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Rocky Enterprise Linux 9.2 Manual Pages on command 'tc-vlan.8'

$ man tc-vlan.8

NAME

    vlan - vlan manipulation module

SYNOPSIS

    tc ... action vlan { pop | pop_eth | PUSH | MODIFY | PUSH_ETH } [CONTROL]

    PUSH := push [protocol VLANPROTO] [priority VLANPRIO] id VLANID

    MODIFY := modify [protocol VLANPROTO] [priority VLANPRIO] id VLANID

    PUSH_ETH := push_eth dst_mac LLADDR src_mac LLADDR

    CONTROL := { reclassify | pipe | drop | continue | pass | goto chain CHAIN_INDEX }

DESCRIPTION

    The vlan action allows to perform 802.1Q en- or decapsulation on a packet, reflected by

    the operation modes POP, PUSH and MODIFY. The POP mode is simple, as no further informa?

    tion is required to just drop the outer-most VLAN encapsulation. The PUSH and MODIFY modes

    require at least a VLANID and allow to optionally choose the VLANPROTO to use.

    The vlan action can also be used to add or remove the base Ethernet header. The pop_eth

    mode, which takes no argument, is used to remove the base Ethernet header. All existing

    VLANs must have been previously dropped. The opposite operation, adding a base Ethernet

    header, is done with the push_eth mode. In that case, the packet must have no MAC header

    (stacking MAC headers is not permitted). This mode is mostly useful when a previous action

    has encapsulated the whole original frame behind a network header and one needs to prepend

    an Ethernet header before forwarding the resulting packet.

OPTIONS

    pop   Decapsulation mode, no further arguments allowed.

push   Encapsulation mode. Requires at least id option.

modify Replace mode. Existing 802.1Q tag is replaced. Requires at least id option.

pop_eth

    Ethernet header decapsulation mode. Only works on a plain Ethernet header: VLANs,

    if any, must be removed first.

push_eth

    Ethernet header encapsulation mode. The Ethertype is automatically set using the

    network header type. Chaining Ethernet headers is not allowed: the packet must have

    no MAC header when using this mode. Requires the dst_mac and src_mac options.

id VLANID

    Specify the VLAN ID to encapsulate into. VLANID is an unsigned 16bit integer, the

    format is detected automatically (e.g. prefix with '0x' for hexadecimal interpreta?

    tion, etc.).

protocol VLANPROTO

    Choose the VLAN protocol to use. At the time of writing, the kernel accepts only

    802.1Q or 802.1ad.

priority VLANPRIO

    Choose the VLAN priority to use. Decimal number in range of 0-7.

dst_mac LLADDR

    Choose the destination MAC address to use.

src_mac LLADDR

    Choose the source MAC address to use.

CONTROL

    How to continue after executing this action.

    reclassify

        Restarts classification by jumping back to the first filter attached to this

        action's parent.

    pipe   Continue with the next action, this is the default.

    drop   Packet will be dropped without running further actions.

    continue

        Continue classification with next filter in line.

    pass   Return to calling qdisc for packet processing. This ends the classification

        process.

EXAMPLES

The following example encapsulates incoming ICMP packets on eth0 from 10.0.0.2 into VLAN
ID 123:

```
#tc qdisc add dev eth0 handle ffff: ingress

#tc filter add dev eth0 parent ffff: pref 11 protocol ip \

    u32 match ip protocol 1 0xff flowid 1:1 \

      match ip src 10.0.0.2 flowid 1:1 \

    action vlan push id 123
```

Here is an example of the pop function: Incoming VLAN packets on eth0 are decapsulated and
the classification process then restarted for the plain packet:

```
#tc qdisc add dev eth0 handle ffff: ingress

#tc filter add dev $ETH parent ffff: pref 1 protocol 802.1Q \

    u32 match u32 0 0 flowid 1:1 \

    action vlan pop reclassify
```

For an example of the pop_eth and push_eth modes, see tc-mpls(8).

SEE ALSO

tc(8), tc-mpls(8)

iproute2   12 Jan 2015   VLAN manipulation action in tc(8)