



What's New in Virtual GPU Software R440 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 10.0

New Features in Release 10.0

- ▶ Support for NVIDIA® GRID™ Virtual PC and GRID Virtual Applications on Quadro RTX 6000 and Quadro RTX 8000 GPUs
- ▶ Increase in the maximum number of virtual display heads supported by -1Q, -2B, and -1B4 vGPUs:
 - ▶ All -1Q vGPUs now support 4 heads instead of 2 heads.
 - ▶ All -2B vGPUs now support 4 heads instead of 2 heads.
 - ▶ All -1B4 vGPUs now support 4 heads instead of 1 head.

- ▶ Flexible virtual display resolutions

Instead of a fixed maximum resolution per head, vGPUs now support a maximum combined resolution based on their frame buffer size. This behavior allows the same number of lower resolution displays to be used as before, but alternatively allows a smaller number of higher resolution displays to be used.

- ▶ Virtual display resolutions greater than 4096×2160
- ▶ 10-bit color
- ▶ Support for multiple vGPUs in a single VM on Citrix Hypervisor (requires release 8.1)
- ▶ Changes to allow cross-branch driver support in future main release branches



Note: This feature cannot be used until the next NVIDIA vGPU software main release branch is available.

The purpose of this change is to allow a release of the Virtual GPU Manager from a later main release branch to be used with the NVIDIA vGPU software graphics drivers for the guest VMs from the previous branch.

- ▶ Miscellaneous bug fixes

Hardware and Software Support Introduced in Release 10.0

- ▶ Support for passively cooled Quadro RTX 6000 and Quadro RTX 8000 GPUs
- ▶ Support for Tesla V100S PCIe 32GB GPUs
- ▶ Support for Citrix Hypervisor 8.1
- ▶ Support for Red Hat Enterprise Linux with KVM hypervisor releases 8.1 and 7.7
- ▶ Support for Red Hat Enterprise Linux 8.1 as a guest OS
- ▶ Support for Red Hat Enterprise Linux 8.0 and CentOS 8.0 as a guest OS on Citrix Hypervisor (requires release 8.1) and Nutanix AHV
- ▶ Support for Ubuntu 18.04 as a guest OS on Nutanix AHV
- ▶ Support for Windows 10 November 2019 Update (1909) as a guest OS
- ▶ Support for Citrix Virtual Apps and Desktops version 7 1912
- ▶ Support for VMware Horizon 7.11

Feature Support Withdrawn in Release 10.0

- ▶ Nutanix AHV 5.5, 5.8, and 5.9 are no longer supported.
- ▶ VMware Horizon 6.2 is no longer supported.

Features Deprecated in Release 10.0

The following table lists features that are deprecated in this release of NVIDIA vGPU software. Although the features remain available in this release, they might be withdrawn in a future release. In preparation for the possible removal of these features, use the preferred alternative listed in the table.

Deprecated Feature	Preferred Alternative
-1B4 vGPU types	-1B vGPU types
-2B4 vGPU types	-2B vGPU types

1.2. Updates in Release 10.1

New Features in Release 10.1

- ▶ Miscellaneous bug fixes

Feature Support Withdrawn in Release 10.1

- ▶ Citrix Hypervisor 7.6 is no longer supported.
- ▶ Nutanix AHV 5.11 and 5.10 are no longer supported.

- ▶ Red Hat Enterprise Linux with KVM 8.0 hypervisor is no longer supported.
- ▶ Red Hat Enterprise Linux 8.0 is no longer supported as a guest OS.

1.3. Updates in Release 10.2

New Features in Release 10.2

- ▶ Miscellaneous bug fixes
- ▶ Security updates (see [Security Bulletin: NVIDIA GPU Display Driver - February 2020](#))

Hardware and Software Support Introduced in Release 10.2

- ▶ Support for Red Hat Enterprise Linux with KVM hypervisor releases 8.2 and 7.8
- ▶ Support for VMware vSphere 7.0
- ▶ Support for the following OS releases as a guest OS:
 - ▶ Red Hat Enterprise Linux 8.2
 - ▶ Red Hat Enterprise Linux 8.0, 8.1 on Microsoft Windows Server with Hyper-V role
 - ▶ CentOS Linux 8.0 on Microsoft Windows Server with Hyper-V role, 8 (1911)
 - ▶ Red Hat Enterprise Linux 7.8
 - ▶ CentOS 7.8
- ▶ Support for Citrix Virtual Apps and Desktops version 7 2003
- ▶ Support for VMware Horizon 7.12

Feature Support Withdrawn in Release 10.2

- ▶ The following Red Hat hypervisor software releases are no longer supported:
 - ▶ Red Hat Enterprise Linux with KVM hypervisor releases 7.0-7.5
 - ▶ Red Hat Virtualization (RHV) 4.1
- ▶ The following guest OS releases are no longer supported:
 - ▶ Red Hat Enterprise Linux 7.0-7.5
 - ▶ CentOS 7.0-7.5
- ▶ The following releases of Citrix virtual desktop software are no longer supported:
 - ▶ Citrix Virtual Apps and Desktops version 7 1808
 - ▶ Citrix XenApp/XenDesktop versions 7.18 and 7.17

1.4. Updates in Release 10.3

New Features in Release 10.3

- ▶ Cross-branch driver support
With the release of NVIDIA vGPU software 11.0, NVIDIA vGPU software graphics drivers for the guest VMs from this release branch can be used with the Virtual GPU Manager from NVIDIA vGPU software 11.0 and later 11.x releases
- ▶ Miscellaneous bug fixes
- ▶ Security updates - see [Security Bulletin: NVIDIA GPU Display Driver - June 2020](#)

Hardware and Software Support Introduced in Release 10.3

- ▶ Support for Nutanix AHV 5.17.1 and 5.15



Note: Nutanix AHV 5.17.1 is also supported on NVIDIA vGPU software release 10.1 but not on release 10.0 or 10.2.

- ▶ Support for Citrix Virtual Apps and Desktops version 7 2006
- ▶ Support for VMware Horizon 2006 (8.0)

Feature Support Withdrawn in Release 10.3

- ▶ Citrix Hypervisor 8.0 is no longer supported
- ▶ Microsoft Windows Server 2008 R2 is no longer supported as a guest OS

1.5. Updates in Release 10.4

New Features in Release 10.4

- ▶ Miscellaneous bug fixes
- ▶ Security updates - see [Security Bulletin: NVIDIA GPU Display Driver - September 2020](#)

Hardware and Software Support Introduced in Release 10.4

- ▶ Support for Citrix Virtual Apps and Desktops version 7 2009

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