



NVAPI Open Source SDK for Driver Release 575

Release Notes

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NVAPI Release Notes

Introduction

NVAPI is NVIDIA Corporation's core software development kit that allows direct access to NVIDIA GPUs and drivers on all Windows platforms. NVAPI provides support for categories of operations that range beyond the scope of those found in familiar graphics APIs such as DirectX and OpenGL.

The following files are provided by NVIDIA:

- > nvapi.h
- > nvapi_interface.h
- > nvapi_lite_common.h
- > nvapi_lite_d3dext.h
- > nvapi_lite_salend.h
- > nvapi_lite_salstart.h
- > nvapi_lite_sli.h
- > nvapi_lite_stereo.h
- > nvapi_lite_surround.h
- > NvApiDriverSettings.c
- > NvApiDriverSettings.h
- > nvHLSLExtns.h
- > nvHLSLExtnsInternal.h
- > nvShaderExtnEnums.h
- > \x86\nvapi.lib
- > \amd64\nvapi64.lib
- > \docs\NVAPI_Reference_OpenSource.chm
- > \docs\NVAPI_SDKs_Samples_and_Tools_License_Agreement(Public).pdf

These release notes describe the new features, enhancements, and changes in the NVAPI SDK for this release.

Changes in NVAPI for Driver Release 575

New Functions

- > None

New/Updated Structures

- > Added the following members to `NV_NGX_DLSS_OVERRIDE_GET_STATE_PARAMS_V1`
 - o `scalingRatio`
 - o `performanceMode`
 - o `renderPreset`
 - o `frameGenerationCount`

New/Updated Enums

- > Added `NV_DP2X_LINK_RATE`
- > Added `NV_NGX_DLSS_OVERRIDE_FLAG_EVALUATE` to `NV_NGX_DLSS_OVERRIDE_BITFIELD`

New Typedefs

- > Added the `NvU32` definition for the CLANG compiler

New Unions

- > None

New Macros

- > None

New Errors

- > None

TCC Support

- > None

MCDM Support

- > None

NVAPI Security Information

- > None

Deprecated NVAPI Functions

- > None

Deprecated Enum Values

- > None

NVAPIDriverSettings Additions/Removals (NvApiDriverSettings.c)

- > Removed `EValues NGX_DLSS_FG_OVERRIDE_RESERVED_KEY1`
- > Removed `EValues NGX_DLSS_FG_OVERRIDE_RESERVED_KEY2`
- > Removed the following values from `EValues NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION`
 - o `NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_G`
 - o `NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_H`
 - o `NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_I`
 - o `NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_J`
 - o `NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_K`
 - o `NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_L`
 - o `NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_M`
 - o `NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_N`
 - o `NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_O`
- > Removed `EValues NGX_DLSS_RR_OVERRIDE_RESERVED_KEY1`
- > Removed `EValues NGX_DLSS_RR_OVERRIDE_RESERVED_KEY2`
- > Added `EValues NGX_DLSS_RR_OVERRIDE_SCALING_RATIO`
- > Removed the following values from `NGX_DLSS_SR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_Latest`
 - o `NGX_DLSS_SR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_K`
 - o `NGX_DLSS_SR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_L`
 - o `NGX_DLSS_SR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_M`

- NGX_DLSS_SR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_N
- NGX_DLSS_SR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_O
- > Removed EValues NGX_DLSS_SR_OVERRIDE_RESERVED_KEY1
- > Removed EValues NGX_DLSS_SR_OVERRIDE_RESERVED_KEY2
- > Added EValues NGX_DLSS_SR_OVERRIDE_SCALING_RATIO
- > Changed

```
{NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_ID,
  NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_STRING, 17, (NvU32
*)g_valuesNGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION,
  NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_OFF},
```

to

```
{NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_ID,
  NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_STRING, 8, (NvU32
*)g_valuesNGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION,
  NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_OFF},
```

NVAPIDriverSettings Additions/Removals (NvApiDriverSettings.h)

- > Added the string definition: NGX_DLSS_RR_OVERRIDE_SCALING_RATIO_STRING
- > Added the string definition: NGX_DLSS_SR_OVERRIDE_SCALING_RATIO_STRING
- > Added the Setting ID: NGX_DLSS_RR_OVERRIDE_SCALING_RATIO_ID
- > Added the Setting ID: NGX_DLSS_SR_OVERRIDE_SCALING_RATIO_ID
- > Removed enum EValues NGX_DLSS_FG_OVERRIDE_RESERVED_KEY1
- > Removed enum EValues NGX_DLSS_FG_OVERRIDE_RESERVED_KEY2
- > Removed the following values from the following values from
EValues NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION
 - NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_G
 - NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_H
 - NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_I
 - NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_J
 - NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_K
 - NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_L
 - NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_M
 - NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_N
 - NGX_DLSS_RR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_O
- > Added enum EValues NGX_DLSS_RR_OVERRIDE_SCALING_RATIO
- > Removed the following values from the following values from
EValues NGX_DLSS_SR_OVERRIDE_RENDER_PRESET_SELECTION

- o NGX_DLSS_SR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_K
- o NGX_DLSS_SR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_L
- o NGX_DLSS_SR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_M
- o NGX_DLSS_SR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_N
- o NGX_DLSS_SR_OVERRIDE_RENDER_PRESET_SELECTION_RENDER_PRESET_O

> Added enum EValues NGX_DLSS_SR_OVERRIDE_SCALING_RATIO

HLSL Extension Additions/Removals

> None

NVAPI Security Information

User administrator privilege is required to access certain driver features per NVIDIA's overall security vision. This helps mitigate the impact of malware.

Each API requiring administrator access will return an NVAPI_INVALID_USER_PRIVILEGE error, when run with standard user privilege.

The application will require administrator privileges to access this API, which can be elevated to a higher permission level by selecting "Run as Administrator" in Admin approval mode.

Sample Code

The SDK package contains the `Sample_Code` directory, which provides code examples for the following features:

Feature	Sample Code Subdirectory	Sample Code
Custom timing	CustomTiming	CustomTiming.cpp
Display color control	DisplayColorControl	> DisplayColorControl.cpp > NVHelper.cpp > NVHelper.h

Display configuration	DisplayConfiguration	> DisplayConfiguration.cpp
GPU handle enumeration	GPUHandleEnumeration	gpuHandleEnumeration.c
QSYNC event registration	QSYNC_Event_Registratio n	QSYNC_Event_Registration.cpp
Sync configuration	Sync_Configuration	> Sync_Configuration.cpp
I2C	i2c	> i2c.cpp

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