

# Basic Capabilities

## Sample User's Guide

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### *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.