NAME
ovs-vlan-test – check Linux drivers for problems with vlan traffic

SYNOPSIS
ovs-vlan-test [-s | --server] control_ip vlan_ip

Common options:
  [-h | --help] [-V | --version]

DESCRIPTION
The ovs-vlan-test utility has some limitations, for example, it does not use TCP in its tests. Also it does
not take into account MTU to detect potential edge cases. To overcome those limitations a new tool was
developed – ovs-test. ovs-test is currently supported only on Debian so, if possible try to use that on
instead of ovs-vlan-test.

The ovs-vlan-test program may be used to check for problems sending 802.1Q traffic which may occur
when running Open vSwitch. These problems can occur when Open vSwitch is used to send 802.1Q traffic
through physical interfaces running certain drivers of certain Linux kernel versions. To run a test, configure
Open vSwitch to tag traffic originating from vlan_ip and forward it out the target interface. Then run the
ovs-vlan-test in client mode connecting to an ovs-vlan-test server. ovs-vlan-test will display "OK" if it
did not detect problems.

Some examples of the types of problems that may be encountered are:

• When NICs use VLAN stripping on receive they must pass a pointer to a vlan_group when
  reporting the stripped tag to the networking core. If no vlan_group is in use then some drivers
  just drop the extracted tag. Drivers are supposed to only enable stripping if a vlan_group is regis-
  tered but not all of them do that.

• On receive, some drivers handle priority tagged packets specially and don’t pass the tag onto the
  network stack at all, so Open vSwitch never has a chance to see it.

• Some drivers size their receive buffers based on whether a vlan_group is enabled, meaning that a
  maximum size packet with a VLAN tag will not fit if no vlan_group is configured.

• On transmit, some drivers expect that VLAN acceleration will be used if it is available, which can
  only be done if a vlan_group is configured. In these cases, the driver may fail to parse the packet
  and correctly setup checksum offloading or TSO.

Client Mode
An ovs-vlan-test client may be run on a host to check for VLAN connectivity problems. The client must
be able to establish HTTP connections with an ovs-vlan-test server located at the specified control_ip
address. UDP traffic sourced at vlan_ip should be tagged and directed out the interface whose connectivity
is being tested.

Server Mode
To conduct tests, an ovs-vlan-test server must be running on a host known not to have VLAN connectivity
problems. The server must have a control_ip on a non-VLAN network which clients can establish connect-
itivity with. It must also have a vlan_ip address on a VLAN network which clients will use to test their
VLAN connectivity. Multiple clients may test against a single ovs-vlan-test server concurrently.

OPTIONS
  -s
  --server
    Run in server mode.
  -h
  --help  Prints a brief help message to the console.
  -V
---version
Prints version information to the console.

EXAMPLES
Display the Linux kernel version and driver of eth1.


uname -r
ethtool -i eth1

Set up a bridge which forwards traffic originating from 123.4 out eth1 with VLAN tag 10.


ovs-vsctl --add-br vlan-br \
-- add-port vlan-br eth1 \
-- add-port vlan-br vlan-br-tag tag=10 \
-- set Interface vlan-br-tag type=internal
ifconfig vlan-br-tag up 123.4

Run an ovs-vlan-test server listening for client control traffic on 172.16.0.142 port 8080 and VLAN traffic on the default port of 123.3.


ovs-vlan-test -s 172.16.0.142:8080 123.3

Run an ovs-vlan-test client with a control server located at 172.16.0.142 port 8080 and a local VLAN ip of 123.4.


ovs-vlan-test 172.16.0.142:8080 123.4

SEE ALSO
ovs-vswitchd(8), ovs-ofctl(8), ovs-vsctl(8), ovs-test(8), ethtool(8), uname(1)