DPDK

DATA PLANE DEVELOPMENT KIT

Getting Started Guide for Windows

Release 19.08.0

Aug 11, 2019

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CHAPTER

ONE

INTRODUCTION

This document contains instructions for installing and configuring the Data Plane Development Kit (DPDK) software. The document describes how to compile and run a DPDK application in a Windows* OS application environment, without going deeply into detail.

*Other names and brands may be claimed as the property of others.

CHAPTER

TWO

LIMITATIONS

DPDK for Windows is currently a work in progress. Not all DPDK source files compile. Support is being added in pieces so as to limit the overall scope of any individual patch series. The goal is to be able to run any DPDK application natively on Windows.

CHAPTER

THREE

COMPILING THE DPDK TARGET FROM SOURCE

3.1 System Requirements

The DPDK and its applications require the Clang-LLVM C compiler and Microsoft MSVC linker. The Meson Build system is used to prepare the sources for compilation with the Ninja backend. The installation of these tools is covered in this section.

3.2 Install the Compiler

Download and install the clang compiler from LLVM website. For example, Clang-LLVM direct download link:

```
http://releases.llvm.org/7.0.1/LLVM-7.0.1-win64.exe
```

3.3 Install the Linker

Download and install the Build Tools for Visual Studio to link and build the files on windows, from Microsoft website. When installing build tools, select the "Visual C++ build tools" option and ensure the Windows SDK is selected.

3.4 Install the Build System

Download and install the build system from Meson website. A good option to choose is the MSI installer for both meson and ninja together:

```
http://mesonbuild.com/Getting-meson.html#installing-meson-and-ninja-with-the-msi-installer%22
```

3.5 Install the Backend

If using Ninja, download and install the backend from Ninja website or install along with the meson build system.

3.6 Build the code

The build environment is setup to build the EAL and the helloworld example by default.

3.6.1 Using the ninja backend

Specifying the compiler might be required to complete the meson command.

```
set CC=clang
```

To compile the examples, the flag `-Dexamples` is required.

```
cd C:\Users\me\dpdk
meson -Dexamples=helloworld build
cd build
ninja
```

CHAPTER

FOUR

RUN THE HELLOWORLD EXAMPLE

Navigate to the examples in the build directory and run *dpdk-helloworld.exe*.

```
cd C:\Users\me\dpdk\build\examples
dpdk-helloworld.exe
hello from core 1
hello from core 3
hello from core 0
hello from core 2
```