

DPDK 16.04 Bug

CPU: Intel(R) Xeon(R) CPU E5-2687W v3
NICs: (2) Intel Corporation Ethernet 10G 2P X710 Adapter
OS: Ubuntu 14.04
Kernel: 3.16.0-60-generic (x84_64)
DPDK: 16.04

Network devices using DPDK-compatible driver

```
=====
0000:01:00.1 'Ethernet 10G 2P X710 Adapter' drv=igb_uio unused=
0000:01:00.2 'Ethernet 10G 2P X710 Adapter' drv=igb_uio unused=
```

Problem: `rte_eth_rx_burst(...)` is not initializing the `rte_mbuf` struct. Specifically, `mb → packet.type` is always 0. However, `rte_pkt_mtod(mb, struct ether_hdr *)` does return a pointer at the beginning of the Ethernet header and parsing other higher level headers (e.g., TCP) works correctly.

Reproducing: Compile `dpdk-16.04`. Set `verbose.level=1` in `testpmd.c` and compile. Run `./testpmd -i, 'set fwd rxonly', 'start'`.

Example output:

```
src=00:00:00:00:00:01 - dst=00:00:00:00:00:02 - type=0x0800 - length=60 - nb_segs=1
Unknown packet type // Should have been RTE_PTYPE_L2_ETHER:
- Receive queue=0x0
src=00:00:00:00:00:01 - dst=00:00:00:00:00:02 - type=0x0800 - length=60 - nb_segs=1
Unknown packet type // Should have been RTE_PTYPE_L2_ETHER:
- Receive queue=0x0
...
```

Repeating the steps above with `dpdk-2.2.0` on the same machine does not have this issue.

Example output on dpdk-2.2.0:

```
src=00:00:00:00:00:01 - dst=00:00:00:00:00:02 - type=0x0800 - length=60 - nb_segs=1
- (outer) L2 type: ETHER - (outer) L3 type: IPV4_EXT_UNKNOWN - (outer) L4 type: UDP
- Tunnel type: Unknown - Inner L2 type: Unknown - Inner L3 type: Unknown - Inner L4
type: Unknown
- Receive queue=0x0
...
```