NAME

Execution Control [DEPRECATED] −

Functions

CUresult cuFuncSetBlockShape (**CUfunction** hfunc, int x, int y, int z)
Sets the block-dimensions for the function.

CUresult cuFuncSetSharedSize (**CUfunction** hfunc, unsigned int bytes)
Sets the dynamic shared-memory size for the function.

CUresult cuLaunch (**CUfunction** f)
Launches a CUDA function.

CUresult cuLaunchGrid (**CUfunction** f, int grid_width, int grid_height)
Launches a CUDA function.

CUresult cuLaunchGridAsync (**CUfunction** f, int grid_width, int grid_height, **CUstream** hStream)
Launches a CUDA function.

CUresult cuParamSetf (**CUfunction** hfunc, int offset, float value)
Adds a floating-point parameter to the function's argument list.

CUresult cuParamSeti (**CUfunction** hfunc, int offset, unsigned int value)
Adds an integer parameter to the function's argument list.

CUresult cuParamSetSize (**CUfunction** hfunc, unsigned int numbytes)
Sets the parameter size for the function.

CUresult cuParamSetTexRef (**CUfunction** hfunc, int texunit, **CUtexref** hTexRef)
Adds a texture-reference to the function's argument list.

CUresult cuParamSetv (**CUfunction** hfunc, int offset, void *ptr, unsigned int numbytes)
Adds arbitrary data to the function's argument list.

Detailed Description

\brief deprecated execution control functions of the low-level CUDA driver API (**cuda.h**)

This section describes the deprecated execution control functions of the low-level CUDA driver application programming interface.

Function Documentation

CUresult cuFuncSetBlockShape (CUfunction hfunc, int x, int y, int z)

Deprecated

Specifies the `x`, `y`, and `z` dimensions of the thread blocks that are created when the kernel given by `hfunc` is launched.

Parameters:

hfunc - Kernel to specify dimensions of
x - X dimension
y - Y dimension
z - Z dimension

Returns:

CUDA_SUCCESS, **CUDA_ERROR_DEINITIALIZED**, **CUDA_ERROR_NOT_INITIALIZED**, **CUDA_ERROR_INVALID_CONTEXT**, **CUDA_ERROR_INVALID_HANDLE**, **CUDA_ERROR_INVALID_VALUE**

Note:

Note that this function may also return error codes from previous, asynchronous launches.

See also:

cuFuncSetSharedSize, **cuFuncSetCacheConfig**, **cuFuncGetAttribute**, **cuParamSetSize**, **cuParamSeti**, **cuParamSetf**, **cuParamSetv**, **cuLaunch**, **cuLaunchGrid**, **cuLaunchGridAsync**, **cuLaunchKernel**

CUresult cuFuncSetSharedSize (CUfunction hfunc, unsigned int bytes)

Deprecated

Sets through `bytes` the amount of dynamic shared memory that will be available to each thread block when the kernel given by `hfunc` is launched.

Parameters:

hfunc - Kernel to specify dynamic shared-memory size for
bytes - Dynamic shared-memory size per thread in bytes



Returns:
CUDA_SUCCESS, **CUDA_ERROR_DEINITIALIZED**, **CUDA_ERROR_NOT_INITIALIZED**, **CUDA_ERROR_INVALID_CONTEXT**, **CUDA_ERROR_INVALID_HANDLE**, **CUDA_ERROR_INVALID_VALUE**

Note:
Note that this function may also return error codes from previous, asynchronous launches.

See also:
cuFuncSetBlockShape, **cuFuncSetCacheConfig**, **cuFuncGetAttribute**, **cuParamSetSize**, **cuParamSeti**, **cuParamSetf**, **cuParamSetv**, **cuLaunch**, **cuLaunchGrid**, **cuLaunchGridAsync**, **cuLaunchKernel**

CUresult cuLaunch (CUfunction f)
Deprecated

Invokes the kernel `f` on a 1 x 1 x 1 grid of blocks. The block contains the number of threads specified by a previous call to **cuFuncSetBlockShape()**.

Parameters:
f - Kernel to launch

Returns:
CUDA_SUCCESS, **CUDA_ERROR_DEINITIALIZED**, **CUDA_ERROR_NOT_INITIALIZED**, **CUDA_ERROR_INVALID_CONTEXT**, **CUDA_ERROR_INVALID_VALUE**, **CUDA_ERROR_LAUNCH_FAILED**, **CUDA_ERROR_LAUNCH_OUT_OF_RESOURCES**, **CUDA_ERROR_LAUNCH_TIMEOUT**, **CUDA_ERROR_LAUNCH_INCOMPATIBLE_TEXTURING**, **CUDA_ERROR_SHARED_OBJECT_INIT_FAILED**

Note:
Note that this function may also return error codes from previous, asynchronous launches.

See also:
cuFuncSetBlockShape, **cuFuncSetSharedSize**, **cuFuncGetAttribute**, **cuParamSetSize**, **cuParamSetf**, **cuParamSeti**, **cuParamSetv**, **cuLaunch**, **cuLaunchGrid**, **cuLaunchGridAsync**, **cuLaunchKernel**

CUresult cuLaunchGrid (CUfunction f, int grid_width, int grid_height)
Deprecated

Invokes the kernel `f` on a `grid_width` x `grid_height` grid of blocks. Each block contains the number of threads specified by a previous call to **cuFuncSetBlockShape()**.

Parameters:
f - Kernel to launch
grid_width - Width of grid in blocks
grid_height - Height of grid in blocks

Returns:
CUDA_SUCCESS, **CUDA_ERROR_DEINITIALIZED**, **CUDA_ERROR_NOT_INITIALIZED**, **CUDA_ERROR_INVALID_CONTEXT**, **CUDA_ERROR_INVALID_VALUE**, **CUDA_ERROR_LAUNCH_FAILED**, **CUDA_ERROR_LAUNCH_OUT_OF_RESOURCES**, **CUDA_ERROR_LAUNCH_TIMEOUT**, **CUDA_ERROR_LAUNCH_INCOMPATIBLE_TEXTURING**, **CUDA_ERROR_SHARED_OBJECT_INIT_FAILED**

Note:
Note that this function may also return error codes from previous, asynchronous launches.

See also:
cuFuncSetBlockShape, **cuFuncSetSharedSize**, **cuFuncGetAttribute**, **cuParamSetSize**, **cuParamSetf**, **cuParamSeti**, **cuParamSetv**, **cuLaunch**, **cuLaunchGridAsync**, **cuLaunchKernel**



CUresult cuLaunchGridAsync (CUfunction f, int grid_width, int grid_height, CUstream hStream)
Deprecated

Invokes the kernel `f` on a `grid_width` x `grid_height` grid of blocks. Each block contains the number of threads specified by a previous call to **cuFuncSetBlockShape()**.

Parameters:
f - Kernel to launch
grid_width - Width of grid in blocks
grid_height - Height of grid in blocks
hStream - Stream identifier

Returns:
CUDA_SUCCESS, **CUDA_ERROR_DEINITIALIZED**, **CUDA_ERROR_NOT_INITIALIZED**, **CUDA_ERROR_INVALID_CONTEXT**, **CUDA_ERROR_INVALID_HANDLE**, **CUDA_ERROR_INVALID_VALUE**, **CUDA_ERROR_LAUNCH_FAILED**, **CUDA_ERROR_LAUNCH_OUT_OF_RESOURCES**, **CUDA_ERROR_LAUNCH_TIMEOUT**, **CUDA_ERROR_LAUNCH_INCOMPATIBLE_TEXTURING**, **CUDA_ERROR_SHARED_OBJECT_INIT_FAILED**

Note:
In certain cases where cubins are created with no ABI (i.e., using `ptxas --abi-compile no`), this function may serialize kernel launches. In order to force the CUDA driver to retain asynchronous behavior, set the **CU_CTX_LMEM_RESIZE_TO_MAX** flag during context creation (see **cuCtxCreate**).

This function uses standard semantics.

Note that this function may also return error codes from previous, asynchronous launches.

See also:
cuFuncSetBlockShape, **cuFuncSetSharedSize**, **cuFuncGetAttribute**, **cuParamSetSize**, **cuParamSetf**, **cuParamSeti**, **cuParamSetv**, **cuLaunch**, **cuLaunchGrid**, **cuLaunchKernel**

CUresult cuParamSetf (CUfunction hfunc, int offset, float value)
Deprecated

Sets a floating-point parameter that will be specified the next time the kernel corresponding to `hfunc` will be invoked. `offset` is a byte offset.

Parameters:
hfunc - Kernel to add parameter to
offset - Offset to add parameter to argument list
value - Value of parameter

Returns:
CUDA_SUCCESS, **CUDA_ERROR_DEINITIALIZED**, **CUDA_ERROR_NOT_INITIALIZED**, **CUDA_ERROR_INVALID_CONTEXT**, **CUDA_ERROR_INVALID_VALUE**

Note:
Note that this function may also return error codes from previous, asynchronous launches.

See also:
cuFuncSetBlockShape, **cuFuncSetSharedSize**, **cuFuncGetAttribute**, **cuParamSetSize**, **cuParamSeti**, **cuParamSetv**, **cuLaunch**, **cuLaunchGrid**, **cuLaunchGridAsync**, **cuLaunchKernel**

CUresult cuParamSeti (CUfunction hfunc, int offset, unsigned int value)
Deprecated

Sets an integer parameter that will be specified the next time the kernel corresponding to `hfunc` will be invoked. `offset` is a byte offset.

Parameters:
hfunc - Kernel to add parameter to



offset - Offset to add parameter to argument list
value - Value of parameter

Returns:
CUDA_SUCCESS, **CUDA_ERROR_DEINITIALIZED**, **CUDA_ERROR_NOT_INITIALIZED**, **CUDA_ERROR_INVALID_CONTEXT**, **CUDA_ERROR_INVALID_VALUE**

Note:
Note that this function may also return error codes from previous, asynchronous launches.

See also:
cuFuncSetBlockShape, **cuFuncSetSharedSize**, **cuFuncGetAttribute**, **cuParamSetSize**, **cuParamSetf**, **cuParamSetv**, **cuLaunch**, **cuLaunchGrid**, **cuLaunchGridAsync**, **cuLaunchKernel**

CUresult cuParamSetSize (CUfunction hfunc, unsigned int numbytes)
Deprecated

Sets through `numbytes` the total size in bytes needed by the function parameters of the kernel corresponding to `hfunc`.

Parameters:
hfunc - Kernel to set parameter size for
numbytes - Size of parameter list in bytes

Returns:
CUDA_SUCCESS, **CUDA_ERROR_DEINITIALIZED**, **CUDA_ERROR_NOT_INITIALIZED**, **CUDA_ERROR_INVALID_CONTEXT**, **CUDA_ERROR_INVALID_VALUE**

Note:
Note that this function may also return error codes from previous, asynchronous launches.

See also:
cuFuncSetBlockShape, **cuFuncSetSharedSize**, **cuFuncGetAttribute**, **cuParamSetf**, **cuParamSeti**, **cuParamSetv**, **cuLaunch**, **cuLaunchGrid**, **cuLaunchGridAsync**, **cuLaunchKernel**

CUresult cuParamSetTexRef (CUfunction hfunc, int texunit, CUtexref hTexRef)
Deprecated

Makes the CUDA array or linear memory bound to the texture reference `hTexRef` available to a device program as a texture. In this version of CUDA, the texture-reference must be obtained via **cuModuleGetTexRef()** and the `texunit` parameter must be set to **CU_PARAM_TR_DEFAULT**.

Parameters:
hfunc - Kernel to add texture-reference to
texunit - Texture unit (must be **CU_PARAM_TR_DEFAULT**)
hTexRef - Texture-reference to add to argument list

Returns:
CUDA_SUCCESS, **CUDA_ERROR_DEINITIALIZED**, **CUDA_ERROR_NOT_INITIALIZED**, **CUDA_ERROR_INVALID_CONTEXT**, **CUDA_ERROR_INVALID_VALUE**

Note:
Note that this function may also return error codes from previous, asynchronous launches.

CUresult cuParamSetv (CUfunction hfunc, int offset, void * ptr, unsigned int numbytes)
Deprecated

Copies an arbitrary amount of data (specified in `numbytes`) from `ptr` into the parameter space of the kernel corresponding to `hfunc`. `offset` is a byte offset.

Parameters:
hfunc - Kernel to add data to
offset - Offset to add data to argument list
ptr - Pointer to arbitrary data



numbytes - Size of data to copy in bytes

Returns:

CUDA_SUCCESS, **CUDA_ERROR_DEINITIALIZED**, **CUDA_ERROR_NOT_INITIALIZED**, **CUDA_ERROR_INVALID_CONTEXT**, **CUDA_ERROR_INVALID_VALUE**

Note:

Note that this function may also return error codes from previous, asynchronous launches.

See also:

cuFuncSetBlockShape, **cuFuncSetSharedSize**, **cuFuncGetAttribute**, **cuParamSetSize**, **cuParamSetf**, **cuParamSeti**, **cuLaunch**, **cuLaunchGrid**, **cuLaunchGridAsync**, **cuLaunchKernel**

Author

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