Packet Structures of OpenFlow 1.0.0

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1 ofp_header

Figure 1

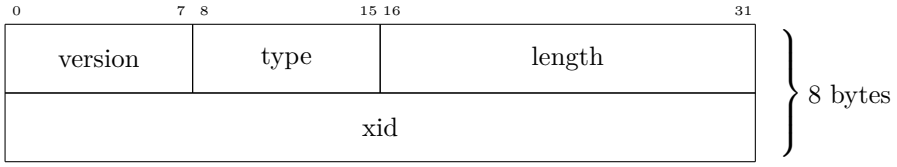
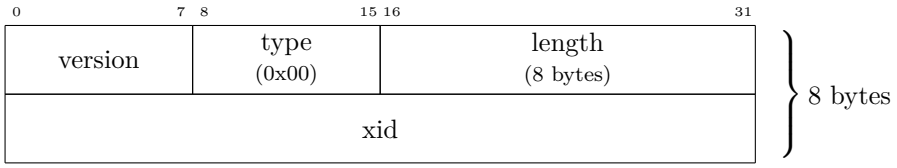


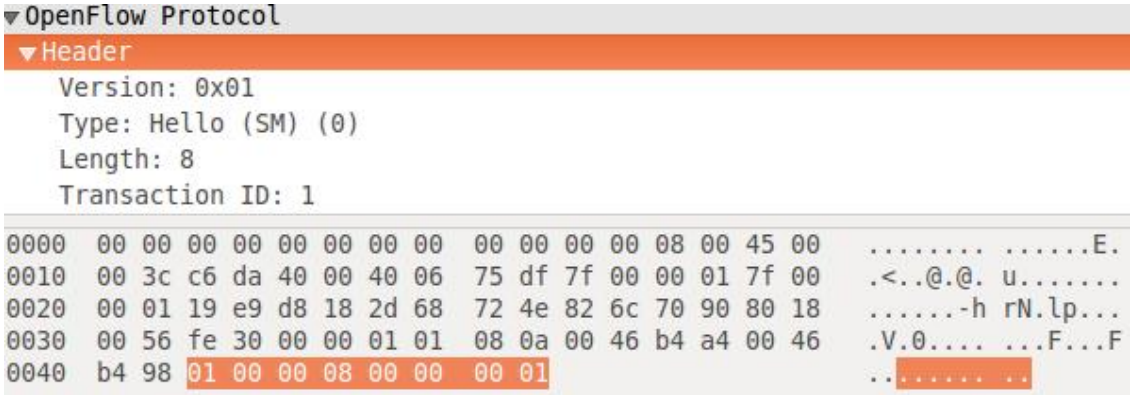
Figure 1 ofp_header

2 ofp_hello

Figure 2



(a)



(b)

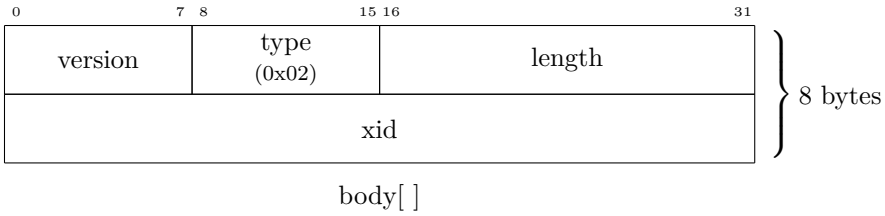
Figure 2 ofp_hello

3 ofp_echo_request

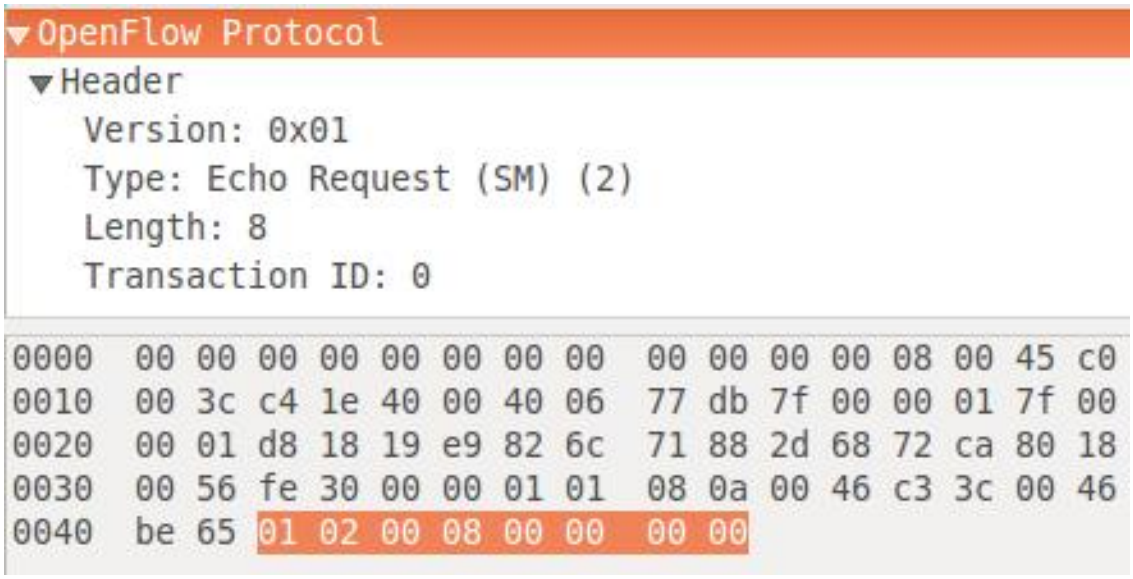
Figure 3

4 ofp_echo_reply

Figure 4

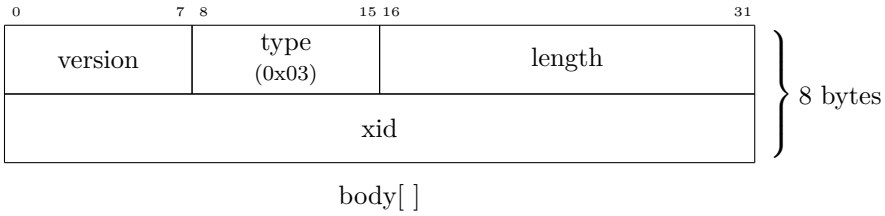


(a)

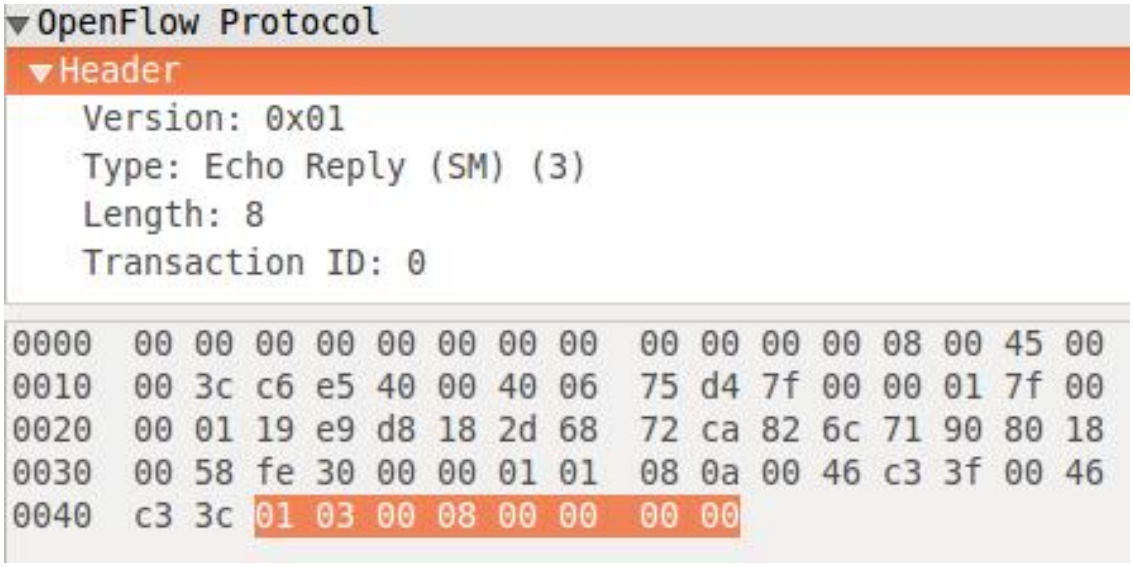


(b)

Figure 3 ofp_echo_request



(a)

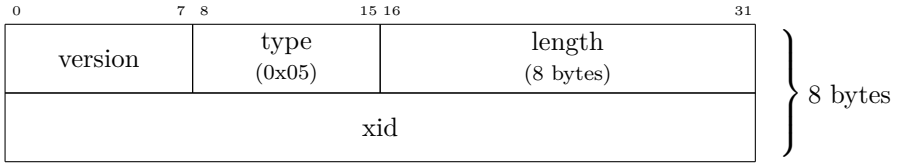


(b)

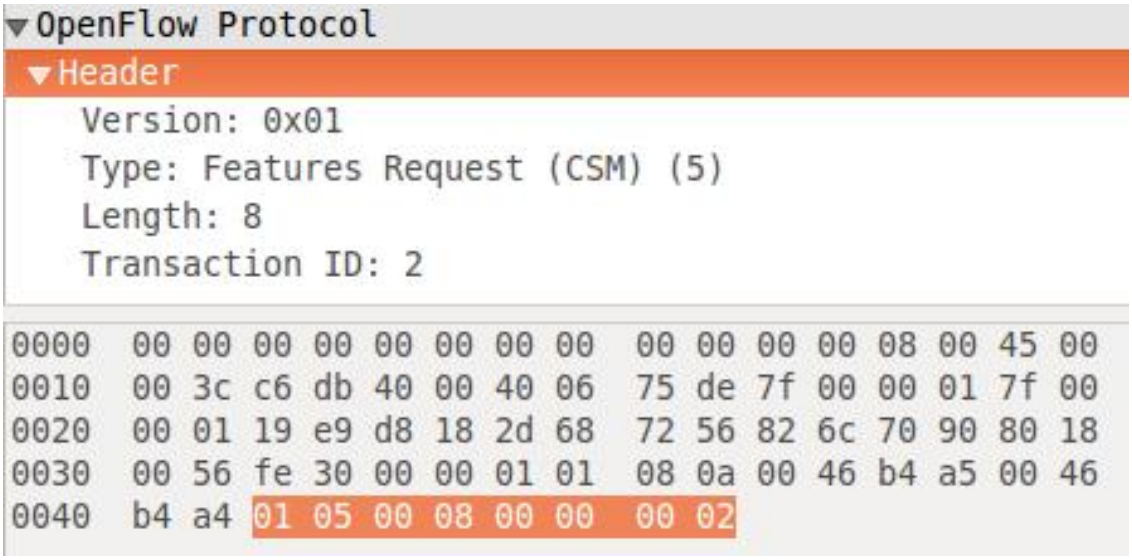
Figure 4 ofp_echo_reply

5 ofp_features_request

Figure 5



(a)



(b)

Figure 5 ofp_features_request

6 ofp_phy_port

Figure 6

7 ofp_packet_queue

Figure 7

8 ofp_queue_prop_header

Figure 8

9 ofp_queue_prop_min_rate

Figure 9

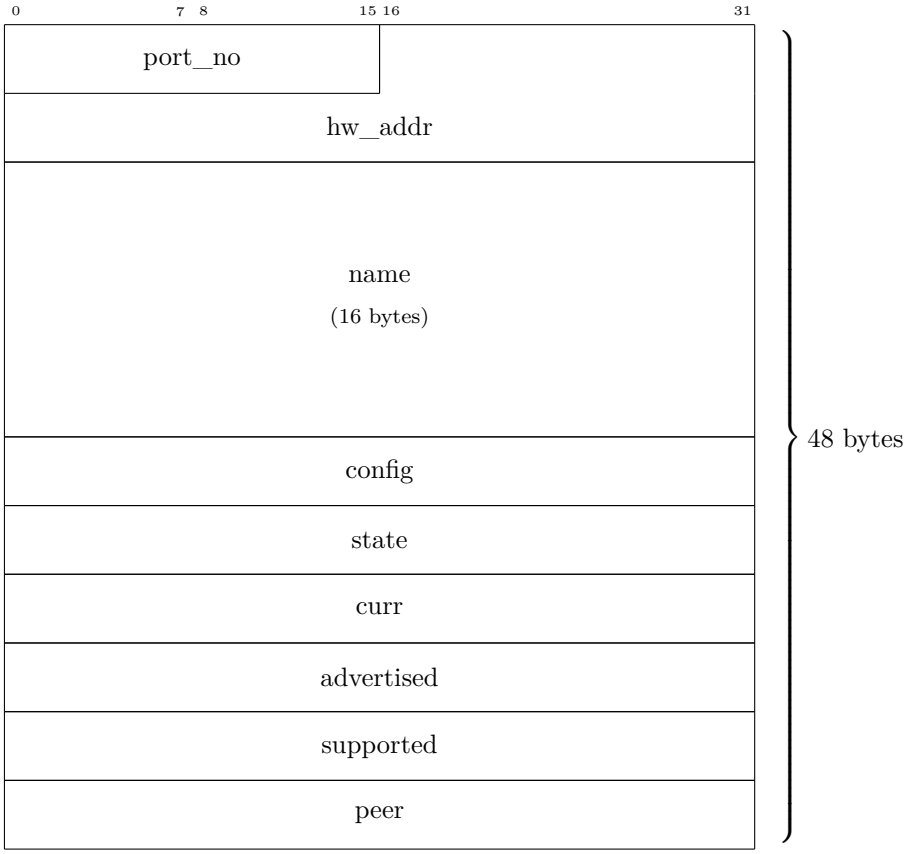


Figure 6 ofp_phy_port

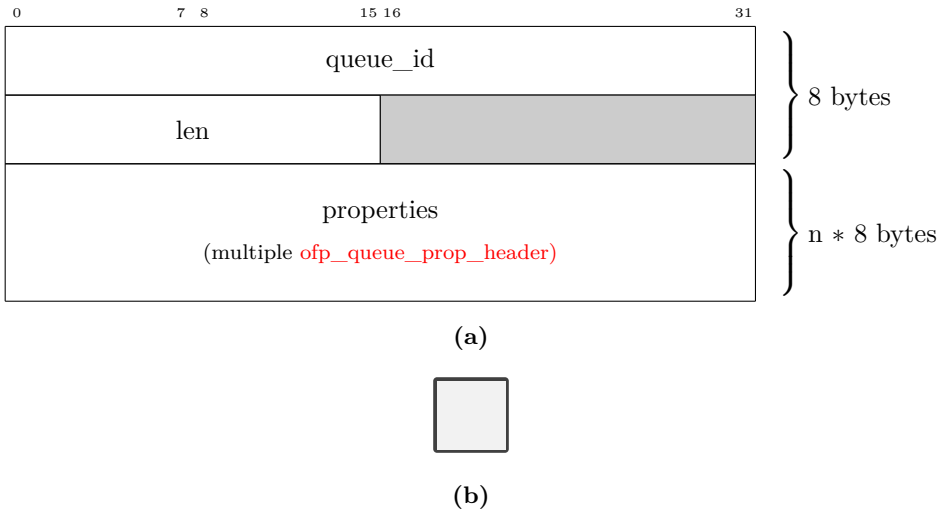


Figure 7 ofp_packet_queue

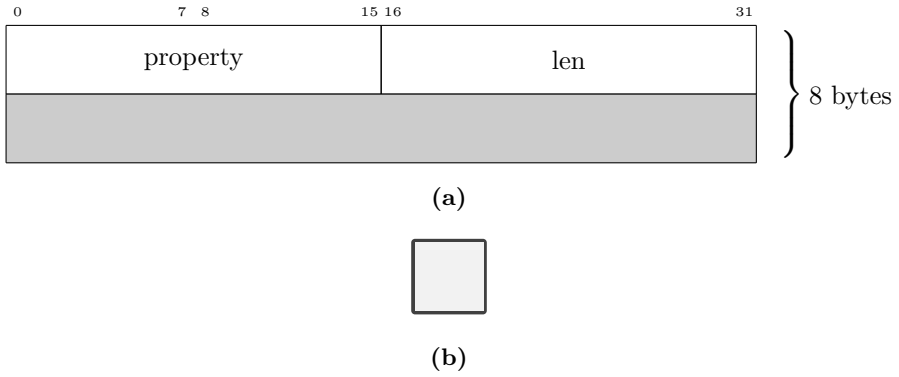


Figure 8 ofp_queue_prop_header

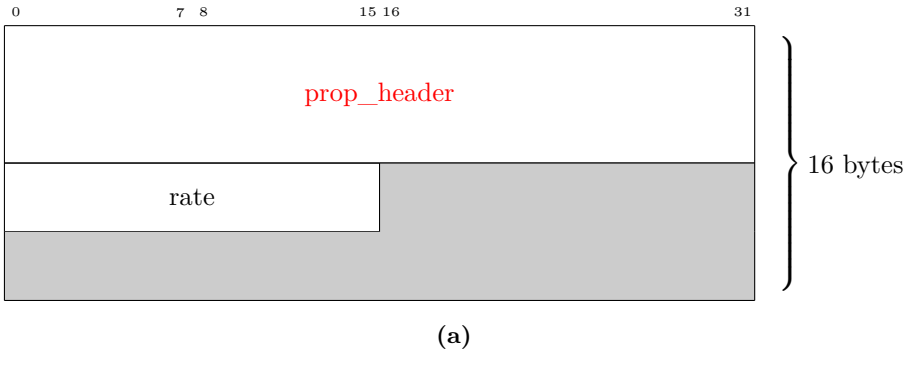


Figure 9 ofp_queue_prop_min_rate

10 ofp_match

Figure 10

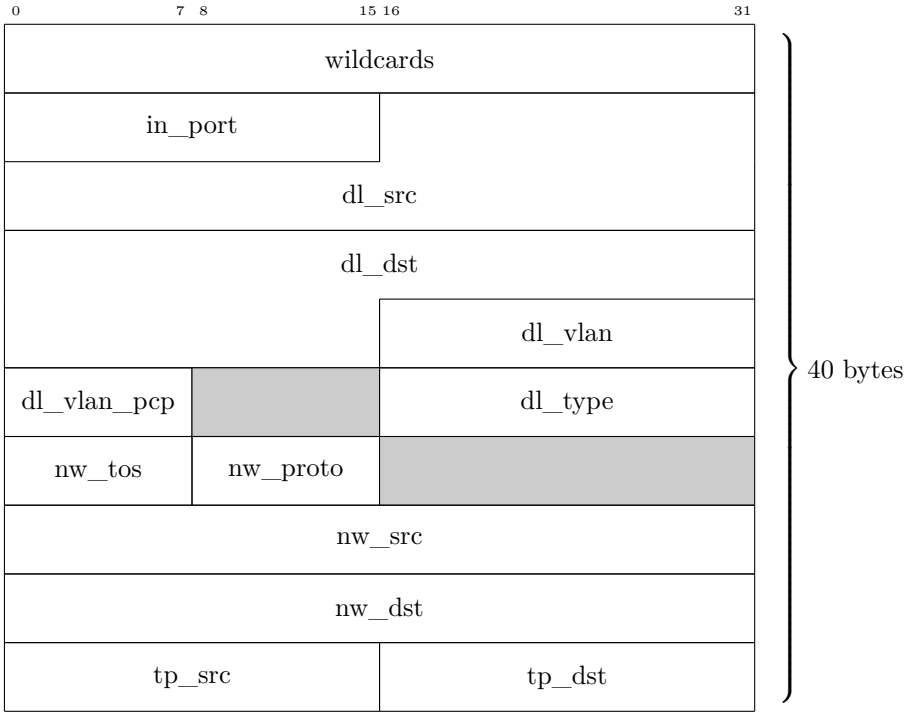


Figure 10 ofp_match

11 ofp_action_header

Figure 11

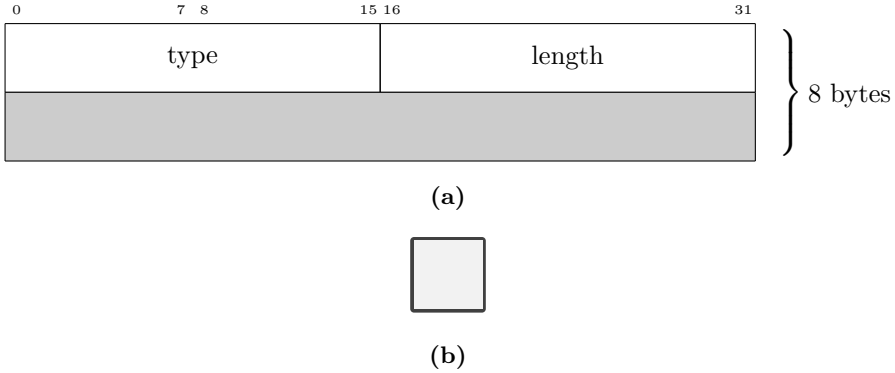


Figure 11 ofp_action_header

12 ofp_action_output

Figure 12

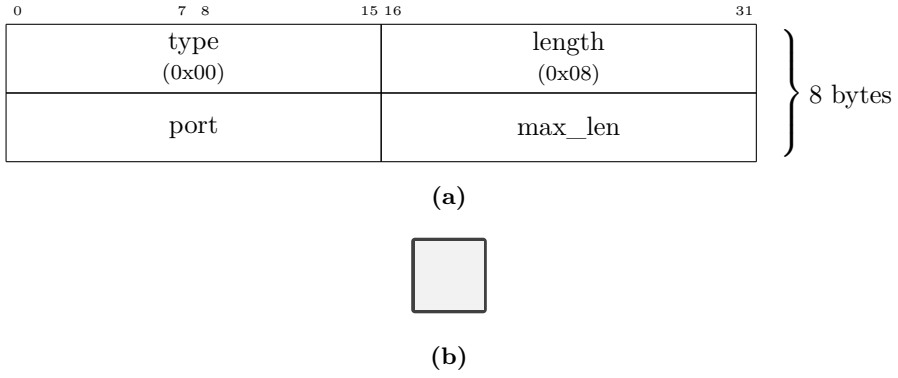


Figure 12 ofp_action_output

13 ofp_action_enqueue

Figure 13

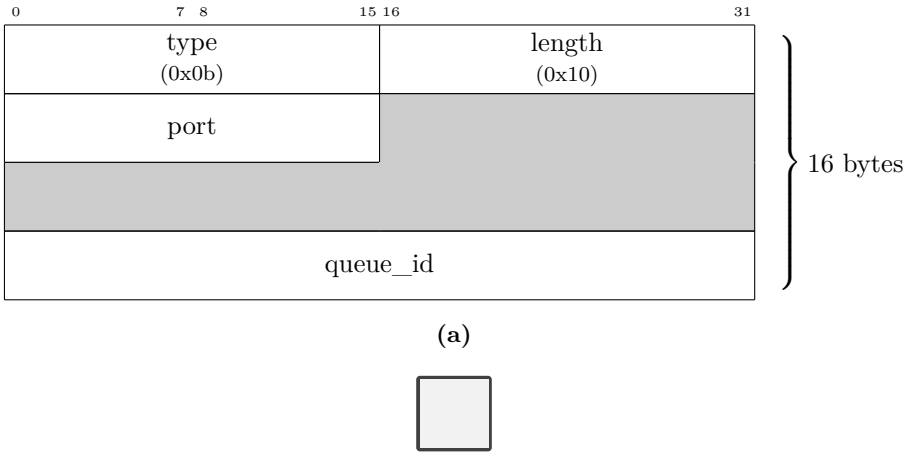


Figure 13 ofp_action_enqueue

14 ofp_action_vlan_vid

Figure 14

15 ofp_action_vlan_pcp

Figure 15

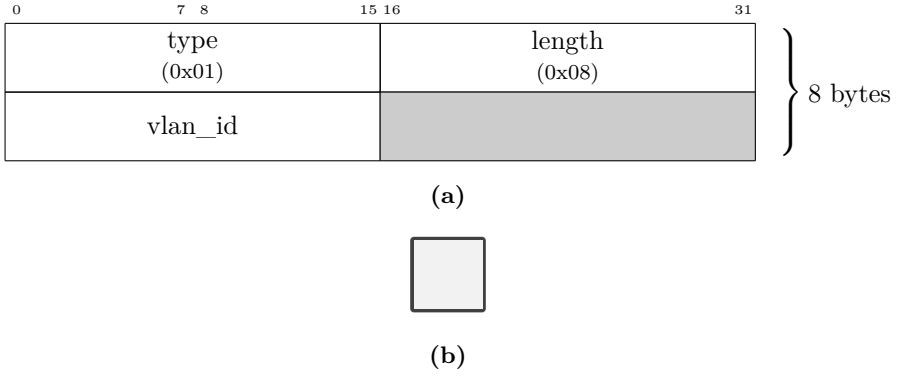


Figure 14 ofp_action_vlan_vid

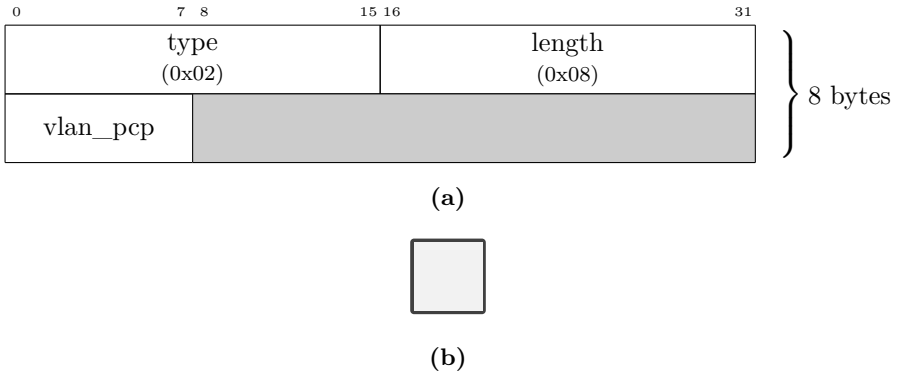


Figure 15 ofp_action_vlan_pcp

16 ofp_action_dl_addr

Figure 16

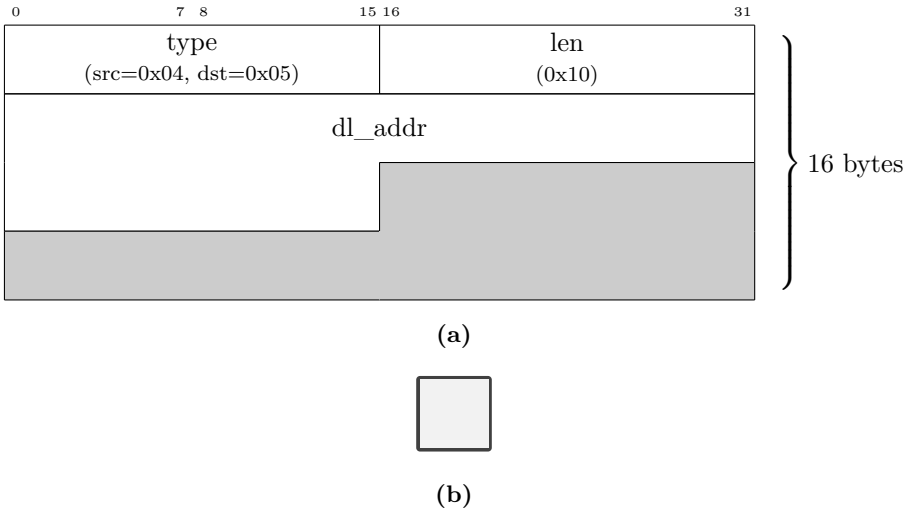


Figure 16 ofp_action_dl_addr

17 ofp_action_nw_addr

Figure 17

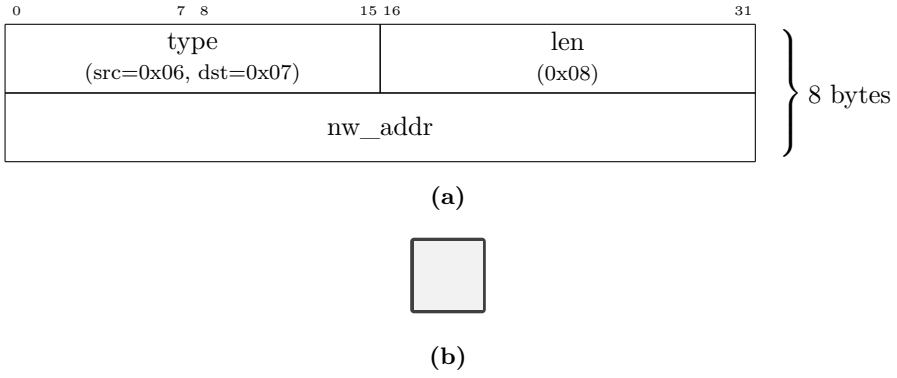


Figure 17 ofp_action_nw_addr

18 ofp_action_nw_tos

Figure 18

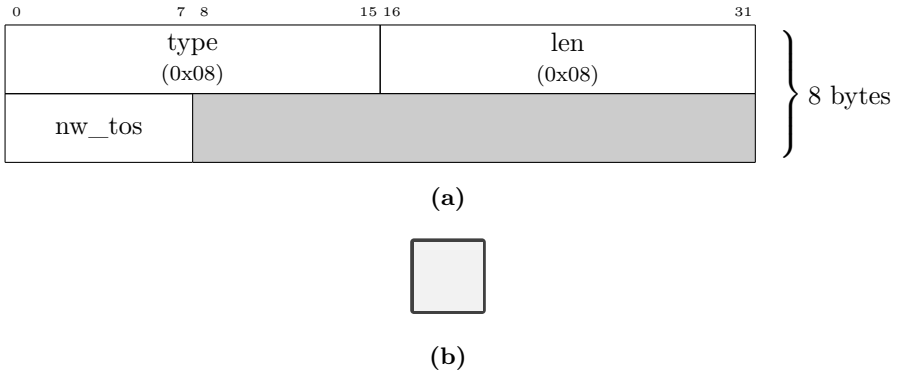


Figure 18 ofp_action_nw_tos

19 ofp_action_tp_port

Figure 19

20 ofp_action_vendor_header

Figure 20

21 ofp_features_reply

Figure 21

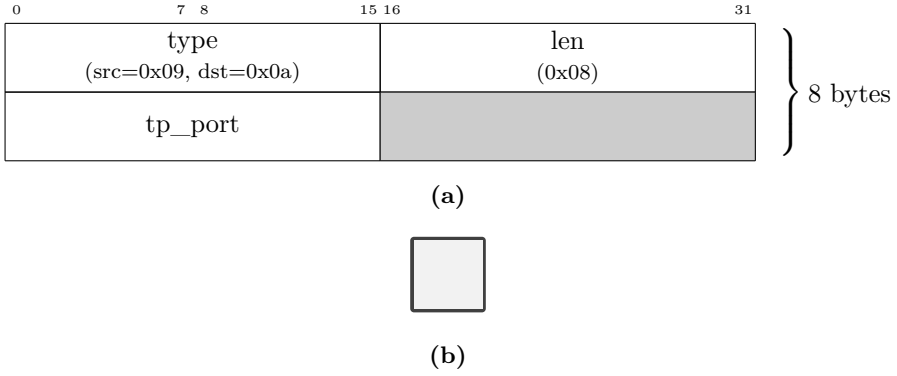


Figure 19 ofp_action_tp_port

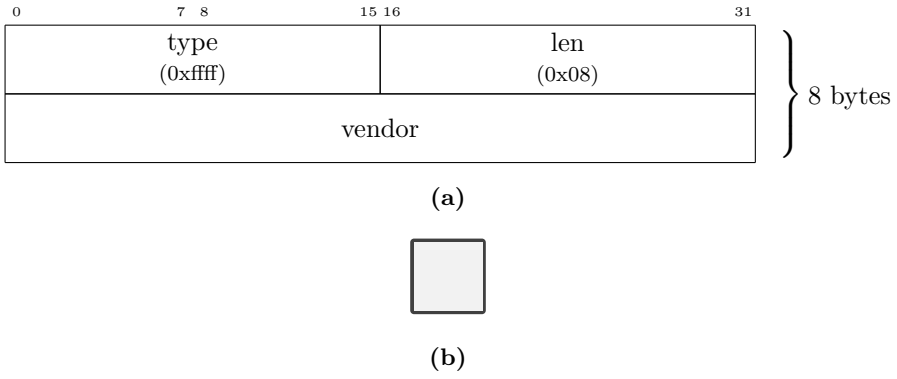


Figure 20 ofp_action_vendor_header

22 ofp_switch_config

Figure 22

23 ofp_flow_mod

Figure 23

24 ofp_port_mod

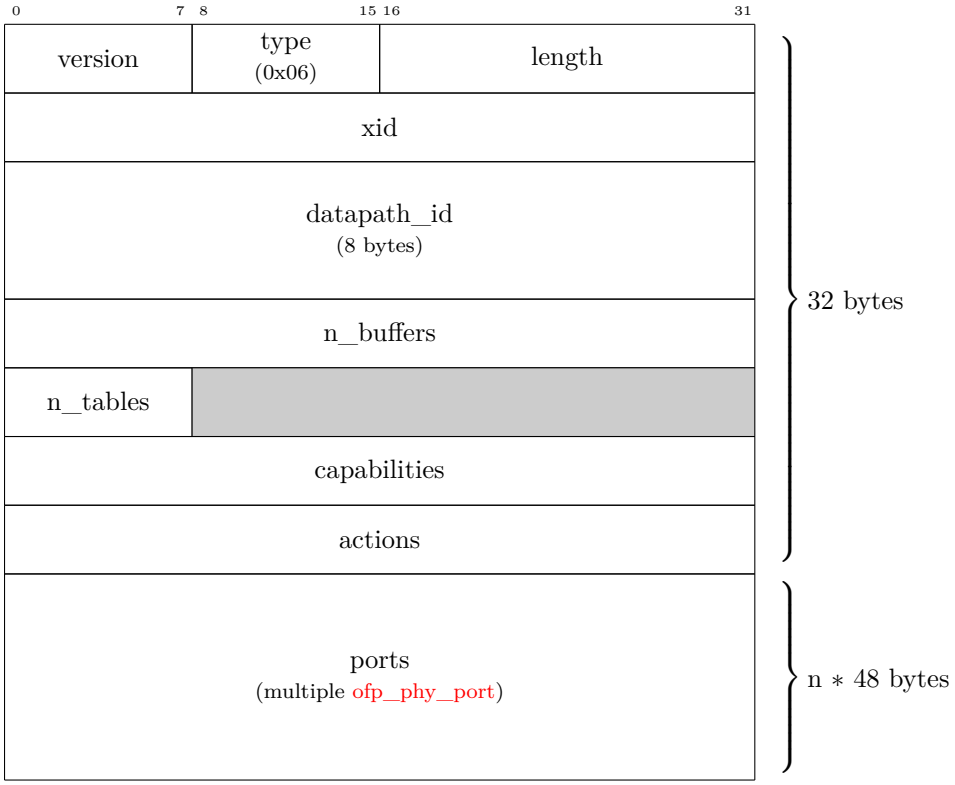
Figure 24

25 ofp_queue_get_config_request

Figure 25

26 ofp_queue_get_config_reply

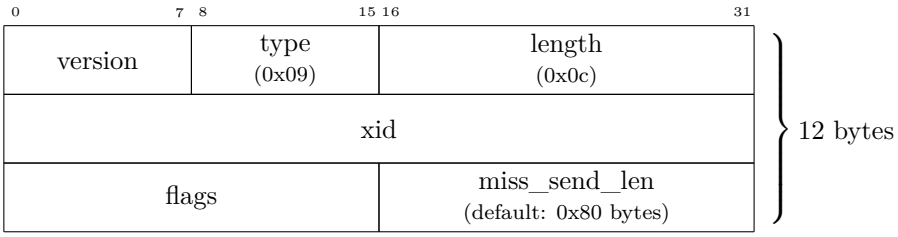
Figure 26



(a)

(b)

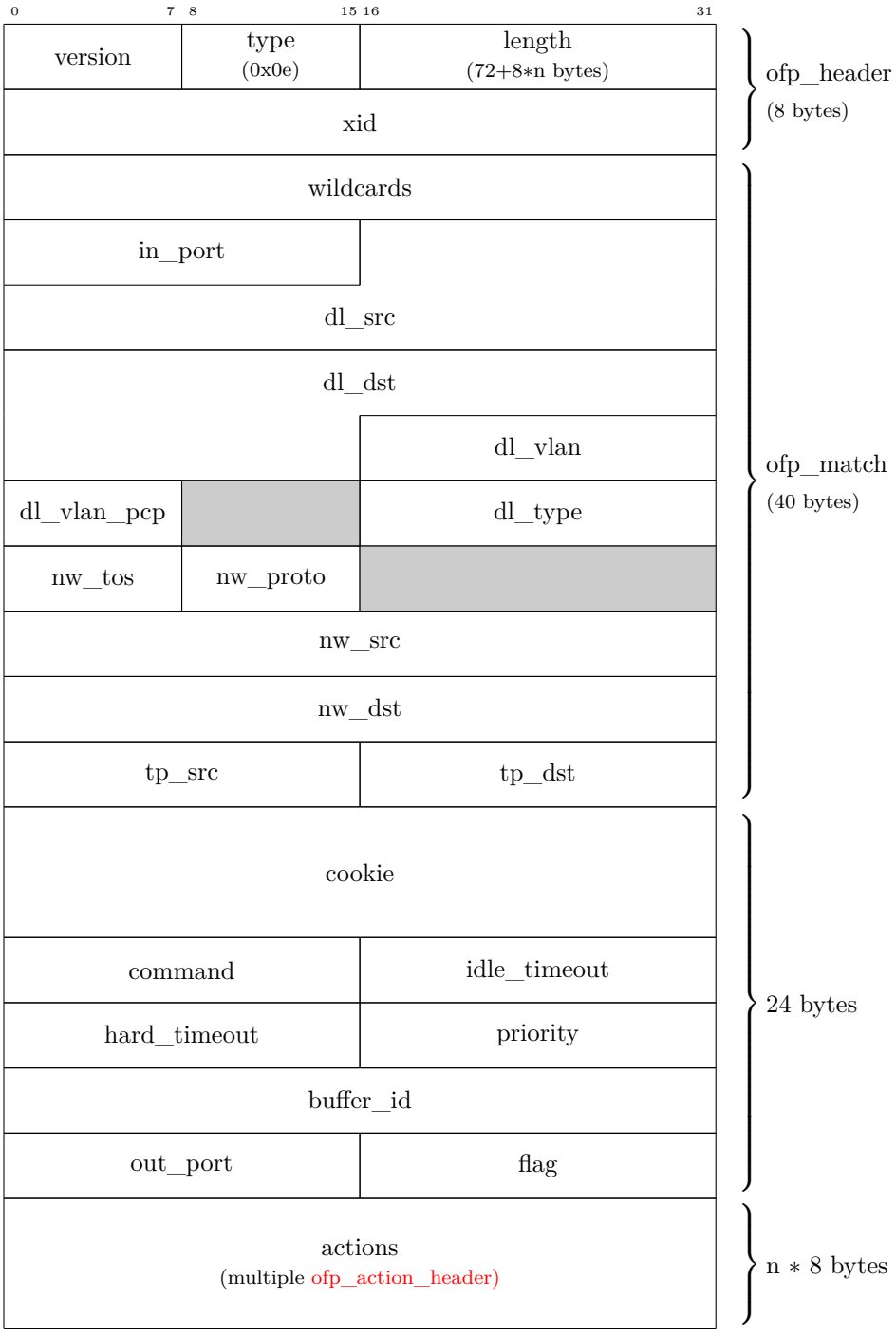
Figure 21 ofp_features_reply



(a)

(b)

Figure 22 ofp_switch_config



(a)

(b)

Figure 23 ofp_flow_mod

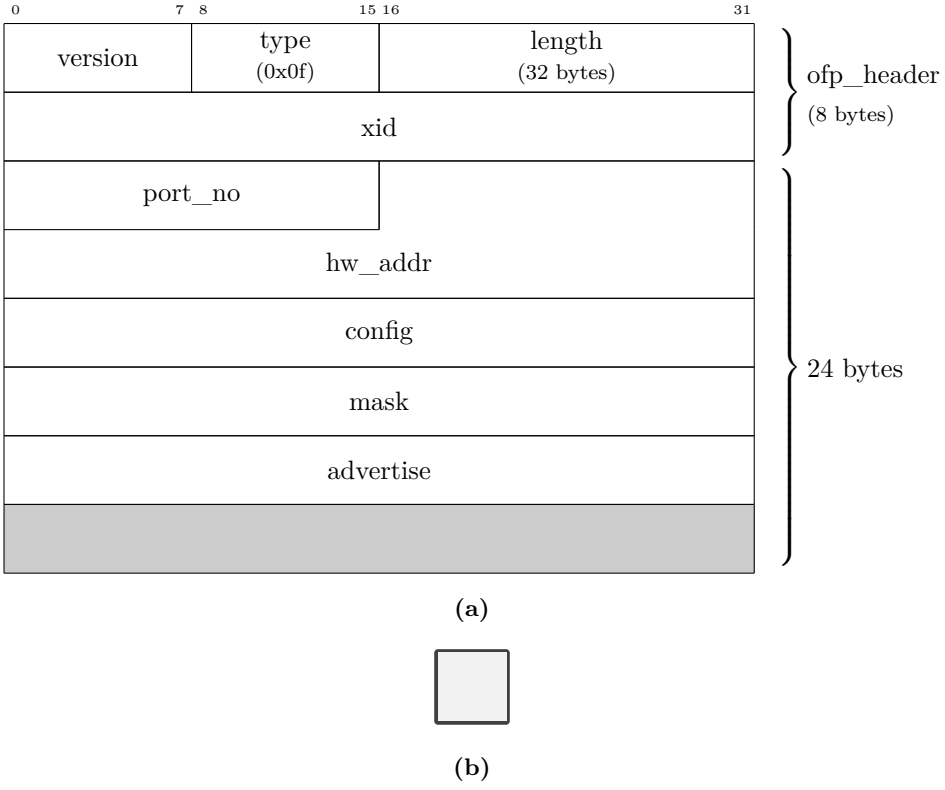


Figure 24 ofp_port_mod

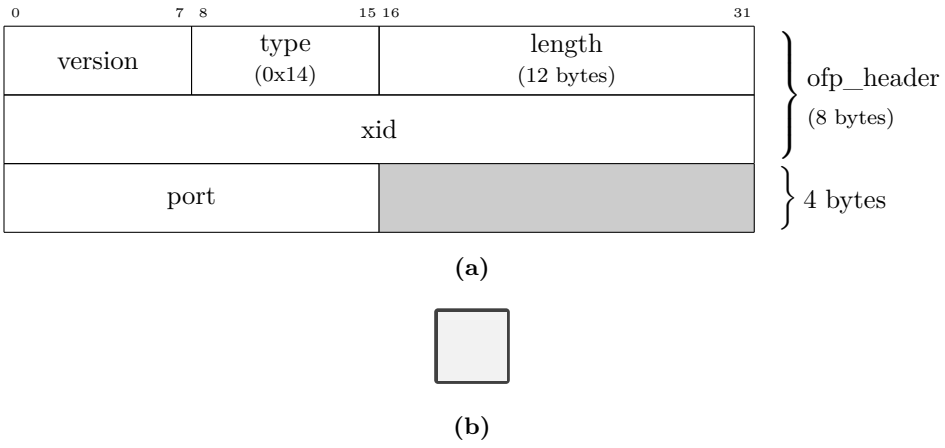


Figure 25 ofp_queue_get_config_request

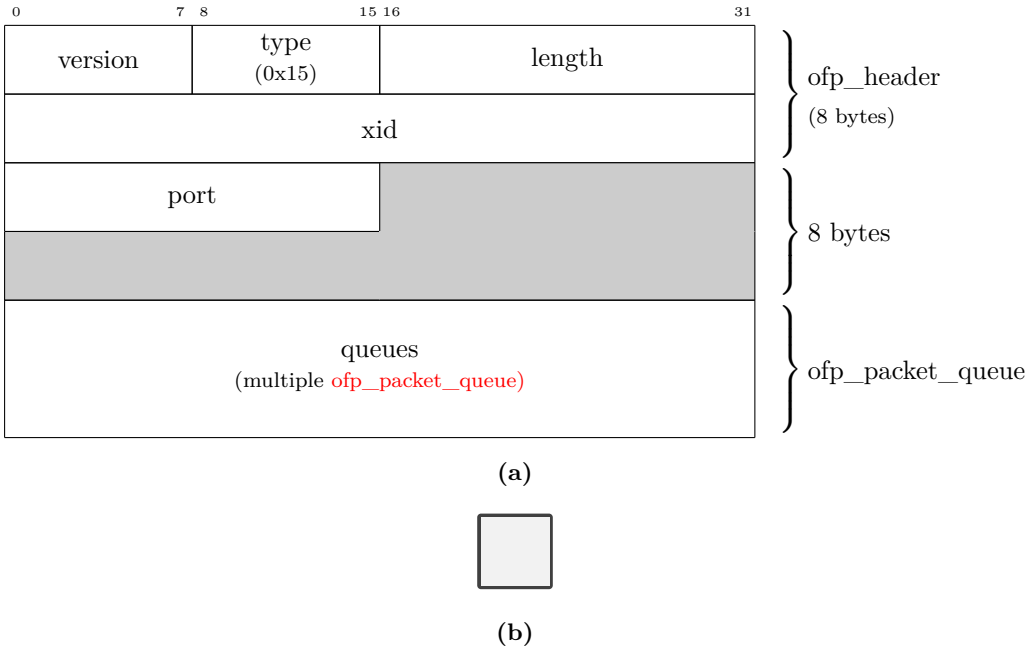


Figure 26 ofp_queue_get_config_repy

27 ofp_stats_request

Figure 37

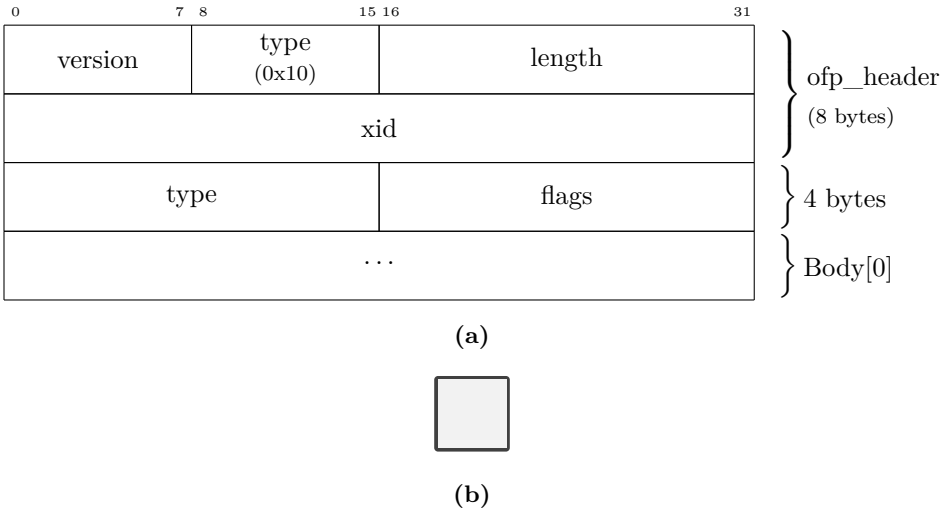


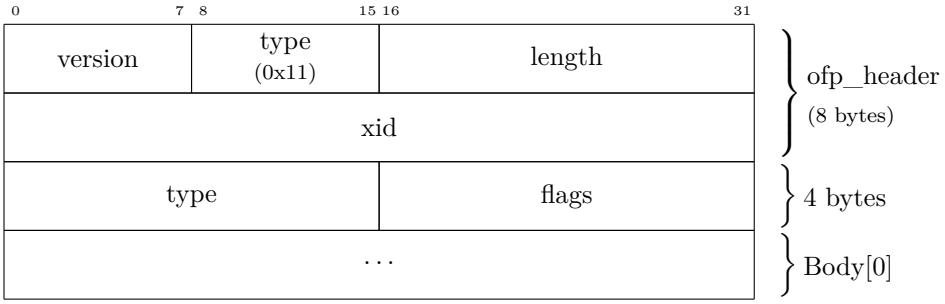
Figure 27 ofp_stats_request

28 ofp_stats_reply

Figure 28

29 ofp_desc_stats

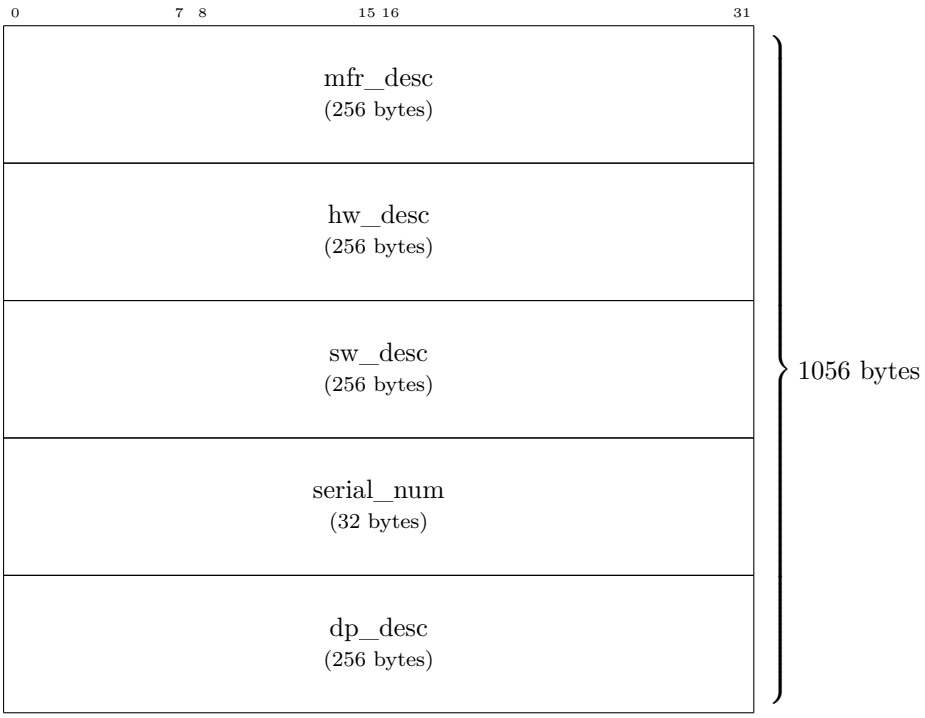
Figure 29



(a)

(b)

Figure 28 ofp_stats_reply



(a)

(b)

Figure 29 ofp_desc_stats

30 ofp_flow_stats_request

Figure 30

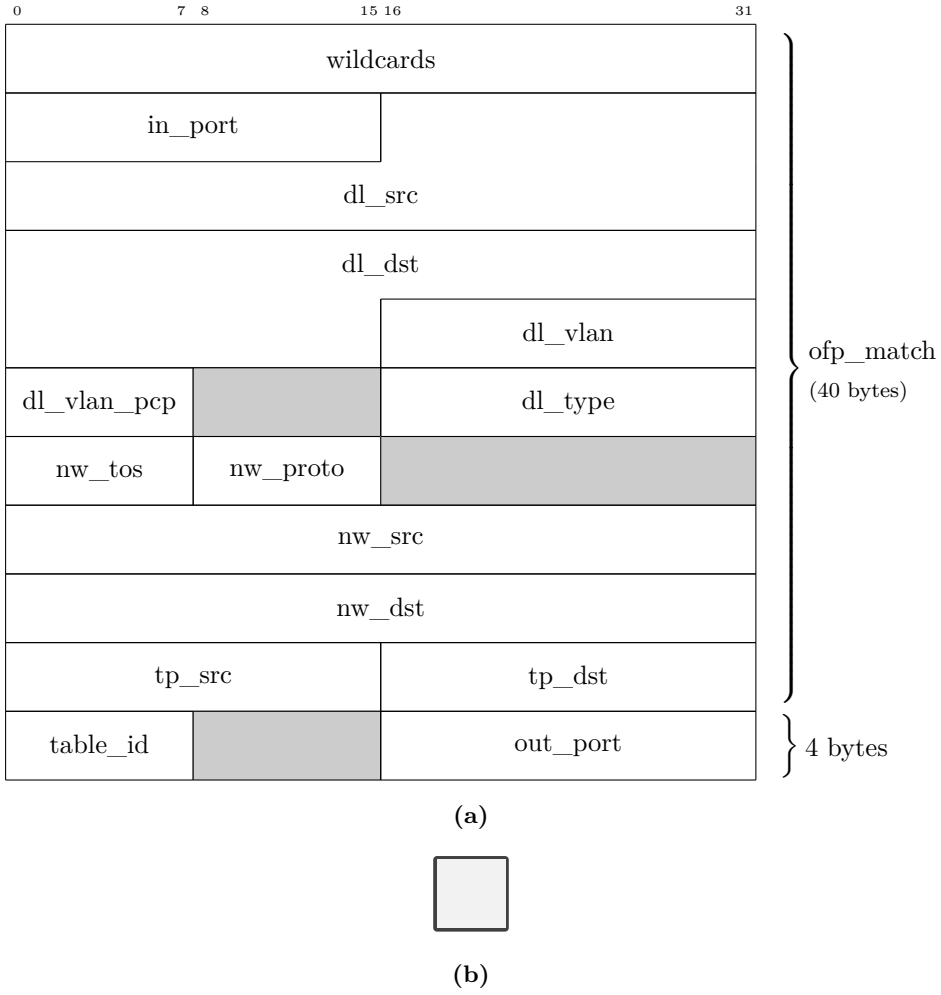


Figure 30 ofp_flow_stats_request

31 ofp_flow_stats

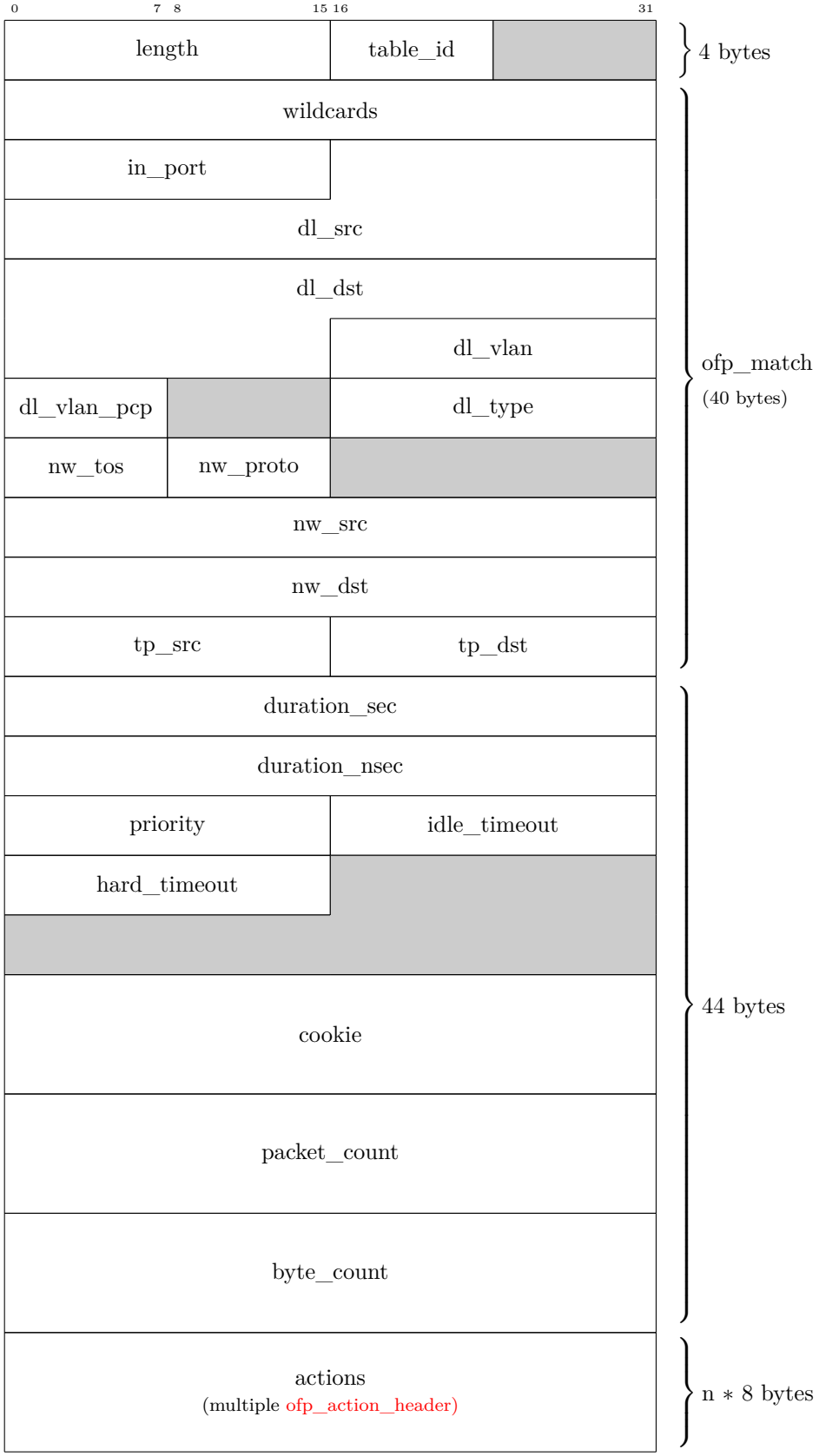
Figure 31

32 ofp_aggregate_stats_request

Figure 32

33 ofp_aggregate_stats_reply

Figure 33



(a)

(b)

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Figure 31 ofp_flow_stats

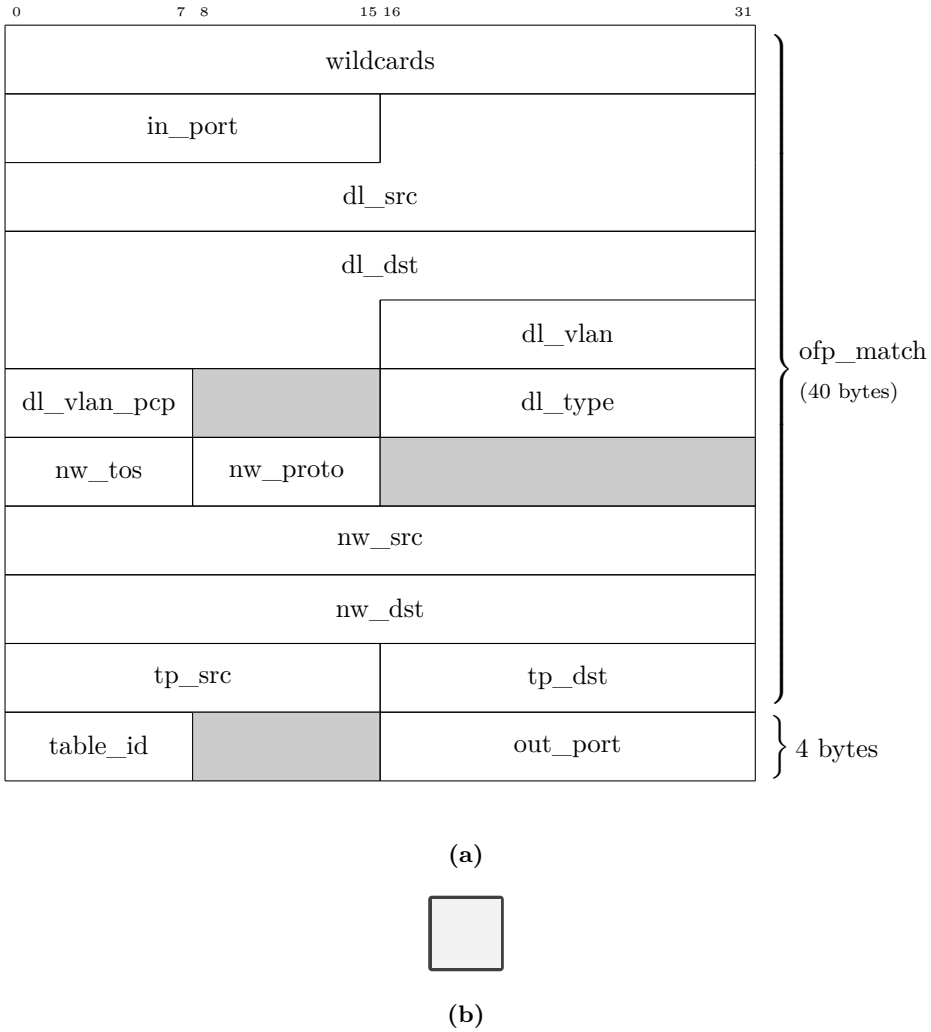


Figure 32 ofp_aggregate_stats_request

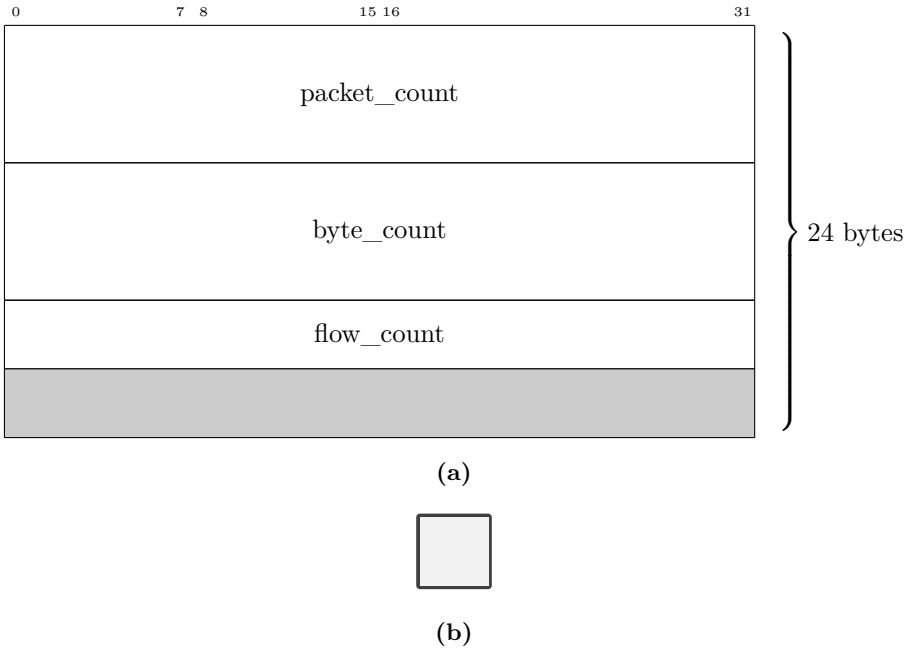


Figure 33 ofp_aggregate_stats_reply

34 ofp_table_stats

Figure 34

35 ofp_port_stats_request

Figure 35

36 ofp_port_stats

Figure 36

37 ofp_queue_stats_request

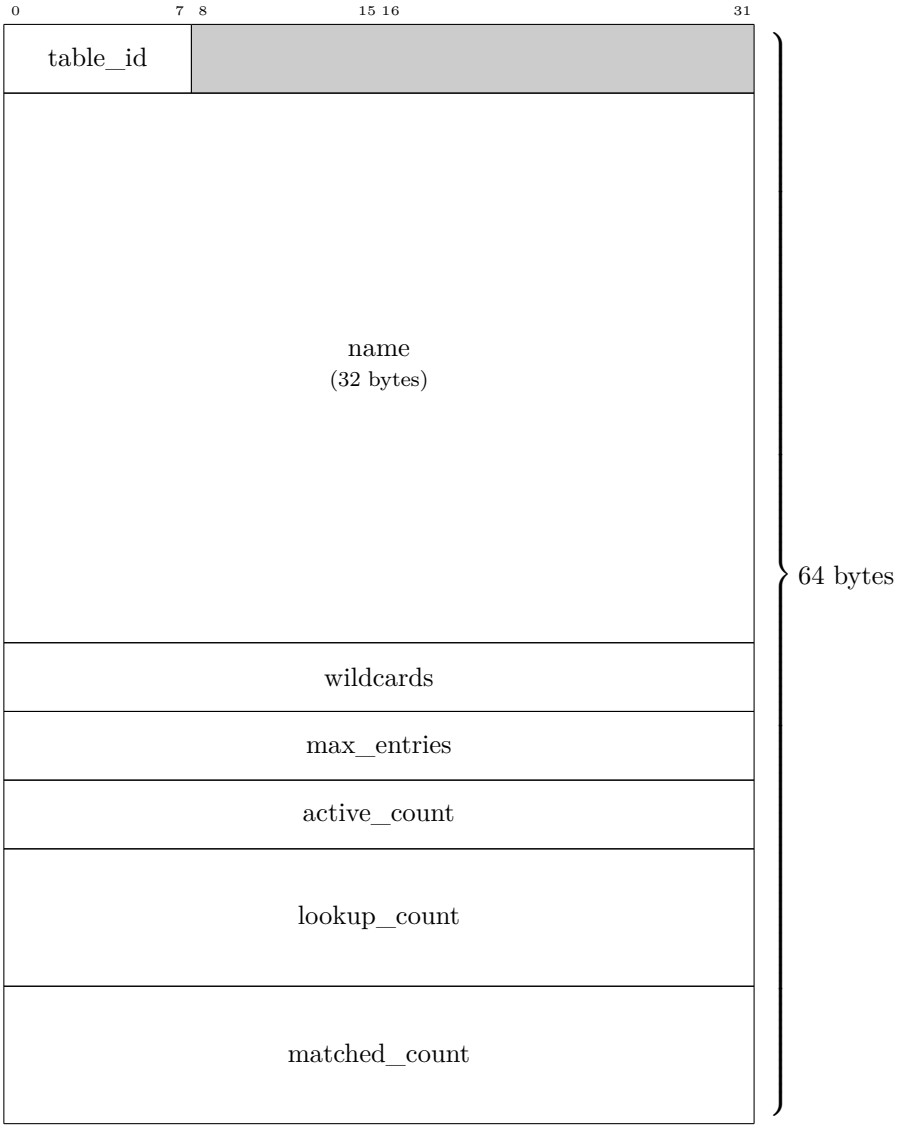
Figure 37

38 ofp_queue_stats

Figure 38

39 ofp_packet_out

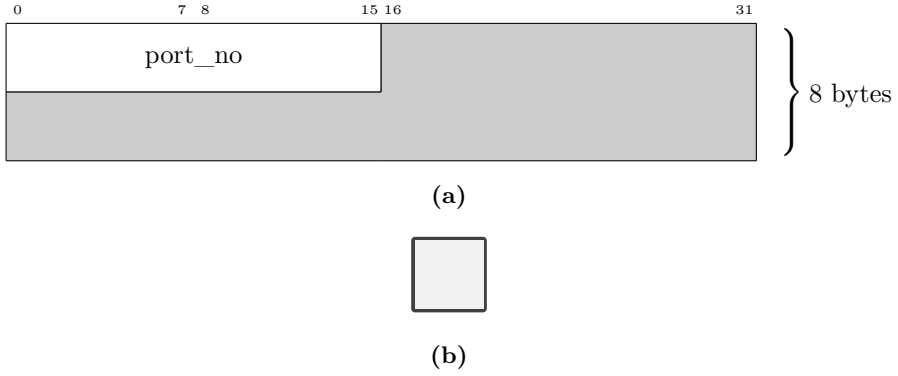
Figure 39



(a)

(b)

Figure 34 ofp_table_stats



(a)

(b)

Figure 35 ofp_port_stats_request

40 ofp_barrier_reply

Figure 40

41 ofp_barrier_request

Figure 41

42 ofp_packet_in

Figure 42

Note that two bytes are padded automatically at the end of the structure.

`sizeof(struct ofp_packet_in) == 20`, while `offsetof(struct ofp_packet_in, data) == 18`

43 ofp_flow_removed

Figure 43

44 ofp_port_status

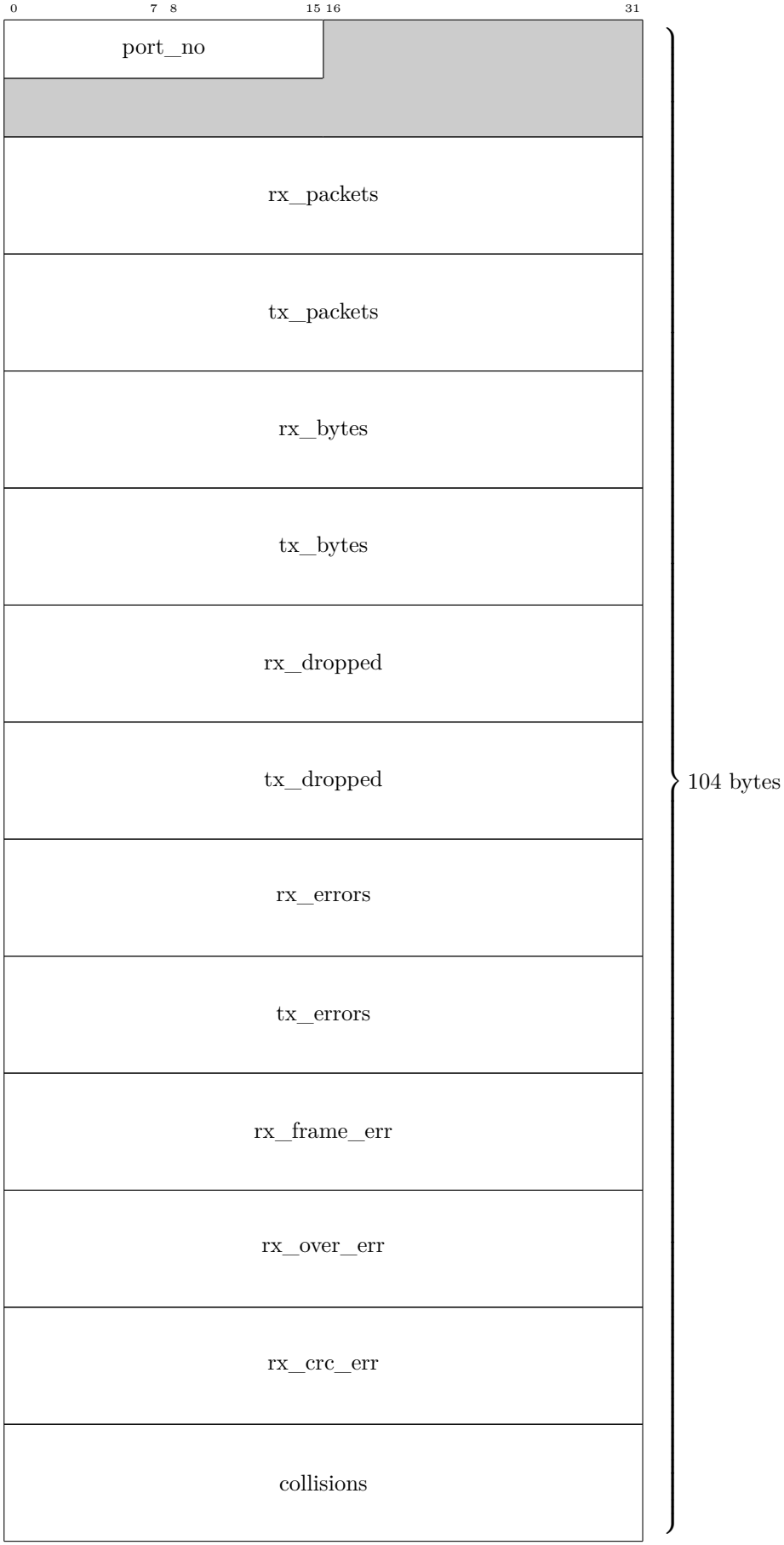
Figure 44

45 ofp_error

Figure 45

46 ofp_vendor_header

Figure 46



(a)

http://csukuangfj.github.io

(b)

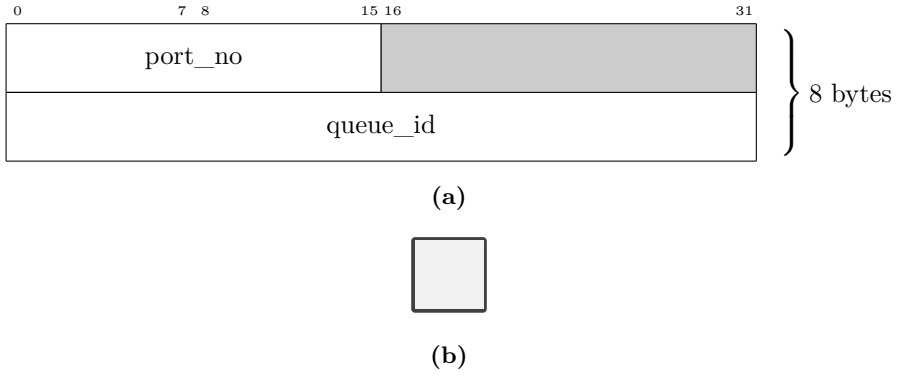


Figure 37 ofp_queue_stats_request

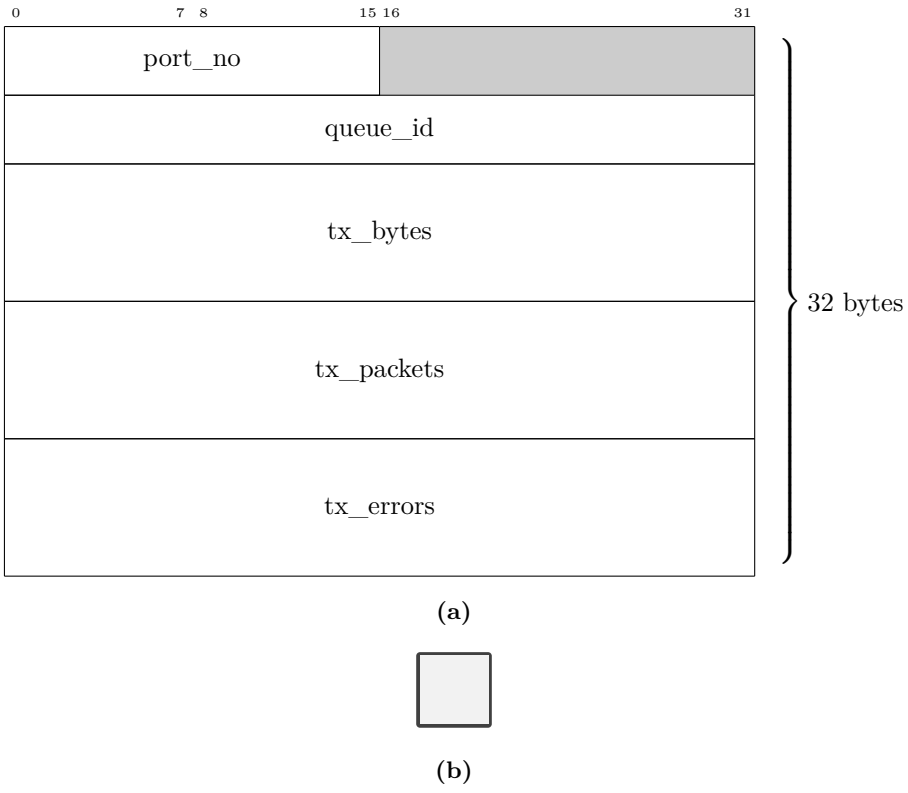
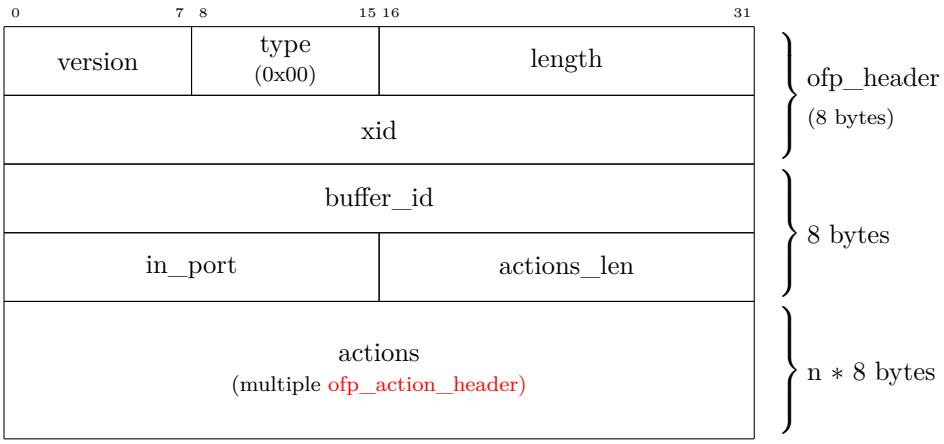


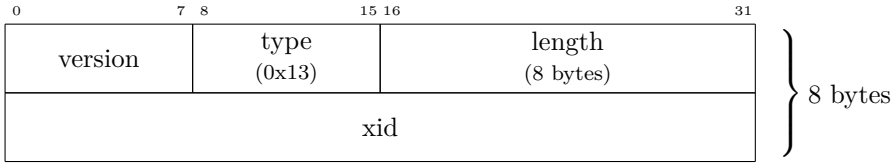
Figure 38 ofp_queue_stats



(a)

(b)

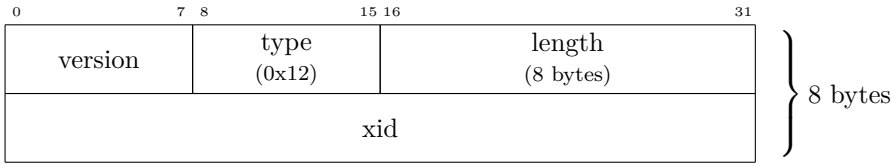
Figure 39 ofp_packet_out



(a)

(b)

Figure 40 ofp_barrier_reply



(a)

(b)

Figure 41 ofp_barrier_request

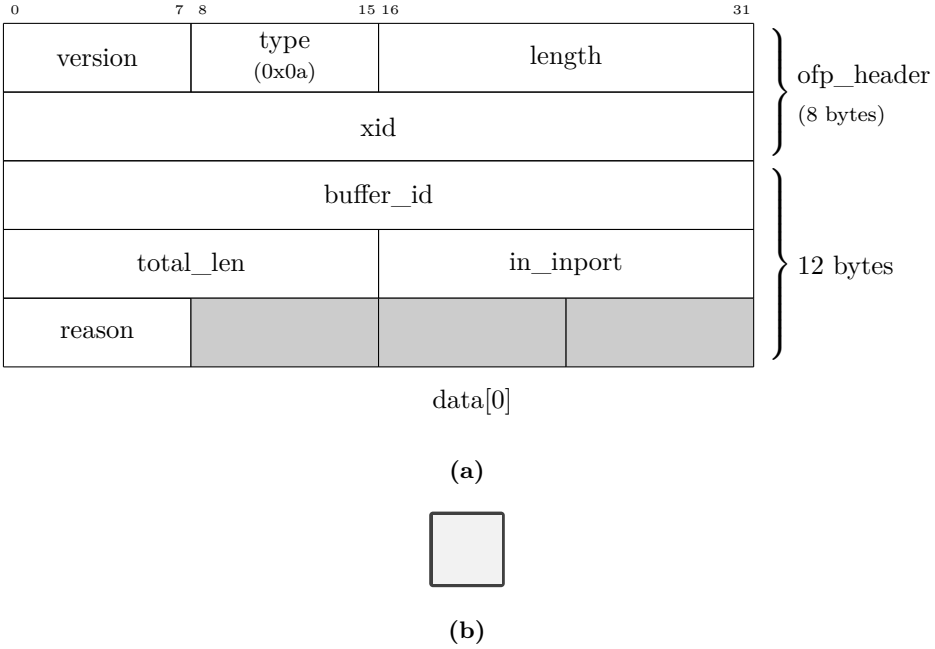
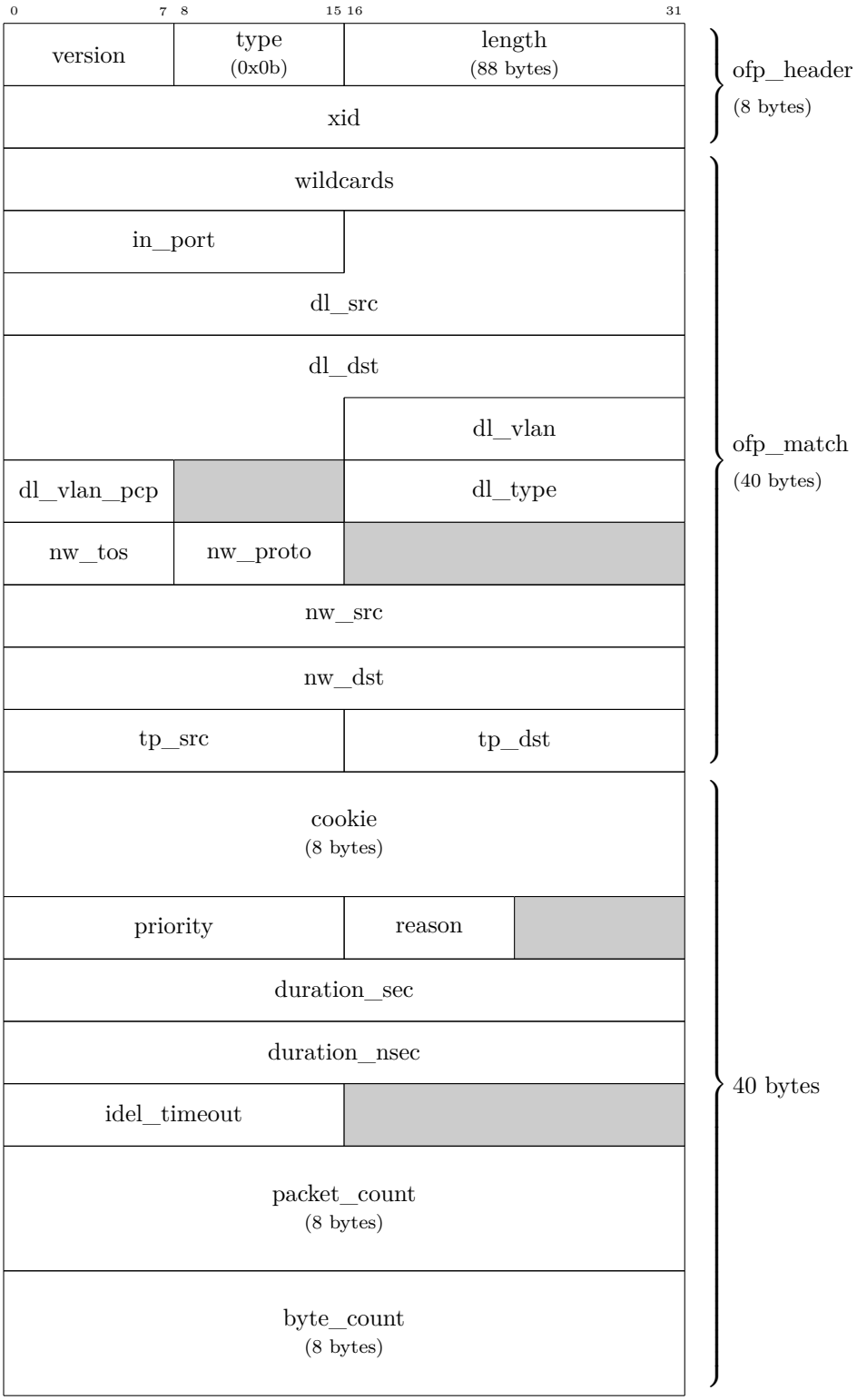


Figure 42 ofp_packet_in

47 ofp_vendor

Figure 47



(a)

(b)

Figure 43 ofp_flow_removed

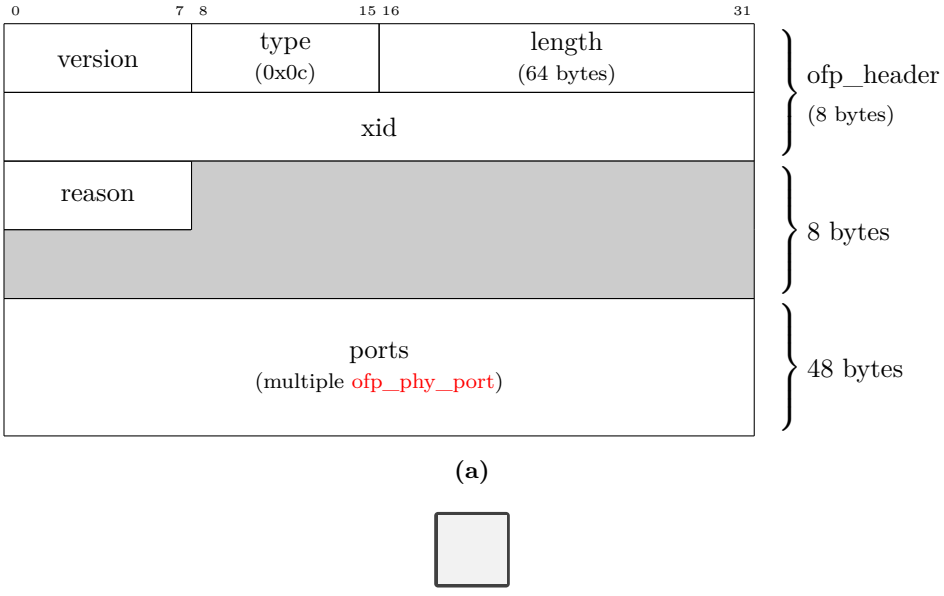


Figure 44 ofp_port_status

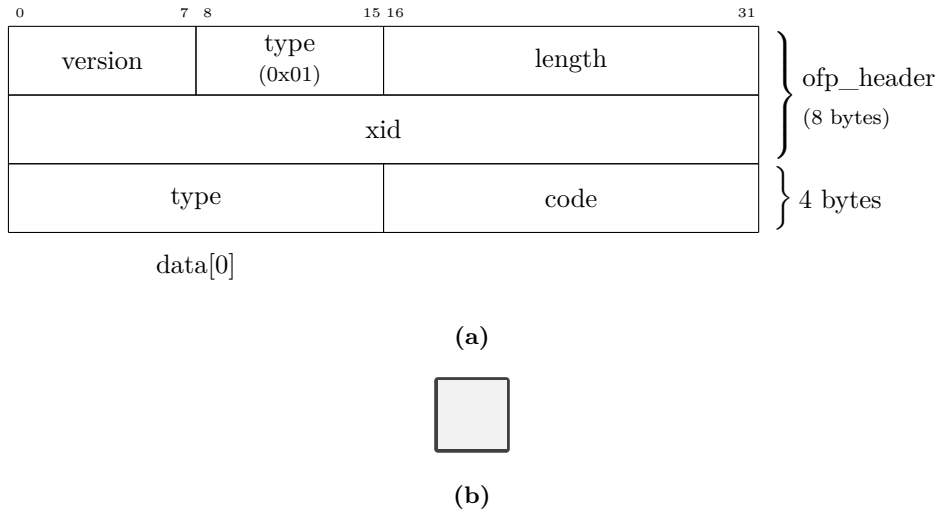


Figure 45 ofp_error

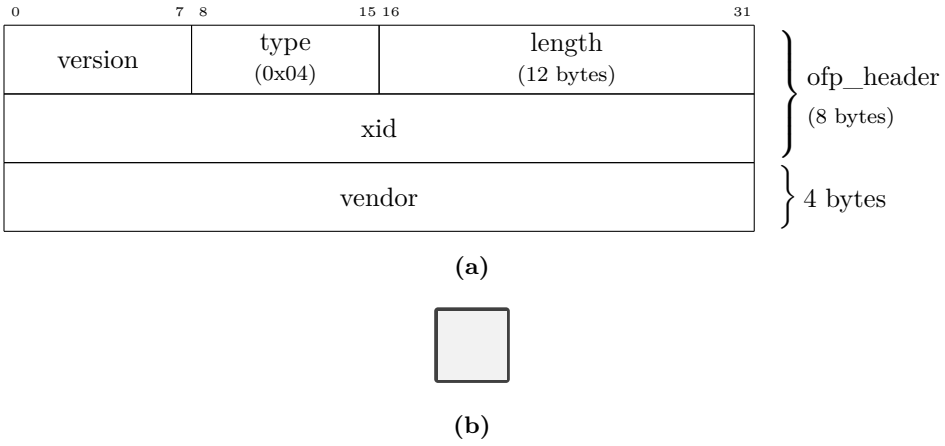


Figure 46 ofp_vendor_header

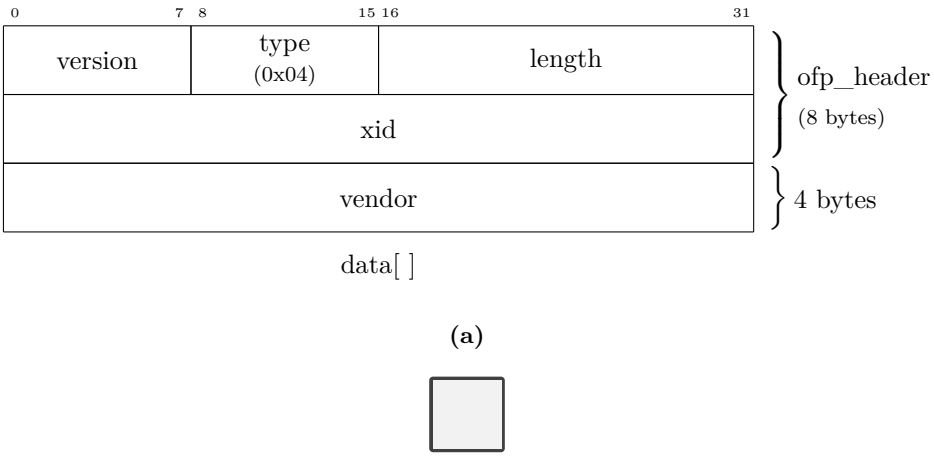


Figure 47 ofp_vendor