January 11, 2022

NVAPI RELEASE NOTICE

NVAPI Developer Open Source Interface for Driver Release 510

RN-10003-510_v1.0

NVAPI Developer Open Source Interface Release

NVAPI is NVIDIA Corporation's core software development kit that allows 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.

This release contains a version of nvapi.h, provided under MIT license, to enable open source re-implementations of NVAPI for Windows emulation environments.

For those interested in developing applications using the NVAPI Developer SDK on Windows Platform, NVIDIA recommends using the NVAPI Developer SDK available at https://developer.nvidia.com/nvapi.

File List

The following files are provided as a part of the NVAPI Open Source SDK:

nvapi.h

This file contains the interface constants, structure definitions and function prototypes for NvAPI interface.

nvapi_interface.h

This file is a reference for mapping the NVAPI identifiers to functions (more on this below).

NvApiDriverSettings.h

NvApiDriverSettings.c

These files are used to query and change driver settings. For more details, please see:

http://developer.download.nvidia.com/NVAPI/PG-5116-001_v01_public.pdf

NVAPI Runtime

The NVAPI runtime, nvapi.dll, provides the following key functions.

nvapi_QueryInterface() : maps a 32-bit identifier to a function pointer:

```
    void *nvapi_QueryInterface(NvU32 id);
```

The NVAPI application will call nvapi_QueryInterface() to get individual NVAPI function pointers from nvapi.dll.

Please consult nvapi_interface.h for a mapping of identifiers to NVAPI function names.

NvAPI_Initialize()

```
    NvAPI_Status __cdecl NvAPI_Initialize()
    {
        return NVAPI_OK;
    }
```

NvAPI_Unload()

```
    NvAPI_Status __cdecl NvAPI_Unload()
```

```
    {
        return NVAPI_OK;
    }
```

Release Notes

- New Functions:
  - Added NvAPI_GetPhysicalGPUFromGPUID
  - Added NvAPI_GetGPUIDfromPhysicalGPU
  - Added NvAPI_GPU_CudaEnumComputeCapableGpus
  - Added NvAPI_DISP_GetVirtualRefreshRateData
  - Added NvAPI_DISP_SetVirtualRefreshRateData
  - Added NvAPI_D3D12_CreateDDisplayPresentBarrierClient
  - Added NvAPI_D3D12_GetOptimalThreadCountForMesh
- New Structures:
  - Added NV_COMPUTE_GPU_TOPOLOGY_V1
  - Added NV_COMPUTE_GPU
  - Added NV_COMPUTE_GPU_TOPOLOGY_V2
  - Added NV_GET_VIRTUAL_REFRESH_RATE_DATA_V1
  - Added NV_SET_VIRTUAL_REFRESH_RATE_DATA_V1
- Deprecated NVAPI_GPU_CONNECTOR_VIRTUAL_WFD from NV_GPU_CONNECTOR_TYPE

Revision History

Revision	Date	Description
1.0	January 10, 2022	Initial release