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## Introduction

First let's see what VLAN is:

"A virtual LAN, commonly known as a VLAN, is a group of hosts with a common set of requirements that communicate as if they were attached to the same Broadcast domain, regardless of their physical location. A VLAN has the same attributes as a physical LAN, but it allows for end stations to be grouped together even if they are not located on the same network switch. Network reconfiguration can be done through software instead of physically relocating devices." (Quoted from wikipedia)

What you can do with VLAN support in DD-WRT:

- Create different subnets for each Ethernet port or groups of ports
- Make LAN ports function as WAN ports
- 802.1q tagging so that a single port can carry frames for multiple VLAN's

## General Information

Here are some broad generalizations about what hardware is believed to be able to support port-based VLAN's in DD-WRT currently:

1. Only Broadcom based devices support port-based VLAN's, no Atheros or Ralink devices. Non-Broadcom platforms support 802.1q VLAN tagging via the Networking page options (Linux's vconfig utility is used internally for this) but it often does not work correctly and it is for tagging entire interfaces (the LAN ports are all one interface on these platforms).
2. Only LAN ports can do VLAN's on devices with BCM4704 CPU due to the WAN port having a separate MII (connection to the CPU). See the discussion in [this thread](#).
3. Any other devices that don't create vlan# interfaces by default.
4. If vlan# interfaces are created then they likely can be reconfigured and tagged using nvram settings as explained on the [Switched Ports](#) page because the VLAN GUI is unreliable on modern devices.

## VLAN Support Tables

Some notes about the tables:

- Port-based VLAN's means that you can reconfigure ports to be in different VLAN's. Port-based VLAN's do not confirm 802.1q VLAN support.
- 802.1q VLAN's means that you can tag VLAN's with 802.1q headers to create a trunk between two devices that carries frames for multiple VLAN's. 802.1q VLAN's confirm that there is also Port-based VLAN support.
- Always put a Confirmation Link when confirming that there **is** ("Yes") or **is not** ("No") support for either type of VLAN support. If you can not link to any confirmation then put a question mark ("?") for the VLAN types that can't be confirmed.
- Multiple links for the same model are encouraged to help provide better reference.

### Asus

Model	H.W. rev	Switch Chip	Port-based VLAN's	802.1q VLAN's	Confirmation Links
RT-N16	-	BCM53115	Yes	Yes	<a href="#">[1]</a> <a href="#">[2]</a>
WL-520gU	-	BCM5354	Yes	Yes	<a href="#">[3]</a>
WL-500gP	v2.0	BCM5354	Yes	Yes	<a href="#">[4]</a>

### Cisco Linksys

Model	H.W. rev	Switch Chip	Port-based VLAN's	802.1q VLAN's	Confirmation Links
E1000	v2.0	BCM5357B	Yes	Yes	<a href="#">[5]</a>
E2000	v1.0	BCM53115	Yes	?	<a href="#">[6]</a>
E3000	v1.0	BCM53115	Yes	Yes	<a href="#">[7]</a> <a href="#">[8]</a>
E4200	v1.0	BCM53115	Yes	Yes	<a href="#">[9]</a>
WRT54G	v2.2	BCM5325E	Yes	?	<a href="#">[10]</a> <a href="#">[11]</a>
WRT54G	v3.0	BCM5325E	Yes	?	<a href="#">[12]</a>
WRT54G	v4.0	BCM5325E	Yes	?	<a href="#">[13]</a> <a href="#">[14]</a>
WRT54G	v5.0	BCM5325E	Yes	?	<a href="#">[15]</a> <a href="#">[16]</a>
WRT54G	v6.0	BCM5352E	Yes	?	<a href="#">[17]</a> <a href="#">[18]</a>
WRT54G	v8.0	BCM5354K	Yes	?	<a href="#">[19]</a> <a href="#">[20]</a>
WRT54G	v8.2	BCM5354K	Yes	?	<a href="#">[21]</a> <a href="#">[22]</a>
WRT54G2	v1.0	BCM5354K	Yes	?	<a href="#">[23]</a> <a href="#">[24]</a>
WRT54GL	v1.1	BCM5352E	Yes	Yes	<a href="#">[25]</a>

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WRT54G-TM	v1.1	BCM5352E	Yes	?	[26] [27]
WRT54GS	v1.1	BCM5325E	Yes	?	[28] [29]
WRT54GS	v2.0	BCM5325E	Yes	Yes	[30]
WRT54GS	v5.0	BCM5325E	Yes	?	[31] [32]
WRT54GS	v6.0	BCM5325E	Yes	?	[33] [34]
WRT54GS	v7.0	BCM5354K	Yes	?	[35] [36]
WRT54GS	v7.2	BCM5354K	Yes	?	[37] [38]
WRT54GS2	v1.0	BCM5354K	?	?	?
WRT150N	v1.0	BCM5325F	?	?	
WRT150N	v1.1	BCM5325F	LAN ports only	LAN ports only	[39]
WRT160N	v1.0	BCM5325F	?	?	
WRT160N	v1.1	BCM5325F	?	?	
WRT160N	v3.0	BCM5325E	Yes	?	[40] [41]
WRT300N	v1.0	BCM5325F	?	?	
WRT300N	v1.1	BCM5325E	Yes	Yes	[42]
WRT310N	v1.0	BCM5397	Yes	?	[43][44]
WRT320N	-	BCM53115	Yes	Yes	[45] [46] [47] [48]
WRT350N	v1.0	BCM5397	Yes	Yes	[49] [50] [51]
WRT600N	v1.0	BCM5397	?	?	
WRT600N	v1.1	BCM5397	Yes	?	[52] [53]
WRT610N	v1.0	BCM53115	Yes	Yes	[54]
WRT610N	v2.0	BCM53115	Yes	Yes	[55]

## Netgear

Model	H.W. rev	Switch Chip	Port-based VLAN's	802.1q VLAN's	Confirmation Links
WNR3500L	-	BCM53115	Yes	Yes	[56] [57]
WNDR3300	-	BCM5325F	LAN ports only	LAN ports only	[58]
WGR614	v8.0 or L	BCM5354	Yes	?	[59]

## Testing

*phuzi0n wrote:* When you test VLAN's you need to try to reconfigure them with the nvram variables. Put a port into the WAN VLAN and see if it starts functioning as a WAN port, add a port to a new VLAN and after rebooting set up the VLAN with an IP and DHCP on the networking page, and if you have multiple VLAN capable routers then try to make a trunk between them with at least 2 tagged VLAN's on each and make sure both VLAN's can communicate with a single cable using the trunk ports.

## VLAN\_Support

Trunking is a rather high level concept and it hasn't really been explained in detail in any guides that I'm aware of so that might be tough to test yet. I hope I explained it decently on the [switch ports page](#) but I do plan on writing a guide to extend multiple WLAN's with a VLAN trunk. I'm just not sure how exactly I want to write it with all the variety of nvram variables that can exist and the nonfunctional VLAN GUI on all k2.6 builds...

From our current tests, we can conclude that pretty much all G broadcom based units, fully support VLANs. As The chart above shows, more testing will be needed for concluding which N based broadcom units can support VLANs as well.

## References

- [Switched Ports](#) - Explains how to configure VLAN's using NVRAM variables.
- [Routers that will and won't support VLAN](#) - Forum thread that sparked discussion of this topic.
- [Enabling VLAN Support for BCM4704](#) - Explains how to enable VLAN support on BCM4704 based devices.
- [Reconfigure VLANs for 802.1q Compatibility](#) - Configure Broadcom 100mbit switch devices for 802.1q compatibility.
- [VLAN Default Configuration](#)
- [VLAN Configuration](#)
- [VLAN Bridging WAN and a LAN port](#)
- [VLAN Detached Networks \(Separate Networks With Internet\)](#)
- [VLAN Detached Networks each with Wireless and Internet](#)
- [Enabling VID's above 15](#) - Info about using VLAN ID's above 15.