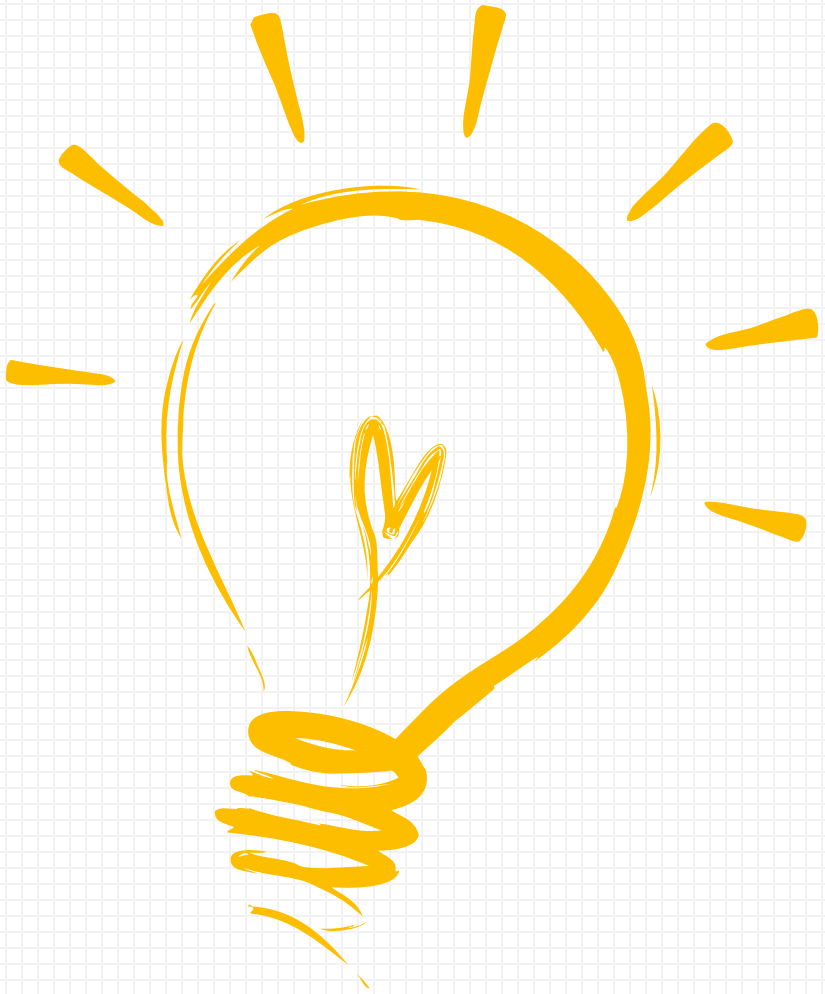
运行时GPU信息查询

CUDA并行编程系列课程

主讲：权双

CONTENTS



01 运行时API查询GPU信息

02 查询GPU计算核心数量

运行时API查询GPU信息

★ 涉及的运行时API函数

★ 调用： cudaDeviceProp prop;

ErrorCheck(cudaGetDeviceProperties(&prop, device_id), __FILE__, __LINE__);

__host__cudaError_t cudaGetDeviceProperties (cudaDeviceProp *prop, int device)

Returns information about the compute-device.

Parameters

prop

- Properties for the specified device

device

- Device number to get properties for

Returns

cudaSuccess, cudaErrorInvalidDevice

运行时API查询GPU信息

★ 查询结果

```
➜ 3.4lesson ./query
Device id:                                 0
Device name:                               Quadro P620
Compute capability:                        6.1
Amount of global memory:                   3.99988 GB
Amount of constant memory:                 64 KB
Maximum grid size:                         2147483647 65535 65535
Maximum block size:                        1024 1024 64
Number of SMs:                             4
Maximum amount of shared memory per block: 48 KB
Maximum amount of shared memory per SM:    96 KB
Maximum number of registers per block:     64 K
Maximum number of registers per SM:        64 K
Maximum number of threads per block:       1024
Maximum number of threads per SM:          2048
```

查询GPU计算核心数量

★ 1、CUDA运行时API函数是无法查询GPU核心数量的（起码我不知道应该用哪一个运行时API函数进行查询）

★ 2、根据GPU的计算能力进行查询

THANKS

谢谢聆听