

# Router Firmware for SOHO Equipment

Router custom firmware information for common models of Small Office/Home Office router equipment, such as Netgear, Asus, and Linksys routers.

- [Fresh Tomato](#)
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# Fresh Tomato



# ..FRESH TOMATO..

**FreshTomato** is a firmware project based on Linux, targeting home and SOHO routers.

FreshTomato is distributed on the GPL license.

FreshTomato supports Broadcom based systems.

“ I currently run Fresh Tomato firmware on several Netgear Nighthawks. The R7000 and R8000 are my current preferred routers for Fresh Tomato firmware.

It is far superior in both security and features than the original Netgear firmware that came with these routers. Unlike Netgear, updates for the router firmware to address security vulnerabilities or correct bugs are available on a regular basis. Netgear would usually take well over a year to address security issues, if at all.

FreshTomato (beta)

Version 2020.3 on Asus RT-N66U

N66U

About

Reboot...

Shutdown...

Logout

Status

Overview

Device List

Web Usage

Logs

Bandwidth

IP Traffic

Tools

Basic

Advanced

Port Forwarding

Access Restriction

DoS

Bandwidth Limiter

Captive Portal

Web Server

USB and NAS

VPN Tunneling

Administration

System

Name

Model

Bootloader (CFE)

Chipset

CPU Frequency

Flash Size

Time

Uptime

CPU Load (1 / 5 / 15 mins)

Total / Free Memory

Total / Free NVRAM

N66U

Asus RT-N66U

1.0.1.9

Broadcom BCM5300 chip rev 1 pkg 0

600MHz

32MB

Mon, 20 Apr 2020 18:07:54 +0200

0 days, 00:04:31

1.23 / 0.71 / 0.29

249.39 MB / 221.96 MB (89.00%)

64.00 KB / 24.04 KB (37.55%)

Ethernet Ports State

LAN0

LAN1

LAN2

LAN3

LAN4

Unplugged

100M Full

Unplugged

Unplugged

Unplugged

WWAN Modem Status

Modem type

Current Mode

RSSI

RSRP

RSRQ

SINR

Location

hilink

LTE

-71 dBm

-103 dBm

-9 dBm

-1 dB

MCC: 2  
MNC: 06  
LAC: 0x0 (0)  
Cell ID: 0x20 (211)  
PCI: 0x155 (341)

WAN

MAC Address

Connection Type

IP Address

Subnet Mask

Gateway

DNS

MTU

Status

Connection Uptime

Remaining Lease Time

50:46:...

4G/LTE

192.168.8.100

255.255.255.0

192.168.8.1

192.168.8.153

1500

Connected

0 days, 00:02:51

0 days, 23:57:09

Renew

Release

LAN

Router MAC Address

Router IP Addresses

DHCP

50:46:...

br0 (LAN) - 192.168.1.1/24  
br1 (LAN1) - 192.168.2.1/24  
br2 (LAN2) - 192.168.3.1/24

br0 (LAN) - 192.168.1.2 - 192.168.1.51  
br1 (LAN1) - 192.168.2.2 - 192.168.2.51  
br2 (LAN2) - 192.168.3.2 - 192.168.3.51

Wireless (2.4 GHz / eth1)

MAC Address

Wireless Mode

Wireless Network Mode

Interface Status

Radio

SSID

Broadcast

Security

Channel

Channel Width

Interference Level

Rate

50:46:...

Access Point

Auto

Up (LAN)

Enabled

pedro-test2

Enabled

WPA2 Personal (PSK) + AES

6 - 2.437 GHz

40 MHz

Acceptable

54 Mbps

Enable

Disable

Wireless (5 GHz / eth2)

MAC Address

Wireless Mode

Wireless Network Mode

Interface Status

Radio

SSID

Broadcast

Security

Channel

Channel Width

Interference Level

Rate

50:46:...

Access Point

Auto

Up (LAN)

Enabled

pedro-test5-2

Enabled

WPA2 Personal (PSK) + AES

104 - 5.520 GHz

40 MHz

Acceptable

450 Mbps

Enable

Disable

Wireless (2.4 GHz / wi0.1)

MAC Address

Wireless Mode

Interface Status

SSID

Broadcast

Security

52:46:...

Access Point

Up (LAN1)

pedro-guest

Enabled

WPA2 Personal (PSK) + AES

3 seconds

Stop

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## Installing on a R8000 Router

Since I use Netgear Nighthawk R8000 routers in my environment, I thought I would outline the process I use to flash fresh Tomato firmware to them. Fresh Tomato supports other broadcom based routers as well. If you have another make and model of router, you can check if yours is supported by going [here](#).

Be sure to read the installation information for your model of router. This installation guide is simply the way I install the firmware on my R8000 routers. I do not imply any guarantee this will work for yours. You are responsible for taking the risk.

“ I will get the instructions in here as soon as time permits. A bit busy with life at the moment.

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## Fixing a 'Bricked' R8000 Router

Recently, I decided I wanted a router as a "shelf spare" in the event one of my production routers failed. Since I have previously flashed many R8000s for myself without issue, I proceeded to purchase a used R8000 from eBay. This particular router, however, 'bricked' on me when I attempted to flash Tomato firmware to it.

“Bricking” essentially means a device has turned into a brick. It may be an electronic device worth hundreds of dollars, but it’s now as useful as a brick (or perhaps a paperweight). A bricked device won’t power on and function normally. A bricked device cannot be fixed through normal means.

Anyway, I thought I would detail the steps and requirements I used to 'unbrick' my router and get it working with Tomato firmware.

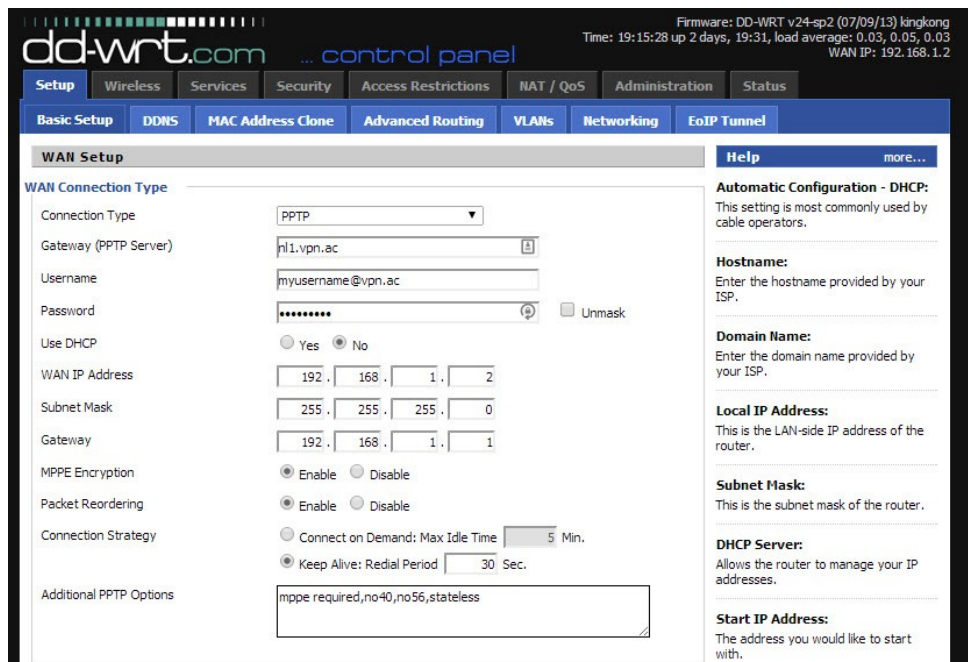
“ I will get the instructions in here as soon as time permits. A bit busy with life at the moment.



# DD-WRT



**DD-WRT** is a Linux based alternative OpenSource firmware suitable for a great variety of WLAN routers and embedded systems. The main emphasis lies on providing the easiest possible handling while at the same time supporting a great number of functionalities within the framework of the respective hardware platform used.



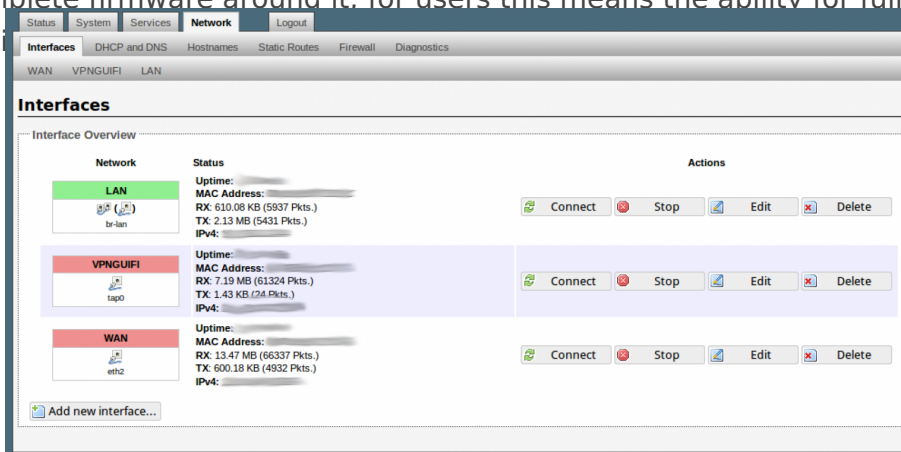
The screenshot displays the DD-WRT control panel interface. At the top, the status bar shows the firmware version (DD-WRT v24-sp2 (07/09/13) kingkong), uptime (19:15:28 up 2 days, 19:31), load average (0.03, 0.05, 0.03), and WAN IP (192.168.1.2). The navigation menu includes Setup, Wireless, Services, Security, Access Restrictions, NAT / QoS, Administration, and Status. The Setup menu is expanded, showing Basic Setup, DDNS, MAC Address Clone, Advanced Routing, VLANs, Networking, and FoIP Tunnel. The Basic Setup page is active, with the WAN Setup tab selected. The WAN Connection Type is set to PPTP. The Gateway (PPTP Server) is nl1.vpn.ac. The Username is myusername@vpn.ac and the Password is masked with asterisks. The Use DHCP option is set to No. The WAN IP Address is 192.168.1.2, Subnet Mask is 255.255.255.0, and Gateway is 192.168.1.1. The MPPE Encryption and Packet Reordering options are both set to Enable. The Connection Strategy is set to Keep Alive: Redial Period 30 Sec. The Additional PPTP Options field contains mppe required,no40,no56,stateless. On the right, the Help section provides information about Automatic Configuration - DHCP, Hostname, Domain Name, Local IP Address, Subnet Mask, DHCP Server, and Start IP Address.

DD-WRT Control Panel

# OpenWrt



The **OpenWrt** Project is a Linux operating system targeting embedded devices. Instead of trying to create a single, static firmware, OpenWrt provides a fully writable filesystem with package management. This frees you from the application selection and configuration provided by the vendor and allows you to customize the device through the use of packages to suit any application. For developers, OpenWrt is the framework to build an application without having to build a complete firmware around it; for users this means the ability for full customization, to use the device



LuCi Interface for OpenWrt