

# Red Baron MMP Server NAT Patch

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## Description

This patch modifies the Red Baron MMP server program (Rb2serve.exe) so that a server which is run behind a router with NAT (Native Address Translation) can be “seen” by players outside the LAN based server PC. This patch only works with Rb2serve.exe version 1.0.0.3 and modified versions of 1.0.0.3 (M01 and M02).

## Files

The files included in this .ZIP file and their descriptions are below:

- ❑ Rb2server NAT Patch.exe: patch executable
- ❑ Rb2serve.exe: version 1.0.0.3 of the Red Baron MMP server program
- ❑ Rb2server.scs: file used by Rb2serve.exe which contains the server port number
- ❑ Red Baron MMP Server NAT Patch.doc: this file

You may also need MFC42D.DLL and MSVCRTD.DLL. These files can be downloaded from <http://plaza.harmonix.ne.jp/~tosiwata/dll/download.html> . Unzip them into the same folder as Rb2server NAT Patch.exe.

## Installation

1. Find your public IP address. Go to <http://www.dslreports.com/whois> and click on the “My public IP is” button. Write this address down.
2. Back up your Rb2serve.exe and Rb2server.scs files on your hard drive.
3. Unzip the contents of Rb2server NAT Patch.zip into your server directory (allow file overwrites).
4. Start Rb2server NAT Patch.exe. Enter your public IP into the boxes provided and click the “Patch” button.
5. If you received a “Cannot find DLL” error message, download and unzip the files as mentioned above, then repeat step 4.

If your public IP is static, you will not have to run the patch again. If your public IP changes, you will need to repeat step 4 using your new public IP. Also, make sure your Rb2server.ini file has the following lines:

```
[RegisterWith]
UDP:dyn-meta.dynamix.com:47801
TCP:rb2.west.won.net:6001
TCP:rb2.east.won.net:6001
```

## Router/Firewall Issues

Rb2serve.exe requires that a port be open to TCP and UDP traffic. The Rb2server.scs file sets this port to 47805, so your router will need to have that port open. To open this port on a Linksys router, use the following steps:

1. Open a DOS prompt on the PC which will be used as the server and type “ipconfig”, then ENTER.
2. Write down the local IP address of the server PC.
3. Open your web browser and point it to <http://192.168.1.1>
4. Enter your username and password.
5. Click on the “DHCP” tab. Make sure the DHCP server feature is DISABLED. Save your changes. Doing this may require you to set static local IPs for other PCs on your LAN. Please note that it turned out this step was not required for my router – however, I would recommend you disable DHCP first, get your server working, and then re-enable it and see if your server still works.
6. Click on the “Advanced” tab. Click on the “Forwarding” tab. Set the “service port range” from 47805 to 47805. Set the protocol to “Both”. Set the IP address to that of the server PC (the local IP from step 2). Save your changes. For security reasons, please remember to close the port after you shut down your server.

If you are also running a software firewall (e.g. ZoneAlarm) on the server PC, you may need to change the firewall settings to allow the Red Baron server to run properly. When running ZoneAlarm, use the following steps:

1. Click on the “Security” tab. Set the Internet Security slider to Medium. For security reasons, please remember to put the Internet Security back to High after you shut down your server.
2. Run your patched Rb2serve.exe. ZoneAlarm will ask if you give permission for Rb2serve.exe to access the Internet – click “Yes”.
3. Shut down the Red Baron MMP server. Click on the “Programs” tab.
4. Find the Rb2serve.exe line and right click on it. Make sure “Allow” and “Allow Server” have green checkmarks next to them for both Local Network and Internet selections.
5. Check the “Pass Lock” check box for Rb2serve.exe.
6. Re-start your patched Rb2serve.exe.

Your Red Baron server should now be visible to players outside your LAN. If you find problems or need additional help, please email me at [kpijon@attbi.com](mailto:kpijon@attbi.com).

{JG13}Kpíjon

P.S. I’ve included a thread (below) from the RBWL3 forum which provides more information regarding routers and game set-up. Many thanks to RAF Chumley for this information!

## RAF\_Chumley

Junior Member

Member # 260

S!

"ipconfig" will not work in the configuration he has. He is behind a DSL router that gets a new address each time (NAT/PAT). This means his address as shown by ipconfig will be his internal non-routeable IP address. He needs to find out what address has been given to his DSL router. Klay's advice is the way to go in that regard...BUT....

I'm not convinced this will work behind a DSL router due to NAT and PAT issues. Here is the difference (technical talk ahead..hope your eyes don't glaze easily!)..

Foundation: In the TCP/IP world there are 3 networks that are NEVER found on the Internet. They are NOT routed by Internet routers and so cannot be utilized publicly. These networks are "reserved" for private use, i.e. they can be used by anyone anywhere for thier private (home or corporate) networks without interfering with someone else's Internet schema. They are:

10.0.0.0 with netmask 255.0.0.0 (noted as /8)

172.16.0-31.0 with mask 255.240.0.0 (noted as /12)

192.168.0.0 with mask 255.255.255.0 (noted as /24)

Most DSL routers and other Small Office/Home Office (SOHO) equipment give out 192.168.1.0 addresses to the computer on the Internal (non-Internet) side of them. Thus if you have a DSL router it will be giving you a NON-Routeable IP address. IPCONFIG (or start..run.."winipcfg" for 9x users) will reveal this address.

Now on to the discussion of issues with NAT and PAT...

NAT is Network Address Translation. It takes an outside routeable address and links it one-to-one with an internal non-routeable address. This is called "Static NAT". Thus a packet flow can be initiated from the outside world because when the packets arrive at the NAT device the device knows where to send the packets. There is a direct correlation between routeable and non-routeable addresses.

PAT (also called "Dynamic NAT") is Port Address Translation. This takes multiple internal non-routeable IP addresses and links it to the external IP address in a one-to-many correlation. With this setup you can have many many computer "hidden" behind one external routeable IP address. The problem is that packet flows CANNOT be initiated from outside the PAT device because the device doesn't know who to send it too. Flows initiated from inside are "remembered" and the response to them is sent to the right internal host...but flows initiated from the outside are directed at the routeable IP address and the device has no "memory" of who to direct that to..so it drops the packets.

Looked at from a corporate view...a company might use Static NAT to allow access to thier web site from you, the outside user..yet use PAT to allow their 600 users to browse the web utilizing a single routeable IP address. Thus that company needs only enough routeable IP addresses to service thier web sites and the Internet connection itself..not an IP address for every user. PAT was designed to get around the depletion of routeable IP addresses and has been so successful that the "new IP" (IPv6..we currently use IPv4) has not really caught on with people. The companys needs are:

People on the Internet can reach thier web site: Flow initiated from OUTSIDE.

Employees can browse the web: Flow initiated from INSIDE.

Neato keen, eh? Ok..I admit..I'm a Geek!

It all comes down to who initiates the "conversation". With NAT a flow can be initiated from the outside..with PAT they can only be initiated from the inside.

Unfortunately, almost ALL DSL routers are PAT devices. Also, you only get ONE IP address from your DSL provider (by default) and so the default PAT setup is the way to go to service multiple home computers from that single routeable IP address. Now, the behavior you will see

when you run your RB Server from behind a PAT device (with Klay's patch performed) is this: You fire it up and it shows up in the server listing..but no-one can connect to it!

Here is why:

Your server is behind the PAT device..it contacts the metaservers and they reply..the reply is to a flow initiated from behind the device so it knows where to send the reply. So you are "registered" with the metas and your server shows up in the list. Now a player wants to play on your server..so he clicks on your server's name in the listing..gets the IP info from the metas..his game initiates a flow to your PAT device (remember, the only IP he gets is the device's routeable IP address). The device gets the packets but does not know where to send them..so it drops them. He cannot connect to the server This is true EVEN IF there is only 1 computer behind the device!

So if you are using a DSL router and a single IP address as supplied by your ISP..you will NOT be able to successfully run a server from behind it.

To run a server you need a second IP address from your ISP (this will cost some small \$) AND you must be able to get into your DSL router and configure it for Static NAT to make a 1-to-1 link between the new external IP and your server's internal non-routeable IP. Note that unless you also deny all ports except the one your server is configured to run on, configuring a Static NAT also opens up your computer as if you were directly on the Internet. You are WIDE OPEN at that point!

Please note that Microsoft's "Internet Connection Sharing" is PAT!!

Having used Klay's software I must say it's very easy to use. Just plug in the IP address and hit the button and you are good to go. Be sure to have put Klay's program in the same directory as the reserver.exe file. After patching, just start the server.

If you are behind a configurable NAT device there is an extra step or two one needs to do. We will assume you have an IP to dedicate to the RB server and only wish to allow the particular port needed to run the server.

1. open the .scs file (rbserver.scs? I forget its exact name...) and check out the first couple of lines for this line:

port=478xx (where "xx" is a number like 00 or 01 etc)

Write that entire number down!

2. Configure your device for Static NAT making the 1-to-1 link between the routeable and non-routeable IP addresses.

3. Configure your device to only allow the port from step 1 to reach your server. This probably will entail creating a custom service entry. The parameters will be "UDP" and "478xx" (use the number you wrote down) for the destination port. Source port can be anything so either leave it blank or use 0-65535.

4. Save and apply the new configuration as applicable to your device.

5. Fire up the server.

If you look in the server listings in your RB game you will see "RBWL Island Please use RBWL Rules". That is my server (on a T3 that is unused after about 6pm EST and is behind a firewall) and it is configured as set forth in the steps above.

S! Hope this helps clear the air about what to expect from Klay's work. Fantastic job Klay!

S!

RAF\_Chumley

Cisco Certified Network Professional

Check Point Certified Security Engineer

Microsoft Certified Systems Engineer\*

Citrix Certified Administrator

Klay,

If the router can do a static NAT (which is not PAT!) and an IP is available to dedicate to the 1-to-1 correlation, then yes, it works. Please open your RB3D game and check out the 3 servers

I am running all from the same computer, all on the same IP, and all behind a firewall utilizing a static NAT and your patch . Note that each instance of the server is running from the same IP, just utilizing a different port (47800, 47801, and 47802 in this case). This means that each server can be uniquely identified by its IP/port combination (which is called a socket). If you choose to play on "RAF Chumley's T3 RBWL Island" you are connecting to 65.222.244.253:47800 whereas if you choose "RAF Chumley's T3 Marne" you are connecting to 65.222.244.253:47801. Uniquely different

So I hope you can see that as long as there is a 1-to-1 correlation and therefore any packets that arrive at the NAT device can be definitely delivered, any amount of servers can be run from that one computer as long as each instance utilizes a different port.

To change the port utilized just change the line in the rbserver.scs file I spoke of in my original posting.

Feel free to use any of this or my original posting in your documentation without reservation.

Thanks for the GREAT work.

I repeat:

U DA MAN!

RAF\_Chumley