gic_handle_irq+0x78/0xb0
[28.311098] call_on_irq_stack+0x20/0x38
[28.315019] do_interrupt_handler+0x54/0x5c
[28.319199] el1_interrupt+0x2c/0x4c
[28.322777] el1h_64_irq_handler+0x14/0x20
[28.326872] el1h_64_irq+0x74/0x78
[28.330269] __setup_irq+0x454/0x780
[28.333841] request_threaded_irq+0xd0/0x1b4
[28.338107] devm_request_threaded_irq+0x84/0x100
[28.342809] npcm_i2c_probe_bus+0x188/0x3d0
[28.346990] platform_probe+0x6c/0xc4
[28.350653] really_probe+0xcc/0x45c
[28.354227] __driver_probe_device+0x8c/0x160
[28.358578] driver_probe_device+0x44/0xe0

[28.362670] __driver_attach+0x124/0x1d0
[28.366589] bus_for_each_dev+0x7c/0xe0
[28.370426] driver_attach+0x28/0x30
[28.373997] bus_add_driver+0x124/0x240
[28.377830] driver_register+0x7c/0x124
[28.381662] __platform_driver_register+0x2c/0x34
[28.386362] npcm_i2c_init+0x3c/0x5c
[28.389937] do_one_initcall+0x74/0x230
[28.393768] kernel_init_freeable+0x24c/0x2b4
[28.398126] kernel_init+0x28/0x130
[28.401614] ret_from_fork+0x10/0x20
[28.405189] Kernel panic - not syncing: softlockup: hung tasks
[28.411011] SMP: stopping secondary CPUs
[28.414933] Kernel Offset: disabled
[28.418412] CPU features: 0x00000000,00000802
[28.427644] Rebooting in 20 seconds..

More Info: https://avd.aquasec.com/nvd/cve-2025-21878

[CVE-2025-21881] kernel: uprobes: Reject the shared zeropage in uprobe_write_opcode() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

uprobes: Reject the shared zeropage in uprobe_write_opcode()

We triggered the following crash in syzkaller tests:

```
BUG: Bad page state in process syz.7.38  pfn:1eff3
page: refcount:0 mapcount:0 mapping:0000000000000000 index:0x0 pfn:0x1eff3
flags: 0x3fffff00004004(referenced|reserved|node=0|zone=1|lastcpupid=0x1fffff)
raw: 003fffff00004004 ffffe6c6c07bfcc8 ffffe6c6c07bfcc8 0000000000000000
raw: 0000000000000000 0000000000000000 00000000fffffffe 0000000000000000
page dumped because: PAGE_FLAGS_CHECK_AT_FREE flag(s) set
Hardware name: QEMU Standard PC (i440FX + PIIX, 1996), BIOS 1.13.0-1ubuntu1.1 04/01/2014
Call Trace:
 <TASK>
 dump_stack_lvl+0x32/0x50
 bad_page+0x69/0xf0
 free_unref_page_prepare+0x401/0x500
 free_unref_page+0x6d/0x1b0
 uprobe_write_opcode+0x460/0x8e0
 install_breakpoint.part.0+0x51/0x80
 register_for_each_vma+0x1d9/0x2b0
 __uprobe_register+0x245/0x300
 bpf_uprobe_multi_link_attach+0x29b/0x4f0
 link_create+0x1e2/0x280
 __sys_bpf+0x75f/0xac0
 __x64_sys_bpf+0x1a/0x30
```

```
  do_syscall_64+0x56/0x100
  entry_SYSCALL_64_after_hwframe+0x78/0xe2

  BUG: Bad rss-counter state mm:00000000452453e0 type:MM_FILEPAGES val:-1
```

The following syzkaller test case can be used to reproduce:

```
 r2 = creat(&(0x7f0000000000)='./file0\x00', 0x8)
 write$nbd(r2, &(0x7f0000000580)=ANY=[], 0x10)
 r4 = openat(0xffffffffffffff9c, &(0x7f0000000040)='./file0\x00', 0x42, 0x0)
 mmap$IORING_OFF_SQ_RING(&(0x7f0000ffd000/0x3000)=nil, 0x3000, 0x0, 0x12, r4, 0x0)
 r5 = userfaultfd(0x80801)
 ioctl$UFFDIO_API(r5, 0xc018aa3f, &(0x7f0000000040)={0xaa, 0x20})
 r6 = userfaultfd(0x80801)
 ioctl$UFFDIO_API(r6, 0xc018aa3f, &(0x7f0000000140))
 ioctl$UFFDIO_REGISTER(r6, 0xc020aa00, &(0x7f0000000100)={{&(0x7f0000ffc000/0x4000)=nil, 0x4000}, 0x2})
 ioctl$UFFDIO_ZEROPAGE(r5, 0xc020aa04, &(0x7f0000000000)={{&(0x7f0000ffd000/0x1000)=nil, 0x1000}})
                r7 = bpf$PROG_LOAD(0x5, &(0x7f0000000140)={0x2, 0x3,
&(0x7f0000000200)=ANY=[@ANYBLOB="18000000001200000000000000000095"], &(0x7f0000000000)='GPL\x00',
0x7, 0x0, 0x0, 0x0, 0x0, '\x00', 0x0, @fallback=0x30, 0xffffffffffffffff, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0, 0x0,
0x10, 0x0, @void, @value}, 0x94)
        bpf$BPF_LINK_CREATE_XDP(0x1c, &(0x7f0000000040)={r7, 0x0, 0x30, 0x1e,
@val=@uprobe_multi={&(0x7f0000000080)='./file0\x00', &(0x7f0000000100)=[0x2], 0x0, 0x0, 0x1}}, 0x40)
```

The cause is that zero pfn is set to the PTE without increasing the RSS
count in mfill_atomic_pte_zeropage() and the refcount of zero folio does
not increase accordingly. Then, the operation on the same pfn is performed
in uprobe_write_opcode()->__replace_page() to unconditional decrease the
RSS count and old_folio's refcount.

Therefore, two bugs are introduced:

1. The RSS count is incorrect, when process exit, the check_mm() report
   error "Bad rss-count".

2. The reserved folio (zero folio) is freed when folio->refcount is zero,
   then free_pages_prepare->free_page_is_bad() report error
   "Bad page state".

There is more, the following warning could also theoretically be triggered:

```
 __replace_page()
   -> ...
     -> folio_remove_rmap_pte()
       -> VM_WARN_ON_FOLIO(is_zero_folio(folio), folio)
```

Considering that uprobe hit on the zero folio is a very rare case, just
reject zero old folio immediately after get_user_page_vma_remote().

[mingo: Cleaned up the changelog]

More Info: https://avd.aquasec.com/nvd/cve-2025-21881

[CVE-2025-21885] kernel: RDMA/bnxt_re: Fix the page details for the srq created by kernel consumers (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

RDMA/bnxt_re: Fix the page details for the srq created by kernel consumers

While using nvme target with use_srq on, below kernel panic is noticed.

```
[  549.698111] bnxt_en 0000:41:00.0 enp65s0np0: FEC autoneg off encoding: Clause 91 RS(544,514)
[  566.393619] Oops: divide error: 0000 [#1] PREEMPT SMP NOPTI
..
[  566.393799]  <TASK>
[  566.393807]  ? __die_body+0x1a/0x60
[  566.393823]  ? die+0x38/0x60
[  566.393835]  ? do_trap+0xe4/0x110
[  566.393847]  ? bnxt_qplib_alloc_init_hwq+0x1d4/0x580 [bnxt_re]
[  566.393867]  ? bnxt_qplib_alloc_init_hwq+0x1d4/0x580 [bnxt_re]
[  566.393881]  ? do_error_trap+0x7c/0x120
[  566.393890]  ? bnxt_qplib_alloc_init_hwq+0x1d4/0x580 [bnxt_re]
[  566.393911]  ? exc_divide_error+0x34/0x50
[  566.393923]  ? bnxt_qplib_alloc_init_hwq+0x1d4/0x580 [bnxt_re]
[  566.393939]  ? asm_exc_divide_error+0x16/0x20
[  566.393966]  ? bnxt_qplib_alloc_init_hwq+0x1d4/0x580 [bnxt_re]
[  566.393997]  bnxt_qplib_create_srq+0xc9/0x340 [bnxt_re]
[  566.394040]  bnxt_re_create_srq+0x335/0x3b0 [bnxt_re]
[  566.394057]  ? srso_return_thunk+0x5/0x5f
[  566.394068]  ? __init_swait_queue_head+0x4a/0x60
[  566.394090]  ib_create_srq_user+0xa7/0x150 [ib_core]
[  566.394147]  nvmet_rdma_queue_connect+0x7d0/0xbe0 [nvmet_rdma]
[  566.394174]  ? lock_release+0x22c/0x3f0
[  566.394187]  ? srso_return_thunk+0x5/0x5f
```

Page size and shift info is set only for the user space SRQs.
Set page size and page shift for kernel space SRQs also.

More Info: https://avd.aquasec.com/nvd/cve-2025-21885

[CVE-2025-21887] kernel: ovl: fix UAF in ovl_dentry_update_reval by moving dput() in ovl_link_up (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

ovl: fix UAF in ovl_dentry_update_reval by moving dput() in ovl_link_up

The issue was caused by dput(upper) being called before

ovl_dentry_update_reval(), while upper->d_flags was still
accessed in ovl_dentry_remote().

Move dput(upper) after its last use to prevent use-after-free.

BUG: KASAN: slab-use-after-free in ovl_dentry_remote fs/overlayfs/util.c:162 [inline]
BUG: KASAN: slab-use-after-free in ovl_dentry_update_reval+0xd2/0xf0 fs/overlayfs/util.c:167

Call Trace:
 <TASK>
 __dump_stack lib/dump_stack.c:88 [inline]
 dump_stack_lvl+0x116/0x1f0 lib/dump_stack.c:114
 print_address_description mm/kasan/report.c:377 [inline]
 print_report+0xc3/0x620 mm/kasan/report.c:488
 kasan_report+0xd9/0x110 mm/kasan/report.c:601
 ovl_dentry_remote fs/overlayfs/util.c:162 [inline]
 ovl_dentry_update_reval+0xd2/0xf0 fs/overlayfs/util.c:167
 ovl_link_up fs/overlayfs/copy_up.c:610 [inline]
 ovl_copy_up_one+0x2105/0x3490 fs/overlayfs/copy_up.c:1170
 ovl_copy_up_flags+0x18d/0x200 fs/overlayfs/copy_up.c:1223
 ovl_rename+0x39e/0x18c0 fs/overlayfs/dir.c:1136
 vfs_rename+0xf84/0x20a0 fs/namei.c:4893
...
 </TASK>

More Info: https://avd.aquasec.com/nvd/cve-2025-21887

[CVE-2025-21888] kernel: RDMA/mlx5: Fix a WARN during dereg_mr for DM type (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

RDMA/mlx5: Fix a WARN during dereg_mr for DM type

Memory regions (MR) of type DM (device memory) do not have an associated
umem.

In the __mlx5_ib_dereg_mr() -> mlx5_free_priv_descs() flow, the code
incorrectly takes the wrong branch, attempting to call
dma_unmap_single() on a DMA address that is not mapped.

This results in a WARN [1], as shown below.

The issue is resolved by properly accounting for the DM type and
ensuring the correct branch is selected in mlx5_free_priv_descs().

[1]
WARNING: CPU: 12 PID: 1346 at drivers/iommu/dma-iommu.c:1230 iommu_dma_unmap_page+0x79/0x90
Modules linked in: ip6table_mangle ip6table_nat ip6table_filter ip6_tables iptable_mangle xt_conntrack xt_MASQUERADE nf_conntrack_netlink nfnetlink xt_addrtype iptable_nat nf_nat br_netfilter rpcsec_gss_krb5 auth_rpcgss oid_registry ovelay rpcrdma rdma_ucm ib_iser libiscsi scsi_transport_iscsi ib_umad rdma_cm ib_ipoib

iw_cm ib_cm mlx5_ib ib_uverbs ib_core fuse mlx5_core
CPU: 12 UID: 0 PID: 1346 Comm: ibv_rc_pingpong Not tainted 6.12.0-rc7+ #1631
Hardware name: QEMU Standard PC (Q35 + ICH9, 2009), BIOS rel-1.13.0-0-gf21b5a4aeb02-prebuilt.qemu.org 04/01/2014
RIP: 0010:iommu_dma_unmap_page+0x79/0x90
Code: 2b 49 3b 29 72 26 49 3b 69 08 73 20 4d 89 f0 44 89 e9 4c 89 e2 48 89 ee 48 89 df 5b 5d 41 5c 41 5d 41 5e 41 5f e9 07 b8 88 ff <0f> 0b 5b 5d 41 5c 41 5d 41 5e 41 5f c3 cc cc cc cc 66 0f 1f 44 00
RSP: 0018:ffffc90001913a10 EFLAGS: 00010246
RAX: 0000000000000000 RBX: ffff88810194b0a8 RCX: 0000000000000000
RDX: 0000000000000000 RSI: 0000000000000000 RDI: 0000000000000001
RBP: ffff88810194b0a8 R08: 0000000000000000 R09: 0000000000000000
R10: 0000000000000001 R11: 0000000000000000 R12: 0000000000000000
R13: 0000000000000001 R14: 0000000000000000 R15: 0000000000000000
FS: 00007f537abdd740(0000) GS:ffff88885fb00000(0000) knlGS:0000000000000000
CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 00007f537aeb8000 CR3: 000000010c248001 CR4: 0000000000372eb0
DR0: 0000000000000000 DR1: 0000000000000000 DR2: 0000000000000000
DR3: 0000000000000000 DR6: 00000000fffe0ff0 DR7: 0000000000000400
Call Trace:
<TASK>
? __warn+0x84/0x190
? iommu_dma_unmap_page+0x79/0x90
? report_bug+0xf8/0x1c0
? handle_bug+0x55/0x90
? exc_invalid_op+0x13/0x60
? asm_exc_invalid_op+0x16/0x20
? iommu_dma_unmap_page+0x79/0x90
dma_unmap_page_attrs+0xe6/0x290
mlx5_free_priv_descs+0xb0/0xe0 [mlx5_ib]
__mlx5_ib_dereg_mr+0x37e/0x520 [mlx5_ib]
? _raw_spin_unlock_irq+0x24/0x40
? wait_for_completion+0xfe/0x130
? rdma_restrack_put+0x63/0xe0 [ib_core]
ib_dereg_mr_user+0x5f/0x120 [ib_core]
? lock_release+0xc6/0x280
destroy_hw_idr_uobject+0x1d/0x60 [ib_uverbs]
uverbs_destroy_uobject+0x58/0x1d0 [ib_uverbs]
uobj_destroy+0x3f/0x70 [ib_uverbs]
ib_uverbs_cmd_verbs+0x3e4/0xbb0 [ib_uverbs]
? __pfx_uverbs_destroy_def_handler+0x10/0x10 [ib_uverbs]
? lock_acquire+0xc1/0x2f0
? ib_uverbs_ioctl+0xcb/0x170 [ib_uverbs]
? ib_uverbs_ioctl+0x116/0x170 [ib_uverbs]
? lock_release+0xc6/0x280
ib_uverbs_ioctl+0xe7/0x170 [ib_uverbs]
? ib_uverbs_ioctl+0xcb/0x170 [ib_uverbs]
__x64_sys_ioctl+0x1b0/0xa70
do_syscall_64+0x6b/0x140
entry_SYSCALL_64_after_hwframe+0x76/0x7e
RIP: 0033:0x7f537adaf17b
Code: 0f 1e fa 48 8b 05 1d ad 0c 00 64 c7 00 26 00 00 00 48 c7 c0 ff ff ff ff c3 66 0f 1f 44 00 00 f3 0f 1e fa b8 10 00 00 00 0f 05 <48> 3d 01 f0 ff ff 73 01 c3 48 8b 0d ed ac 0c 00 f7 d8 64 89 01 48
RSP: 002b:00007ffff218f0b8 EFLAGS: 00000246 ORIG_RAX: 0000000000000010

RAX: ffffffffffffffda RBX: 00007ffff218f1d8 RCX: 00007f537adaf17b
RDX: 00007ffff218f1c0 RSI: 00000000c0181b01 RDI: 0000000000000003
RBP: 00007ffff218f1a0 R08: 00007f537aa8d010 R09: 0000561ee2e4f270
R10: 00007f537aace3a8 R11: 0000000000000246 R12: 00007ffff218f190
R13: 000000000000001c R14: 0000561ee2e4d7c0 R15: 00007ffff218f450
</TASK>

More Info: https://avd.aquasec.com/nvd/cve-2025-21888

[CVE-2025-21891] kernel: ipvlan: ensure network headers are in skb linear part (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

ipvlan: ensure network headers are in skb linear part

syzbot found that ipvlan_process_v6_outbound() was assuming
the IPv6 network header isis present in skb->head [1]

Add the needed pskb_network_may_pull() calls for both
IPv4 and IPv6 handlers.

[1]
BUG: KMSAN: uninit-value in __ipv6_addr_type+0xa2/0x490 net/ipv6/addrconf_core.c:47
 __ipv6_addr_type+0xa2/0x490 net/ipv6/addrconf_core.c:47
 ipv6_addr_type include/net/ipv6.h:555 [inline]
 ip6_route_output_flags_noref net/ipv6/route.c:2616 [inline]
 ip6_route_output_flags+0x51/0x720 net/ipv6/route.c:2651
 ip6_route_output include/net/ip6_route.h:93 [inline]
 ipvlan_route_v6_outbound+0x24e/0x520 drivers/net/ipvlan/ipvlan_core.c:476
 ipvlan_process_v6_outbound drivers/net/ipvlan/ipvlan_core.c:491 [inline]
 ipvlan_process_outbound drivers/net/ipvlan/ipvlan_core.c:541 [inline]
 ipvlan_xmit_mode_l3 drivers/net/ipvlan/ipvlan_core.c:605 [inline]
 ipvlan_queue_xmit+0xd72/0x1780 drivers/net/ipvlan/ipvlan_core.c:671
 ipvlan_start_xmit+0x5b/0x210 drivers/net/ipvlan/ipvlan_main.c:223
 __netdev_start_xmit include/linux/netdevice.h:5150 [inline]
 netdev_start_xmit include/linux/netdevice.h:5159 [inline]
 xmit_one net/core/dev.c:3735 [inline]
 dev_hard_start_xmit+0x247/0xa20 net/core/dev.c:3751
 sch_direct_xmit+0x399/0xd40 net/sched/sch_generic.c:343
 qdisc_restart net/sched/sch_generic.c:408 [inline]
 __qdisc_run+0x14da/0x35d0 net/sched/sch_generic.c:416
 qdisc_run+0x141/0x4d0 include/net/pkt_sched.h:127
 net_tx_action+0x78b/0x940 net/core/dev.c:5484
 handle_softirqs+0x1a0/0x7c0 kernel/softirq.c:561
 __do_softirq+0x14/0x1a kernel/softirq.c:595
 do_softirq+0x9a/0x100 kernel/softirq.c:462
 __local_bh_enable_ip+0x9f/0xb0 kernel/softirq.c:389
 local_bh_enable include/linux/bottom_half.h:33 [inline]
 rcu_read_unlock_bh include/linux/rcupdate.h:919 [inline]
 __dev_queue_xmit+0x2758/0x57d0 net/core/dev.c:4611

dev_queue_xmit include/linux/netdevice.h:3311 [inline]
packet_xmit+0x9c/0x6c0 net/packet/af_packet.c:276
packet_snd net/packet/af_packet.c:3132 [inline]
packet_sendmsg+0x93e0/0xa7e0 net/packet/af_packet.c:3164
sock_sendmsg_nosec net/socket.c:718 [inline]

More Info: https://avd.aquasec.com/nvd/cve-2025-21891

[CVE-2025-21892] kernel: RDMA/mlx5: Fix the recovery flow of the UMR QP (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

RDMA/mlx5: Fix the recovery flow of the UMR QP

This patch addresses an issue in the recovery flow of the UMR QP,
ensuring tasks do not get stuck, as highlighted by the call trace [1].

During recovery, before transitioning the QP to the RESET state, the
software must wait for all outstanding WRs to complete.

Failing to do so can cause the firmware to skip sending some flushed
CQEs with errors and simply discard them upon the RESET, as per the IB
specification.

This race condition can result in lost CQEs and tasks becoming stuck.

To resolve this, the patch sends a final WR which serves only as a
barrier before moving the QP state to RESET.

Once a CQE is received for that final WR, it guarantees that no
outstanding WRs remain, making it safe to transition the QP to RESET and
subsequently back to RTS, restoring proper functionality.

Note:
For the barrier WR, we simply reuse the failed and ready WR.
Since the QP is in an error state, it will only receive
IB_WC_WR_FLUSH_ERR. However, as it serves only as a barrier we don't
care about its status.

[1]
INFO: task rdma_resource_l:1922 blocked for more than 120 seconds.
Tainted: G W 6.12.0-rc7+ #1626
"echo 0 > /proc/sys/kernel/hung_task_timeout_secs" disables this message.
task:rdma_resource_l state:D stack:0 pid:1922 tgid:1922 ppid:1369
flags:0x00004004
Call Trace:
<TASK>
__schedule+0x420/0xd30
schedule+0x47/0x130
schedule_timeout+0x280/0x300

? mark_held_locks+0x48/0x80
? lockdep_hardirqs_on_prepare+0xe5/0x1a0
wait_for_completion+0x75/0x130
mlx5r_umr_post_send_wait+0x3c2/0x5b0 [mlx5_ib]
? __pfx_mlx5r_umr_done+0x10/0x10 [mlx5_ib]
mlx5r_umr_revoke_mr+0x93/0xc0 [mlx5_ib]
__mlx5_ib_dereg_mr+0x299/0x520 [mlx5_ib]
? _raw_spin_unlock_irq+0x24/0x40
? wait_for_completion+0xfe/0x130
? rdma_restrack_put+0x63/0xe0 [ib_core]
ib_dereg_mr_user+0x5f/0x120 [ib_core]
? lock_release+0xc6/0x280
destroy_hw_idr_uobject+0x1d/0x60 [ib_uverbs]
uverbs_destroy_uobject+0x58/0x1d0 [ib_uverbs]
uobj_destroy+0x3f/0x70 [ib_uverbs]
ib_uverbs_cmd_verbs+0x3e4/0xbb0 [ib_uverbs]
? __pfx_uverbs_destroy_def_handler+0x10/0x10 [ib_uverbs]
? __lock_acquire+0x64e/0x2080
? mark_held_locks+0x48/0x80
? find_held_lock+0x2d/0xa0
? lock_acquire+0xc1/0x2f0
? ib_uverbs_ioctl+0xcb/0x170 [ib_uverbs]
? __fget_files+0xc3/0x1b0
ib_uverbs_ioctl+0xe7/0x170 [ib_uverbs]
? ib_uverbs_ioctl+0xcb/0x170 [ib_uverbs]
__x64_sys_ioctl+0x1b0/0xa70
do_syscall_64+0x6b/0x140
entry_SYSCALL_64_after_hwframe+0x76/0x7e
RIP: 0033:0x7f99c918b17b
RSP: 002b:00007ffc766d0468 EFLAGS: 00000246 ORIG_RAX:
0000000000000010
RAX: ffffffffffffffda RBX: 00007ffc766d0578 RCX:
00007f99c918b17b
RDX: 00007ffc766d0560 RSI: 00000000c0181b01 RDI:
0000000000000003
RBP: 00007ffc766d0540 R08: 00007f99c8f99010 R09:
000000000000bd7e
R10: 00007f99c94c1c70 R11: 0000000000000246 R12:
00007ffc766d0530
R13: 000000000000001c R14: 0000000040246a80 R15:
0000000000000000
</TASK>

More Info: https://avd.aquasec.com/nvd/cve-2025-21892

[CVE-2025-21894] kernel: net: enetc: VFs do not support HWTSTAMP_TX_ONESTEP_SYNC (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net: enetc: VFs do not support HWTSTAMP_TX_ONESTEP_SYNC

Actually ENETC VFs do not support HWTSTAMP_TX_ONESTEP_SYNC because only
ENETC PF can access PMa_SINGLE_STEP registers. And there will be a crash
if VFs are used to test one-step timestamp, the crash log as follows.

[129.110909] Unable to handle kernel paging request at virtual address 00000000000080c0
[129.287769] Call trace:
[129.290219] enetc_port_mac_wr+0x30/0xec (P)
[129.294504] enetc_start_xmit+0xda4/0xe74
[129.298525] enetc_xmit+0x70/0xec
[129.301848] dev_hard_start_xmit+0x98/0x118

More Info: https://avd.aquasec.com/nvd/cve-2025-21894

[CVE-2025-21898] kernel: ftrace: Avoid potential division by zero in function_stat_show() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

ftrace: Avoid potential division by zero in function_stat_show()

Check whether denominator expression x * (x - 1) * 1000 mod {2^32, 2^64}
produce zero and skip stddev computation in that case.

For now don't care about rec->counter * rec->counter overflow because
rec->time * rec->time overflow will likely happen earlier.

More Info: https://avd.aquasec.com/nvd/cve-2025-21898

[CVE-2025-21899] kernel: tracing: Fix bad hist from corrupting named_triggers list (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

tracing: Fix bad hist from corrupting named_triggers list

The following commands causes a crash:

```
 ~# cd /sys/kernel/tracing/events/rcu/rcu_callback
 ~# echo 'hist:name=bad:keys=common_pid:onmax(bogus).save(common_pid)' > trigger
 bash: echo: write error: Invalid argument
 ~# echo 'hist:name=bad:keys=common_pid' > trigger
```

Because the following occurs:

```
event_trigger_write() {
  trigger_process_regex() {
    event_hist_trigger_parse() {

      data = event_trigger_alloc(..);

      event_trigger_register(.., data) {
        cmd_ops->reg(.., data, ..) [hist_register_trigger()] {
          data->ops->init() [event_hist_trigger_init()] {
            save_named_trigger(name, data) {
              list_add(&data->named_list, &named_triggers);
            }
          }
        }
      }

      ret = create_actions(); (return -EINVAL)
      if (ret)
        goto out_unreg;
[..]
      ret = hist_trigger_enable(data, ...) {
        list_add_tail_rcu(&data->list, &file->triggers); <<<---- SKIPPED!!! (this is important!)
[..]
 out_unreg:
      event_hist_unregister(.., data) {
        cmd_ops->unreg(.., data, ..) [hist_unregister_trigger()] {
          list_for_each_entry(iter, &file->triggers, list) {
            if (!hist_trigger_match(data, iter, named_data, false))   <- never matches
                continue;
            [..]
            test = iter;
          }
          if (test && test->ops->free) <<<-- test is NULL

            test->ops->free(test) [event_hist_trigger_free()] {
              [..]
              if (data->name)
                del_named_trigger(data) {
                  list_del(&data->named_list);  <<<<-- NEVER gets removed!
                }
              }
            }
          }

          [..]
          kfree(data); <<<-- frees item but it is still on list
```

The next time a hist with name is registered, it causes an u-a-f bug and
the kernel can crash.

Move the code around such that if event_trigger_register() succeeds, the
next thing called is hist_trigger_enable() which adds it to the list.

A bunch of actions is called if get_named_trigger_data() returns false.
But that doesn't need to be called after event_trigger_register(), so it
can be moved up, allowing event_trigger_register() to be called just
before hist_trigger_enable() keeping them together and allowing the
file->triggers to be properly populated.

More Info: https://avd.aquasec.com/nvd/cve-2025-21899

[CVE-2025-21904] kernel: caif_virtio: fix wrong pointer check in cfv_probe() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

caif_virtio: fix wrong pointer check in cfv_probe()

del_vqs() frees virtqueues, therefore cfv->vq_tx pointer should be checked
for NULL before calling it, not cfv->vdev. Also the current implementation
is redundant because the pointer cfv->vdev is dereferenced before it is
checked for NULL.

Fix this by checking cfv->vq_tx for NULL instead of cfv->vdev before
calling del_vqs().

More Info: https://avd.aquasec.com/nvd/cve-2025-21904

[CVE-2025-21905] kernel: wifi: iwlwifi: limit printed string from FW file (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

wifi: iwlwifi: limit printed string from FW file

There's no guarantee here that the file is always with a
NUL-termination, so reading the string may read beyond the
end of the TLV. If that's the last TLV in the file, it can
perhaps even read beyond the end of the file buffer.

Fix that by limiting the print format to the size of the
buffer we have.

More Info: https://avd.aquasec.com/nvd/cve-2025-21905

[CVE-2025-21907] kernel: mm: memory-failure: update ttu flag inside unmap_poisoned_folio (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

mm: memory-failure: update ttu flag inside unmap_poisoned_folio

Patch series "mm: memory_failure: unmap poisoned folio during migrate
properly", v3.

Fix two bugs during folio migration if the folio is poisoned.

This patch (of 3):

Commit 6da6b1d4a7df ("mm/hwpoison: convert TTU_IGNORE_HWPOISON to
TTU_HWPOISON") introduce TTU_HWPOISON to replace TTU_IGNORE_HWPOISON in
order to stop send SIGBUS signal when accessing an error page after a
memory error on a clean folio. However during page migration, anon folio
must be set with TTU_HWPOISON during unmap_*(). For pagecache we need
some policy just like the one in hwpoison_user_mappings to set this flag.
So move this policy from hwpoison_user_mappings to unmap_poisoned_folio to
handle this warning properly.

Warning will be produced during unamp poison folio with the following log:

```
------------[ cut here ]------------
WARNING: CPU: 1 PID: 365 at mm/rmap.c:1847 try_to_unmap_one+0x8fc/0xd3c
Modules linked in:
CPU: 1 UID: 0 PID: 365 Comm: bash Tainted: G        W          6.13.0-rc1-00018-gacdb4bbda7ab #42
Tainted: [W]=WARN
Hardware name: QEMU QEMU Virtual Machine, BIOS 0.0.0 02/06/2015
pstate: 20400005 (nzCv daif +PAN -UAO -TCO -DIT -SSBS BTYPE=--)
pc : try_to_unmap_one+0x8fc/0xd3c
lr : try_to_unmap_one+0x3dc/0xd3c
Call trace:
 try_to_unmap_one+0x8fc/0xd3c (P)
 try_to_unmap_one+0x3dc/0xd3c (L)
 rmap_walk_anon+0xdc/0x1f8
 rmap_walk+0x3c/0x58
 try_to_unmap+0x88/0x90
 unmap_poisoned_folio+0x30/0xa8
 do_migrate_range+0x4a0/0x568
 offline_pages+0x5a4/0x670
 memory_block_action+0x17c/0x374
 memory_subsys_offline+0x3c/0x78
 device_offline+0xa4/0xd0
 state_store+0x8c/0xf0
 dev_attr_store+0x18/0x2c
 sysfs_kf_write+0x44/0x54
 kernfs_fop_write_iter+0x118/0x1a8
 vfs_write+0x3a8/0x4bc
 ksys_write+0x6c/0xf8
 __arm64_sys_write+0x1c/0x28
 invoke_syscall+0x44/0x100
```

el0_svc_common.constprop.0+0x40/0xe0
do_el0_svc+0x1c/0x28
el0_svc+0x30/0xd0
el0t_64_sync_handler+0xc8/0xcc
el0t_64_sync+0x198/0x19c
---[end trace 0000000000000000]---

[mawupeng1@huawei.com: unmap_poisoned_folio(): remove shadowed local `mapping', per Miaohe]
Link: https://lkml.kernel.org/r/20250219060653.3849083-1-mawupeng1@huawei.com

More Info: https://avd.aquasec.com/nvd/cve-2025-21907

[CVE-2025-21909] kernel: wifi: nl80211: reject cooked mode if it is set along with other flags (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

wifi: nl80211: reject cooked mode if it is set along with other flags

It is possible to set both MONITOR_FLAG_COOK_FRAMES and MONITOR_FLAG_ACTIVE
flags simultaneously on the same monitor interface from the userspace. This
causes a sub-interface to be created with no IEEE80211_SDATA_IN_DRIVER bit
set because the monitor interface is in the cooked state and it takes
precedence over all other states. When the interface is then being deleted
the kernel calls WARN_ONCE() from check_sdata_in_driver() because of missing
that bit.

Fix this by rejecting MONITOR_FLAG_COOK_FRAMES if it is set along with
other flags.

Found by Linux Verification Center (linuxtesting.org) with Syzkaller.

More Info: https://avd.aquasec.com/nvd/cve-2025-21909

[CVE-2025-21910] kernel: wifi: cfg80211: regulatory: improve invalid hints checking (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

wifi: cfg80211: regulatory: improve invalid hints checking

Syzbot keeps reporting an issue [1] that occurs when erroneous symbols
sent from userspace get through into user_alpha2[] via
regulatory_hint_user() call. Such invalid regulatory hints should be
rejected.

While a sanity check from commit 47caf685a685 ("cfg80211: regulatory:
reject invalid hints") looks to be enough to deter these very cases,
there is a way to get around it due to 2 reasons.

1) The way isalpha() works, symbols other than latin lower and
upper letters may be used to determine a country/domain.
For instance, greek letters will also be considered upper/lower
letters and for such characters isalpha() will return true as well.
However, ISO-3166-1 alpha2 codes should only hold latin
characters.

2) While processing a user regulatory request, between
reg_process_hint_user() and regulatory_hint_user() there happens to
be a call to queue_regulatory_request() which modifies letters in
request->alpha2[] with toupper(). This works fine for latin symbols,
less so for weird letter characters from the second part of _ctype[].

Syzbot triggers a warning in is_user_regdom_saved() by first sending
over an unexpected non-latin letter that gets malformed by toupper()
into a character that ends up failing isalpha() check.

Prevent this by enhancing is_an_alpha2() to ensure that incoming
symbols are latin letters and nothing else.

[1] Syzbot report:
------------[cut here]------------
Unexpected user alpha2: Aï¿½
WARNING: CPU: 1 PID: 964 at net/wireless/reg.c:442 is_user_regdom_saved net/wireless/reg.c:440 [inline]
WARNING: CPU: 1 PID: 964 at net/wireless/reg.c:442 restore_alpha2 net/wireless/reg.c:3424 [inline]
WARNING: CPU: 1 PID: 964 at net/wireless/reg.c:442 restore_regulatory_settings+0x3c0/0x1e50 net/wireless/reg.c:3516
Modules linked in:
CPU: 1 UID: 0 PID: 964 Comm: kworker/1:2 Not tainted 6.12.0-rc5-syzkaller-00044-gc1e939a21eb1 #0
Hardware name: Google Google Compute Engine/Google Compute Engine, BIOS Google 09/13/2024
Workqueue: events_power_efficient crda_timeout_work
RIP: 0010:is_user_regdom_saved net/wireless/reg.c:440 [inline]
RIP: 0010:restore_alpha2 net/wireless/reg.c:3424 [inline]
RIP: 0010:restore_regulatory_settings+0x3c0/0x1e50 net/wireless/reg.c:3516
...
Call Trace:
 <TASK>
 crda_timeout_work+0x27/0x50 net/wireless/reg.c:542
 process_one_work kernel/workqueue.c:3229 [inline]
 process_scheduled_works+0xa65/0x1850 kernel/workqueue.c:3310
 worker_thread+0x870/0xd30 kernel/workqueue.c:3391
 kthread+0x2f2/0x390 kernel/kthread.c:389
 ret_from_fork+0x4d/0x80 arch/x86/kernel/process.c:147
 ret_from_fork_asm+0x1a/0x30 arch/x86/entry/entry_64.S:244
 </TASK>

More Info: https://avd.aquasec.com/nvd/cve-2025-21910

[CVE-2025-21912] kernel: gpio: rcar: Use raw_spinlock to protect register access (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

gpio: rcar: Use raw_spinlock to protect register access

Use raw_spinlock in order to fix spurious messages about invalid context
when spinlock debugging is enabled. The lock is only used to serialize
register access.

[4.239592] ============================
[4.239595] [BUG: Invalid wait context]
[4.239599] 6.13.0-rc7-arm64-renesas-05496-gd088502a519f #35 Not tainted
[4.239603] ----------------------------
[4.239606] kworker/u8:5/76 is trying to lock:
[4.239609] ffff0000091898a0 (&p->lock){....}-{3:3}, at: gpio_rcar_config_interrupt_input_mode+0x34/0x164
[4.239641] other info that might help us debug this:
[4.239643] context-{5:5}
[4.239646] 5 locks held by kworker/u8:5/76:
[4.239651] #0: ffff0000080fb148 ((wq_completion)async){+.+.}-{0:0}, at: process_one_work+0x190/0x62c
[4.250180] OF: /soc/sound@ec500000/ports/port@0/endpoint: Read of boolean property 'frame-master' with a value.
[4.254094] #1: ffff80008299bd80 ((work_completion)(&entry->work)){+.+.}-{0:0}, at: process_one_work+0x1b8/0x62c
[4.254109] #2: ffff00000920c8f8
[4.258345] OF: /soc/sound@ec500000/ports/port@1/endpoint: Read of boolean property 'bitclock-master' with a value.
[4.264803] (&dev->mutex){....}-{4:4}, at: __device_attach_async_helper+0x3c/0xdc
[4.264820] #3: ffff00000a50ca40 (request_class#2){+.+.}-{4:4}, at: __setup_irq+0xa0/0x690
[4.264840] #4:
[4.268872] OF: /soc/sound@ec500000/ports/port@1/endpoint: Read of boolean property 'frame-master' with a value.
[4.273275] ffff00000a50c8c8 (lock_class){....}-{2:2}, at: __setup_irq+0xc4/0x690
[4.296130] renesas_sdhi_internal_dmac ee100000.mmc: mmc1 base at 0x00000000ee100000, max clock rate 200 MHz
[4.304082] stack backtrace:
[4.304086] CPU: 1 UID: 0 PID: 76 Comm: kworker/u8:5 Not tainted 6.13.0-rc7-arm64-renesas-05496-gd088502a519f #35
[4.304092] Hardware name: Renesas Salvator-X 2nd version board based on r8a77965 (DT)
[4.304097] Workqueue: async async_run_entry_fn
[4.304106] Call trace:
[4.304110] show_stack+0x14/0x20 (C)
[4.304122] dump_stack_lvl+0x6c/0x90
[4.304131] dump_stack+0x14/0x1c
[4.304138] __lock_acquire+0xdfc/0x1584
[4.426274] lock_acquire+0x1c4/0x33c
[4.429942] _raw_spin_lock_irqsave+0x5c/0x80
[4.434307] gpio_rcar_config_interrupt_input_mode+0x34/0x164
[4.440061] gpio_rcar_irq_set_type+0xd4/0xd8
[4.444422] __irq_set_trigger+0x5c/0x178
[4.448435] __setup_irq+0x2e4/0x690

[4.452012] request_threaded_irq+0xc4/0x190
[4.456285] devm_request_threaded_irq+0x7c/0xf4
[4.459398] ata1: link resume succeeded after 1 retries
[4.460902] mmc_gpiod_request_cd_irq+0x68/0xe0
[4.470660] mmc_start_host+0x50/0xac
[4.474327] mmc_add_host+0x80/0xe4
[4.477817] tmio_mmc_host_probe+0x2b0/0x440
[4.482094] renesas_sdhi_probe+0x488/0x6f4
[4.486281] renesas_sdhi_internal_dmac_probe+0x60/0x78
[4.491509] platform_probe+0x64/0xd8
[4.495178] really_probe+0xb8/0x2a8
[4.498756] __driver_probe_device+0x74/0x118
[4.503116] driver_probe_device+0x3c/0x154
[4.507303] __device_attach_driver+0xd4/0x160
[4.511750] bus_for_each_drv+0x84/0xe0
[4.515588] __device_attach_async_helper+0xb0/0xdc
[4.520470] async_run_entry_fn+0x30/0xd8
[4.524481] process_one_work+0x210/0x62c
[4.528494] worker_thread+0x1ac/0x340
[4.532245] kthread+0x10c/0x110
[4.535476] ret_from_fork+0x10/0x20

More Info: https://avd.aquasec.com/nvd/cve-2025-21912

[CVE-2025-21913] kernel: x86/amd_nb: Use rdmsr_safe() in amd_get_mmconfig_range() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

x86/amd_nb: Use rdmsr_safe() in amd_get_mmconfig_range()

Xen doesn't offer MSR_FAM10H_MMIO_CONF_BASE to all guests. This results
in the following warning:

unchecked MSR access error: RDMSR from 0xc0010058 at rIP: 0xffffffff8101d19f (xen_do_read_msr+0x7f/0xa0)
Call Trace:
xen_read_msr+0x1e/0x30
amd_get_mmconfig_range+0x2b/0x80
quirk_amd_mmconfig_area+0x28/0x100
pnp_fixup_device+0x39/0x50
__pnp_add_device+0xf/0x150
pnp_add_device+0x3d/0x100
pnpacpi_add_device_handler+0x1f9/0x280
acpi_ns_get_device_callback+0x104/0x1c0
acpi_ns_walk_namespace+0x1d0/0x260
acpi_get_devices+0x8a/0xb0
pnpacpi_init+0x50/0x80
do_one_initcall+0x46/0x2e0
kernel_init_freeable+0x1da/0x2f0

kernel_init+0x16/0x1b0
ret_from_fork+0x30/0x50
ret_from_fork_asm+0x1b/0x30

based on quirks for a "PNP0c01" device. Treating MMCFG as disabled is the right course of action, so no change is needed there.

This was most likely exposed by fixing the Xen MSR accessors to not be silently-safe.

More Info: https://avd.aquasec.com/nvd/cve-2025-21913

[CVE-2025-21914] kernel: slimbus: messaging: Free transaction ID in delayed interrupt scenario (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

slimbus: messaging: Free transaction ID in delayed interrupt scenario

In case of interrupt delay for any reason, slim_do_transfer()
returns timeout error but the transaction ID (TID) is not freed.
This results into invalid memory access inside
qcom_slim_ngd_rx_msgq_cb() due to invalid TID.

Fix the issue by freeing the TID in slim_do_transfer() before
returning timeout error to avoid invalid memory access.

Call trace:
__memcpy_fromio+0x20/0x190
qcom_slim_ngd_rx_msgq_cb+0x130/0x290 [slim_qcom_ngd_ctrl]
vchan_complete+0x2a0/0x4a0
tasklet_action_common+0x274/0x700
tasklet_action+0x28/0x3c
_stext+0x188/0x620
run_ksoftirqd+0x34/0x74
smpboot_thread_fn+0x1d8/0x464
kthread+0x178/0x238
ret_from_fork+0x10/0x20
Code: aa0003e8 91000429 f100044a 3940002b (3800150b)
---[end trace 0fe00bec2b975c99]---
Kernel panic - not syncing: Oops: Fatal exception in interrupt.

More Info: https://avd.aquasec.com/nvd/cve-2025-21914

[CVE-2025-21916] kernel: usb: atm: cxacru: fix a flaw in existing endpoint checks (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

usb: atm: cxacru: fix a flaw in existing endpoint checks

Syzbot once again identified a flaw in usb endpoint checking, see [1].
This time the issue stems from a commit authored by me (2eabb655a968
("usb: atm: cxacru: fix endpoint checking in cxacru_bind()")).

While using usb_find_common_endpoints() may usually be enough to
discard devices with wrong endpoints, in this case one needs more
than just finding and identifying the sufficient number of endpoints
of correct types - one needs to check the endpoint's address as well.

Since cxacru_bind() fills URBs with CXACRU_EP_CMD address in mind,
switch the endpoint verification approach to usb_check_XXX_endpoints()
instead to fix incomplete ep testing.

[1] Syzbot report:
usb 5-1: BOGUS urb xfer, pipe 3 != type 1
WARNING: CPU: 0 PID: 1378 at drivers/usb/core/urb.c:504 usb_submit_urb+0xc4e/0x18c0 drivers/usb/core/urb.c:503
...
RIP: 0010:usb_submit_urb+0xc4e/0x18c0 drivers/usb/core/urb.c:503
...
Call Trace:
 <TASK>
 cxacru_cm+0x3c8/0xe50 drivers/usb/atm/cxacru.c:649
 cxacru_card_status drivers/usb/atm/cxacru.c:760 [inline]
 cxacru_bind+0xcf9/0x1150 drivers/usb/atm/cxacru.c:1223
 usbatm_usb_probe+0x314/0x1d30 drivers/usb/atm/usbatm.c:1058
 cxacru_usb_probe+0x184/0x220 drivers/usb/atm/cxacru.c:1377
 usb_probe_interface+0x641/0xbb0 drivers/usb/core/driver.c:396
 really_probe+0x2b9/0xad0 drivers/base/dd.c:658
 __driver_probe_device+0x1a2/0x390 drivers/base/dd.c:800
 driver_probe_device+0x50/0x430 drivers/base/dd.c:830
...

More Info: https://avd.aquasec.com/nvd/cve-2025-21916

[CVE-2025-21917] kernel: usb: renesas_usbhs: Flush the notify_hotplug_work (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

usb: renesas_usbhs: Flush the notify_hotplug_work

When performing continuous unbind/bind operations on the USB drivers
available on the Renesas RZ/G2L SoC, a kernel crash with the message
"Unable to handle kernel NULL pointer dereference at virtual address"
may occur. This issue points to the usbhsc_notify_hotplug() function.

Flush the delayed work to avoid its execution when driver resources are

unavailable.

More Info: https://avd.aquasec.com/nvd/cve-2025-21917

[CVE-2025-21918] kernel: usb: typec: ucsi: Fix NULL pointer access (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

usb: typec: ucsi: Fix NULL pointer access

Resources should be released only after all threads that utilize them
have been destroyed.
This commit ensures that resources are not released prematurely by waiting
for the associated workqueue to complete before deallocating them.

More Info: https://avd.aquasec.com/nvd/cve-2025-21918

[CVE-2025-21922] kernel: ppp: Fix KMSAN uninit-value warning with bpf (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

ppp: Fix KMSAN uninit-value warning with bpf

Syzbot caught an "KMSAN: uninit-value" warning [1], which is caused by the
ppp driver not initializing a 2-byte header when using socket filter.

The following code can generate a PPP filter BPF program:
'''
struct bpf_program fp;
pcap_t *handle;
handle = pcap_open_dead(DLT_PPP_PPPD, 65535);
pcap_compile(handle, &fp, "ip and outbound", 0, 0);
bpf_dump(&fp, 1);
'''
Its output is:
'''
(000) ldh [2]
(001) jeq #0x21 jt 2 jf 5
(002) ldb [0]
(003) jeq #0x1 jt 4 jf 5
(004) ret #65535
(005) ret #0
'''
Wen can find similar code at the following link:
https://github.com/ppp-project/ppp/blob/master/pppd/options.c#L1680
The maintainer of this code repository is also the original maintainer

of the ppp driver.

As you can see the BPF program skips 2 bytes of data and then reads the
'Protocol' field to determine if it's an IP packet. Then it read the first
byte of the first 2 bytes to determine the direction.

The issue is that only the first byte indicating direction is initialized
in current ppp driver code while the second byte is not initialized.

For normal BPF programs generated by libpcap, uninitialized data won't be
used, so it's not a problem. However, for carefully crafted BPF programs,
such as those generated by syzkaller [2], which start reading from offset
0, the uninitialized data will be used and caught by KMSAN.

[1] https://syzkaller.appspot.com/bug?extid=853242d9c9917165d791
[2] https://syzkaller.appspot.com/text?tag=ReproC&x=11994913980000

More Info: https://avd.aquasec.com/nvd/cve-2025-21922

[CVE-2025-21924] kernel: net: hns3: make sure ptp clock is unregister and freed if hclge_ptp_get_cycle returns an error (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

net: hns3: make sure ptp clock is unregister and freed if hclge_ptp_get_cycle returns an error

During the initialization of ptp, hclge_ptp_get_cycle might return an error
and returned directly without unregister clock and free it. To avoid that,
call hclge_ptp_destroy_clock to unregist and free clock if
hclge_ptp_get_cycle failed.

More Info: https://avd.aquasec.com/nvd/cve-2025-21924

[CVE-2025-21925] kernel: llc: do not use skb_get() before dev_queue_xmit() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

llc: do not use skb_get() before dev_queue_xmit()

syzbot is able to crash hosts [1], using llc and devices
not supporting IFF_TX_SKB_SHARING.

In this case, e1000 driver calls eth_skb_pad(), while
the skb is shared.

Simply replace skb_get() by skb_clone() in net/llc/llc_s_ac.c

Note that e1000 driver might have an issue with pktgen,
because it does not clear IFF_TX_SKB_SHARING, this is an
orthogonal change.

We need to audit other skb_get() uses in net/llc.

[1]

kernel BUG at net/core/skbuff.c:2178 !
Oops: invalid opcode: 0000 [#1] PREEMPT SMP KASAN NOPTI
CPU: 0 UID: 0 PID: 16371 Comm: syz.2.2764 Not tainted 6.14.0-rc4-syzkaller-00052-gac9c34d1e45a #0
Hardware name: QEMU Standard PC (Q35 + ICH9, 2009), BIOS 1.16.3-debian-1.16.3-2~bpo12+1 04/01/2014
 RIP: 0010:pskb_expand_head+0x6ce/0x1240 net/core/skbuff.c:2178
Call Trace:
 <TASK>
  __skb_pad+0x18a/0x610 net/core/skbuff.c:2466
  __skb_put_padto include/linux/skbuff.h:3843 [inline]
  skb_put_padto include/linux/skbuff.h:3862 [inline]
  eth_skb_pad include/linux/etherdevice.h:656 [inline]
  e1000_xmit_frame+0x2d99/0x5800 drivers/net/ethernet/intel/e1000/e1000_main.c:3128
  __netdev_start_xmit include/linux/netdevice.h:5151 [inline]
  netdev_start_xmit include/linux/netdevice.h:5160 [inline]
  xmit_one net/core/dev.c:3806 [inline]
  dev_hard_start_xmit+0x9a/0x7b0 net/core/dev.c:3822
  sch_direct_xmit+0x1ae/0xc30 net/sched/sch_generic.c:343
  __dev_xmit_skb net/core/dev.c:4045 [inline]
  __dev_queue_xmit+0x13d4/0x43e0 net/core/dev.c:4621
  dev_queue_xmit include/linux/netdevice.h:3313 [inline]
  llc_sap_action_send_test_c+0x268/0x320 net/llc/llc_s_ac.c:144
  llc_exec_sap_trans_actions net/llc/llc_sap.c:153 [inline]
  llc_sap_next_state net/llc/llc_sap.c:182 [inline]
  llc_sap_state_process+0x239/0x510 net/llc/llc_sap.c:209
  llc_ui_sendmsg+0xd0d/0x14e0 net/llc/af_llc.c:993
  sock_sendmsg_nosec net/socket.c:718 [inline]

More Info: https://avd.aquasec.com/nvd/cve-2025-21925

[CVE-2025-21931] kernel: hwpoison, memory_hotplug: lock folio before unmap hwpoisoned folio (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

hwpoison, memory_hotplug: lock folio before unmap hwpoisoned folio

Commit b15c87263a69 ("hwpoison, memory_hotplug: allow hwpoisoned pages to
be offlined) add page poison checks in do_migrate_range in order to make
offline hwpoisoned page possible by introducing isolate_lru_page and
try_to_unmap for hwpoisoned page. However folio lock must be held before

calling try_to_unmap. Add it to fix this problem.

Warning will be produced if folio is not locked during unmap:

```
------------[ cut here ]------------
kernel BUG at ./include/linux/swapops.h:400!
Internal error: Oops - BUG: 00000000f2000800 [#1] PREEMPT SMP
Modules linked in:
CPU: 4 UID: 0 PID: 411 Comm: bash Tainted: G        W          6.13.0-rc1-00016-g3c434c7ee82a-dirty #41
Tainted: [W]=WARN
Hardware name: QEMU QEMU Virtual Machine, BIOS 0.0.0 02/06/2015
pstate: 40400005 (nZcv daif +PAN -UAO -TCO -DIT -SSBS BTYPE=--)
pc : try_to_unmap_one+0xb08/0xd3c
lr : try_to_unmap_one+0x3dc/0xd3c
Call trace:
 try_to_unmap_one+0xb08/0xd3c (P)
 try_to_unmap_one+0x3dc/0xd3c (L)
 rmap_walk_anon+0xdc/0x1f8
 rmap_walk+0x3c/0x58
 try_to_unmap+0x88/0x90
 unmap_poisoned_folio+0x30/0xa8
 do_migrate_range+0x4a0/0x568
 offline_pages+0x5a4/0x670
 memory_block_action+0x17c/0x374
 memory_subsys_offline+0x3c/0x78
 device_offline+0xa4/0xd0
 state_store+0x8c/0xf0
 dev_attr_store+0x18/0x2c
 sysfs_kf_write+0x44/0x54
 kernfs_fop_write_iter+0x118/0x1a8
 vfs_write+0x3a8/0x4bc
 ksys_write+0x6c/0xf8
 __arm64_sys_write+0x1c/0x28
 invoke_syscall+0x44/0x100
 el0_svc_common.constprop.0+0x40/0xe0
 do_el0_svc+0x1c/0x28
 el0_svc+0x30/0xd0
 el0t_64_sync_handler+0xc8/0xcc
 el0t_64_sync+0x198/0x19c
Code: f9407be0 b5fff320 d4210000 17ffff97 (d4210000)
---[ end trace 0000000000000000 ]---
```

More Info: https://avd.aquasec.com/nvd/cve-2025-21931

[CVE-2025-21935] kernel: rapidio: add check for rio_add_net() in rio_scan_alloc_net() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

rapidio: add check for rio_add_net() in rio_scan_alloc_net()

The return value of rio_add_net() should be checked. If it fails,
put_device() should be called to free the memory and give up the reference
initialized in rio_add_net().

More Info: https://avd.aquasec.com/nvd/cve-2025-21935

[CVE-2025-21936] kernel: Bluetooth: Add check for mgmt_alloc_skb() in mgmt_device_connected() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

Bluetooth: Add check for mgmt_alloc_skb() in mgmt_device_connected()

Add check for the return value of mgmt_alloc_skb() in
mgmt_device_connected() to prevent null pointer dereference.

More Info: https://avd.aquasec.com/nvd/cve-2025-21936

[CVE-2025-21937] kernel: Bluetooth: Add check for mgmt_alloc_skb() in mgmt_remote_name() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

Bluetooth: Add check for mgmt_alloc_skb() in mgmt_remote_name()

Add check for the return value of mgmt_alloc_skb() in
mgmt_remote_name() to prevent null pointer dereference.

More Info: https://avd.aquasec.com/nvd/cve-2025-21937

[CVE-2025-21938] kernel: mptcp: fix 'scheduling while atomic' in mptcp_pm_nl_append_new_local_addr (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

mptcp: fix 'scheduling while atomic' in mptcp_pm_nl_append_new_local_addr

If multiple connection requests attempt to create an implicit mptcp
endpoint in parallel, more than one caller may end up in
mptcp_pm_nl_append_new_local_addr because none found the address in
local_addr_list during their call to mptcp_pm_nl_get_local_id. In this

case, the concurrent new_local_addr calls may delete the address entry created by the previous caller. These deletes use synchronize_rcu, but this is not permitted in some of the contexts where this function may be called. During packet recv, the caller may be in a rcu read critical section and have preemption disabled.

An example stack:

```
  BUG: scheduling while atomic: swapper/2/0/0x00000302

  Call Trace:
  <IRQ>
  dump_stack_lvl (lib/dump_stack.c:117 (discriminator 1))
  dump_stack (lib/dump_stack.c:124)
  __schedule_bug (kernel/sched/core.c:5943)
  schedule_debug.constprop.0 (arch/x86/include/asm/preempt.h:33 kernel/sched/core.c:5970)
      __schedule (arch/x86/include/asm/jump_label.h:27 include/linux/jump_label.h:207 kernel/sched/features.h:29
kernel/sched/core.c:6621)
  schedule (arch/x86/include/asm/preempt.h:84 kernel/sched/core.c:6804 kernel/sched/core.c:6818)
  schedule_timeout (kernel/time/timer.c:2160)
    wait_for_completion (kernel/sched/completion.c:96 kernel/sched/completion.c:116 kernel/sched/completion.c:127
kernel/sched/completion.c:148)
  __wait_rcu_gp (include/linux/rcupdate.h:311 kernel/rcu/update.c:444)
  synchronize_rcu (kernel/rcu/tree.c:3609)
  mptcp_pm_nl_append_new_local_addr (net/mptcp/pm_netlink.c:966 net/mptcp/pm_netlink.c:1061)
  mptcp_pm_nl_get_local_id (net/mptcp/pm_netlink.c:1164)
  mptcp_pm_get_local_id (net/mptcp/pm.c:420)
  subflow_check_req (net/mptcp/subflow.c:98 net/mptcp/subflow.c:213)
  subflow_v4_route_req (net/mptcp/subflow.c:305)
  tcp_conn_request (net/ipv4/tcp_input.c:7216)
  subflow_v4_conn_request (net/mptcp/subflow.c:651)
  tcp_rcv_state_process (net/ipv4/tcp_input.c:6709)
  tcp_v4_do_rcv (net/ipv4/tcp_ipv4.c:1934)
  tcp_v4_rcv (net/ipv4/tcp_ipv4.c:2334)
  ip_protocol_deliver_rcu (net/ipv4/ip_input.c:205 (discriminator 1))
  ip_local_deliver_finish (include/linux/rcupdate.h:813 net/ipv4/ip_input.c:234)
  ip_local_deliver (include/linux/netfilter.h:314 include/linux/netfilter.h:308 net/ipv4/ip_input.c:254)
  ip_sublist_rcv_finish (include/net/dst.h:461 net/ipv4/ip_input.c:580)
  ip_sublist_rcv (net/ipv4/ip_input.c:640)
  ip_list_rcv (net/ipv4/ip_input.c:675)
  __netif_receive_skb_list_core (net/core/dev.c:5583 net/core/dev.c:5631)
  netif_receive_skb_list_internal (net/core/dev.c:5685 net/core/dev.c:5774)
  napi_complete_done (include/linux/list.h:37 include/net/gro.h:449 include/net/gro.h:444 net/core/dev.c:6114)
  igb_poll (drivers/net/ethernet/intel/igb/igb_main.c:8244) igb
  __napi_poll (net/core/dev.c:6582)
  net_rx_action (net/core/dev.c:6653 net/core/dev.c:6787)
  handle_softirqs (kernel/softirq.c:553)
  __irq_exit_rcu (kernel/softirq.c:588 kernel/softirq.c:427 kernel/softirq.c:636)
  irq_exit_rcu (kernel/softirq.c:651)
  common_interrupt (arch/x86/kernel/irq.c:247 (discriminator 14))
  </IRQ>
```

This problem seems particularly prevalent if the user advertises an

endpoint that has a different external vs internal address. In the case where the external address is advertised and multiple connections already exist, multiple subflow SYNs arrive in parallel which tends to trigger the race during creation of the first local_addr_list entries which have the internal address instead.

Fix by skipping the replacement of an existing implicit local address if called via mptcp_pm_nl_get_local_id.

More Info: https://avd.aquasec.com/nvd/cve-2025-21938

[CVE-2025-21941] kernel: drm/amd/display: Fix null check for pipe_ctx->plane_state in resource_build_scaling_params (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Fix null check for pipe_ctx->plane_state in resource_build_scaling_params

Null pointer dereference issue could occur when pipe_ctx->plane_state is null. The fix adds a check to ensure 'pipe_ctx->plane_state' is not null before accessing. This prevents a null pointer dereference.

Found by code review.

(cherry picked from commit 63e6a77ccf239337baa9b1e7787cde9fa0462092)

More Info: https://avd.aquasec.com/nvd/cve-2025-21941

[CVE-2025-21943] kernel: gpio: aggregator: protect driver attr handlers against module unload (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

gpio: aggregator: protect driver attr handlers against module unload

Both new_device_store and delete_device_store touch module global resources (e.g. gpio_aggregator_lock). To prevent race conditions with module unload, a reference needs to be held.

Add try_module_get() in these handlers.

For new_device_store, this eliminates what appears to be the most dangerous scenario: if an id is allocated from gpio_aggregator_idr but platform_device_register has not yet been called or completed, a concurrent module unload could fail to unregister/delete the device, leaving behind a dangling platform device/GPIO forwarder. This can result in various issues.

The following simple reproducer demonstrates these problems:

```
#!/bin/bash
while :; do
  # note: whether 'gpiochip0 0' exists or not does not matter.
  echo 'gpiochip0 0' > /sys/bus/platform/drivers/gpio-aggregator/new_device
done &
while :; do
  modprobe gpio-aggregator
  modprobe -r gpio-aggregator
done &
wait
```

```
Starting with the following warning, several kinds of warnings will appear
and the system may become unstable:

------------[ cut here ]------------
list_del corruption, ffff888103e2e980->next is LIST_POISON1 (dead000000000100)
WARNING: CPU: 1 PID: 1327 at lib/list_debug.c:56 __list_del_entry_valid_or_report+0xa3/0x120
[...]
RIP: 0010:__list_del_entry_valid_or_report+0xa3/0x120
[...]
Call Trace:
 <TASK>
 ? __list_del_entry_valid_or_report+0xa3/0x120
 ? __warn.cold+0x93/0xf2
 ? __list_del_entry_valid_or_report+0xa3/0x120
 ? report_bug+0xe6/0x170
 ? __irq_work_queue_local+0x39/0xe0
 ? handle_bug+0x58/0x90
 ? exc_invalid_op+0x13/0x60
 ? asm_exc_invalid_op+0x16/0x20
 ? __list_del_entry_valid_or_report+0xa3/0x120
 gpiod_remove_lookup_table+0x22/0x60
 new_device_store+0x315/0x350 [gpio_aggregator]
 kernfs_fop_write_iter+0x137/0x1f0
 vfs_write+0x262/0x430
 ksys_write+0x60/0xd0
 do_syscall_64+0x6c/0x180
 entry_SYSCALL_64_after_hwframe+0x76/0x7e
 [...]
 </TASK>
---[ end trace 0000000000000000 ]---
```

More Info: https://avd.aquasec.com/nvd/cve-2025-21943

[CVE-2025-21944] kernel: ksmbd: fix bug on trap in smb2_lock (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

ksmbd: fix bug on trap in smb2_lock

If lock count is greater than 1, flags could be old value.
It should be checked with flags of smb_lock, not flags.
It will cause bug-on trap from locks_free_lock in error handling
routine.

More Info: https://avd.aquasec.com/nvd/cve-2025-21944

[CVE-2025-21946] kernel: ksmbd: fix out-of-bounds in parse_sec_desc() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ksmbd: fix out-of-bounds in parse_sec_desc()

If osidoffset, gsidoffset and dacloffset could be greater than smb_ntsd
struct size. If it is smaller, It could cause slab-out-of-bounds.
And when validating sid, It need to check it included subauth array size.

More Info: https://avd.aquasec.com/nvd/cve-2025-21946

[CVE-2025-21947] kernel: ksmbd: fix type confusion via race condition when using ipc_msg_send_request (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

ksmbd: fix type confusion via race condition when using ipc_msg_send_request

req->handle is allocated using ksmbd_acquire_id(&ipc_ida), based on
ida_alloc. req->handle from ksmbd_ipc_login_request and
FSCTL_PIPE_TRANSCEIVE ioctl can be same and it could lead to type confusion
between messages, resulting in access to unexpected parts of memory after
an incorrect delivery. ksmbd check type of ipc response but missing add
continue to check next ipc reponse.

More Info: https://avd.aquasec.com/nvd/cve-2025-21947

[CVE-2025-21948] kernel: HID: appleir: Fix potential NULL dereference at raw event handle (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

HID: appleir: Fix potential NULL dereference at raw event handle

Syzkaller reports a NULL pointer dereference issue in input_event().

BUG: KASAN: null-ptr-deref in instrument_atomic_read include/linux/instrumented.h:68 [inline]
BUG: KASAN: null-ptr-deref in _test_bit include/asm-generic/bitops/instrumented-non-atomic.h:141 [inline]
BUG: KASAN: null-ptr-deref in is_event_supported drivers/input/input.c:67 [inline]
BUG: KASAN: null-ptr-deref in input_event+0x42/0xa0 drivers/input/input.c:395
Read of size 8 at addr 0000000000000028 by task syz-executor199/2949

CPU: 0 UID: 0 PID: 2949 Comm: syz-executor199 Not tainted 6.13.0-rc4-syzkaller-00076-gf097a36ef88d #0
Hardware name: Google Google Compute Engine/Google Compute Engine, BIOS Google 09/13/2024
Call Trace:
<IRQ>
__dump_stack lib/dump_stack.c:94 [inline]
dump_stack_lvl+0x116/0x1f0 lib/dump_stack.c:120
kasan_report+0xd9/0x110 mm/kasan/report.c:602
check_region_inline mm/kasan/generic.c:183 [inline]
kasan_check_range+0xef/0x1a0 mm/kasan/generic.c:189
instrument_atomic_read include/linux/instrumented.h:68 [inline]
_test_bit include/asm-generic/bitops/instrumented-non-atomic.h:141 [inline]
is_event_supported drivers/input/input.c:67 [inline]
input_event+0x42/0xa0 drivers/input/input.c:395
input_report_key include/linux/input.h:439 [inline]
key_down drivers/hid/hid-appleir.c:159 [inline]
appleir_raw_event+0x3e5/0x5e0 drivers/hid/hid-appleir.c:232
__hid_input_report.constprop.0+0x312/0x440 drivers/hid/hid-core.c:2111
hid_ctrl+0x49f/0x550 drivers/hid/usbhid/hid-core.c:484
__usb_hcd_giveback_urb+0x389/0x6e0 drivers/usb/core/hcd.c:1650
usb_hcd_giveback_urb+0x396/0x450 drivers/usb/core/hcd.c:1734
dummy_timer+0x17f7/0x3960 drivers/usb/gadget/udc/dummy_hcd.c:1993
__run_hrtimer kernel/time/hrtimer.c:1739 [inline]
__hrtimer_run_queues+0x20a/0xae0 kernel/time/hrtimer.c:1803
hrtimer_run_softirq+0x17d/0x350 kernel/time/hrtimer.c:1820
handle_softirqs+0x206/0x8d0 kernel/softirq.c:561
__do_softirq kernel/softirq.c:595 [inline]
invoke_softirq kernel/softirq.c:435 [inline]
__irq_exit_rcu+0xfa/0x160 kernel/softirq.c:662
irq_exit_rcu+0x9/0x30 kernel/softirq.c:678
instr_sysvec_apic_timer_interrupt arch/x86/kernel/apic/apic.c:1049 [inline]
sysvec_apic_timer_interrupt+0x90/0xb0 arch/x86/kernel/apic/apic.c:1049
</IRQ>
<TASK>
asm_sysvec_apic_timer_interrupt+0x1a/0x20 arch/x86/include/asm/idtentry.h:702
__mod_timer+0x8f6/0xdc0 kernel/time/timer.c:1185
add_timer+0x62/0x90 kernel/time/timer.c:1295
schedule_timeout+0x11f/0x280 kernel/time/sleep_timeout.c:98
usbhid_wait_io+0x1c7/0x380 drivers/hid/usbhid/hid-core.c:645
usbhid_init_reports+0x19f/0x390 drivers/hid/usbhid/hid-core.c:784
hiddev_ioctl+0x1133/0x15b0 drivers/hid/usbhid/hiddev.c:794
vfs_ioctl fs/ioctl.c:51 [inline]
__do_sys_ioctl fs/ioctl.c:906 [inline]
__se_sys_ioctl fs/ioctl.c:892 [inline]
__x64_sys_ioctl+0x190/0x200 fs/ioctl.c:892

do_syscall_x64 arch/x86/entry/common.c:52 [inline]
do_syscall_64+0xcd/0x250 arch/x86/entry/common.c:83
entry_SYSCALL_64_after_hwframe+0x77/0x7f
</TASK>

This happens due to the malformed report items sent by the emulated device
which results in a report, that has no fields, being added to the report list.
Due to this appleir_input_configured() is never called, hidinput_connect()
fails which results in the HID_CLAIMED_INPUT flag is not being set. However,
it does not make appleir_probe() fail and lets the event callback to be
called without the associated input device.

Thus, add a check for the HID_CLAIMED_INPUT flag and leave the event hook
early if the driver didn't claim any input_dev for some reason. Moreover,
some other hid drivers accessing input_dev in their event callbacks do have
similar checks, too.

Found by Linux Verification Center (linuxtesting.org) with Syzkaller.

More Info: https://avd.aquasec.com/nvd/cve-2025-21948

[CVE-2025-21949] kernel: LoongArch: Set hugetlb mmap base address aligned with pmd size (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

LoongArch: Set hugetlb mmap base address aligned with pmd size

With ltp test case "testcases/bin/hugefork02", there is a dmesg error
report message such as:

kernel BUG at mm/hugetlb.c:5550!
Oops - BUG[#1]:
CPU: 0 UID: 0 PID: 1517 Comm: hugefork02 Not tainted 6.14.0-rc2+ #241
Hardware name: QEMU QEMU Virtual Machine, BIOS unknown 2/2/2022
pc 90000000004eaf1c ra 9000000000485538 tp 900000010edbc000 sp 900000010edbf940
a0 900000010edbfb00 a1 9000000108d20280 a2 00007fffe9474000 a3 00007ffff3474000
a4 0000000000000000 a5 0000000000000003 a6 00000000003cadd3 a7 0000000000000000
t0 0000000001ffffff t1 0000000001474000 t2 900000010ecd7900 t3 00007fffe9474000
t4 00007fffe9474000 t5 0000000000000040 t6 900000010edbfb00 t7 0000000000000001
t8 0000000000000005 u0 90000000004849d0 s9 900000010edbfa00 s0 9000000108d20280
s1 00007fffe9474000 s2 0000000002000000 s3 9000000108d20280 s4 9000000002b38b10
s5 900000010edbfb00 s6 00007ffff3474000 s7 0000000000000406 s8 900000010edbfa08
   ra: 9000000000485538 unmap_vmas+0x130/0x218
  ERA: 90000000004eaf1c __unmap_hugepage_range+0x6f4/0x7d0
 PRMD: 00000004 (PPLV0 +PIE -PWE)
 EUEN: 00000007 (+FPE +SXE +ASXE -BTE)
 ECFG: 00071c1d (LIE=0,2-4,10-12 VS=7)
ESTAT: 000c0000 [BRK] (IS= ECode=12 EsubCode=0)

PRID: 0014c010 (Loongson-64bit, Loongson-3A5000)
Process hugefork02 (pid: 1517, threadinfo=00000000a670eaf4, task=000000007a95fc64)
Call Trace:
[<90000000004eaf1c>] __unmap_hugepage_range+0x6f4/0x7d0
[<9000000000485534>] unmap_vmas+0x12c/0x218
[<9000000000494068>] exit_mmap+0xe0/0x308
[<900000000025fdc4>] mmput+0x74/0x180
[<900000000026a284>] do_exit+0x294/0x898
[<900000000026aa30>] do_group_exit+0x30/0x98
[<900000000027bed4>] get_signal+0x83c/0x868
[<90000000002457b4>] arch_do_signal_or_restart+0x54/0xfa0
[<90000000015795e8>] irqentry_exit_to_user_mode+0xb8/0x138
[<90000000002572d0>] tlb_do_page_fault_1+0x114/0x1b4

The problem is that base address allocated from hugetlbfs is not aligned
with pmd size. Here add a checking for hugetlbfs and align base address
with pmd size. After this patch the test case "testcases/bin/hugefork02"
passes to run.

This is similar to the commit 7f24cbc9c4d42db8a3c8484d1 ("mm/mmap: teach
generic_get_unmapped_area{_topdown} to handle hugetlb mappings").

More Info: https://avd.aquasec.com/nvd/cve-2025-21949

[CVE-2025-21950] kernel: drivers: virt: acrn: hsm: Use kzalloc to avoid info leak in pmcmd_ioctl (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

drivers: virt: acrn: hsm: Use kzalloc to avoid info leak in pmcmd_ioctl

In the "pmcmd_ioctl" function, three memory objects allocated by
kmalloc are initialized by "hcall_get_cpu_state", which are then
copied to user space. The initializer is indeed implemented in
"acrn_hypercall2" (arch/x86/include/asm/acrn.h). There is a risk of
information leakage due to uninitialized bytes.

More Info: https://avd.aquasec.com/nvd/cve-2025-21950

[CVE-2025-21951] kernel: bus: mhi: host: pci_generic: Use pci_try_reset_function() to avoid deadlock (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

bus: mhi: host: pci_generic: Use pci_try_reset_function() to avoid deadlock

There are multiple places from where the recovery work gets scheduled asynchronously. Also, there are multiple places where the caller waits synchronously for the recovery to be completed. One such place is during the PM shutdown() callback.

If the device is not alive during recovery_work, it will try to reset the device using pci_reset_function(). This function internally will take the device_lock() first before resetting the device. By this time, if the lock has already been acquired, then recovery_work will get stalled while waiting for the lock. And if the lock was already acquired by the caller which waits for the recovery_work to be completed, it will lead to deadlock.

This is what happened on the X1E80100 CRD device when the device died before shutdown() callback. Driver core calls the driver's shutdown() callback while holding the device_lock() leading to deadlock.

And this deadlock scenario can occur on other paths as well, like during the PM suspend() callback, where the driver core would hold the device_lock() before calling driver's suspend() callback. And if the recovery_work was already started, it could lead to deadlock. This is also observed on the X1E80100 CRD.

So to fix both issues, use pci_try_reset_function() in recovery_work. This function first checks for the availability of the device_lock() before trying to reset the device. If the lock is available, it will acquire it and reset the device. Otherwise, it will return -EAGAIN. If that happens, recovery_work will fail with the error message "Recovery failed" as not much could be done.

More Info: https://avd.aquasec.com/nvd/cve-2025-21951

[CVE-2025-21955] kernel: ksmbd: prevent connection release during oplock break notification (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ksmbd: prevent connection release during oplock break notification

ksmbd_work could be freed when after connection release.
Increment r_count of ksmbd_conn to indicate that requests
are not finished yet and to not release the connection.

More Info: https://avd.aquasec.com/nvd/cve-2025-21955

[CVE-2025-21956] kernel: drm/amd/display: Assign normalized_pix_clk when color depth = 14 (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1

Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Assign normalized_pix_clk when color depth = 14

[WHY & HOW]
A warning message "WARNING: CPU: 4 PID: 459 at ... /dc_resource.c:3397
calculate_phy_pix_clks+0xef/0x100 [amdgpu]" occurs because the
display_color_depth == COLOR_DEPTH_141414 is not handled. This is
observed in Radeon RX 6600 XT.

It is fixed by assigning pix_clk * (14 * 3) / 24 - same as the rests.

Also fixes the indentation in get_norm_pix_clk.

(cherry picked from commit 274a87eb389f58eddcbc5659ab0b180b37e92775)

More Info: https://avd.aquasec.com/nvd/cve-2025-21956

[CVE-2025-21957] kernel: scsi: qla1280: Fix kernel oops when debug level > 2 (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

scsi: qla1280: Fix kernel oops when debug level > 2

A null dereference or oops exception will eventually occur when qla1280.c
driver is compiled with DEBUG_QLA1280 enabled and ql_debug_level > 2. I
think its clear from the code that the intention here is sg_dma_len(s) not
length of sg_next(s) when printing the debug info.

More Info: https://avd.aquasec.com/nvd/cve-2025-21957

[CVE-2025-21959] kernel: netfilter: nf_conncount: Fully initialize struct nf_conncount_tuple in insert_tree() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

netfilter: nf_conncount: Fully initialize struct nf_conncount_tuple in insert_tree()

Since commit b36e4523d4d5 ("netfilter: nf_conncount: fix garbage
collection confirm race"), `cpu` and `jiffies32` were introduced to
the struct nf_conncount_tuple.

The commit made nf_conncount_add() initialize `conn->cpu` and
`conn->jiffies32` when allocating the struct.

In contrast, count_tree() was not changed to initialize them.

By commit 34848d5c896e ("netfilter: nf_conncount: Split insert and
traversal"), count_tree() was split and the relevant allocation
code now resides in insert_tree().
Initialize `conn->cpu` and `conn->jiffies32` in insert_tree().

BUG: KMSAN: uninit-value in find_or_evict net/netfilter/nf_conncount.c:117 [inline]
BUG: KMSAN: uninit-value in __nf_conncount_add+0xd9c/0x2850 net/netfilter/nf_conncount.c:143
 find_or_evict net/netfilter/nf_conncount.c:117 [inline]
 __nf_conncount_add+0xd9c/0x2850 net/netfilter/nf_conncount.c:143
 count_tree net/netfilter/nf_conncount.c:438 [inline]
 nf_conncount_count+0x82f/0x1e80 net/netfilter/nf_conncount.c:521
 connlimit_mt+0x7f6/0xbd0 net/netfilter/xt_connlimit.c:72
 __nft_match_eval net/netfilter/nft_compat.c:403 [inline]
 nft_match_eval+0x1a5/0x300 net/netfilter/nft_compat.c:433
 expr_call_ops_eval net/netfilter/nf_tables_core.c:240 [inline]
 nft_do_chain+0x426/0x2290 net/netfilter/nf_tables_core.c:288
 nft_do_chain_ipv4+0x1a5/0x230 net/netfilter/nft_chain_filter.c:23
 nf_hook_entry_hookfn include/linux/netfilter.h:154 [inline]
 nf_hook_slow+0xf4/0x400 net/netfilter/core.c:626
 nf_hook_slow_list+0x24d/0x860 net/netfilter/core.c:663
 NF_HOOK_LIST include/linux/netfilter.h:350 [inline]
 ip_sublist_rcv+0x17b7/0x17f0 net/ipv4/ip_input.c:633
 ip_list_rcv+0x9ef/0xa40 net/ipv4/ip_input.c:669
 __netif_receive_skb_list_ptype net/core/dev.c:5936 [inline]
 __netif_receive_skb_list_core+0x15c5/0x1670 net/core/dev.c:5983
 __netif_receive_skb_list net/core/dev.c:6035 [inline]
 netif_receive_skb_list_internal+0x1085/0x1700 net/core/dev.c:6126
 netif_receive_skb_list+0x5a/0x460 net/core/dev.c:6178
 xdp_recv_frames net/bpf/test_run.c:280 [inline]
 xdp_test_run_batch net/bpf/test_run.c:361 [inline]
 bpf_test_run_xdp_live+0x2e86/0x3480 net/bpf/test_run.c:390
 bpf_prog_test_run_xdp+0xf1d/0x1ae0 net/bpf/test_run.c:1316
 bpf_prog_test_run+0x5e5/0xa30 kernel/bpf/syscall.c:4407
 __sys_bpf+0x6aa/0xd90 kernel/bpf/syscall.c:5813
 __do_sys_bpf kernel/bpf/syscall.c:5902 [inline]
 __se_sys_bpf kernel/bpf/syscall.c:5900 [inline]
 __ia32_sys_bpf+0xa0/0xe0 kernel/bpf/syscall.c:5900
 ia32_sys_call+0x394d/0x4180 arch/x86/include/generated/asm/syscalls_32.h:358
 do_syscall_32_irqs_on arch/x86/entry/common.c:165 [inline]
 __do_fast_syscall_32+0xb0/0x110 arch/x86/entry/common.c:387
 do_fast_syscall_32+0x38/0x80 arch/x86/entry/common.c:412
 do_SYSENTER_32+0x1f/0x30 arch/x86/entry/common.c:450
 entry_SYSENTER_compat_after_hwframe+0x84/0x8e

Uninit was created at:
 slab_post_alloc_hook mm/slub.c:4121 [inline]
 slab_alloc_node mm/slub.c:4164 [inline]
 kmem_cache_alloc_noprof+0x915/0xe10 mm/slub.c:4171
 insert_tree net/netfilter/nf_conncount.c:372 [inline]
 count_tree net/netfilter/nf_conncount.c:450 [inline]
 nf_conncount_count+0x1415/0x1e80 net/netfilter/nf_conncount.c:521

connlimit_mt+0x7f6/0xbd0 net/netfilter/xt_connlimit.c:72
__nft_match_eval net/netfilter/nft_compat.c:403 [inline]
nft_match_eval+0x1a5/0x300 net/netfilter/nft_compat.c:433
expr_call_ops_eval net/netfilter/nf_tables_core.c:240 [inline]
nft_do_chain+0x426/0x2290 net/netfilter/nf_tables_core.c:288
nft_do_chain_ipv4+0x1a5/0x230 net/netfilter/nft_chain_filter.c:23
nf_hook_entry_hookfn include/linux/netfilter.h:154 [inline]
nf_hook_slow+0xf4/0x400 net/netfilter/core.c:626
nf_hook_slow_list+0x24d/0x860 net/netfilter/core.c:663
NF_HOOK_LIST include/linux/netfilter.h:350 [inline]
ip_sublist_rcv+0x17b7/0x17f0 net/ipv4/ip_input.c:633
ip_list_rcv+0x9ef/0xa40 net/ip
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2025-21959

[CVE-2025-21960] kernel: eth: bnxt: do not update checksum in bnxt_xdp_build_skb() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

eth: bnxt: do not update checksum in bnxt_xdp_build_skb()

The bnxt_rx_pkt() updates ip_summed value at the end if checksum offload
is enabled.
When the XDP-MB program is attached and it returns XDP_PASS, the
bnxt_xdp_build_skb() is called to update skb_shared_info.
The main purpose of bnxt_xdp_build_skb() is to update skb_shared_info,
but it updates ip_summed value too if checksum offload is enabled.
This is actually duplicate work.

When the bnxt_rx_pkt() updates ip_summed value, it checks if ip_summed
is CHECKSUM_NONE or not.
It means that ip_summed should be CHECKSUM_NONE at this moment.
But ip_summed may already be updated to CHECKSUM_UNNECESSARY in the
XDP-MB-PASS path.
So the by skb_checksum_none_assert() WARNS about it.

This is duplicate work and updating ip_summed in the
bnxt_xdp_build_skb() is not needed.

Splat looks like:
WARNING: CPU: 3 PID: 5782 at ./include/linux/skbuff.h:5155 bnxt_rx_pkt+0x479b/0x7610 [bnxt_en]
Modules linked in: bnxt_re bnxt_en rdma_ucm rdma_cm iw_cm ib_cm ib_uverbs veth xt_nat xt_tcpudp xt_conntrack nft_chain_nat xt_MASQUERADE nf_]
CPU: 3 UID: 0 PID: 5782 Comm: socat Tainted: G W 6.14.0-rc4+ #27
Tainted: [W]=WARN
Hardware name: ASUS System Product Name/PRIME Z690-P D4, BIOS 0603 11/01/2021
RIP: 0010:bnxt_rx_pkt+0x479b/0x7610 [bnxt_en]

Code: 54 24 0c 4c 89 f1 4c 89 ff c1 ea 1f ff d3 0f 1f 00 49 89 c6 48 85 c0 0f 84 4c e5 ff ff 48 89 c7 e8 ca 3d a0 c8 e9 8f f4 ff ff <0f> 0b f
RSP: 0018:ffff88881ba09928 EFLAGS: 00010202
RAX: 0000000000000000 RBX: 00000000c7590303 RCX: 0000000000000000
RDX: 1ffff1104e7d1610 RSI: 0000000000000001 RDI: ffff8881c91300b8
RBP: ffff88881ba09b28 R08: ffff888273e8b0d0 R09: ffff888273e8b070
R10: ffff888273e8b010 R11: ffff888278b0f000 R12: ffff888273e8b080
R13: ffff8881c9130e00 R14: ffff8881505d3800 R15: ffff888273e8b000
FS: 00007f5a2e7be080(0000) GS:ffff88881ba00000(0000) knlGS:0000000000000000
CS: 0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 00007fff2e708ff8 CR3: 000000013e3b0000 CR4: 0000000007506f0
PKRU: 55555554
Call Trace:
 <IRQ>
 ? __warn+0xcd/0x2f0
 ? bnxt_rx_pkt+0x479b/0x7610
 ? report_bug+0x326/0x3c0
 ? handle_bug+0x53/0xa0
 ? exc_invalid_op+0x14/0x50
 ? asm_exc_invalid_op+0x16/0x20
 ? bnxt_rx_pkt+0x479b/0x7610
 ? bnxt_rx_pkt+0x3e41/0x7610
 ? __pfx_bnxt_rx_pkt+0x10/0x10
 ? napi_complete_done+0x2cf/0x7d0
 __bnxt_poll_work+0x4e8/0x1220
 ? __pfx___bnxt_poll_work+0x10/0x10
 ? __pfx_mark_lock.part.0+0x10/0x10
 bnxt_poll_p5+0x36a/0xfa0
 ? __pfx_bnxt_poll_p5+0x10/0x10
 __napi_poll.constprop.0+0xa0/0x440
 net_rx_action+0x899/0xd00
...

Following ping.py patch adds xdp-mb-pass case. so ping.py is going
to be able to reproduce this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-21960

[CVE-2025-21961] kernel: eth: bnxt: fix truesize for mb-xdp-pass case (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

eth: bnxt: fix truesize for mb-xdp-pass case

When mb-xdp is set and return is XDP_PASS, packet is converted from
xdp_buff to sk_buff with xdp_update_skb_shared_info() in
bnxt_xdp_build_skb().
bnxt_xdp_build_skb() passes incorrect truesize argument to
xdp_update_skb_shared_info().
The truesize is calculated as BNXT_RX_PAGE_SIZE * sinfo->nr_frags but

the skb_shared_info was wiped by napi_build_skb() before.
So it stores sinfo->nr_frags before bnxt_xdp_build_skb() and use it
instead of getting skb_shared_info from xdp_get_shared_info_from_buff().

Splat looks like:
```
 ------------[ cut here ]------------
 WARNING: CPU: 2 PID: 0 at net/core/skbuff.c:6072 skb_try_coalesce+0x504/0x590
 Modules linked in: xt_nat xt_tcpudp veth af_packet xt_conntrack nft_chain_nat xt_MASQUERADE nf_conntrack_netlink
xfrm_user xt_addrtype nft_coms
 CPU: 2 UID: 0 PID: 0 Comm: swapper/2 Not tainted 6.14.0-rc2+ #3
 RIP: 0010:skb_try_coalesce+0x504/0x590
 Code: 4b fd ff ff 49 8b 34 24 40 80 e6 40 0f 84 3d fd ff ff 49 8b 74 24 48 40 f6 c6 01 0f 84 2e fd ff ff 48 8d 4e ff e9 25 fd
ff ff <0f> 0b e99
 RSP: 0018:ffffb62c4120caa8 EFLAGS: 00010287
 RAX: 0000000000000003 RBX: ffffb62c4120cb14 RCX: 0000000000000ec0
 RDX: 0000000000001000 RSI: ffffa06e5d7dc000 RDI: 0000000000000003
 RBP: ffffa06e5d7ddec0 R08: ffffa06e6120a800 R09: ffffa06e7a119900
 R10: 0000000000002310 R11: ffffa06e5d7dcec0 R12: ffffe4360575f740
 R13: ffffe43600000000 R14: 0000000000000002 R15: 0000000000000002
 FS:  0000000000000000(0000) GS:ffffa0755f700000(0000) knlGS:0000000000000000
 CS:  0010 DS: 0000 ES: 0000 CR0: 0000000080050033
 CR2: 00007f147b76b0f8 CR3: 00000001615d4000 CR4: 00000000007506f0
 PKRU: 55555554
 Call Trace:
  <IRQ>
  ? __warn+0x84/0x130
  ? skb_try_coalesce+0x504/0x590
  ? report_bug+0x18a/0x1a0
  ? handle_bug+0x53/0x90
  ? exc_invalid_op+0x14/0x70
  ? asm_exc_invalid_op+0x16/0x20
  ? skb_try_coalesce+0x504/0x590
  inet_frag_reasm_finish+0x11f/0x2e0
  ip_defrag+0x37a/0x900
  ip_local_deliver+0x51/0x120
  ip_sublist_rcv_finish+0x64/0x70
  ip_sublist_rcv+0x179/0x210
  ip_list_rcv+0xf9/0x130
```

How to reproduce:
```
<Node A>
ip link set $interface1 xdp obj xdp_pass.o
ip link set $interface1 mtu 9000 up
ip a a 10.0.0.1/24 dev $interface1
<Node B>
ip link set $interfac2 mtu 9000 up
ip a a 10.0.0.2/24 dev $interface2
ping 10.0.0.1 -s 65000
```

Following ping.py patch adds xdp-mb-pass case. so ping.py is going to be
able to reproduce this issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-21961

[CVE-2025-21962] kernel: cifs: Fix integer overflow while processing closetimeo mount option (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

cifs: Fix integer overflow while processing closetimeo mount option

User-provided mount parameter closetimeo of type u32 is intended to have
an upper limit, but before it is validated, the value is converted from
seconds to jiffies which can lead to an integer overflow.

Found by Linux Verification Center (linuxtesting.org) with SVACE.

More Info: https://avd.aquasec.com/nvd/cve-2025-21962

[CVE-2025-21963] kernel: cifs: Fix integer overflow while processing acdirmax mount option (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

cifs: Fix integer overflow while processing acdirmax mount option

User-provided mount parameter acdirmax of type u32 is intended to have
an upper limit, but before it is validated, the value is converted from
seconds to jiffies which can lead to an integer overflow.

Found by Linux Verification Center (linuxtesting.org) with SVACE.

More Info: https://avd.aquasec.com/nvd/cve-2025-21963

[CVE-2025-21964] kernel: cifs: Fix integer overflow while processing acregmax mount option (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

cifs: Fix integer overflow while processing acregmax mount option

User-provided mount parameter acregmax of type u32 is intended to have
an upper limit, but before it is validated, the value is converted from
seconds to jiffies which can lead to an integer overflow.

Found by Linux Verification Center (linuxtesting.org) with SVACE.

More Info: https://avd.aquasec.com/nvd/cve-2025-21964

[CVE-2025-21967] kernel: ksmbd: fix use-after-free in ksmbd_free_work_struct (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

ksmbd: fix use-after-free in ksmbd_free_work_struct

->interim_entry of ksmbd_work could be deleted after oplock is freed.
We don't need to manage it with linked list. The interim request could be
immediately sent whenever a oplock break wait is needed.

More Info: https://avd.aquasec.com/nvd/cve-2025-21967

[CVE-2025-21968] kernel: drm/amd/display: Fix slab-use-after-free on hdcp_work (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Fix slab-use-after-free on hdcp_work

[Why]
A slab-use-after-free is reported when HDCP is destroyed but the
property_validate_dwork queue is still running.

[How]
Cancel the delayed work when destroying workqueue.

(cherry picked from commit 725a04ba5a95e89c89633d4322430cfbca7ce128)

More Info: https://avd.aquasec.com/nvd/cve-2025-21968

[CVE-2025-21969] kernel: Bluetooth: L2CAP: Fix slab-use-after-free Read in l2cap_send_cmd (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

Bluetooth: L2CAP: Fix slab-use-after-free Read in l2cap_send_cmd

After the hci sync command releases l2cap_conn, the hci receive data work
queue references the released l2cap_conn when sending to the upper layer.
Add hci dev lock to the hci receive data work queue to synchronize the two.

[1]
BUG: KASAN: slab-use-after-free in l2cap_send_cmd+0x187/0x8d0 net/bluetooth/l2cap_core.c:954
Read of size 8 at addr ffff8880271a4000 by task kworker/u9:2/5837

CPU: 0 UID: 0 PID: 5837 Comm: kworker/u9:2 Not tainted 6.13.0-rc5-syzkaller-00163-gab75170520d4 #0
Hardware name: Google Google Compute Engine/Google Compute Engine, BIOS Google 09/13/2024
Workqueue: hci1 hci_rx_work
Call Trace:
 <TASK>
 __dump_stack lib/dump_stack.c:94 [inline]
 dump_stack_lvl+0x241/0x360 lib/dump_stack.c:120
 print_address_description mm/kasan/report.c:378 [inline]
 print_report+0x169/0x550 mm/kasan/report.c:489
 kasan_report+0x143/0x180 mm/kasan/report.c:602
 l2cap_build_cmd net/bluetooth/l2cap_core.c:2964 [inline]
 l2cap_send_cmd+0x187/0x8d0 net/bluetooth/l2cap_core.c:954
 l2cap_sig_send_rej net/bluetooth/l2cap_core.c:5502 [inline]
 l2cap_sig_channel net/bluetooth/l2cap_core.c:5538 [inline]
 l2cap_recv_frame+0x221f/0x10db0 net/bluetooth/l2cap_core.c:6817
 hci_acldata_packet net/bluetooth/hci_core.c:3797 [inline]
 hci_rx_work+0x508/0xdb0 net/bluetooth/hci_core.c:4040
 process_one_work kernel/workqueue.c:3229 [inline]
 process_scheduled_works+0xa66/0x1840 kernel/workqueue.c:3310
 worker_thread+0x870/0xd30 kernel/workqueue.c:3391
 kthread+0x2f0/0x390 kernel/kthread.c:389
 ret_from_fork+0x4b/0x80 arch/x86/kernel/process.c:147
 ret_from_fork_asm+0x1a/0x30 arch/x86/entry/entry_64.S:244
 </TASK>

Allocated by task 5837:
 kasan_save_stack mm/kasan/common.c:47 [inline]
 kasan_save_track+0x3f/0x80 mm/kasan/common.c:68
 poison_kmalloc_redzone mm/kasan/common.c:377 [inline]
 __kasan_kmalloc+0x98/0xb0 mm/kasan/common.c:394
 kasan_kmalloc include/linux/kasan.h:260 [inline]
 __kmalloc_cache_noprof+0x243/0x390 mm/slub.c:4329
 kmalloc_noprof include/linux/slab.h:901 [inline]
 kzalloc_noprof include/linux/slab.h:1037 [inline]
 l2cap_conn_add+0xa9/0x8e0 net/bluetooth/l2cap_core.c:6860
 l2cap_connect_cfm+0x115/0x1090 net/bluetooth/l2cap_core.c:7239
 hci_connect_cfm include/net/bluetooth/hci_core.h:2057 [inline]
 hci_remote_features_evt+0x68e/0xac0 net/bluetooth/hci_event.c:3726
 hci_event_func net/bluetooth/hci_event.c:7473 [inline]
 hci_event_packet+0xac2/0x1540 net/bluetooth/hci_event.c:7525
 hci_rx_work+0x3f3/0xdb0 net/bluetooth/hci_core.c:4035
 process_one_work kernel/workqueue.c:3229 [inline]
 process_scheduled_works+0xa66/0x1840 kernel/workqueue.c:3310
 worker_thread+0x870/0xd30 kernel/workqueue.c:3391
 kthread+0x2f0/0x390 kernel/kthread.c:389
 ret_from_fork+0x4b/0x80 arch/x86/kernel/process.c:147
 ret_from_fork_asm+0x1a/0x30 arch/x86/entry/entry_64.S:244

Freed by task 54:

kasan_save_stack mm/kasan/common.c:47 [inline]
kasan_save_track+0x3f/0x80 mm/kasan/common.c:68
kasan_save_free_info+0x40/0x50 mm/kasan/generic.c:582
poison_slab_object mm/kasan/common.c:247 [inline]
__kasan_slab_free+0x59/0x70 mm/kasan/common.c:264
kasan_slab_free include/linux/kasan.h:233 [inline]
slab_free_hook mm/slub.c:2353 [inline]
slab_free mm/slub.c:4613 [inline]
kfree+0x196/0x430 mm/slub.c:4761
l2cap_connect_cfm+0xcc/0x1090 net/bluetooth/l2cap_core.c:7235
hci_connect_cfm include/net/bluetooth/hci_core.h:2057 [inline]
hci_conn_failed+0x287/0x400 net/bluetooth/hci_conn.c:1266
hci_abort_conn_sync+0x56c/0x11f0 net/bluetooth/hci_sync.c:5603
hci_cmd_sync_work+0x22b/0x400 net/bluetooth/hci_sync.c:332
process_one_work kernel/workqueue.c:3229 [inline]
process_scheduled_works+0xa66/0x1840 kernel/workqueue.c:3310
worker_thread+0x870/0xd30 kernel/workqueue.c:3391
kthread+0x2f0/0x390 kernel/kthread.c:389
ret_from_fork+0x4b/0x80 arch/x86/kernel/process.c:147
ret_from_fork_asm+0x1a/0x30 arch/x86/entry/entr
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2025-21969

[CVE-2025-21970] kernel: net/mlx5: Bridge, fix the crash caused by LAG state check (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

net/mlx5: Bridge, fix the crash caused by LAG state check

When removing LAG device from bridge, NETDEV_CHANGEUPPER event is
triggered. Driver finds the lower devices (PFs) to flush all the
offloaded entries. And mlx5_lag_is_shared_fdb is checked, it returns
false if one of PF is unloaded. In such case,
mlx5_esw_bridge_lag_rep_get() and its caller return NULL, instead of
the alive PF, and the flush is skipped.

Besides, the bridge fdb entry's lastuse is updated in mlx5 bridge
event handler. But this SWITCHDEV_FDB_ADD_TO_BRIDGE event can be
ignored in this case because the upper interface for bond is deleted,
and the entry will never be aged because lastuse is never updated.

To make things worse, as the entry is alive, mlx5 bridge workqueue
keeps sending that event, which is then handled by kernel bridge
notifier. It causes the following crash when accessing the passed bond
netdev which is already destroyed.

To fix this issue, remove such checks. LAG state is already checked in

commit 15f8f168952f ("net/mlx5: Bridge, verify LAG state when adding bond to bridge"), driver still need to skip offload if LAG becomes invalid state after initialization.

```
Oops: stack segment: 0000 [#1] SMP
CPU: 3 UID: 0 PID: 23695 Comm: kworker/u40:3 Tainted: G          OE      6.11.0_mlnx #1
Tainted: [O]=OOT_MODULE, [E]=UNSIGNED_MODULE
Hardware name: QEMU Standard PC (Q35 + ICH9, 2009), BIOS rel-1.13.0-0-gf21b5a4aeb02-prebuilt.qemu.org 04/01/2014
Workqueue: mlx5_bridge_wq mlx5_esw_bridge_update_work [mlx5_core]
RIP: 0010:br_switchdev_event+0x2c/0x110 [bridge]
Code: 44 00 00 48 8b 02 48 f7 00 00 02 00 00 74 69 41 54 55 53 48 83 ec 08 48 8b a8 08 01 00 00 48 85 ed 74 4a 48 83 fe 02 48 89 d3 <4c> 8b 65 00 74 23 76 49 48 83 fe 05 74 7e 48 83 fe 06 75 2f 0f b7
RSP: 0018:ffffc900092cfda0 EFLAGS: 00010297
RAX: ffff888123bfe000 RBX: ffffc900092cfe08 RCX: 00000000ffffffff
RDX: ffffc900092cfe08 RSI: 0000000000000001 RDI: ffffffffa0c585f0
RBP: 6669746f6e690a30 R08: 0000000000000000 R09: ffff888123ae92c8
R10: 0000000000000000 R11: fefefefefefefeff R12: ffff888123ae9c60
R13: 0000000000000001 R14: ffffc900092cfe08 R15: 0000000000000000
FS:  0000000000000000(0000) GS:ffff88852c980000(0000) knlGS:0000000000000000
CS:  0010 DS: 0000 ES: 0000 CR0: 0000000080050033
CR2: 00007f15914c8734 CR3: 0000000002830005 CR4: 0000000000770ef0
DR0: 0000000000000000 DR1: 0000000000000000 DR2: 0000000000000000
DR3: 0000000000000000 DR6: 00000000fffe0ff0 DR7: 0000000000000400
PKRU: 55555554
Call Trace:
<TASK>
? __die_body+0x1a/0x60
? die+0x38/0x60
? do_trap+0x10b/0x120
? do_error_trap+0x64/0xa0
? exc_stack_segment+0x33/0x50
? asm_exc_stack_segment+0x22/0x30
? br_switchdev_event+0x2c/0x110 [bridge]
? sched_balance_newidle.isra.149+0x248/0x390
notifier_call_chain+0x4b/0xa0
atomic_notifier_call_chain+0x16/0x20
mlx5_esw_bridge_update+0xec/0x170 [mlx5_core]
mlx5_esw_bridge_update_work+0x19/0x40 [mlx5_core]
process_scheduled_works+0x81/0x390
worker_thread+0x106/0x250
? bh_worker+0x110/0x110
kthread+0xb7/0xe0
? kthread_park+0x80/0x80
ret_from_fork+0x2d/0x50
? kthread_park+0x80/0x80
ret_from_fork_asm+0x11/0x20
</TASK>
```

More Info: https://avd.aquasec.com/nvd/cve-2025-21970

[CVE-2025-21971] kernel: net_sched: Prevent creation of classes with TC_H_ROOT (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

net_sched: Prevent creation of classes with TC_H_ROOT

The function qdisc_tree_reduce_backlog() uses TC_H_ROOT as a termination condition when traversing up the qdisc tree to update parent backlog counters. However, if a class is created with classid TC_H_ROOT, the traversal terminates prematurely at this class instead of reaching the actual root qdisc, causing parent statistics to be incorrectly maintained. In case of DRR, this could lead to a crash as reported by Mingi Cho.

Prevent the creation of any Qdisc class with classid TC_H_ROOT (0xFFFFFFFF) across all qdisc types, as suggested by Jamal.

More Info: https://avd.aquasec.com/nvd/cve-2025-21971

[CVE-2025-21972] kernel: net: mctp: unshare packets when reassembling (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net: mctp: unshare packets when reassembling

Ensure that the frag_list used for reassembly isn't shared with other packets. This avoids incorrect reassembly when packets are cloned, and prevents a memory leak due to circular references between fragments and their skb_shared_info.

The upcoming MCTP-over-USB driver uses skb_clone which can trigger the problem - other MCTP drivers don't share SKBs.

A kunit test is added to reproduce the issue.

More Info: https://avd.aquasec.com/nvd/cve-2025-21972

[CVE-2025-21975] kernel: net/mlx5: handle errors in mlx5_chains_create_table() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

net/mlx5: handle errors in mlx5_chains_create_table()

In mlx5_chains_create_table(), the return value ofÂ mlx5_get_fdb_sub_ns() and mlx5_get_flow_namespace() must be checked to prevent NULL pointer

dereferences. If either function fails, the function should log error
message with mlx5_core_warn() and return error pointer.

More Info: https://avd.aquasec.com/nvd/cve-2025-21975

[CVE-2025-21976] kernel: fbdev: hyperv_fb: Allow graceful removal of framebuffer (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

fbdev: hyperv_fb: Allow graceful removal of framebuffer

When a Hyper-V framebuffer device is unbind, hyperv_fb driver tries to
release the framebuffer forcefully. If this framebuffer is in use it
produce the following WARN and hence this framebuffer is never released.

[44.111220] WARNING: CPU: 35 PID: 1882 at drivers/video/fbdev/core/fb_info.c:70 framebuffer_release+0x2c/0x40
< snip >
[44.111289] Call Trace:
[44.111290] <TASK>
[44.111291] ? show_regs+0x6c/0x80
[44.111295] ? __warn+0x8d/0x150
[44.111298] ? framebuffer_release+0x2c/0x40
[44.111300] ? report_bug+0x182/0x1b0
[44.111303] ? handle_bug+0x6e/0xb0
[44.111306] ? exc_invalid_op+0x18/0x80
[44.111308] ? asm_exc_invalid_op+0x1b/0x20
[44.111311] ? framebuffer_release+0x2c/0x40
[44.111313] ? hvfb_remove+0x86/0xa0 [hyperv_fb]
[44.111315] vmbus_remove+0x24/0x40 [hv_vmbus]
[44.111323] device_remove+0x40/0x80
[44.111325] device_release_driver_internal+0x20b/0x270
[44.111327] ? bus_find_device+0xb3/0xf0

Fix this by moving the release of framebuffer and assosiated memory
to fb_ops.fb_destroy function, so that framebuffer framework handles
it gracefully.

While we fix this, also replace manual registrations/unregistration of
framebuffer with devm_register_framebuffer.

More Info: https://avd.aquasec.com/nvd/cve-2025-21976

[CVE-2025-21978] kernel: drm/hyperv: Fix address space leak when Hyper-V DRM device is removed (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

drm/hyperv: Fix address space leak when Hyper-V DRM device is removed

When a Hyper-V DRM device is probed, the driver allocates MMIO space for
the vram, and maps it cacheable. If the device removed, or in the error
path for device probing, the MMIO space is released but no unmap is done.
Consequently the kernel address space for the mapping is leaked.

Fix this by adding iounmap() calls in the device removal path, and in the
error path during device probing.

More Info: https://avd.aquasec.com/nvd/cve-2025-21978

[CVE-2025-21980] kernel: sched: address a potential NULL pointer dereference in the GRED scheduler. (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

sched: address a potential NULL pointer dereference in the GRED scheduler.

If kzalloc in gred_init returns a NULL pointer, the code follows the
error handling path, invoking gred_destroy. This, in turn, calls
gred_offload, where memset could receive a NULL pointer as input,
potentially leading to a kernel crash.

When table->opt is NULL in gred_init(), gred_change_table_def()
is not called yet, so it is not necessary to call ->ndo_setup_tc()
in gred_offload().

More Info: https://avd.aquasec.com/nvd/cve-2025-21980

[CVE-2025-21981] kernel: ice: fix memory leak in aRFS after reset (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

ice: fix memory leak in aRFS after reset

Fix aRFS (accelerated Receive Flow Steering) structures memory leak by
adding a checker to verify if aRFS memory is already allocated while
configuring VSI. aRFS objects are allocated in two cases:
- as part of VSI initialization (at probe), and
- as part of reset handling

However, VSI reconfiguration executed during reset involves memory
allocation one more time, without prior releasing already allocated
resources. This led to the memory leak with the following signature:

```
[root@os-delivery ~]# cat /sys/kernel/debug/kmemleak
unreferenced object 0xff3c1ca7252e6000 (size 8192):
  comm "kworker/0:0", pid 8, jiffies 4296833052
  hex dump (first 32 bytes):
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ................
    00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ................
  backtrace (crc 0):
    [<ffffffff991ec485>] __kmalloc_cache_noprof+0x275/0x340
    [<ffffffffc0a6e06a>] ice_init_arfs+0x3a/0xe0 [ice]
    [<ffffffffc09f1027>] ice_vsi_cfg_def+0x607/0x850 [ice]
    [<ffffffffc09f244b>] ice_vsi_setup+0x5b/0x130 [ice]
    [<ffffffffc09c2131>] ice_init+0x1c1/0x460 [ice]
    [<ffffffffc09c64af>] ice_probe+0x2af/0x520 [ice]
    [<ffffffff994fbcd3>] local_pci_probe+0x43/0xa0
    [<ffffffff98f07103>] work_for_cpu_fn+0x13/0x20
    [<ffffffff98f0b6d9>] process_one_work+0x179/0x390
    [<ffffffff98f0c1e9>] worker_thread+0x239/0x340
    [<ffffffff98f14abc>] kthread+0xcc/0x100
    [<ffffffff98e45a6d>] ret_from_fork+0x2d/0x50
    [<ffffffff98e083ba>] ret_from_fork_asm+0x1a/0x30
    ...
```

More Info: https://avd.aquasec.com/nvd/cve-2025-21981

[CVE-2025-21985] kernel: drm/amd/display: Fix out-of-bound accesses (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

drm/amd/display: Fix out-of-bound accesses

[WHAT & HOW]
hpo_stream_to_link_encoder_mapping has size MAX_HPO_DP2_ENCODERS(=4),
but location can have size up to 6. As a result, it is necessary to
check location against MAX_HPO_DP2_ENCODERS.

Similiarly, disp_cfg_stream_location can be used as an array index which
should be 0..5, so the ASSERT's conditions should be less without equal.

More Info: https://avd.aquasec.com/nvd/cve-2025-21985

[CVE-2025-21986] kernel: net: switchdev: Convert blocking notification chain to a raw one (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

net: switchdev: Convert blocking notification chain to a raw one

A blocking notification chain uses a read-write semaphore to protect the
integrity of the chain. The semaphore is acquired for writing when
adding / removing notifiers to / from the chain and acquired for reading
when traversing the chain and informing notifiers about an event.

In case of the blocking switchdev notification chain, recursive
notifications are possible which leads to the semaphore being acquired
twice for reading and to lockdep warnings being generated [1].

Specifically, this can happen when the bridge driver processes a
SWITCHDEV_BRPORT_UNOFFLOADED event which causes it to emit notifications
about deferred events when calling switchdev_deferred_process().

Fix this by converting the notification chain to a raw notification
chain in a similar fashion to the netdev notification chain. Protect
the chain using the RTNL mutex by acquiring it when modifying the chain.
Events are always informed under the RTNL mutex, but add an assertion in
call_switchdev_blocking_notifiers() to make sure this is not violated in
the future.

Maintain the "blocking" prefix as events are always emitted from process
context and listeners are allowed to block.

[1]:
WARNING: possible recursive locking detected
6.14.0-rc4-custom-g079270089484 #1 Not tainted
----
ip/52731 is trying to acquire lock:
ffffffff850918d8 ((switchdev_blocking_notif_chain).rwsem){++++}-{4:4}, at: blocking_notifier_call_chain+0x58/0xa0

but task is already holding lock:
ffffffff850918d8 ((switchdev_blocking_notif_chain).rwsem){++++}-{4:4}, at: blocking_notifier_call_chain+0x58/0xa0

other info that might help us debug this:
Possible unsafe locking scenario:
CPU0
----
lock((switchdev_blocking_notif_chain).rwsem);
lock((switchdev_blocking_notif_chain).rwsem);

*** DEADLOCK ***
May be due to missing lock nesting notation
3 locks held by ip/52731:
 #0: ffffffff84f795b0 (rtnl_mutex){+.+.}-{4:4}, at: rtnl_newlink+0x727/0x1dc0
 #1: ffffffff8731f628 (&net->rtnl_mutex){+.+.}-{4:4}, at: rtnl_newlink+0x790/0x1dc0
 #2: ffffffff850918d8 ((switchdev_blocking_notif_chain).rwsem){++++}-{4:4}, at: blocking_notifier_call_chain+0x58/0xa0

stack backtrace:
...
? __pfx_down_read+0x10/0x10
? __pfx_mark_lock+0x10/0x10

? __pfx_switchdev_port_attr_set_deferred+0x10/0x10
blocking_notifier_call_chain+0x58/0xa0
switchdev_port_attr_notify.constprop.0+0xb3/0x1b0
? __pfx_switchdev_port_attr_notify.constprop.0+0x10/0x10
? mark_held_locks+0x94/0xe0
? switchdev_deferred_process+0x11a/0x340
switchdev_port_attr_set_deferred+0x27/0xd0
switchdev_deferred_process+0x164/0x340
br_switchdev_port_unoffload+0xc8/0x100 [bridge]
br_switchdev_blocking_event+0x29f/0x580 [bridge]
notifier_call_chain+0xa2/0x440
blocking_notifier_call_chain+0x6e/0xa0
switchdev_bridge_port_unoffload+0xde/0x1a0
...

More Info: https://avd.aquasec.com/nvd/cve-2025-21986

[CVE-2025-21992] kernel: HID: ignore non-functional sensor in HP 5MP Camera (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

HID: ignore non-functional sensor in HP 5MP Camera

The HP 5MP Camera (USB ID 0408:5473) reports a HID sensor interface that
is not actually implemented. Attempting to access this non-functional
sensor via iio_info causes system hangs as runtime PM tries to wake up
an unresponsive sensor.

[453] hid-sensor-hub 0003:0408:5473.0003: Report latency attributes: ffffffff:ffffffff
[453] hid-sensor-hub 0003:0408:5473.0003: common attributes: 5:1, 2:1, 3:1 ffffffff:ffffffff

Add this device to the HID ignore list since the sensor interface is
non-functional by design and should not be exposed to userspace.

More Info: https://avd.aquasec.com/nvd/cve-2025-21992

[CVE-2025-21994] kernel: ksmbd: fix incorrect validation for num_aces field of smb_acl (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

ksmbd: fix incorrect validation for num_aces field of smb_acl

parse_dcal() validate num_aces to allocate posix_ace_state_array.

if (num_aces > ULONG_MAX / sizeof(struct smb_ace *))

It is an incorrect validation that we can create an array of size ULONG_MAX.
smb_acl has ->size field to calculate actual number of aces in request buffer
size. Use this to check invalid num_aces.

More Info: https://avd.aquasec.com/nvd/cve-2025-21994

[CVE-2025-21996] kernel: drm/radeon: fix uninitialized size issue in radeon_vce_cs_parse() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

drm/radeon: fix uninitialized size issue in radeon_vce_cs_parse()

On the off chance that command stream passed from userspace via
ioctl() call to radeon_vce_cs_parse() is weirdly crafted and
first command to execute is to encode (case 0x03000001), the function
in question will attempt to call radeon_vce_cs_reloc() with size
argument that has not been properly initialized. Specifically, 'size'
will point to 'tmp' variable before the latter had a chance to be
assigned any value.

Play it safe and init 'tmp' with 0, thus ensuring that
radeon_vce_cs_reloc() will catch an early error in cases like these.

Found by Linux Verification Center (linuxtesting.org) with static
analysis tool SVACE.

(cherry picked from commit 2d52de55f9ee7aaee0e09ac443f77855989c6b68)

More Info: https://avd.aquasec.com/nvd/cve-2025-21996

[CVE-2025-21997] kernel: xsk: fix an integer overflow in xp_create_and_assign_umem() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

xsk: fix an integer overflow in xp_create_and_assign_umem()

Since the i and pool->chunk_size variables are of type 'u32',
their product can wrap around and then be cast to 'u64'.
This can lead to two different XDP buffers pointing to the same
memory area.

Found by InfoTeCS on behalf of Linux Verification Center
(linuxtesting.org) with SVACE.

More Info: https://avd.aquasec.com/nvd/cve-2025-21997

[CVE-2025-22004] kernel: net: atm: fix use after free in lec_send() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

net: atm: fix use after free in lec_send()

The ->send() operation frees skb so save the length before calling
->send() to avoid a use after free.

More Info: https://avd.aquasec.com/nvd/cve-2025-22004

[CVE-2025-22005] kernel: ipv6: Fix memleak of nhc_pcpu_rth_output in fib_check_nh_v6_gw(). (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

ipv6: Fix memleak of nhc_pcpu_rth_output in fib_check_nh_v6_gw().

fib_check_nh_v6_gw() expects that fib6_nh_init() cleans up everything
when it fails.

Commit 7dd73168e273 ("ipv6: Always allocate pcpu memory in a fib6_nh")
moved fib_nh_common_init() before alloc_percpu_gfp() within fib6_nh_init()
but forgot to add cleanup for fib6_nh->nh_common.nhc_pcpu_rth_output in
case it fails to allocate fib6_nh->rt6i_pcpu, resulting in memleak.

Let's call fib_nh_common_release() and clear nhc_pcpu_rth_output in the
error path.

Note that we can remove the fib6_nh_release() call in nh_create_ipv6()
later in net-next.git.

More Info: https://avd.aquasec.com/nvd/cve-2025-22005

[CVE-2025-22007] kernel: Bluetooth: Fix error code in chan_alloc_skb_cb() (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

Bluetooth: Fix error code in chan_alloc_skb_cb()

The chan_alloc_skb_cb() function is supposed to return error pointers on
error. Returning NULL will lead to a NULL dereference.

More Info: https://avd.aquasec.com/nvd/cve-2025-22007

[CVE-2025-22008] kernel: regulator: check that dummy regulator has been probed before using it (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

regulator: check that dummy regulator has been probed before using it

Due to asynchronous driver probing there is a chance that the dummy
regulator hasn't already been probed when first accessing it.

More Info: https://avd.aquasec.com/nvd/cve-2025-22008

[CVE-2025-22010] kernel: RDMA/hns: Fix soft lockup during bt pages loop (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

RDMA/hns: Fix soft lockup during bt pages loop

Driver runs a for-loop when allocating bt pages and mapping them with
buffer pages. When a large buffer (e.g. MR over 100GB) is being allocated,
it may require a considerable loop count. This will lead to soft lockup:

```
watchdog: BUG: soft lockup - CPU#27 stuck for 22s!
...
Call trace:
 hem_list_alloc_mid_bt+0x124/0x394 [hns_roce_hw_v2]
 hns_roce_hem_list_request+0xf8/0x160 [hns_roce_hw_v2]
 hns_roce_mtr_create+0x2e4/0x360 [hns_roce_hw_v2]
 alloc_mr_pbl+0xd4/0x17c [hns_roce_hw_v2]
 hns_roce_reg_user_mr+0xf8/0x190 [hns_roce_hw_v2]
 ib_uverbs_reg_mr+0x118/0x290

watchdog: BUG: soft lockup - CPU#35 stuck for 23s!
...
Call trace:
 hns_roce_hem_list_find_mtt+0x7c/0xb0 [hns_roce_hw_v2]
 mtr_map_bufs+0xc4/0x204 [hns_roce_hw_v2]
 hns_roce_mtr_create+0x31c/0x3c4 [hns_roce_hw_v2]
 alloc_mr_pbl+0xb0/0x160 [hns_roce_hw_v2]
 hns_roce_reg_user_mr+0x108/0x1c0 [hns_roce_hw_v2]
 ib_uverbs_reg_mr+0x120/0x2bc
```

Add a cond_resched() to fix soft lockup during these loops. In order not
to affect the allocation performance of normal-size buffer, set the loop
count of a 100GB MR as the threshold to call cond_resched().

More Info: https://avd.aquasec.com/nvd/cve-2025-22010

[CVE-2025-22014] kernel: soc: qcom: pdr: Fix the potential deadlock (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

soc: qcom: pdr: Fix the potential deadlock

When some client process A call pdr_add_lookup() to add the look up for
the service and does schedule locator work, later a process B got a new
server packet indicating locator is up and call pdr_locator_new_server()
which eventually sets pdr->locator_init_complete to true which process A
sees and takes list lock and queries domain list but it will timeout due
to deadlock as the response will queued to the same qmi->wq and it is
ordered workqueue and process B is not able to complete new server
request work due to deadlock on list lock.

Fix it by removing the unnecessary list iteration as the list iteration
is already being done inside locator work, so avoid it here and just
call schedule_work() here.

```
      Process A                    Process B

                               process_scheduled_works()
pdr_add_lookup()                 qmi_data_ready_work()
 process_scheduled_works()         pdr_locator_new_server()
                                    pdr->locator_init_complete=true;
  pdr_locator_work()
   mutex_lock(&pdr->list_lock);

    pdr_locate_service()             mutex_lock(&pdr->list_lock);

     pdr_get_domain_list()
      pr_err("PDR: %s get domain list
            txn wait failed: %d\n",
            req->service_name,
            ret);
```

Timeout error log due to deadlock:

```
"
 PDR: tms/servreg get domain list txn wait failed: -110
 PDR: service lookup for msm/adsp/sensor_pd:tms/servreg failed: -110
"
```

Thanks to Bjorn and Johan for letting me know that this commit also fixes
an audio regression when using the in-kernel pd-mapper as that makes it
easier to hit this race. [1]

More Info: https://avd.aquasec.com/nvd/cve-2025-22014

[CVE-2025-22015] kernel: mm/migrate: fix shmem xarray update during migration (Severity: MEDIUM)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: 6.1.133-1

In the Linux kernel, the following vulnerability has been resolved:

mm/migrate: fix shmem xarray update during migration

A shmem folio can be either in page cache or in swap cache, but not at the
same time. Namely, once it is in swap cache, folio->mapping should be
NULL, and the folio is no longer in a shmem mapping.

In __folio_migrate_mapping(), to determine the number of xarray entries to
update, folio_test_swapbacked() is used, but that conflates shmem in page
cache case and shmem in swap cache case. It leads to xarray multi-index
entry corruption, since it turns a sibling entry to a normal entry during
xas_store() (see [1] for a userspace reproduction). Fix it by only using
folio_test_swapcache() to determine whether xarray is storing swap cache
entries or not to choose the right number of xarray entries to update.

[1] https://lore.kernel.org/linux-mm/Z8idPCkaJW1IChjT@casper.infradead.org/

Note:
In __split_huge_page(), folio_test_anon() && folio_test_swapcache() is
used to get swap_cache address space, but that ignores the shmem folio in
swap cache case. It could lead to NULL pointer dereferencing when a
in-swap-cache shmem folio is split at __xa_store(), since
!folio_test_anon() is true and folio->mapping is NULL. But fortunately,
its caller split_huge_page_to_list_to_order() bails out early with EBUSY
when folio->mapping is NULL. So no need to take care of it here.

More Info: https://avd.aquasec.com/nvd/cve-2025-22015

[CVE-2004-0230] TCP, when using a large Window Size, makes it easier for remote attack ... (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

TCP, when using a large Window Size, makes it easier for remote attackers to guess sequence numbers and cause a denial of service (connection loss) to persistent TCP connections by repeatedly injecting a TCP RST packet, especially in protocols that use long-lived connections, such as BGP.

More Info: https://avd.aquasec.com/nvd/cve-2004-0230

[CVE-2005-3660] Linux kernel 2.4 and 2.6 allows attackers to cause a denial of service ... (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

Linux kernel 2.4 and 2.6 allows attackers to cause a denial of service (memory exhaustion and panic) by creating a large number of connected file descriptors or socketpairs and setting a large data transfer buffer, then preventing Linux from being able to finish the transfer by causing the process to become a zombie, or closing the file descriptor without closing an associated reference.

More Info: https://avd.aquasec.com/nvd/cve-2005-3660

[CVE-2007-3719] kernel: secretly Monopolizing the CPU Without Superuser Privileges (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

The process scheduler in the Linux kernel 2.6.16 gives preference to "interactive" processes that perform voluntary sleeps, which allows local users to cause a denial of service (CPU consumption), as described in "Secretly Monopolizing the CPU Without Superuser Privileges."

More Info: https://avd.aquasec.com/nvd/cve-2007-3719

[CVE-2008-2544] kernel: mounting proc readonly on a different mount point silently mounts it rw if the /proc mount is rw (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

Mounting /proc filesystem via chroot command silently mounts it in read-write mode. The user could bypass the chroot environment and gain write access to files, he would never have otherwise.

More Info: https://avd.aquasec.com/nvd/cve-2008-2544

[CVE-2008-4609] kernel: TCP protocol vulnerabilities from Outpost24 (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

The TCP implementation in (1) Linux, (2) platforms based on BSD Unix, (3) Microsoft Windows, (4) Cisco products, and probably other operating systems allows remote attackers to cause a denial of service (connection queue exhaustion) via multiple vectors that manipulate information in the TCP state table, as demonstrated by sockstress.

More Info: https://avd.aquasec.com/nvd/cve-2008-4609

[CVE-2010-4563] kernel: ipv6: sniffer detection (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

The Linux kernel, when using IPv6, allows remote attackers to determine whether a host is sniffing the network by sending an ICMPv6 Echo Request to a multicast address and determining whether an Echo Reply is sent, as demonstrated by thcping.

More Info: https://avd.aquasec.com/nvd/cve-2010-4563

[CVE-2010-5321] kernel: v4l: videobuf: hotfix a bug on multiple calls to mmap() (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

Memory leak in drivers/media/video/videobuf-core.c in the videobuf subsystem in the Linux kernel 2.6.x through 4.x allows local users to cause a denial of service (memory consumption) by leveraging /dev/video access for a series of mmap calls that require new allocations, a different vulnerability than CVE-2007-6761. NOTE: as of 2016-06-18, this affects only 11 drivers that have not been updated to use videobuf2 instead of videobuf.

More Info: https://avd.aquasec.com/nvd/cve-2010-5321

[CVE-2011-4915] fs/proc/base.c in the Linux kernel through 3.1 allows local users to o ... (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

fs/proc/base.c in the Linux kernel through 3.1 allows local users to obtain sensitive keystroke information via access to /proc/interrupts.

More Info: https://avd.aquasec.com/nvd/cve-2011-4915

[CVE-2011-4916] Linux kernel through 3.1 allows local users to obtain sensitive keystr ... (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

Linux kernel through 3.1 allows local users to obtain sensitive keystroke information via access to /dev/pts/ and /dev/tty*.

More Info: https://avd.aquasec.com/nvd/cve-2011-4916

[CVE-2011-4917] In the Linux kernel through 3.1 there is an information disclosure iss ... (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel through 3.1 there is an information disclosure issue via /proc/stat.

More Info: https://avd.aquasec.com/nvd/cve-2011-4917

[CVE-2012-4542] kernel: block: default SCSI command filter does not accomodate commands overlap across device classes (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

block/scsi_ioctl.c in the Linux kernel through 3.8 does not properly consider the SCSI device class during authorization of SCSI commands, which allows local users to bypass intended access restrictions via an SG_IO ioctl call that leverages overlapping opcodes.

More Info: https://avd.aquasec.com/nvd/cve-2012-4542

[CVE-2014-9892] The snd_compr_tstamp function in sound/core/compress_offload.c in the ... (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

The snd_compr_tstamp function in sound/core/compress_offload.c in the Linux kernel through 4.7, as used in Android before 2016-08-05 on Nexus 5 and 7 (2013) devices, does not properly initialize a timestamp data structure, which allows attackers to obtain sensitive information via a crafted application, aka Android internal bug 28770164 and Qualcomm internal bug CR568717.

More Info: https://avd.aquasec.com/nvd/cve-2014-9892

[CVE-2014-9900] kernel: Info leak in uninitialized structure ethtool_wolinfo in ethtool_get_wol() (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

The ethtool_get_wol function in net/core/ethtool.c in the Linux kernel through 4.7, as used in Android before 2016-08-05 on Nexus 5 and 7 (2013) devices, does not initialize a certain data structure, which allows local users to obtain sensitive information via a crafted application, aka Android internal bug 28803952 and Qualcomm internal bug CR570754.

More Info: https://avd.aquasec.com/nvd/cve-2014-9900

[CVE-2015-2877] Kernel: Cross-VM ASL INtrospection (CAIN) (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

Kernel Samepage Merging (KSM) in the Linux kernel 2.6.32 through 4.x does not prevent use of a write-timing side channel, which allows guest OS users to defeat the ASLR protection mechanism on other guest OS instances via a Cross-VM ASL INtrospection (CAIN) attack. NOTE: the vendor states "Basically if you care about this attack vector, disable deduplication." Share-until-written approaches for memory conservation among mutually untrusting tenants are inherently detectable for information disclosure, and can be classified as potentially misunderstood behaviors rather than vulnerabilities

More Info: https://avd.aquasec.com/nvd/cve-2015-2877

[CVE-2016-10723] An issue was discovered in the Linux kernel through 4.17.2. Since the ... (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in the Linux kernel through 4.17.2. Since the page allocator does not yield CPU resources to the owner of the oom_lock mutex, a local unprivileged user can trivially lock up the system forever by wasting CPU resources from the page allocator (e.g., via concurrent page fault events) when the global OOM killer is invoked. NOTE: the software maintainer has not accepted certain proposed patches, in part because of a viewpoint that "the underlying problem is non-trivial to handle.

More Info: https://avd.aquasec.com/nvd/cve-2016-10723

[CVE-2016-8660] kernel: xfs: local DoS due to a page lock order bug in the XFS seek hole/data implementation (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

The XFS subsystem in the Linux kernel through 4.8.2 allows local users to cause a denial of service (fdatasync failure and system hang) by using the vfs syscall group in the trinity program, related to a "page lock order bug in the XFS seek hole/data implementation."

More Info: https://avd.aquasec.com/nvd/cve-2016-8660

[CVE-2017-0630] kernel: Information disclosure vulnerability in kernel trace subsystem (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An information disclosure vulnerability in the kernel trace subsystem could enable a local malicious application to access data outside of its permission levels. This issue is rated as Moderate because it first requires compromising a privileged process. Product: Android. Versions: Kernel-3.10, Kernel-3.18. Android ID: A-34277115.

More Info: https://avd.aquasec.com/nvd/cve-2017-0630

[CVE-2017-13693] kernel: ACPI operand cache leak in dsutils.c (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

The acpi_ds_create_operands() function in drivers/acpi/acpica/dsutils.c in the Linux kernel through 4.12.9 does not flush the operand cache and causes a kernel stack dump, which allows local users to obtain sensitive information from kernel memory and bypass the KASLR protection mechanism (in the kernel through 4.9) via a crafted ACPI table.

More Info: https://avd.aquasec.com/nvd/cve-2017-13693

[CVE-2017-13694] kernel: ACPI node and node_ext cache leak (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

The acpi_ps_complete_final_op() function in drivers/acpi/acpica/psobject.c in the Linux kernel through 4.12.9 does not flush the node and node_ext caches and causes a kernel stack dump, which allows local users to obtain sensitive information from kernel memory and bypass the KASLR protection mechanism (in the kernel through 4.9) via a crafted ACPI table.

More Info: https://avd.aquasec.com/nvd/cve-2017-13694

[CVE-2018-1121] procps: process hiding through race condition enumerating /proc (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

procps-ng, procps is vulnerable to a process hiding through race condition. Since the kernel's proc_pid_readdir() returns PID entries in ascending numeric order, a process occupying a high PID can use inotify events to determine when the process list is being scanned, and fork/exec to obtain a lower PID, thus avoiding enumeration. An unprivileged attacker can hide a process from procps-ng's utilities by exploiting a race condition in reading /proc/PID entries. This vulnerability affects procps and procps-ng up to version 3.3.15, newer versions might be affected also.

More Info: https://avd.aquasec.com/nvd/cve-2018-1121

[CVE-2018-12928] kernel: NULL pointer dereference in hfs_ext_read_extent in hfs.ko (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel 4.15.0, a NULL pointer dereference was discovered in hfs_ext_read_extent in hfs.ko. This can occur during a mount of a crafted hfs filesystem.

More Info: https://avd.aquasec.com/nvd/cve-2018-12928

[CVE-2018-17977] kernel: Mishandled interactions among XFRM Netlink messages, IPPROTO_AH packets, and IPPROTO_IP packets resulting in a denial of service (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

The Linux kernel 4.14.67 mishandles certain interaction among XFRM Netlink messages, IPPROTO_AH packets, and IPPROTO_IP packets, which allows local users to cause a denial of service (memory consumption and system hang) by leveraging root access to execute crafted applications, as demonstrated on CentOS 7.

More Info: https://avd.aquasec.com/nvd/cve-2018-17977

[CVE-2019-11191] kernel: race condition in load_aout_binary() allows local users to bypass ASLR on setuid a.out programs (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

The Linux kernel through 5.0.7, when CONFIG_IA32_AOUT is enabled and ia32_aout is loaded, allows local users to bypass ASLR on setuid a.out programs (if any exist) because install_exec_creds() is called too late in load_aout_binary() in fs/binfmt_aout.c, and thus the ptrace_may_access() check has a race condition when reading /proc/pid/stat. NOTE: the software maintainer disputes that this is a vulnerability because ASLR for a.out format

executables has never been supported

More Info: https://avd.aquasec.com/nvd/cve-2019-11191

[CVE-2019-12378] kernel: unchecked kmalloc of new_ra in ip6_ra_control leads to denial of service (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in ip6_ra_control in net/ipv6/ipv6_sockglue.c in the Linux kernel through 5.1.5. There is an unchecked kmalloc of new_ra, which might allow an attacker to cause a denial of service (NULL pointer dereference and system crash). NOTE: This has been disputed as not an issue

More Info: https://avd.aquasec.com/nvd/cve-2019-12378

[CVE-2019-12379] kernel: memory leak in con_insert_unipair in drivers/tty/vt/consolemap.c (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in con_insert_unipair in drivers/tty/vt/consolemap.c in the Linux kernel through 5.1.5. There is a memory leak in a certain case of an ENOMEM outcome of kmalloc. NOTE: This id is disputed as not being an issue

More Info: https://avd.aquasec.com/nvd/cve-2019-12379

[CVE-2019-12380] kernel: memory allocation failure in the efi subsystem leads to denial of service (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

DISPUTED An issue was discovered in the efi subsystem in the Linux kernel through 5.1.5. phys_efi_set_virtual_address_map in arch/x86/platform/efi/efi.c and efi_call_phys_prolog in arch/x86/platform/efi/efi_64.c mishandle memory allocation failures. NOTE: This id is disputed as not being an issue because â€œAll the code touched by the referenced commit runs only at boot, before any user processes are started. Therefore, there is no possibility for an unprivileged user to control it.â€•.

More Info: https://avd.aquasec.com/nvd/cve-2019-12380

[CVE-2019-12381] kernel: unchecked kmalloc of new_ra in ip_ra_control leads to denial of service (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in ip_ra_control in net/ipv4/ip_sockglue.c in the Linux kernel through 5.1.5. There is an unchecked kmalloc of new_ra, which might allow an attacker to cause a denial of service (NULL pointer dereference and system crash). NOTE: this is disputed because new_ra is never used if it is NULL

More Info: https://avd.aquasec.com/nvd/cve-2019-12381

[CVE-2019-12382] kernel: unchecked kstrdup of fwstr in drm_load_edid_firmware leads to denial of service (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in drm_load_edid_firmware in drivers/gpu/drm/drm_edid_load.c in the Linux kernel through 5.1.5. There is an unchecked kstrdup of fwstr, which might allow an attacker to cause a denial of service (NULL pointer dereference and system crash). NOTE: The vendor disputes this issues as not being a vulnerability because kstrdup() returning NULL is handled sufficiently and there is no chance for a NULL pointer dereference

More Info: https://avd.aquasec.com/nvd/cve-2019-12382

[CVE-2019-12455] kernel: null pointer dereference in sunxi_divs_clk_setup in drivers/clk/sunxi/clk-sunxi.c causing denial of service (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in sunxi_divs_clk_setup in drivers/clk/sunxi/clk-sunxi.c in the Linux kernel through 5.1.5. There is an unchecked kstrndup of derived_name, which might allow an attacker to cause a denial of service (NULL pointer dereference and system crash). NOTE: This id is disputed as not being an issue because â€œThe memory allocation that was not checked is part of a code that only runs at boot time, before user processes are started. Therefore, there is no possibility for an unprivileged user to control it, and no denial of service.â€•

More Info: https://avd.aquasec.com/nvd/cve-2019-12455

[CVE-2019-12456] kernel: double fetch in the MPT3COMMAND case in _ctl_ioctl_main in drivers/scsi/mpt3sas/mpt3sas_ctl.c (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in the MPT3COMMAND case in _ctl_ioctl_main in drivers/scsi/mpt3sas/mpt3sas_ctl.c in the Linux kernel through 5.1.5. It allows local users to cause a denial of service or possibly have unspecified other impact by changing the value of ioc_number between two kernel reads of that value, aka a "double fetch" vulnerability. NOTE: a third party reports that this is unexploitable because the doubly fetched value is not used

More Info: https://avd.aquasec.com/nvd/cve-2019-12456

[CVE-2019-16229] kernel: null pointer dereference in drivers/gpu/drm/amd/amdkfd/kfd_interrupt.c (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

drivers/gpu/drm/amd/amdkfd/kfd_interrupt.c in the Linux kernel 5.2.14 does not check the alloc_workqueue return value, leading to a NULL pointer dereference. NOTE: The security community disputes this issues as not being serious enough to be deserving a CVE id

More Info: https://avd.aquasec.com/nvd/cve-2019-16229

[CVE-2019-16230] kernel: null pointer dereference in drivers/gpu/drm/radeon/radeon_display.c (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

drivers/gpu/drm/radeon/radeon_display.c in the Linux kernel 5.2.14 does not check the alloc_workqueue return value, leading to a NULL pointer dereference. NOTE: A third-party software maintainer states that the work queue allocation is happening during device initialization, which for a graphics card occurs during boot. It is not attacker controllable and OOM at that time is highly unlikely

More Info: https://avd.aquasec.com/nvd/cve-2019-16230

[CVE-2019-16231] kernel: null-pointer dereference in drivers/net/fjes/fjes_main.c (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

drivers/net/fjes/fjes_main.c in the Linux kernel 5.2.14 does not check the alloc_workqueue return value, leading to a NULL pointer dereference.

More Info: https://avd.aquasec.com/nvd/cve-2019-16231

[CVE-2019-16232] kernel: null-pointer dereference in drivers/net/wireless/marvell/libertas/if_sdio.c (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

drivers/net/wireless/marvell/libertas/if_sdio.c in the Linux kernel 5.2.14 does not check the alloc_workqueue return value, leading to a NULL pointer dereference.

More Info: https://avd.aquasec.com/nvd/cve-2019-16232

[CVE-2019-16233] kernel: null pointer dereference in drivers/scsi/qla2xxx/qla_os.c (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

drivers/scsi/qla2xxx/qla_os.c in the Linux kernel 5.2.14 does not check the alloc_workqueue return value, leading to a NULL pointer dereference.

More Info: https://avd.aquasec.com/nvd/cve-2019-16233

[CVE-2019-16234] kernel: null pointer dereference in drivers/net/wireless/intel/iwlwifi/pcie/trans.c (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1

Fixed: %!s(<nil>)

drivers/net/wireless/intel/iwlwifi/pcie/trans.c in the Linux kernel 5.2.14 does not check the alloc_workqueue return value, leading to a NULL pointer dereference.

More Info: https://avd.aquasec.com/nvd/cve-2019-16234

[CVE-2019-19070] kernel: A memory leak in the spi_gpio_probe() function in drivers/spi/spi-gpio.c allows for a DoS (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A memory leak in the spi_gpio_probe() function in drivers/spi/spi-gpio.c in the Linux kernel through 5.3.11 allows attackers to cause a denial of service (memory consumption) by triggering devm_add_action_or_reset() failures, aka CID-d3b0ffa1d75d. NOTE: third parties dispute the relevance of this because the system must have already been out of memory before the probe began

More Info: https://avd.aquasec.com/nvd/cve-2019-19070

[CVE-2019-19378] kernel: out-of-bounds write in index_rbio_pages in fs/btrfs/raid56.c (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel 5.0.21, mounting a crafted btrfs filesystem image can lead to slab-out-of-bounds write access in index_rbio_pages in fs/btrfs/raid56.c.

More Info: https://avd.aquasec.com/nvd/cve-2019-19378

[CVE-2020-11725] kernel: improper handling of private_size*count multiplication due to count=info->owner typo (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

snd_ctl_elem_add in sound/core/control.c in the Linux kernel through 5.6.3 has a count=info->owner line, which later affects a private_size*count multiplication for unspecified "interesting side effects." NOTE: kernel engineers dispute this finding, because it could be relevant only if new callers were added that were unfamiliar with the misuse of the info->owner field to represent data unrelated to the "owner" concept. The existing callers, SNDRV_CTL_IOCTL_ELEM_ADD and SNDRV_CTL_IOCTL_ELEM_REPLACE, have been designed to misuse the info->owner field in a safe way

More Info: https://avd.aquasec.com/nvd/cve-2020-11725

[CVE-2020-35501] kernel: audit not logging access to syscall open_by_handle_at for users with CAP_DAC_READ_SEARCH capability (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A flaw was found in the Linux kernels implementation of audit rules, where a syscall can unexpectedly not be correctly not be logged by the audit subsystem

More Info: https://avd.aquasec.com/nvd/cve-2020-35501

[CVE-2021-26934] An issue was discovered in the Linux kernel 4.18 through 5.10.16, as u ... (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in the Linux kernel 4.18 through 5.10.16, as used by Xen. The backend allocation (aka be-alloc) mode of the drm_xen_front drivers was not meant to be a supported configuration, but this wasn't stated accordingly in its support status entry.

More Info: https://avd.aquasec.com/nvd/cve-2021-26934

[CVE-2021-3714] kernel: Remote Page Deduplication Attacks (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A flaw was found in the Linux kernels memory deduplication mechanism. Previous work has shown that memory deduplication can be attacked via a local exploitation mechanism. The same technique can be used if an attacker can upload page sized files and detect the change in access time from a networked service to determine if the page has been merged.

More Info: https://avd.aquasec.com/nvd/cve-2021-3714

[CVE-2022-0400] kernel: Out of bounds read in the smc protocol stack (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An out-of-bounds read vulnerability was discovered in linux kernel in the smc protocol stack, causing remote dos.

More Info: https://avd.aquasec.com/nvd/cve-2022-0400

[CVE-2022-1247] kernel: A race condition bug in rose_connect() (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue found in linux-kernel that leads to a race condition in rose_connect(). The rose driver uses rose_neigh->use to represent how many objects are using the rose_neigh. When a user wants to delete a rose_route via rose_ioctl(), the rose driver calls rose_del_node() and removes neighbours only if their â€œcountâ€• and â€œuseâ€• are zero.

More Info: https://avd.aquasec.com/nvd/cve-2022-1247

[CVE-2022-25265] kernel: Executable Space Protection Bypass (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1

Fixed: %!s(<nil>)

In the Linux kernel through 5.16.10, certain binary files may have the exec-all attribute if they were built in approximately 2003 (e.g., with GCC 3.2.2 and Linux kernel 2.4.20). This can cause execution of bytes located in supposedly non-executable regions of a file.

More Info: https://avd.aquasec.com/nvd/cve-2022-25265

[CVE-2022-2961] kernel: race condition in rose_bind() (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A use-after-free flaw was found in the Linux kernelâ€™s PLP Rose functionality in the way a user triggers a race condition by calling bind while simultaneously triggering the rose_bind() function. This flaw allows a local user to crash or potentially escalate their privileges on the system.

More Info: https://avd.aquasec.com/nvd/cve-2022-2961

[CVE-2022-3238] kernel: ntfs3 local privledge escalation if NTFS character set and remount and umount called simultaneously (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A double-free flaw was found in the Linux kernelâ€™s NTFS3 subsystem in how a user triggers remount and umount simultaneously. This flaw allows a local user to crash or potentially escalate their privileges on the system.

More Info: https://avd.aquasec.com/nvd/cve-2022-3238

[CVE-2022-41848] kernel: Race condition between mgslpc_ioctl and mgslpc_detach (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

drivers/char/pcmcia/synclink_cs.c in the Linux kernel through 5.19.12 has a race condition and resultant use-after-free if a physically proximate attacker removes a PCMCIA device while calling ioctl, aka a race condition between mgslpc_ioctl and mgslpc_detach.

More Info: https://avd.aquasec.com/nvd/cve-2022-41848

[CVE-2022-44032] Kernel: Race between cmm_open() and cm4000_detach() result in UAF (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in the Linux kernel through 6.0.6. drivers/char/pcmcia/cm4000_cs.c has a race condition and resultant use-after-free if a physically proximate attacker removes a PCMCIA device while calling open(), aka a race condition between cmm_open() and cm4000_detach().

More Info: https://avd.aquasec.com/nvd/cve-2022-44032

[CVE-2022-44033] Kernel: A race condition between cm4040_open() and reader_detach() may result in UAF (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in the Linux kernel through 6.0.6. drivers/char/pcmcia/cm4040_cs.c has a race condition and resultant use-after-free if a physically proximate attacker removes a PCMCIA device while calling open(), aka a race condition between cm4040_open() and reader_detach().

More Info: https://avd.aquasec.com/nvd/cve-2022-44033

[CVE-2022-44034] Kernel: A use-after-free due to race between scr24x_open() and scr24x_remove() (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in the Linux kernel through 6.0.6. drivers/char/pcmcia/scr24x_cs.c has a race condition and resultant use-after-free if a physically proximate attacker removes a PCMCIA device while calling open(), aka a race condition between scr24x_open() and scr24x_remove().

More Info: https://avd.aquasec.com/nvd/cve-2022-44034

[CVE-2022-4543] kernel: KASLR Prefetch Bypass Breaks KPTI (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A flaw named "EntryBleed" was found in the Linux Kernel Page Table Isolation (KPTI). This issue could allow a local attacker to leak KASLR base via prefetch side-channels based on TLB timing for Intel systems.

More Info: https://avd.aquasec.com/nvd/cve-2022-4543

[CVE-2022-45884] kernel: use-after-free due to race condition occurring in dvb_register_device() (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in the Linux kernel through 6.0.9. drivers/media/dvb-core/dvbdev.c has a use-after-free, related to dvb_register_device dynamically allocating fops.

More Info: https://avd.aquasec.com/nvd/cve-2022-45884

[CVE-2022-45885] kernel: use-after-free due to race condition occurring in dvb_frontend.c (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in the Linux kernel through 6.0.9. drivers/media/dvb-core/dvb_frontend.c has a race condition that can cause a use-after-free when a device is disconnected.

More Info: https://avd.aquasec.com/nvd/cve-2022-45885

[CVE-2023-23039] kernel: tty: vcc: race condition leading to use-after-free in vcc_open() (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in the Linux kernel through 6.2.0-rc2. drivers/tty/vcc.c has a race condition and resultant use-after-free if a physically proximate attacker removes a VCC device while calling open(), aka a race condition between vcc_open() and vcc_remove().

More Info: https://avd.aquasec.com/nvd/cve-2023-23039

[CVE-2023-26242] afu_mmio_region_get_by_offset in drivers/fpga/dfl-afu-region.c in the ... (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

afu_mmio_region_get_by_offset in drivers/fpga/dfl-afu-region.c in the Linux kernel through 6.1.12 has an integer overflow.

More Info: https://avd.aquasec.com/nvd/cve-2023-26242

[CVE-2023-31081] An issue was discovered in drivers/media/test-drivers/vidtv/vidtv_brid ... (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in drivers/media/test-drivers/vidtv/vidtv_bridge.c in the Linux kernel 6.2. There is a NULL pointer dereference in vidtv_mux_stop_thread. In vidtv_stop_streaming, after dvb->mux=NULL occurs, it executes vidtv_mux_stop_thread(dvb->mux).

More Info: https://avd.aquasec.com/nvd/cve-2023-31081

[CVE-2023-31085] kernel: divide-by-zero error in ctrl_cdev_ioctl when do_div happens and erasesize is 0 (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An issue was discovered in drivers/mtd/ubi/cdev.c in the Linux kernel 6.2. There is a divide-by-zero error in do_div(sz,mtd->erasesize), used indirectly by ctrl_cdev_ioctl, when mtd->erasesize is 0.

More Info: https://avd.aquasec.com/nvd/cve-2023-31085

[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 (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

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.

More Info: https://avd.aquasec.com/nvd/cve-2023-3640

[CVE-2023-39191] kernel: eBPF: insufficient stack type checks in dynptr (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

An improper input validation flaw was found in the eBPF subsystem in the Linux kernel. The issue occurs due to a lack of proper validation of dynamic pointers within user-supplied eBPF programs prior to executing them. This may allow an attacker with CAP_BPF privileges to escalate privileges and execute arbitrary code in the context of the kernel.

More Info: https://avd.aquasec.com/nvd/cve-2023-39191

[CVE-2023-4134] kernel: cyttsp4_core: use-after-free in cyttsp4_watchdog_work() (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A use-after-free vulnerability was found in the cyttsp4_core driver in the Linux kernel. This issue occurs in the device cleanup routine due to a possible rearming of the watchdog_timer from the workqueue. This could allow a local user to crash the system, causing a denial of service.

More Info: https://avd.aquasec.com/nvd/cve-2023-4134

[CVE-2024-0564] kernel: max page sharing of Kernel Samepage Merging (KSM) may cause memory deduplication (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

A flaw was found in the Linux kernel's memory deduplication mechanism. The max page sharing of Kernel Samepage Merging (KSM), added in Linux kernel version 4.4.0-96.119, can create a side channel. When the attacker and the victim share the same host and the default setting of KSM is "max page sharing=256", it is possible for the attacker to time the unmap to merge with the victim's page. The unmapping time depends on whether it merges with the victim's page and additional physical pages are created beyond the KSM's "max page share". Through these operations, the attacker can leak the victim's page.

More Info: https://avd.aquasec.com/nvd/cve-2024-0564

[CVE-2024-40918] kernel: parisc: Try to fix random segmentation faults in package builds (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

parisc: Try to fix random segmentation faults in package builds

PA-RISC systems with PA8800 and PA8900 processors have had problems
with random segmentation faults for many years. Systems with earlier
processors are much more stable.

Systems with PA8800 and PA8900 processors have a large L2 cache which
needs per page flushing for decent performance when a large range is
flushed. The combined cache in these systems is also more sensitive to
non-equivalent aliases than the caches in earlier systems.

The majority of random segmentation faults that I have looked at
appear to be memory corruption in memory allocated using mmap and
malloc.

My first attempt at fixing the random faults didn't work. On
reviewing the cache code, I realized that there were two issues
which the existing code didn't handle correctly. Both relate
to cache move-in. Another issue is that the present bit in PTEs
is racy.

1) PA-RISC caches have a mind of their own and they can speculatively
load data and instructions for a page as long as there is a entry in
the TLB for the page which allows move-in. TLBs are local to each
CPU. Thus, the TLB entry for a page must be purged before flushing
the page. This is particularly important on SMP systems.

In some of the flush routines, the flush routine would be called
and then the TLB entry would be purged. This was because the flush
routine needed the TLB entry to do the flush.

2) My initial approach to trying the fix the random faults was to
try and use flush_cache_page_if_present for all flush operations.
This actually made things worse and led to a couple of hardware
lockups. It finally dawned on me that some lines weren't being
flushed because the pte check code was racy. This resulted in
random inequivalent mappings to physical pages.

The __flush_cache_page tmpalias flush sets up its own TLB entry
and it doesn't need the existing TLB entry. As long as we can find
the pte pointer for the vm page, we can get the pfn and physical
address of the page. We can also purge the TLB entry for the page

before doing the flush. Further, __flush_cache_page uses a special
TLB entry that inhibits cache move-in.

When switching page mappings, we need to ensure that lines are
removed from the cache. It is not sufficient to just flush the
lines to memory as they may come back.

This made it clear that we needed to implement all the required
flush operations using tmpalias routines. This includes flushes
for user and kernel pages.

After modifying the code to use tmpalias flushes, it became clear
that the random segmentation faults were not fully resolved. The
frequency of faults was worse on systems with a 64 MB L2 (PA8900)
and systems with more CPUs (rp4440).

The warning that I added to flush_cache_page_if_present to detect
pages that couldn't be flushed triggered frequently on some systems.

Helge and I looked at the pages that couldn't be flushed and found
that the PTE was either cleared or for a swap page. Ignoring pages
that were swapped out seemed okay but pages with cleared PTEs seemed
problematic.

I looked at routines related to pte_clear and noticed ptep_clear_flush.
The default implementation just flushes the TLB entry. However, it was
obvious that on parisc we need to flush the cache page as well. If
we don't flush the cache page, stale lines will be left in the cache
and cause random corruption. Once a PTE is cleared, there is no way
to find the physical address associated with the PTE and flush the
associated page at a later time.

I implemented an updated change with a parisc specific version of
ptep_clear_flush. It fixed the random data corruption on Helge's rp4440
and rp3440, as well as on my c8000.

At this point, I realized that I could restore the code where we only
flush in flush_cache_page_if_present if the page has been accessed.
However, for this, we also need to flush the cache when the accessed
bit is cleared in
---truncated---

More Info: https://avd.aquasec.com/nvd/cve-2024-40918

[CVE-2024-42155] kernel: s390/pkey: Wipe copies of protected- and secure-keys (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

s390/pkey: Wipe copies of protected- and secure-keys

Although the clear-key of neither protected- nor secure-keys is
accessible, this key material should only be visible to the calling
process. So wipe all copies of protected- or secure-keys from stack,
even in case of an error.

More Info: https://avd.aquasec.com/nvd/cve-2024-42155

[CVE-2024-50057] kernel: usb: typec: tipd: Free IRQ only if it was requested before (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

usb: typec: tipd: Free IRQ only if it was requested before

In polling mode, if no IRQ was requested there is no need to free it.
Call devm_free_irq() only if client->irq is set. This fixes the warning
caused by the tps6598x module removal:

WARNING: CPU: 2 PID: 333 at kernel/irq/devres.c:144 devm_free_irq+0x80/0x8c
...
...
Call trace:
 devm_free_irq+0x80/0x8c
 tps6598x_remove+0x28/0x88 [tps6598x]
 i2c_device_remove+0x2c/0x9c
 device_remove+0x4c/0x80
 device_release_driver_internal+0x1cc/0x228
 driver_detach+0x50/0x98
 bus_remove_driver+0x6c/0xbc
 driver_unregister+0x30/0x60
 i2c_del_driver+0x54/0x64
 tps6598x_i2c_driver_exit+0x18/0xc3c [tps6598x]
 __arm64_sys_delete_module+0x184/0x264
 invoke_syscall+0x48/0x110
 el0_svc_common.constprop.0+0xc8/0xe8
 do_el0_svc+0x20/0x2c
 el0_svc+0x28/0x98
 el0t_64_sync_handler+0x13c/0x158
 el0t_64_sync+0x190/0x194

More Info: https://avd.aquasec.com/nvd/cve-2024-50057

[CVE-2024-50211] kernel: udf: refactor inode_bmap() to handle error (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

udf: refactor inode_bmap() to handle error

Refactor inode_bmap() to handle error since udf_next_aext() can return
error now. On situations like ftruncate, udf_extend_file() can now
detect errors and bail out early without resorting to checking for
particular offsets and assuming internal behavior of these functions.

More Info: https://avd.aquasec.com/nvd/cve-2024-50211

[CVE-2024-56641] kernel: net/smc: initialize close_work early to avoid warning (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

net/smc: initialize close_work early to avoid warning

We encountered a warning that close_work was canceled before
initialization.

```
 WARNING: CPU: 7 PID: 111103 at kernel/workqueue.c:3047 __flush_work+0x19e/0x1b0
 Workqueue: events smc_lgr_terminate_work [smc]
 RIP: 0010:__flush_work+0x19e/0x1b0
 Call Trace:
  ? __wake_up_common+0x7a/0x190
  ? work_busy+0x80/0x80
  __cancel_work_timer+0xe3/0x160
  smc_close_cancel_work+0x1a/0x70 [smc]
  smc_close_active_abort+0x207/0x360 [smc]
  __smc_lgr_terminate.part.38+0xc8/0x180 [smc]
  process_one_work+0x19e/0x340
  worker_thread+0x30/0x370
  ? process_one_work+0x340/0x340
  kthread+0x117/0x130
  ? __kthread_cancel_work+0x50/0x50
  ret_from_fork+0x22/0x30
```

This is because when smc_close_cancel_work is triggered, e.g. the RDMA
driver is rmmod and the LGR is terminated, the conn->close_work is
flushed before initialization, resulting in WARN_ON(!work->func).

```
__smc_lgr_terminate             | smc_connect_{rdma|ism}
-------------------------------------------------------------
                                | smc_conn_create
   | \- smc_lgr_register_conn
for conn in lgr->conns_all      |
\- smc_conn_kill                |
  \- smc_close_active_abort     |
    \- smc_close_cancel_work    |
      \- cancel_work_sync       |
        \- __flush_work         |
       (close_work)             |
                                | smc_close_init
```

| \- INIT_WORK(&close_work)

So fix this by initializing close_work before establishing the
connection.

More Info: https://avd.aquasec.com/nvd/cve-2024-56641

[CVE-2025-21825] kernel: bpf: Cancel the running bpf_timer through kworker for PREEMPT_RT (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

In the Linux kernel, the following vulnerability has been resolved:

bpf: Cancel the running bpf_timer through kworker for PREEMPT_RT

During the update procedure, when overwrite element in a pre-allocated
htab, the freeing of old_element is protected by the bucket lock. The
reason why the bucket lock is necessary is that the old_element has
already been stashed in htab->extra_elems after alloc_htab_elem()
returns. If freeing the old_element after the bucket lock is unlocked,
the stashed element may be reused by concurrent update procedure and the
freeing of old_element will run concurrently with the reuse of the
old_element. However, the invocation of check_and_free_fields() may
acquire a spin-lock which violates the lockdep rule because its caller
has already held a raw-spin-lock (bucket lock). The following warning
will be reported when such race happens:

```
BUG: scheduling while atomic: test_progs/676/0x00000003
3 locks held by test_progs/676:
#0: ffffffff864b0240 (rcu_read_lock_trace){....}-{0:0}, at: bpf_prog_test_run_syscall+0x2c0/0x830
#1: ffff88810e961188 (&htab->lockdep_key){....}-{2:2}, at: htab_map_update_elem+0x306/0x1500
#2: ffff8881f4eac1b8 (&base->softirq_expiry_lock){....}-{2:2}, at: hrtimer_cancel_wait_running+0xe9/0x1b0
Modules linked in: bpf_testmod(O)
Preemption disabled at:
[<ffffffff817837a3>] htab_map_update_elem+0x293/0x1500
CPU: 0 UID: 0 PID: 676 Comm: test_progs Tainted: G ... 6.12.0+ #11
Tainted: [W]=WARN, [O]=OOT_MODULE
Hardware name: QEMU Standard PC (i440FX + PIIX, 1996)...
Call Trace:
<TASK>
dump_stack_lvl+0x57/0x70
dump_stack+0x10/0x20
__schedule_bug+0x120/0x170
__schedule+0x300c/0x4800
schedule_rtlock+0x37/0x60
rtlock_slowlock_locked+0x6d9/0x54c0
rt_spin_lock+0x168/0x230
hrtimer_cancel_wait_running+0xe9/0x1b0
hrtimer_cancel+0x24/0x30
bpf_timer_delete_work+0x1d/0x40
```

bpf_timer_cancel_and_free+0x5e/0x80
bpf_obj_free_fields+0x262/0x4a0
check_and_free_fields+0x1d0/0x280
htab_map_update_elem+0x7fc/0x1500
bpf_prog_9f90bc20768e0cb9_overwrite_cb+0x3f/0x43
bpf_prog_ea601c4649694dbd_overwrite_timer+0x5d/0x7e
bpf_prog_test_run_syscall+0x322/0x830
__sys_bpf+0x135d/0x3ca0
__x64_sys_bpf+0x75/0xb0
x64_sys_call+0x1b5/0xa10
do_syscall_64+0x3b/0xc0
entry_SYSCALL_64_after_hwframe+0x4b/0x53
...
</TASK>

It seems feasible to break the reuse and refill of per-cpu extra_elems
into two independent parts: reuse the per-cpu extra_elems with bucket
lock being held and refill the old_element as per-cpu extra_elems after
the bucket lock is unlocked. However, it will make the concurrent
overwrite procedures on the same CPU return unexpected -E2BIG error when
the map is full.

Therefore, the patch fixes the lock problem by breaking the cancelling
of bpf_timer into two steps for PREEMPT_RT:
1) use hrtimer_try_to_cancel() and check its return value
2) if the timer is running, use hrtimer_cancel() through a kworker to
   cancel it again
Considering that the current implementation of hrtimer_cancel() will try
to acquire a being held softirq_expiry_lock when the current timer is
running, these steps above are reasonable. However, it also has
downside. When the timer is running, the cancelling of the timer is
delayed when releasing the last map uref. The delay is also fixable
(e.g., break the cancelling of bpf timer into two parts: one part in
locked scope, another one in unlocked scope), it can be revised later if
necessary.

It is a bit hard to decide the right fix tag. One reason is that the
problem depends on PREEMPT_RT which is enabled in v6.12. Considering the
softirq_expiry_lock lock exists since v5.4 and bpf_timer is introduced
in v5.15, the bpf_timer commit is used in the fixes tag and an extra
depends-on tag is added to state the dependency on PREEMPT_RT.

Depends-on: v6.12+ with PREEMPT_RT enabled

More Info: https://avd.aquasec.com/nvd/cve-2025-21825

[TEMP-0000000-F7A20F] [Kernel: Unprivileged user can freeze journald] (Severity: LOW)

Package: linux-libc-dev
Installed: 6.1.129-1
Fixed: %!s(<nil>)

%!s(<nil>)

More Info: https://security-tracker.debian.org/tracker/TEMP-0000000-F7A20F

[CVE-2023-4641] shadow-utils: possible password leak during passwd(1) change (Severity: MEDIUM)

Package: login
Installed: 1:4.13+dfsg1-1+b1
Fixed: %!s(<nil>)

A flaw was found in shadow-utils. When asking for a new password, shadow-utils asks the password twice. If the password fails on the second attempt, shadow-utils fails in cleaning the buffer used to store the first entry. This may allow an attacker with enough access to retrieve the password from the memory.

More Info: https://avd.aquasec.com/nvd/cve-2023-4641

[CVE-2007-5686] initscripts in rPath Linux 1 sets insecure permissions for the /var/lo ... (Severity: LOW)

Package: login
Installed: 1:4.13+dfsg1-1+b1
Fixed: %!s(<nil>)

initscripts in rPath Linux 1 sets insecure permissions for the /var/log/btmp file, which allows local users to obtain sensitive information regarding authentication attempts. NOTE: because sshd detects the insecure permissions and does not log certain events, this also prevents sshd from logging failed authentication attempts by remote attackers.

More Info: https://avd.aquasec.com/nvd/cve-2007-5686

[CVE-2023-29383] shadow: Improper input validation in shadow-utils package utility chfn (Severity: LOW)

Package: login
Installed: 1:4.13+dfsg1-1+b1
Fixed: %!s(<nil>)

In Shadow 4.13, it is possible to inject control characters into fields provided to the SUID program chfn (change finger). Although it is not possible to exploit this directly (e.g., adding a new user fails because \n is in the block list), it is possible to misrepresent the /etc/passwd file when viewed. Use of \r manipulations and Unicode characters to work around blocking of the : character make it possible to give the impression that a new user has been added. In other words, an adversary may be able to convince a system administrator to take the system offline (an indirect, social-engineered denial of service) by demonstrating that "cat /etc/passwd" shows a rogue user account.

More Info: https://avd.aquasec.com/nvd/cve-2023-29383

[CVE-2024-56433] shadow-utils: Default subordinate ID configuration in /etc/login.defs could lead to compromise (Severity: LOW)

Package: login
Installed: 1:4.13+dfsg1-1+b1
Fixed: %!s(<nil>)

shadow-utils (aka shadow) 4.4 through 4.17.0 establishes a default /etc/subuid behavior (e.g., uid 100000 through 165535 for the first user account) that can realistically conflict with the uids of users defined on locally administered networks, potentially leading to account takeover, e.g., by leveraging newuidmap for access to an NFS home directory (or same-host resources in the case of remote logins by these local network users). NOTE: it may also be argued that system administrators should not have assigned uids, within local networks, that are within the range that can occur in

/etc/subuid.

More Info: https://avd.aquasec.com/nvd/cve-2024-56433

[TEMP-0628843-DBAD28] [more related to CVE-2005-4890] (Severity: LOW)

Package: login
Installed: 1:4.13+dfsg1-1+b1
Fixed: %!s(<nil>)

%!s(<nil>)

More Info: https://security-tracker.debian.org/tracker/TEMP-0628843-DBAD28

[CVE-2008-1687] m4: unquoted output of maketemp and mkstemp (Severity: LOW)

Package: m4
Installed: 1.4.19-3
Fixed: %!s(<nil>)

The (1) maketemp and (2) mkstemp builtin functions in GNU m4 before 1.4.11 do not quote their output when a file is created, which might allow context-dependent attackers to trigger a macro expansion, leading to unspecified use of an incorrect filename.

More Info: https://avd.aquasec.com/nvd/cve-2008-1687

[CVE-2008-1688] m4: code execution via -F argument (Severity: LOW)

Package: m4
Installed: 1.4.19-3
Fixed: %!s(<nil>)

Unspecified vulnerability in GNU m4 before 1.4.11 might allow context-dependent attackers to execute arbitrary code, related to improper handling of filenames specified with the -F option. NOTE: it is not clear when this issue crosses privilege boundaries.

More Info: https://avd.aquasec.com/nvd/cve-2008-1688

[CVE-2023-52969] mariadb: MariaDB Server Crash Due to Empty Backtrace Log (Severity: MEDIUM)

Package: mariadb-common
Installed: 1:10.11.11-0+deb12u1
Fixed: %!s(<nil>)

MariaDB Server 10.4 through 10.5.*, 10.6 through 10.6.*, 10.7 through 10.11.*, and 11.0 through 11.0.* can sometimes crash with an empty backtrace log. This may be related to make_aggr_tables_info and optimize_stage2.

More Info: https://avd.aquasec.com/nvd/cve-2023-52969

[CVE-2023-52970] mariadb: MariaDB Server Crash via Item_direct_view_ref (Severity: MEDIUM)

Package: mariadb-common
Installed: 1:10.11.11-0+deb12u1
Fixed: %!s(<nil>)

MariaDB Server 10.4 through 10.5.*, 10.6 through 10.6.*, 10.7 through 10.11.*, 11.0 through 11.0.*, and 11.1 through 11.4.* crashes in Item_direct_view_ref::derived_field_transformer_for_where.

More Info: https://avd.aquasec.com/nvd/cve-2023-52970

[CVE-2023-52971] mariadb: MariaDB Server Crash (Severity: MEDIUM)

Package: mariadb-common
Installed: 1:10.11.11-0+deb12u1
Fixed: %!s(<nil>)

MariaDB Server 10.10 through 10.11.* and 11.0 through 11.4.* crashes in JOIN::fix_all_splittings_in_plan.

More Info: https://avd.aquasec.com/nvd/cve-2023-52971

[CVE-2022-0563] util-linux: partial disclosure of arbitrary files in chfn and chsh when compiled with libreadline (Severity: LOW)

Package: mount
Installed: 2.38.1-5+deb12u3
Fixed: %!s(<nil>)

A flaw was found in the util-linux chfn and chsh utilities when compiled with Readline support. The Readline library uses an "INPUTRC" environment variable to get a path to the library config file. When the library cannot parse the specified file, it prints an error message containing data from the file. This flaw allows an unprivileged user to read root-owned files, potentially leading to privilege escalation. This flaw affects util-linux versions prior to 2.37.4.

More Info: https://avd.aquasec.com/nvd/cve-2022-0563

[CVE-2023-50495] ncurses: segmentation fault via _nc_wrap_entry() (Severity: MEDIUM)

Package: ncurses-base
Installed: 6.4-4
Fixed: %!s(<nil>)

NCurse v6.4-20230418 was discovered to contain a segmentation fault via the component _nc_wrap_entry().

More Info: https://avd.aquasec.com/nvd/cve-2023-50495

[CVE-2023-50495] ncurses: segmentation fault via _nc_wrap_entry() (Severity: MEDIUM)

Package: ncurses-bin
Installed: 6.4-4
Fixed: %!s(<nil>)

NCurse v6.4-20230418 was discovered to contain a segmentation fault via the component _nc_wrap_entry().

More Info: https://avd.aquasec.com/nvd/cve-2023-50495

[CVE-2025-32728] openssh: OpenSSH SSHD Agent Forwarding and X11 Forwarding (Severity: MEDIUM)

Package: openssh-client
Installed: 1:9.2p1-2+deb12u5
Fixed: %!s(<nil>)

In sshd in OpenSSH before 10.0, the DisableForwarding directive does not adhere to the documentation stating that it disables X11 and agent forwarding.

More Info: https://avd.aquasec.com/nvd/cve-2025-32728

[CVE-2007-2243] OpenSSH 4.6 and earlier, when ChallengeResponseAuthentication is enabl ... (Severity: LOW)

Package: openssh-client
Installed: 1:9.2p1-2+deb12u5
Fixed: %!s(<nil>)

OpenSSH 4.6 and earlier, when ChallengeResponseAuthentication is enabled, allows remote attackers to determine the existence of user accounts by attempting to authenticate via S/KEY, which displays a different response if the user account exists, a similar issue to CVE-2001-1483.

More Info: https://avd.aquasec.com/nvd/cve-2007-2243

[CVE-2007-2768] OpenSSH, when using OPIE (One-Time Passwords in Everything) for PAM, a ... (Severity: LOW)

Package: openssh-client
Installed: 1:9.2p1-2+deb12u5
Fixed: %!s(<nil>)

OpenSSH, when using OPIE (One-Time Passwords in Everything) for PAM, allows remote attackers to determine the existence of certain user accounts, which displays a different response if the user account exists and is configured to use one-time passwords (OTP), a similar issue to CVE-2007-2243.

More Info: https://avd.aquasec.com/nvd/cve-2007-2768

[CVE-2008-3234] sshd in OpenSSH 4 on Debian GNU/Linux, and the 20070303 OpenSSH snapsh ... (Severity: LOW)

Package: openssh-client
Installed: 1:9.2p1-2+deb12u5
Fixed: %!s(<nil>)

sshd in OpenSSH 4 on Debian GNU/Linux, and the 20070303 OpenSSH snapshot, allows remote authenticated users to obtain access to arbitrary SELinux roles by appending a :/ (colon slash) sequence, followed by the role name, to the username.

More Info: https://avd.aquasec.com/nvd/cve-2008-3234

[CVE-2016-20012] openssh: Public key information leak (Severity: LOW)

Package: openssh-client
Installed: 1:9.2p1-2+deb12u5
Fixed: %!s(<nil>)

OpenSSH through 8.7 allows remote attackers, who have a suspicion that a certain combination of username and public key is known to an SSH server, to test whether this suspicion is correct. This occurs because a challenge is sent only when that combination could be valid for a login session. NOTE: the vendor does not recognize user enumeration as a vulnerability for this product

More Info: https://avd.aquasec.com/nvd/cve-2016-20012

[CVE-2018-15919] openssh: User enumeration via malformed packets in authentication requests (Severity: LOW)

Package: openssh-client
Installed: 1:9.2p1-2+deb12u5
Fixed: %!s(<nil>)

Remotely observable behaviour in auth-gss2.c in OpenSSH through 7.8 could be used by remote attackers to detect existence of users on a target system when GSS2 is in use. NOTE: the discoverer states 'We understand that the OpenSSH developers do not want to treat such a username enumeration (or "oracle") as a vulnerability.'

More Info: https://avd.aquasec.com/nvd/cve-2018-15919

[CVE-2019-6110] openssh: Acceptance and display of arbitrary stderr allows for spoofing of scp client output (Severity: LOW)

Package: openssh-client
Installed: 1:9.2p1-2+deb12u5
Fixed: %!s(<nil>)

In OpenSSH 7.9, due to accepting and displaying arbitrary stderr output from the server, a malicious server (or Man-in-The-Middle attacker) can manipulate the client output, for example to use ANSI control codes to hide additional files being transferred.

More Info: https://avd.aquasec.com/nvd/cve-2019-6110

[CVE-2020-14145] openssh: Observable discrepancy leading to an information leak in the algorithm negotiation (Severity: LOW)

Package: openssh-client
Installed: 1:9.2p1-2+deb12u5
Fixed: %!s(<nil>)

The client side in OpenSSH 5.7 through 8.4 has an Observable Discrepancy leading to an information leak in the algorithm negotiation. This allows man-in-the-middle attackers to target initial connection attempts (where no host key for the server has been cached by the client). NOTE: some reports state that 8.5 and 8.6 are also affected.

More Info: https://avd.aquasec.com/nvd/cve-2020-14145

[CVE-2020-15778] openssh: scp allows command injection when using backtick characters in the destination argument (Severity: LOW)

Package: openssh-client
Installed: 1:9.2p1-2+deb12u5
Fixed: %!s(<nil>)

scp in OpenSSH through 8.3p1 allows command injection in the scp.c toremote function, as demonstrated by backtick characters in the destination argument. NOTE: the vendor reportedly has stated that they intentionally omit validation of "anomalous argument transfers" because that could "stand a great chance of breaking existing workflows."

More Info: https://avd.aquasec.com/nvd/cve-2020-15778

[CVE-2023-51767] openssh: authentication bypass via row hammer attack (Severity: LOW)

Package: openssh-client
Installed: 1:9.2p1-2+deb12u5

Fixed: %!s(<nil>)

OpenSSH through 9.6, when common types of DRAM are used, might allow row hammer attacks (for authentication bypass) because the integer value of authenticated in mm_answer_authpassword does not resist flips of a single bit. NOTE: this is applicable to a certain threat model of attacker-victim co-location in which the attacker has user privileges.

More Info: https://avd.aquasec.com/nvd/cve-2023-51767

[CVE-2024-13176] openssl: Timing side-channel in ECDSA signature computation (Severity: MEDIUM)

Package: openssl
Installed: 3.0.15-1~deb12u1
Fixed: %!s(<nil>)

Issue summary: A timing side-channel which could potentially allow recovering
the private key exists in the ECDSA signature computation.

Impact summary: A timing side-channel in ECDSA signature computations
could allow recovering the private key by an attacker. However, measuring
the timing would require either local access to the signing application or
a very fast network connection with low latency.

There is a timing signal of around 300 nanoseconds when the top word of
the inverted ECDSA nonce value is zero. This can happen with significant
probability only for some of the supported elliptic curves. In particular
the NIST P-521 curve is affected. To be able to measure this leak, the attacker
process must either be located in the same physical computer or must
have a very fast network connection with low latency. For that reason
the severity of this vulnerability is Low.

The FIPS modules in 3.4, 3.3, 3.2, 3.1 and 3.0 are affected by this issue.

More Info: https://avd.aquasec.com/nvd/cve-2024-13176

[CVE-2023-4641] shadow-utils: possible password leak during passwd(1) change (Severity: MEDIUM)

Package: passwd
Installed: 1:4.13+dfsg1-1+b1
Fixed: %!s(<nil>)

A flaw was found in shadow-utils. When asking for a new password, shadow-utils asks the password twice. If the password fails on the second attempt, shadow-utils fails in cleaning the buffer used to store the first entry. This may allow an attacker with enough access to retrieve the password from the memory.

More Info: https://avd.aquasec.com/nvd/cve-2023-4641

[CVE-2007-5686] initscripts in rPath Linux 1 sets insecure permissions for the /var/lo ... (Severity: LOW)

Package: passwd
Installed: 1:4.13+dfsg1-1+b1
Fixed: %!s(<nil>)

initscripts in rPath Linux 1 sets insecure permissions for the /var/log/btmp file, which allows local users to obtain sensitive information regarding authentication attempts. NOTE: because sshd detects the insecure permissions and

does not log certain events, this also prevents sshd from logging failed authentication attempts by remote attackers.

More Info: https://avd.aquasec.com/nvd/cve-2007-5686

[CVE-2023-29383] shadow: Improper input validation in shadow-utils package utility chfn (Severity: LOW)

Package: passwd
Installed: 1:4.13+dfsg1-1+b1
Fixed: %!s(<nil>)

In Shadow 4.13, it is possible to inject control characters into fields provided to the SUID program chfn (change finger). Although it is not possible to exploit this directly (e.g., adding a new user fails because \n is in the block list), it is possible to misrepresent the /etc/passwd file when viewed. Use of \r manipulations and Unicode characters to work around blocking of the : character make it possible to give the impression that a new user has been added. In other words, an adversary may be able to convince a system administrator to take the system offline (an indirect, social-engineered denial of service) by demonstrating that "cat /etc/passwd" shows a rogue user account.

More Info: https://avd.aquasec.com/nvd/cve-2023-29383

[CVE-2024-56433] shadow-utils: Default subordinate ID configuration in /etc/login.defs could lead to compromise (Severity: LOW)

Package: passwd
Installed: 1:4.13+dfsg1-1+b1
Fixed: %!s(<nil>)

shadow-utils (aka shadow) 4.4 through 4.17.0 establishes a default /etc/subuid behavior (e.g., uid 100000 through 165535 for the first user account) that can realistically conflict with the uids of users defined on locally administered networks, potentially leading to account takeover, e.g., by leveraging newuidmap for access to an NFS home directory (or same-host resources in the case of remote logins by these local network users). NOTE: it may also be argued that system administrators should not have assigned uids, within local networks, that are within the range that can occur in /etc/subuid.

More Info: https://avd.aquasec.com/nvd/cve-2024-56433

[TEMP-0628843-DBAD28] [more related to CVE-2005-4890] (Severity: LOW)

Package: passwd
Installed: 1:4.13+dfsg1-1+b1
Fixed: %!s(<nil>)

%!s(<nil>)

More Info: https://security-tracker.debian.org/tracker/TEMP-0628843-DBAD28

[CVE-2010-4651] patch: directory traversal flaw allows for arbitrary file creation (Severity: LOW)

Package: patch
Installed: 2.7.6-7
Fixed: %!s(<nil>)

Directory traversal vulnerability in util.c in GNU patch 2.6.1 and earlier allows user-assisted remote attackers to create or overwrite arbitrary files via a filename that is specified with a .. (dot dot) or full pathname, a related issue to CVE-2010-1679.

More Info: https://avd.aquasec.com/nvd/cve-2010-4651

[CVE-2018-6951] patch: NULL pointer dereference in pch.c:intuit_diff_type() causes a crash (Severity: LOW)

Package: patch
Installed: 2.7.6-7
Fixed: %!s(<nil>)

An issue was discovered in GNU patch through 2.7.6. There is a segmentation fault, associated with a NULL pointer dereference, leading to a denial of service in the intuit_diff_type function in pch.c, aka a "mangled rename" issue.

More Info: https://avd.aquasec.com/nvd/cve-2018-6951

[CVE-2018-6952] patch: Double free of memory in pch.c:another_hunk() causes a crash (Severity: LOW)

Package: patch
Installed: 2.7.6-7
Fixed: %!s(<nil>)

A double free exists in the another_hunk function in pch.c in GNU patch through 2.7.6.

More Info: https://avd.aquasec.com/nvd/cve-2018-6952

[CVE-2021-45261] patch: Invalid Pointer via another_hunk function (Severity: LOW)

Package: patch
Installed: 2.7.6-7
Fixed: %!s(<nil>)

An Invalid Pointer vulnerability exists in GNU patch 2.7 via the another_hunk function, which causes a Denial of Service.

More Info: https://avd.aquasec.com/nvd/cve-2021-45261

[CVE-2023-31484] perl: CPAN.pm does not verify TLS certificates when downloading distributions over HTTPS (Severity: HIGH)

Package: perl
Installed: 5.36.0-7+deb12u1
Fixed: %!s(<nil>)

CPAN.pm before 2.35 does not verify TLS certificates when downloading distributions over HTTPS.

More Info: https://avd.aquasec.com/nvd/cve-2023-31484

[CVE-2011-4116] perl: File:: Temp insecure temporary file handling (Severity: LOW)

Package: perl
Installed: 5.36.0-7+deb12u1
Fixed: %!s(<nil>)

_is_safe in the File::Temp module for Perl does not properly handle symlinks.

More Info: https://avd.aquasec.com/nvd/cve-2011-4116

[CVE-2023-31486] http-tiny: insecure TLS cert default (Severity: LOW)

Package: perl
Installed: 5.36.0-7+deb12u1
Fixed: %!s(<nil>)

HTTP::Tiny before 0.083, a Perl core module since 5.13.9 and available standalone on CPAN, has an insecure default TLS configuration where users must opt in to verify certificates.

More Info: https://avd.aquasec.com/nvd/cve-2023-31486

[CVE-2023-31484] perl: CPAN.pm does not verify TLS certificates when downloading distributions over HTTPS (Severity: HIGH)

Package: perl-base
Installed: 5.36.0-7+deb12u1
Fixed: %!s(<nil>)

CPAN.pm before 2.35 does not verify TLS certificates when downloading distributions over HTTPS.

More Info: https://avd.aquasec.com/nvd/cve-2023-31484

[CVE-2011-4116] perl: File:: Temp insecure temporary file handling (Severity: LOW)

Package: perl-base
Installed: 5.36.0-7+deb12u1
Fixed: %!s(<nil>)

_is_safe in the File::Temp module for Perl does not properly handle symlinks.

More Info: https://avd.aquasec.com/nvd/cve-2011-4116

[CVE-2023-31486] http-tiny: insecure TLS cert default (Severity: LOW)

Package: perl-base
Installed: 5.36.0-7+deb12u1
Fixed: %!s(<nil>)

HTTP::Tiny before 0.083, a Perl core module since 5.13.9 and available standalone on CPAN, has an insecure default TLS configuration where users must opt in to verify certificates.

More Info: https://avd.aquasec.com/nvd/cve-2023-31486

[CVE-2023-31484] perl: CPAN.pm does not verify TLS certificates when downloading distributions over HTTPS (Severity: HIGH)

Package: perl-modules-5.36
Installed: 5.36.0-7+deb12u1
Fixed: %!s(<nil>)

CPAN.pm before 2.35 does not verify TLS certificates when downloading distributions over HTTPS.

More Info: https://avd.aquasec.com/nvd/cve-2023-31484

[CVE-2011-4116] perl: File:: Temp insecure temporary file handling (Severity: LOW)

Package: perl-modules-5.36

Installed: 5.36.0-7+deb12u1
Fixed: %!s(<nil>)

_is_safe in the File::Temp module for Perl does not properly handle symlinks.

More Info: https://avd.aquasec.com/nvd/cve-2011-4116

[CVE-2023-31486] http-tiny: insecure TLS cert default (Severity: LOW)

Package: perl-modules-5.36
Installed: 5.36.0-7+deb12u1
Fixed: %!s(<nil>)

HTTP::Tiny before 0.083, a Perl core module since 5.13.9 and available standalone on CPAN, has an insecure default TLS configuration where users must opt in to verify certificates.

More Info: https://avd.aquasec.com/nvd/cve-2023-31486

[CVE-2023-4016] procps: ps buffer overflow (Severity: LOW)

Package: procps
Installed: 2:4.0.2-3
Fixed: %!s(<nil>)

Under some circumstances, this weakness allows a user who has access to run the â€œpsâ€• utility on a machine, the ability to write almost unlimited amounts of unfiltered data into the process heap.

More Info: https://avd.aquasec.com/nvd/cve-2023-4016

[CVE-2025-0938] python: cpython: URL parser allowed square brackets in domain names (Severity: MEDIUM)

Package: python3.11
Installed: 3.11.2-6+deb12u5
Fixed: %!s(<nil>)

The Python standard library functions `urllib.parse.urlsplit` and `urlparse` accepted domain names that included square brackets which isn't valid according to RFC 3986. Square brackets are only meant to be used as delimiters for specifying IPv6 and IPvFuture hosts in URLs. This could result in differential parsing across the Python URL parser and other specification-compliant URL parsers.

More Info: https://avd.aquasec.com/nvd/cve-2025-0938

[CVE-2025-1795] python: Mishandling of comma during folding and unicode-encoding of email headers (Severity: LOW)

Package: python3.11
Installed: 3.11.2-6+deb12u5
Fixed: %!s(<nil>)

During an address list folding when a separating comma ends up on a folded line and that line is to be unicode-encoded then the separator itself is also unicode-encoded. Expected behavior is that the separating comma remains a plan comma. This can result in the address header being misinterpreted by some mail servers.

More Info: https://avd.aquasec.com/nvd/cve-2025-1795

[CVE-2025-0938] python: cpython: URL parser allowed square brackets in domain names (Severity: MEDIUM)

Package: python3.11-minimal
Installed: 3.11.2-6+deb12u5
Fixed: %!s(<nil>)

The Python standard library functions `urllib.parse.urlsplit` and `urlparse` accepted domain names that included square brackets which isn't valid according to RFC 3986. Square brackets are only meant to be used as delimiters for specifying IPv6 and IPvFuture hosts in URLs. This could result in differential parsing across the Python URL parser and other specification-compliant URL parsers.

More Info: https://avd.aquasec.com/nvd/cve-2025-0938

[CVE-2025-1795] python: Mishandling of comma during folding and unicode-encoding of email headers (Severity: LOW)

Package: python3.11-minimal
Installed: 3.11.2-6+deb12u5
Fixed: %!s(<nil>)

During an address list folding when a separating comma ends up on a folded line and that line is to be unicode-encoded then the separator itself is also unicode-encoded. Expected behavior is that the separating comma remains a plan comma. This can result in the address header being misinterpreted by some mail servers.

More Info: https://avd.aquasec.com/nvd/cve-2025-1795

[TEMP-0517018-A83CE6] [sysvinit: no-root option in expert installer exposes locally exploitable security flaw] (Severity: LOW)

Package: sysvinit-utils
Installed: 3.06-4
Fixed: %!s(<nil>)

%!s(<nil>)

More Info: https://security-tracker.debian.org/tracker/TEMP-0517018-A83CE6

[CVE-2005-2541] tar: does not properly warn the user when extracting setuid or setgid files (Severity: LOW)

Package: tar
Installed: 1.34+dfsg-1.2+deb12u1
Fixed: %!s(<nil>)

Tar 1.15.1 does not properly warn the user when extracting setuid or setgid files, which may allow local users or remote attackers to gain privileges.

More Info: https://avd.aquasec.com/nvd/cve-2005-2541

[TEMP-0290435-0B57B5] [tar's rmt command may have undesired side effects] (Severity: LOW)

Package: tar
Installed: 1.34+dfsg-1.2+deb12u1
Fixed: %!s(<nil>)

%!s(<nil>)

More Info: https://security-tracker.debian.org/tracker/TEMP-0290435-0B57B5

[CVE-2021-4217] unzip: Null pointer dereference in Unicode strings code (Severity: LOW)

Package: unzip
Installed: 6.0-28
Fixed: %!s(<nil>)

A flaw was found in unzip. The vulnerability occurs due to improper handling of Unicode strings, which can lead to a null pointer dereference. This flaw allows an attacker to input a specially crafted zip file, leading to a crash or code execution.

More Info: https://avd.aquasec.com/nvd/cve-2021-4217

[CVE-2022-0563] util-linux: partial disclosure of arbitrary files in chfn and chsh when compiled with libreadline (Severity: LOW)

Package: util-linux
Installed: 2.38.1-5+deb12u3
Fixed: %!s(<nil>)

A flaw was found in the util-linux chfn and chsh utilities when compiled with Readline support. The Readline library uses an "INPUTRC" environment variable to get a path to the library config file. When the library cannot parse the specified file, it prints an error message containing data from the file. This flaw allows an unprivileged user to read root-owned files, potentially leading to privilege escalation. This flaw affects util-linux versions prior to 2.37.4.

More Info: https://avd.aquasec.com/nvd/cve-2022-0563

[CVE-2022-0563] util-linux: partial disclosure of arbitrary files in chfn and chsh when compiled with libreadline (Severity: LOW)

Package: util-linux-extra
Installed: 2.38.1-5+deb12u3
Fixed: %!s(<nil>)

A flaw was found in the util-linux chfn and chsh utilities when compiled with Readline support. The Readline library uses an "INPUTRC" environment variable to get a path to the library config file. When the library cannot parse the specified file, it prints an error message containing data from the file. This flaw allows an unprivileged user to read root-owned files, potentially leading to privilege escalation. This flaw affects util-linux versions prior to 2.37.4.

More Info: https://avd.aquasec.com/nvd/cve-2022-0563

[CVE-2022-0563] util-linux: partial disclosure of arbitrary files in chfn and chsh when compiled with libreadline (Severity: LOW)

Package: uuid-dev
Installed: 2.38.1-5+deb12u3
Fixed: %!s(<nil>)

A flaw was found in the util-linux chfn and chsh utilities when compiled with Readline support. The Readline library uses an "INPUTRC" environment variable to get a path to the library config file. When the library cannot parse the specified file, it prints an error message containing data from the file. This flaw allows an unprivileged user to read root-owned files, potentially leading to privilege escalation. This flaw affects util-linux versions prior to 2.37.4.

More Info: https://avd.aquasec.com/nvd/cve-2022-0563

[CVE-2021-31879] wget: authorization header disclosure on redirect (Severity: MEDIUM)

Package: wget
Installed: 1.21.3-1+deb12u1
Fixed: %!s(<nil>)

GNU Wget through 1.21.1 does not omit the Authorization header upon a redirect to a different origin, a related issue to CVE-2018-1000007.

More Info: https://avd.aquasec.com/nvd/cve-2021-31879

[CVE-2024-10524] wget: GNU Wget is vulnerable to an SSRF attack when accessing partially-user-controlled shorthand URLs (Severity: MEDIUM)

Package: wget
Installed: 1.21.3-1+deb12u1
Fixed: %!s(<nil>)

Applications that use Wget to access a remote resource using shorthand URLs and pass arbitrary user credentials in the URL are vulnerable. In these cases attackers can enter crafted credentials which will cause Wget to access an arbitrary host.

More Info: https://avd.aquasec.com/nvd/cve-2024-10524

[CVE-2023-45853] zlib: integer overflow and resultant heap-based buffer overflow in zipOpenNewFileInZip4_6 (Severity: CRITICAL)

Package: zlib1g
Installed: 1:1.2.13.dfsg-1
Fixed: %!s(<nil>)

MiniZip in zlib through 1.3 has an integer overflow and resultant heap-based buffer overflow in zipOpenNewFileInZip4_64 via a long filename, comment, or extra field. NOTE: MiniZip is not a supported part of the zlib product. NOTE: pyminizip through 0.2.6 is also vulnerable because it bundles an affected zlib version, and exposes the applicable MiniZip code through its compress API.

More Info: https://avd.aquasec.com/nvd/cve-2023-45853

[CVE-2023-45853] zlib: integer overflow and resultant heap-based buffer overflow in zipOpenNewFileInZip4_6 (Severity: CRITICAL)

Package: zlib1g-dev
Installed: 1:1.2.13.dfsg-1
Fixed: %!s(<nil>)

MiniZip in zlib through 1.3 has an integer overflow and resultant heap-based buffer overflow in zipOpenNewFileInZip4_64 via a long filename, comment, or extra field. NOTE: MiniZip is not a supported part of the zlib product. NOTE: pyminizip through 0.2.6 is also vulnerable because it bundles an affected zlib version, and exposes the applicable MiniZip code through its compress API.

More Info: https://avd.aquasec.com/nvd/cve-2023-45853

Target: Node.js