Security Bulletin: NVIDIA GPU Display Driver - April 2025

Updated 04/30/2025 12:58 PM

NVIDIA has released a software security update for NVIDIA GPU Display Driver to address the issues that are disclosed in this bulletin.

To protect your system, download and install this software update through the NVIDIA Driver Downloads page or, for the vGPU software and Cloud Gaming updates, through the NVIDIA Licensing Portal.

Go to NVIDIA Product Security.

DETAILS

This section summarizes the potential vulnerabilities that this security update addresses and their impact. Descriptions use CWE™, and base scores and vectors use CVSS v3.1 standards.

NVIDIA GPU DISPLAY DRIVER

CVE ID	Description	Vector	Base Score	Severity	CWE	Impacts
CVE-2025-23244	NVIDIA GPU Display Driver for Linux contains a vulnerability which could allow an unprivileged attacker to escalate permissions. A successful exploit of this vulnerability might lead to code execution, denial of service, escalation of privileges, information disclosure, and data tampering.	AV:L/AC:L/PR:L/UI:N/S:U/C:H/I:H/A:H	7.8	High	CWE-863	Code execution, denial of service, escalation of privileges, information disclosure, and data tampering

NVIDIA VGPU SOFTWARE

CVE ID	Description	Vector	Base Score	Severity	CWE	Impacts
CVE-2025-23245	NVIDIA vGPU software for Windows and Linux contains a vulnerability in the Virtual GPU Manager (vGPU plugin), where it allows a guest to access global resources. A successful exploit of this vulnerability might lead to denial of service.	AV:L/AC:L/PR:L/UI:N/S:U/C:N/I:N/A:H	5.5	Medium	CWE-732	Denial of service
CVE-2025-23246	NVIDIA vGPU software for Windows and Linux contains a vulnerability in the Virtual GPU Manager (vGPU plugin), where it allows a guest to consume uncontrolled resources. A successful exploit of this vulnerability might lead to denial of service.	AV:L/AC:L/PR:L/UI:N/S:U/C:N/I:N/A:H	5.5	Medium	CWE-400	Denial of service

assessment is based on an average of risk across a diverse set of installed systems and may not represent the true risk to your local installation. NVIDIA recommends consulting a security or IT professional to evaluate the risk to

your specific configuration.

SECURITY UPDATES FOR NVIDIA GPU DISPLAY DRIVER

CVES ADDRESSED IN EACH LINUX DRIVER BRANCH

The following table lists the CVEs addressed by the update in each Linux driver branch.

Linux Driver Branch	CVEs Addressed
R535, R550, R570, R575	CVE-2025-23244

LINUX AFFECTED COMPONENTS, AFFECTED VERSIONS, AND UPDATED VERSIONS

The following table lists the NVIDIA software products affected, Windows driver versions affected, and the updated version available from nvidia.com that includes this security update. Download the updates from the NVIDIA Driver Downloads page.

Software Product	Operating System	Driver Branch	Affected Driver Versions	Updated Driver Version
GeForce	Linux	R575	All driver versions prior to 575.51.02	575.51.02
		R570	All driver versions prior to 570.133.07	570.133.07
		R550	All driver versions prior to 550.163.01	550.163.01
		R535	All driver versions prior to 535.247.01	535.247.01
NVIDIA RTX, Quadro, NVS	Linux	R575	All driver versions prior to 575.51.02	575.51.02
		R570	All driver versions prior to 570.133.07	570.133.07
		R550	All driver versions prior to 550.163.01	550.163.01
		R535	All driver versions prior to 535.247.01	535.247.01
Tesla	Linux	R570	All driver versions prior to 570.133.20	570.133.20
		R550	All driver versions prior to 550.163.01	550.163.01
		R535	All driver versions prior to 535.247.01	535.247.01

NOTES

- The table above might not be a comprehensive list of all affected supported versions or branch releases and might be updated as more information becomes available.
- Earlier software GPU branch releases that support these products might also be affected. If you are using an earlier branch release for which an update version is not listed above, upgrade to the latest branch release.

SECURITY UPDATES FOR NVIDIA VGPU SOFTWARE

CVE IDS ADDRESSED IN EACH LINUX VGPU DRIVER BRANCH

The following table lists the CVE IDs addressed by the update in each Linux vGPU driver branch.

Linux Driver Branch	CVE IDs Addressed
R535, R550, R570, R575	CVE-2025-23244

CVE IDS ADDRESSED IN EACH VGPU MANAGER DRIVER BRANCH

The following table lists the CVE IDs addressed by the update in each vGPU Manager driver branch.

vGPU Manager Driver Branch (beta)	CVE IDs Addressed
R535, R550, R570, R575	CVE-2025-23245, CVE-2025-23246

AFFECTED COMPONENTS, AFFECTED VERSIONS, AND UPDATED VERSIONS

The following table lists NVIDIA vGPU software components affected, versions affected, and the updated version that includes this security update. Download the updates through the NVIDIA Licensing Portal.

CVE IDs Addressed	vGPU Software Component	Operating System	Affected Versions		Updated Version	
			vGPU Software	Driver	vGPU Software	Driver
CVE-2025-23244	Guest driver	Linux	All versions prior to and including 18.0	570.124.06	18.1	570.133.20
			All versions prior to and including 17.5	550.144.03	17.6	550.163.01
			All versions prior to and including 16.9	535.230.02	16.10	535.247.01
CVE-2025-23245 CVE-2025-23246	Virtual GPU Manager	Citrix Hypervisor, VMware vSphere, Red Hat Enterprise Linux KVM, Ubuntu	All versions prior to and including 18.0	570.124.03	18.1	570.133.10
			All versions prior to and including 17.5	550.144.02	17.6	550.163.02
			All versions prior to and including 16.9	535.230.02	16.10	535.247.02
CVE-2025-23245 CVE-2025-23246	Virtual GPU Manager	Microsoft Azure Local, Microsoft Windows Server	All versions prior to and including 18.0	572.60	vGPU 18.1	572.83

Notes:

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- Earlier software branch releases that support these products might also be affected. If you are using an earlier branch release for which an update version is not listed above, upgrade to the latest branch release.

SECURITY UPDATES FOR NVIDIA CLOUD GAMING

The following table lists the NVIDIA software products affected, versions affected, and the updated version that includes this security update.

Download the updates through the NVIDIA Licensing Portal.

CVE IDs Addressed	Cloud Gaming Component	Operating System	Affected Versions		Updated Version	
			Cloud Gaming Software	Driver	Cloud Gaming Software	Driver
CVE-2025-23244	Guest driver	Linux	All versions up to and including the Feb 2025 release	570.124.06	March 2025 Release	570.133.20
CVE-2025-23245 CVE-2025-23246	Virtual GPU Manager	Red Hat Enterprise Linux KVM, VMware vSphere	All versions up to and including the Feb 2025 release	570.124.03	March 2025 Release	570.133.10

MITIGATIONS

See Security Updates for NVIDIA GPU Display Driver, Security Updates for NVIDIA vGPU Software, or Security Updates for NVIDIA Cloud Gaming for the version to install.

ACKNOWLEDGEMENTS

NVIDIA thanks the following people for reporting the issues to us:

CVE-2025-23244: Xingyu Jin - Google

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- Report a potential security issue in any NVIDIA supported product
- Learn more about the vulnerability management process followed by the NVIDIA Product Security Incident Response Team (PSIRT)

REVISION HISTORY

Revision	Date	Description
1.0	April 24, 2025	Initial release
1.1	April 30, 2025	Updated acknowledgements

SUPPORT

If you have any questions about this security bulletin, contact NVIDIA Support.

FREQUENTLY ASKED QUESTIONS (FAQS)

How do I determine which NVIDIA display driver version is currently installed on my PC?

Disclaimer