

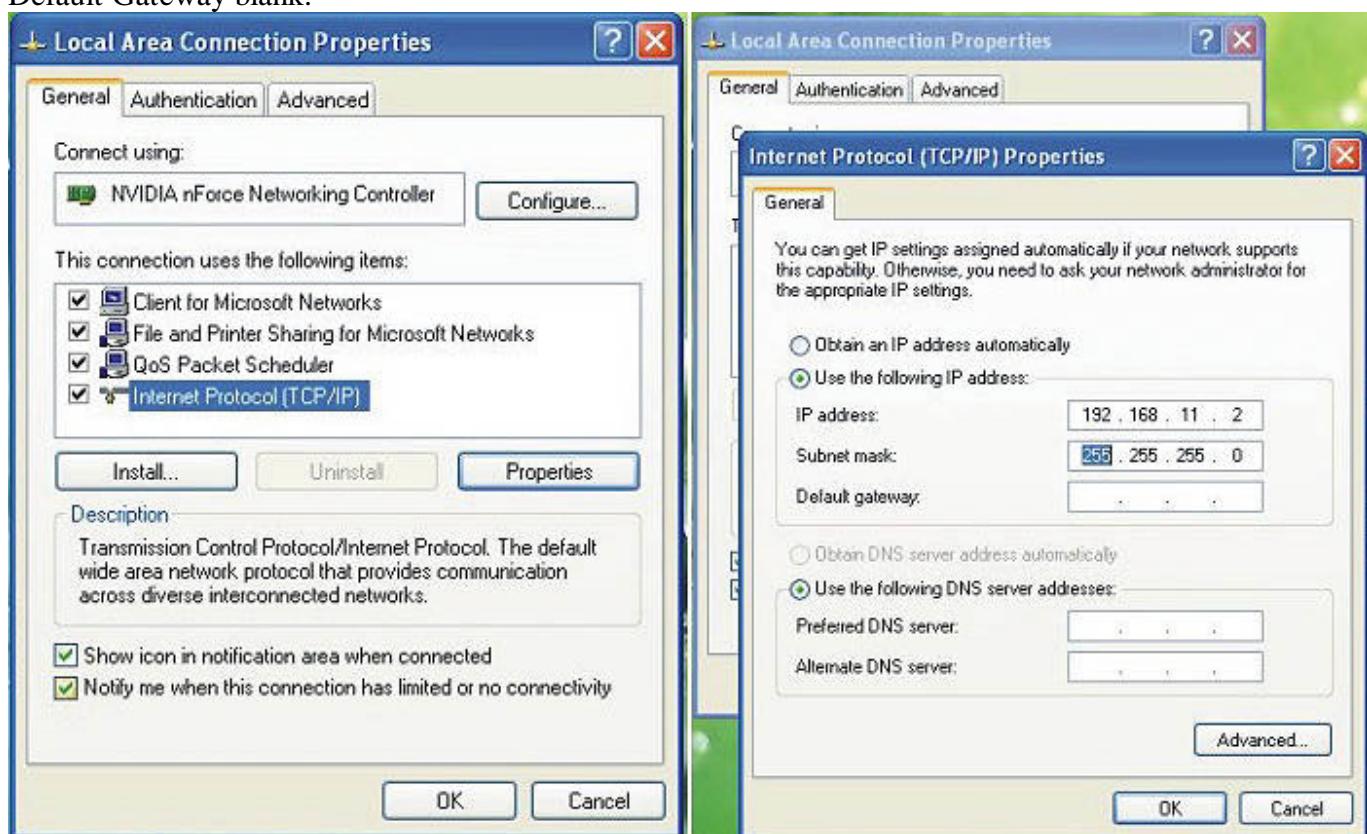
Buffalo WHR-G54S, WHR-HP-G54 and WZR-RS-G54

Normally, most companies let you upload firmware directly from the user interface. Buffalo unfortunately encrypts their firmware, and they'll only accept encrypted firmware in their web interface. So the easiest way to replace the firmware turns out to be the same way you would "de-brick" a router with corrupt firmware.

Namely, all the broadcom routers enter a special mode in the first few seconds after power is applied that allows a tftp transfer to directly program the flash rom with new firmware. So what you need to do is get everything ready to go, power up the router, and then send it the new firmware quickly. It turns out to be easier than it sounds.

Gotchas: The special mode uses the default IP address of the router. So if you've changed the ip address of the router since you got it you need to set everything up on the old IP address not the new one. You also need to do this with a wired connection, not a wireless connection. This means that you need to give yourself a static IP address on the wired network (i.e. set your computer to use 192.168.11.2 instead of using DHCP). **Use only v23 SP1 final or later. Older releases may cause trouble!**

1. For thoroughness, reset to factory defaults by holding the reset button while plugging in the router. Hold for at least 30 seconds. Unplug the router.
2. Connect your computer directly to one of the LAN ports on the router. (You can use a regular cable or crossover).
3. Because the Buffalo starts up with 192.168.11.1(or 192.168.12.1 for WZR-RS-G54), your computer's IP needs to be in the 192.168.11.0/24 subnet (e.g. 192.168.11.2, mask 255.255.255.0 or 192.168.12.2, mask 255.255.255.0 for WZR-RS-G54). You will have to set a static IP. A static IP is critical for the tftp procedure to work; a dynamic IP won't work even if the dynamic IP is currently set in the proper subnet. For Windows XP, the following screen shots should help. After selecting "Internet Protocol (TCP/IP)," click on the Properties button to open the next screen. Then enter the info as shown and click 'OK'. Leave Default Gateway blank.



4. Open a command window. Go to Start->Run->"cmd".
5. Change your directory to the folder containing the firmware image. (Ex. cd "C:\Documents and Settings\All Users\Desktop" (if you saved the .bin file to the Desktop)
6. Type tftp -i 192.168.11.1 PUT dd-wrt.v23_generic.bin. (For WZR-RS-G54 use 192.168.12.1 as the router IP.) Do not press enter yet.
7. Grab the power cable to the router (should be unplugged), connect the power to the Buffalo. All port LEDs will illuminate at once.
8. When all LAN port LEDs turn off, hit "Enter". An LED may remain lit if there is a cable in the port.
9. The LED on the LAN port will flash rapidly for about 6 seconds. The command will complete with a success printout, like Transfer successful: 3502080 bytes in 5 seconds, 700416 bytes/s. NOTE: If you use the -v option (verbose) the flash will take 30 seconds or more. There are over 6,500 blocks of data sent, and the -v option writes each block transmission to the screen. Pretty much a blur...
10. The router will reboot into DD-WRT, wait until the red bridge/diagnostic light stops blinking.
11. At this point, the router is ready to use. There is no need to reboot it (unplug/plug), although this is a safe precaution.
12. The router will be now be accessible on 192.168.1.1 netmask 255.255.255.0. You will need to change your IP to this range to access it for configuration. (For the WB2-G54, the router is still accessible at 192.168.11.1).
13. The username is 'root' and the password is 'admin'.

Original is at:

http://www.dd-wrt.com/wiki/index.php/Installation#Buffalo_WHR-G54S.2C_WHR-HP-G54_and_WZR-RS-G54

Editor's comments:

dd-wrt.v23_generic.bin

http://www.dd-wrt.com/dd-wrtv2/down.php?path=downloads%2Fdd-wrt.v23%20SP2%2Fstandard%2F&download=dd-wrt.v23_generic.bin

TFTP Client for Windows command-line, supports all versions except CE

<http://www.tftp-server.com/tftp-client.html>

TFTP (from LinkSysy)

<ftp://ftp.linksys.com/pub/network/tftp.exe>

You may see references to a "mini" bin, but that was only for buggy versions of the Linksys firmware that would not allow flash images over 3MBytes big. Linksys fixed the problem many revisions ago. (Thanks to Jeff Liebermann for the "mini" info)

tftp -i 192.168.11.1 PUT dd-wrt.v23_generic.bin. (for WHR-G54S routers)

-i Specifies binary image transfer mode (also called octet). In binary image mode the file is moved literally, byte by byte. Use this mode when transferring binary files.

-v Show detail information during transfer (verbose mode).