NAME
>   ovs−vlan−bug−workaround − utility for configuring Linux VLAN driver bug workaround

SYNOPSIS
>   **ovs−vlan−bug−workaround** *netdev* **on**
>   **ovs−vlan−bug−workaround** *netdev* **off**
>   **ovs−vlan−bug−workaround −−help**
>   **ovs−vlan−bug−workaround −−version**

DESCRIPTION
>   Some Linux network drivers support a feature called ''VLAN acceleration''. VLAN acceleration is associated with a data structure called a **vlan_group** that is, abstractly, a dictionary that maps from a VLAN ID (in the range 0 to 4095) to a VLAN device, that is, a Linux network device associated with a particular VLAN, e.g. **eth0.9** for VLAN 9 on **eth0**.
>
>   Some drivers that support VLAN acceleration have bugs that fall roughly into the categories listed below. **ovs−vlan−test**(8) can test for these driver bugs.
>
>   •   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 registered 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.
>
>   The correct long term solution is to fix these driver bugs.
>
>   For now, **ovs−vlan−bug−workaround** can enable a special-purpose workaround for devices with buggy VLAN acceleration. A kernel patch must be applied for this workaround to work.
>
>   Use the command **ovs−vlan−bug−workaround** *netdev* **on** to enable the VLAN driver bug workaround for network device *netdev*. Use the command **ovs−vlan−bug−workaround** *netdev* **off** to disable the VLAN driver bug workaround for network device *netdev*.

DRIVER DETAILS
>   The following drivers in Linux version 2.6.32.12-0.7.1.xs1.0.0.311.170586 implement VLAN acceleration and are relevant to Open vSwitch on XenServer. We have not tested any version of most of these drivers, so we do not know whether they have a VLAN problem that needs to be fixed. The drivers are listed by the name that they report in, e.g., **ethtool −i** output; in a few cases this differs slightly from the name of the module's **.ko** file:

8139cp	**acenic**	**amd8111e**	**atl1c**	**ATL1E**	**atl1**
atl2	**be2net**	**bna**	**bnx2**	**bnx2x**	**cnic**
cxgb	**cxgb3**	**e1000**	**e1000e**	**enic**	**forcedeth**
igb	**igbvf**	**ixgb**	**ixgbe**	**jme**	**ml4x_core**
ns83820	**qlge**	**r8169**	**S2IO**	**sky2**	**starfire**
tehuti	**tg3**	**typhoon**	**via-velocity**	**vxge**	

>   The following drivers use **vlan_group** but are irrelevant to Open vSwitch on XenServer:

>   **bonding**
>   Not used with Open vSwitch on XenServer.

>   **gianfar**
>   Not shipped with XenServer. A FreeScale CPU-integrated device.

ehea　　Cannot be built on x86. IBM Power architecture only.

stmmac
　　　　Cannot be built on x86. SH4 architecture only.

vmxnet3
　　　　Not shipped with XenServer. For use inside VMware VMs only.

OPTIONS
−h
−−help Prints a brief help message to the console.

−V
−−version
　　　　Prints version information to the console.

BUGS
　　　Obviously.

SEE ALSO
　　　ovs−vlan−test(8).