

**NAME**

simple - basic example action

**SYNOPSIS**

**tc ... action simple** [ **sdata** *STRING* ] [ **index** *INDEX* ] [ *CONTROL* ]

*CONTROL* := { **reclassify** | **pipe** | **drop** | **continue** | **ok** }

**DESCRIPTION**

This is a pedagogical example rather than an actually useful action. Upon every access, it prints the given *STRING* which may be of arbitrary length.

**OPTIONS**

**sdata** *STRING*

The actual string to print.

**index** *INDEX*

Optional action index value.

*CONTROL*

Indicate how **tc** should proceed after executing the action. For a description of the possible *CONTROL* values, see **tc-actions(8)**.

**EXAMPLES**

The following example makes the kernel yell "Incoming ICMP!" every time it sees an incoming ICMP on eth0. Steps are:

- 1) Add an ingress qdisc point to eth0
- 2) Start a chain on ingress of eth0 that first matches ICMP then invokes the simple action to shout.
- 3) display stats and show that no packet has been seen by the action
- 4) Send one ping packet to google (expect to receive a response back)
- 5) grep the logs to see the logged message
- 6) display stats again and observe increment by 1

```
hadi@nomal:~$ tc qdisc add dev eth0 ingress
hadi@nomal:~$ tc filter add dev eth0 parent ffff: protocol ip prio 5 \
    u32 match ip protocol 1 0xff flowid 1:1 action simple sdata "Incoming ICMP"

hadi@nomal:~$ sudo tc -s filter ls dev eth0 parent ffff:
filter protocol ip pref 5 u32
filter protocol ip pref 5 u32 fh 800: ht divisor 1
filter protocol ip pref 5 u32 fh 800::800 order 2048 key ht 800 bkt 0 flowid 1
    match 00010000/00ff0000 at 8
    action order 1: Simple <Incoming ICMP>
    index 4 ref 1 bind 1 installed 29 sec used 29 sec
    Action statistics:
        Sent 0 bytes 0 pkt (dropped 0, overlimits 0 requeues 0)
        backlog 0b 0p requeues 0

hadi@nomal:~$ ping -c 1 www.google.ca
PING www.google.ca (74.125.225.120) 56(84) bytes of data:
64 bytes from ord08s08-in-f24.1e100.net (74.125.225.120): icmp_req=1 ttl=53 time=0.123 ms

--- www.google.ca ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
```

```
rtt min/avg/max/mdev = 31.316/31.316/31.316/0.000 ms
```

```
hadi@nomal$ dmesg | grep simple  
[135354.473951] simple: Incoming ICMP_1
```

```
hadi@nomal$ sudo tc/tc -s filter ls dev eth0 parent ffff:  
filter protocol ip pref 5 u32  
filter protocol ip pref 5 u32 fh 800: ht divisor 1  
filter protocol ip pref 5 u32 fh 800::800 order 2048 key ht 800 bkt 0 flowid 1:  
  match 00010000/00ff0000 at 8  
    action order 1: Simple <Incoming ICMP>  
      index 4 ref 1 bind 1 installed 206 sec used 67 sec  
    Action statistics:  
      Sent 84 bytes 1 pkt (dropped 0, overlimits 0 requeues 0)  
    backlog 0b 0p requeues 0
```

**SEE ALSO****tc(8) tc-actions(8)**