



# What's New in Virtual GPU Software R535 for All Supported Hypervisors

Release Notes

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# Chapter 1. Updates by Release

Updates for each release in this release family of NVIDIA vGPU software may include new features, introduction of hardware and software support, and withdrawal of hardware and software support.

## 1.1. Updates in Release 16.8

### New Features in Release 16.8

- ▶ vGPU migration support on the Ubuntu hypervisor
- ▶ Security updates - see *Security Bulletin: NVIDIA GPU Display Driver - October 2024*, which is posted shortly after the release date of this software and is listed on the [NVIDIA Product Security](#) page
- ▶ Miscellaneous bug fixes

### Newly Supported Hardware and Software in Release 16.8

- ▶ Newly supported hypervisor software:
  - ▶ Ubuntu 24.04
- ▶ Newly supported remoting solutions:
  - ▶ Citrix Virtual Apps and Desktops version 7 2407
  - ▶ Omnissa Horizon 2406 (8.13)

## 1.2. Updates in Release 16.7

### New Features in Release 16.7

- ▶ Security updates - see *Security Bulletin: NVIDIA GPU Display Driver - July 2024*, which is posted shortly after the release date of this software and is listed on the [NVIDIA Product Security](#) page
- ▶ Miscellaneous bug fixes

## Feature Support Withdrawn in Release 16.7

- ▶ Hypervisor software no longer supported:
  - ▶ Red Hat Enterprise Linux with KVM 7.9
- ▶ Guest OSes no longer supported:
  - ▶ Red Hat Enterprise Linux 7.9

# 1.3. Updates in Release 16.6

## New Features in Release 16.6

- ▶ vGPU migration support on the Red Hat Enterprise Linux with KVM hypervisor
- ▶ Security updates - see *Security Bulletin: NVIDIA GPU Display Driver - June 2024*, which is posted shortly after the release date of this software and is listed on the [NVIDIA Product Security](#) page
- ▶ Miscellaneous bug fixes

## Hardware and Software Support Introduced in Release 16.6

- ▶ Newly supported hypervisor software:
  - ▶ Red Hat Enterprise Linux with KVM 9.4 and 8.10
- ▶ Newly supported guest OS releases:
  - ▶ Debian 12
  - ▶ Red Hat Enterprise Linux 9.4 and 8.10
  - ▶ Ubuntu 24.04



**Note:** This release introduces support for Ubuntu 24.04 **only** as a guest OS. This release does **not** introduce support for Ubuntu 24.04 hypervisor.

- ▶ Newly supported remoting solutions:
  - ▶ Citrix Virtual Apps and Desktops version 7 2402

## Feature Support Withdrawn in Release 16.6

- ▶ Hypervisor software no longer supported:
  - ▶ Red Hat Enterprise Linux with KVM 9.3, 9.0, 8.9, and 8.6
- ▶ Guest OSes no longer supported:
  - ▶ Debian 10

- ▶ Red Hat Enterprise Linux 9.3, 9.0, 8.9, and 8.6

## 1.4. Updates in Release 16.5

NVIDIA vGPU software 16.5 resolves an issue that affects graphics cards that are supported only by NVIDIA AI Enterprise.

## 1.5. Updates in Release 16.4

### New Features in Release 16.4

- ▶ Security updates - see *Security Bulletin: NVIDIA GPU Display Driver - February 2024*, which is posted shortly after the release date of this software and is listed on the [NVIDIA Product Security](#) page
- ▶ Miscellaneous bug fixes

### Newly Supported Hardware and Software in Release 16.4

- ▶ Newly supported hypervisor software:
  - ▶ Red Hat Enterprise Linux with KVM hypervisor 9.3
- ▶ Newly supported guest OS releases:
  - ▶ Microsoft Windows 11 23H2
  - ▶ Red Hat Enterprise Linux 9.3
- ▶ Newly supported remoting solutions:
  - ▶ Omnissa Horizon 2312 (8.12)

## 1.6. Updates in Release 16.3

### New Features in Release 16.3

- ▶ Miscellaneous bug fixes

### Hardware and Software Support Introduced in Release 16.3

- ▶ Newly supported graphics cards:
  - ▶ NVIDIA L2
  - ▶ NVIDIA L20
- ▶ Newly supported hypervisor software:

- ▶ Red Hat Enterprise Linux with KVM hypervisor 8.9
- ▶ Newly supported guest OS releases:
  - ▶ Red Hat Enterprise Linux 8.9
- ▶ Newly supported remoting solutions:
  - ▶ Citrix Virtual Apps and Desktops version 7 2311

## 1.7. Updates in Release 16.2

### New Features in Release 16.2

- ▶ Security updates - see *Security Bulletin: NVIDIA GPU Display Driver - October 2023*, which is posted shortly after the release date of this software and is listed on the [NVIDIA Product Security](#) page
- ▶ Miscellaneous bug fixes

### Hardware and Software Support Introduced in Release 16.2

- ▶ Newly supported hypervisor software:
  - ▶ Microsoft Azure Stack HCI 23H2 preview
- ▶ Newly supported remoting solutions:
  - ▶ Citrix Virtual Apps and Desktops version 7 2308
  - ▶ VMware Horizon 2309 (8.11)

## 1.8. Updates in Release 16.1

### New Features in Release 16.1

- ▶ New options in the NVML API and the `nvidia-smi` command for getting the scheduling behavior of time-sliced vGPUs
- ▶ Miscellaneous bug fixes

### Hardware and Software Support Introduced in Release 16.1

- ▶ Support for the for the following GPUs:
  - ▶ NVIDIA L40S
  - ▶ NVIDIA RTX 5000 Ada
- ▶ Support for XenServer 8 hypervisor

- ▶ Support for Microsoft Windows Server 2022 as a guest OS on Red Hat Enterprise Linux with KVM hypervisor
- ▶ Support for SUSE Linux Enterprise Server 12 SP5 as a guest OS on Microsoft Windows Server and VMware vSphere

## 1.9. Updates in Release 16.0

### New Features in Release 16.0

- ▶ Support for the NVIDIA L4 and NVIDIA L40 graphics cards in DDA mode only on Microsoft Azure Stack HCI
- ▶ Support for 4K displays with an aspect ratio of 16:10
- ▶ Options in the NVML API and the `nvidia-smi` command for controlling the scheduling behavior of time-sliced vGPUs
- ▶ Assignment of multiple fractional vGPUs to a single VM on Microsoft Azure Stack HCI  
A fractional vGPU is allocated only a fraction of the physical GPU's frame buffer.
- ▶ Security updates - see *Security Bulletin: NVIDIA GPU Display Driver - June 2023*, which is posted shortly after the release date of this software and is listed on the [NVIDIA Product Security](#) page
- ▶ Miscellaneous bug fixes

### Newly Supported Hardware and Software in Release 16.0

- ▶ Newly supported hypervisor software:
  - ▶ Red Hat Enterprise Linux with KVM 9.2 and 8.8
- ▶ Newly supported guest OSes:
  - ▶ Red Hat Enterprise Linux 9.2 and 8.8
- ▶ Newly supported remoting solutions:
  - ▶ Citrix Virtual Apps and Desktops version 7 2305
  - ▶ Omnissa Horizon 2306 (8.10) and 2303 (8.9)

### Feature Support Withdrawn in Release 16.0

- ▶ Product functionality no longer supported:
  - ▶ NVIDIA Virtual Compute Server (vCS)



**Note:** As a result of this change, C-series vGPU types are no longer available.

Instead, vCS is supported with NVIDIA AI Enterprise.

- ▶ Graphics cards no longer supported:
  - ▶ Graphics cards that support only C-series vGPUs, namely:
    - ▶ NVIDIA H800 PCIe 80GB
    - ▶ NVIDIA H100 PCIe 80GB
    - ▶ NVIDIA A800 PCIe 80GB
    - ▶ NVIDIA A800 PCIe 80GB liquid cooled
    - ▶ NVIDIA A800 HGX 80GB
    - ▶ NVIDIA A100 PCIe 80GB
    - ▶ NVIDIA A100 PCIe 80GB liquid cooled
    - ▶ NVIDIA A100X
    - ▶ NVIDIA A100 HGX 80GB
    - ▶ NVIDIA A100 PCIe 40GB
    - ▶ NVIDIA A100 HGX 40GB
    - ▶ NVIDIA A30
    - ▶ NVIDIA A30X

Instead, these graphics cards are supported with NVIDIA AI Enterprise.

- ▶ Hypervisor software no longer supported:
  - ▶ Red Hat Enterprise Linux with KVM 9.1, 8.7, and 8.4
  - ▶ Ubuntu 18.04
- ▶ Guest OSes no longer supported:
  - ▶ Red Hat Enterprise Linux 9.1, 8.7, and 8.4
  - ▶ Ubuntu 18.04



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