Additional Definitions for the OpenMP API Specification Version 5.1

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1 OpenMP 5.1 Context Definitions

This chapter describes additional values for OpenMP contexts that compliant implementations must support, as stated in Section 2.3.1 of the OpenMP 5.1 specification.

1.1 Additional *kind-name* Values

Table 1.1 describes the *kind-name* values that can be used in the **kind** trait of the OpenMP context in addition to the **host** and **nohost** values.

TABLE 1.1: Additional *kind-name* values

kind-name	**Description**
cpu	A parallel device optimized for general computation
gpu	A massively parallel throughput device
fpga	A reconfigurable computational device

1.2 Supported *vendor-name* Values

Table 1.2 describes the *vendor-name* values that can be used in the **vendor** trait in the OpenMP context and their correspondence to the represented organization.

TABLE 1.2: Additional *vendor-name* values

id	*vendor-name*	**Organization**
0	**unknown**	Any other than those listed below
1	**amd**	Advanced Micro Devices, Inc.

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id	*vendor-name*	**Organization**
2	**arm**	Arm Limited
3	**bsc**	Barcelona Supercomputing Center
4	**fujitsu**	Fujitsu Limited
5	**gnu**	GNU Project
6	**hpe** or **cray**	Hewlett Packard Enterprise
7	**ibm**	IBM Corporation
8	**intel**	Intel Corporation
9	**llvm**	LLVM Foundation
10	**nec**	NEC Corporation
11	**nvidia**	NVIDIA Corporation
12	**ti**	Texas Instruments

2 OpenMP 5.1 Interoperability Definitions

2.1 Foreign Runtime Environment Values

Table 2.1 and Table 2.2 describe the *foreign-runtime-id* values that can be used in the **interop** directive.

TABLE 2.1: Interop foreign runtime ids, names to be used as string literals for same, and their associated concrete data types for **targetsync** and **device_context** properties

*foreign-runtime-id*s		data types	
id	name	**targetsync**	**device_context**
1	cuda	**cudaStream_t**	N/A
2	cuda_driver	**CUstream**	**CUcontext**
3	opencl	**cl_queue**	**cl_context**
4	sycl	**cl::sycl::queue**	**cl::sycl::context**
5	hip	**hipStream_t**	**hipCtx_t**
6	level_zero	**ze_command_queue_handle_t**	**ze_context_handle_t**

TABLE 2.2: Interop foreign runtime ids, names to be used as string literals for same, and their associated concrete data types for device and platform properties

*foreign-runtime-id*s		data types	
id	name	**device**	**platform**
1	cuda	**int**	N/A
2	cuda_driver	**CUdevice**	N/A
3	opencl	**cl_device**	**cl_platform**
4	sycl	**cl::sycl::device**	**cl::sycl::platform**
5	hip	**hipDevice_t**	N/A

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*foreign-runtime-id*s		data types	
id	name	**device**	**platform**
6	level_zero	**ze_device_handle_t**	**ze_driver_handle_t**