Basic Capabilities

Sample User's Guide

Intel® SDK for OpenCL Applications - Samples*

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About Basic Capabilities Sample

CapsBasic sample demonstrates how to query all OpenCL* platforms available on the system and list all devices for a given platform. Also it demonstrates several important parameters for each device such as:

- device name
- driver
- vendor information
- other properties and capabilities of the device

Controlling the Sample

This is a console sample. To run it you need to run the executable through terminal:

```
$ ./capsbasic
```

By default, the sample searches for the OpenCL platform that contains "Intel" as a substring in platform name. If the application fails to find this platform, it prints error message and exits. In this case you need to select platform manually by name (as a substring). For example, to select platform, which contains "Different platform name" as a sub-name, run this command:

```
$ ./capsbasic "Different platform name"
```

Running capsbasic without any command-line options (default run) is equivalent to the following:

```
$ ./capsbasic Intel
```

The sample supports the following command-line options:

Option	Description
`-h, --help`	Show this help text and exit.
`<PLATFORM>`	Platform name substring to select platform. Case sensitive. Default value is "Intel". In case of multiple matches, the first matching platform is selected.

Understanding the Sample Output

Sample prints the information in the following order (examples are provided from the system with the Intel® Xeon Phi™ coprocessor and Intel Architecture CPU OpenCL devices):

1. List of available platforms; here is just one platform and it is selected:

... and so on

```
        CL_DEVICE_TYPE_ACCELERATOR[0]
            CL_DEVICE_NAME: Intel(R) Many Integrated Core Acceleration Card
            CL_DEVICE_AVAILABLE: 1
            CL_DEVICE_VENDOR: Intel(R) Corporation
```

... and so on

Each property has form "param_name: param_value", where param_name is one of the enumeration constants accepted by the `clGetDeviceInfo` OpenCL function.