

NAME

Profiler Control –

Functions

CUresult cuProfilerInitialize (const char *configFile, const char *outputFile, CUoutput_mode
outputMode)

Initialize the profiling.

CUresult cuProfilerStart (void)

Enable profiling.

CUresult cuProfilerStop (void)

Disable profiling.

Detailed Description

\brief profiler control functions of the low-level CUDA driver API (cudaProfiler.h)

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

Function Documentation

CUresult cuProfilerInitialize (const char * configFile, const char * outputFile, CUoutput_mode
outputMode)

Using this API user can initialize the CUDA profiler by specifying the configuration file, output file and output file format. This API is generally used to profile different set of counters by looping the kernel launch. The `configFile` parameter can be used to select profiling options including profiler counters. Refer to the 'Compute Command Line Profiler User Guide' for supported profiler options and counters.

Limitation: The CUDA profiler cannot be initialized with this API if another profiling tool is already active, as indicated by the **CUDA_ERROR_PROFILER_DISABLED** return code.

Typical usage of the profiling APIs is as follows:

for each set of counters/options

```
{
cuProfilerInitialize(); //Initialize profiling, set the counters or options in the config file
...
cuProfilerStart();
// code to be profiled
cuProfilerStop();
...
cuProfilerStart();
// code to be profiled
cuProfilerStop();
...
}
```

Parameters:

configFile - Name of the config file that lists the counters/options for profiling.

outputFile - Name of the outputFile where the profiling results will be stored.

outputMode - outputMode, can be CU_OUT_KEY_VALUE_PAIR or CU_OUT_CSV.

Returns:

CUDA_SUCCESS, CUDA_ERROR_INVALID_CONTEXT,
CUDA_ERROR_INVALID_VALUE, CUDA_ERROR_PROFILER_DISABLED

Note:

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

See also:

cuProfilerStart, cuProfilerStop

CUresult cuProfilerStart (void)

Enables profile collection by the active profiling tool for the current context. If profiling is already enabled, then **cuProfilerStart()** has no effect.

cuProfilerStart and cuProfilerStop APIs are used to programmatically control the profiling granularity



by allowing profiling to be done only on selective pieces of code.

Returns:

CUDA_SUCCESS, CUDA_ERROR_INVALID_CONTEXT

Note:

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

See also:

cuProfilerInitialize, cuProfilerStop

CUresult cuProfilerStop (void)

Disables profile collection by the active profiling tool for the current context. If profiling is already disabled, then **cuProfilerStop()** has no effect.

cuProfilerStart and cuProfilerStop APIs are used to programmatically control the profiling granularity by allowing profiling to be done only on selective pieces of code.

Returns:

CUDA_SUCCESS, CUDA_ERROR_INVALID_CONTEXT

Note:

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

See also:

cuProfilerInitialize, cuProfilerStart

Author

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