**<https://doc.dpdk.org/api/rte__ethdev_8h.html>**

***rte\_eth\_dev\_configure(port\_id, nb\_rx\_queue, nb\_tx\_queue, eth\_conf)***

配置以太网设备

参数：

port\_id: 需要配置的以太网设备的端口id。

nb\_rx\_queue: 为以太网设备设置的接收队列的数量。

nb\_tx\_queue: 为以太网设备设置的发送队列的数量。

eth\_conf: 指向用于以太网设备的配置数据的指针，设定为默认时为：

struct rte\_eth conf port-conf=port\_conf\_default;

***rte\_eth\_tx\_queue\_setup(port\_id, tx\_queue\_id, nb\_tx\_desc, socket\_id, tx\_conf)***

给以太网设备分配并配置一个传输队列

***rte\_eth\_promiscuous\_enable(port)***

混杂模式：这个是设置port网口的混杂模式，只要是到这个网口的数据包，不管是不是发给它的都会接受。

***rte\_eth\_dev\_count\_avail()***

The count of available Ethernet devices. 查看其是否等于零来判断是否有以太网支持。

***int rte\_eth\_dev\_socket\_id(uint16\_t port\_id)***

Return the NUMA socket to which an Ethernet device is connected

***int rte\_eth\_dev\_start(uint16\_t*port\_id*)***

启动以太网设备，这是启动设备的最后一步，之前要将别的参数都配置好

***int rte\_eth\_dev\_info\_get ( uint16\_t  port\_id, struct rte\_eth\_dev\_info \*  dev\_info)*** 检索以太网设备的上下文信息

***struct rte\_mempool\* rte\_pktmbuf\_pool\_create***

***(const char \* name,***

***unsigned n,***

***unsigned cache\_size,***

***uint16\_t priv\_size,***

***uint16\_t data\_room\_size,***

***int socket\_id***

***)***

创建并且初始化mbuf pool

|  |  |
| --- | --- |
| name | The name of the mbuf pool. |
| n | The number of elements in the mbuf pool. The optimum size (in terms of memory usage) for a mempool is when n is a power of two minus one: n = (2^q - 1). |
| cache\_size | Size of the per-core object cache. See [rte\_mempool\_create()](https://doc.dpdk.org/api/rte__mempool_8h.html" \l "a503f2f889043a48ca9995878846db2fd) for details. |
| priv\_size | Size of application private are between the [rte\_mbuf](https://doc.dpdk.org/api/structrte__mbuf.html) structure and the data buffer. This value must be aligned to RTE\_MBUF\_PRIV\_ALIGN. |
| data\_room\_size | Size of data buffer in each mbuf, including RTE\_PKTMBUF\_HEADROOM. |
| socket\_id | The socket identifier where the memory should be allocated. The value can be SOCKET\_ID\_ANY if there is no NUMA constraint for the reserved zone. |

***static uint16\_t rte\_eth\_rx\_burst (uint16\_t  port\_id, uint16\_t  queue\_id, struct rte\_mbuf \*\*  rx\_pkts, const uint16\_t  nb\_pkts  )***

从以太网设备的接收队列当中检索输入数据包，并且存放在rte\_mbuf当中

|  |  |
| --- | --- |
| port\_id | The port identifier of the Ethernet device. |
| queue\_id | The index of the receive queue from which to retrieve input packets. The value must be in the range [0, nb\_rx\_queue - 1] previously supplied to [rte\_eth\_dev\_configure()](https://doc.dpdk.org/api/rte__ethdev_8h.html" \l "a1a7d3a20b102fee222541fda50fd87bd). |
| rx\_pkts | The **address** of an array of pointers to [rte\_mbuf](https://doc.dpdk.org/api/structrte__mbuf.html) structures that must be large enough to store nb\_pkts pointers in it. |
| nb\_pkts | The **maximum** number of packets to retrieve. The value must be divisible by 8 in order to work with any driver. |