DPDK

DATA PLANE DEVELOPMENT KIT

Mempool Device Driver

Release 19.02.0

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The following are a list of mempool PMDs, which can be used from an application through the mempool API.

CHAPTER

ONE

OCTEON TX FPAVF MEMPOOL DRIVER

The OCTEON TX FPAVF PMD (**librte_mempool_octeontx**) is a mempool driver for offload mempool device found in **Cavium OCTEON TX** SoC family.

More information can be found at Cavium, Inc Official Website.

1.1 Features

Features of the OCTEON TX FPAVF PMD are:

- 32 SR-IOV Virtual functions
- 32 Pools
- HW mempool manager

1.2 Supported OCTEON TX SoCs

- CN83xx

1.3 Prerequisites

See :doc: *../platform/octeontx.rst* for setup information.

1.4 Pre-Installation Configuration

1.4.1 Config File Options

The following options can be modified in the `config` file. Please note that enabling debugging options may affect system performance.

- `CONFIG_RTE_MBUF_DEFAULT_MEMPOOL_OPS` (set to `octeontx_fpavf`)

  Set default mempool ops to octeontx_fpavf.

- `CONFIG_RTE_LIBRTE_OCTEONTX_MEMPOOL` (default `y`)

  Toggle compilation of the `librte_mempool_octeontx` driver.

1.4.2 Driver Compilation

To compile the OCTEON TX FPAVF MEMPOOL PMD for Linux arm64 gcc target, run the following `make` command:

```
cd <DPDK-source-directory>
make config T=arm64-thunderx-linuxapp-gcc test-build
```

1.5 Initialization

The OCTEON TX fpavf mempool initialization similar to other mempool drivers like ring. However user need to pass –base-virtaddr as command line input to application example test_mempool.c application.

Example:

```
./build/app/test -c 0xf --base-virtaddr=0x100000000000 \
                    --mbuf-pool-ops-name="octeontx_fpavf"
```