



## Port Forwarding Setup

(NB9 / NB9W)

## Port Forwarding

Port forwarding enables programs or devices running on your LAN to communicate with the internet as if they were directly connected.

This is most commonly used for VOIP ATA devices or online gaming (via game console or computer).

Port forwarding works by "forwarding" a specific TCP or UDP port from the modem / router to the computer or device you are using.

You can also restrict which incoming connections will have the rule applied to it. This enables you to specify all incoming connections, from a specific subnet or from an individual IP address.\*



Different services and different games all use different TCP or UDP ports.

You will need to consult any information supplied with your service or game in order to find which ports need to be forwarded.



You can only forward a port to **one** location (IP address).

In some cases, this may cause issues when multiple LAN devices (computers, game consoles, or VOIP ATAs) attempt to use online gaming at the same time or make multiple VOIP service connections.

In these cases, you would need to use an alternate port for any subsequent connections after the first device.

Please consult your VOIP provider or game manufacturer for assistance with this.

\* - If supported by your model of modem / router.

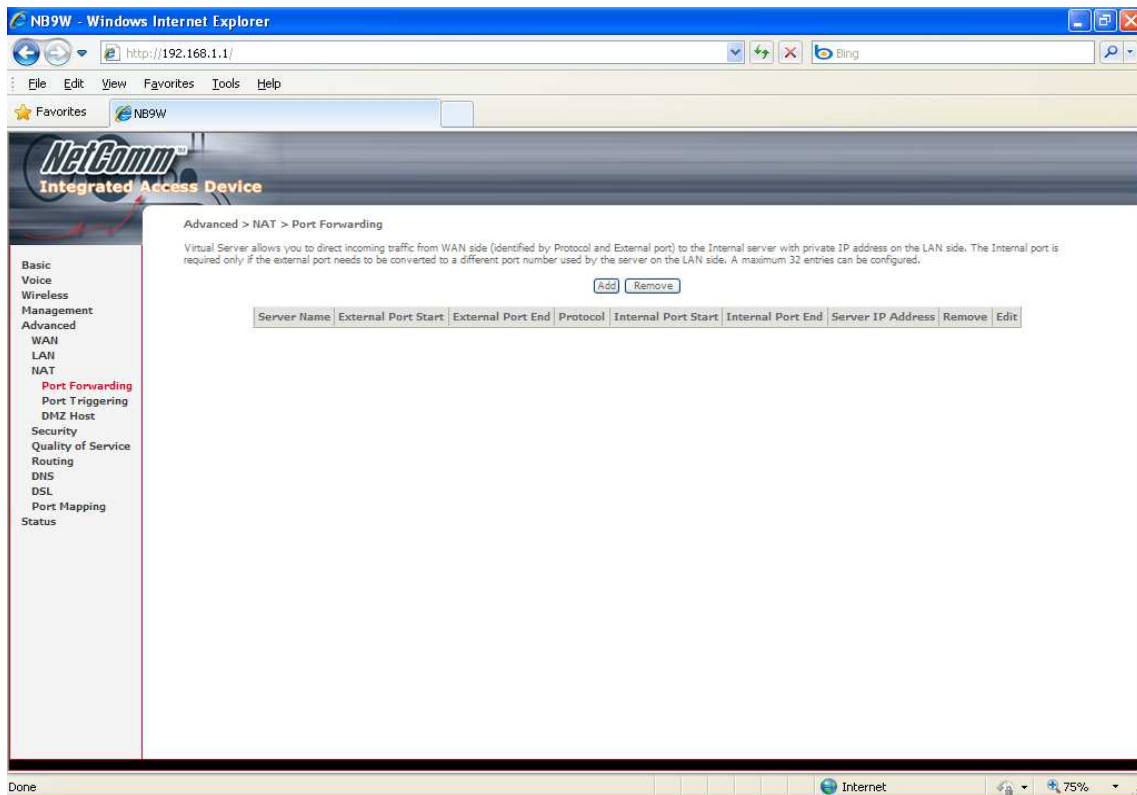
## Adding a Port Forwarding Rule

This guide will take you through the steps required to add a port forwarding rule to your modem / router.

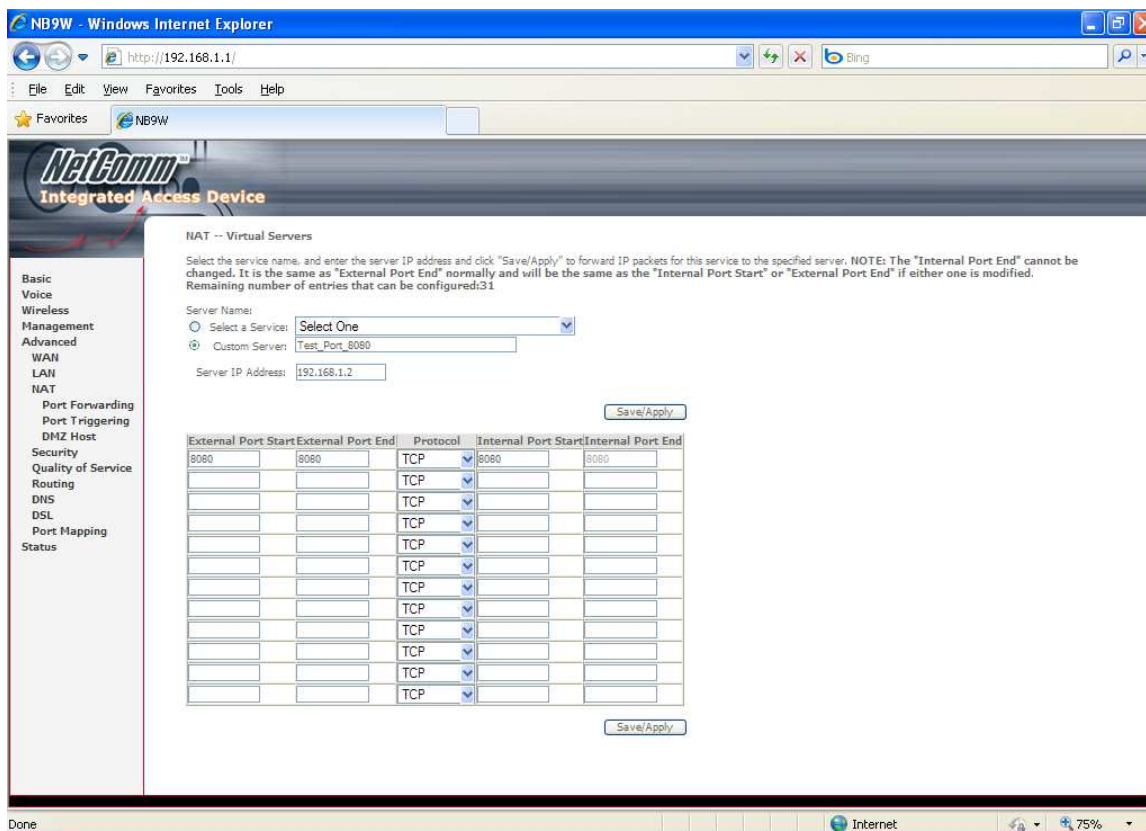
1. Navigate to <http://192.168.1.1> in a web browser. If asked to login, use "admin" without quotes as the default username and password.



2. Select "**Advanced**" > "**NAT**" > "**Port Forwarding**" from the left menu options. You should see a screen resembling the shot below.



3. Press the "Add" button.



4. Under Server Name, select the "Custom Server" option.
5. Enter a name for your Port Forwarding rule. This can be anything and is used to describe the port forwarding rule. In the example above we have named the port forwarding rule Test\_Port\_8080 and are intending to port forward port 8080.
6. In the "Server IP Address" box, enter the IP Address of the computer or device you wish to port forward to. By default, the IP Address will be 192.168.1.x, where 'x' is a number between 2 and 254. In the example above the IP address is 192.168.1.2.
7. If you are unsure of the IP Address of your computer, or the address of your computer is "dynamic", please see the following page for more information about setting a "Static IP": <http://www.portforward.com/networking/staticip.htm>
8. Under "External Port Start" and "External Port End" on the next blank row of the table, enter the port number that you wish to Port Forward.
9. If you are entering a range of ports (such as 1000-2000) then you would enter 1000 into External Port Start, and 2000 into External Port End.

10. Under Protocol on the same row of the table, select the "Protocol" that is required for your ports. If you do not know this, select "TCP/UDP".

11. Under "Internal Port Start" and "Internal Port End" on the same row of the table, enter the port number that the forward ports will be redirected to. Typically, these are the same numbers as in Step 8.

13. There are also a number of pre-configured port rules for popular services that can be selected using the "Select a Service" option. In the example below the Telnet service is added to allow port forwarding across the NB9W to the device using the IP address 192.168.1.2.

The screenshot shows the NetComm Integrated Access Device web interface. The browser address bar shows 'http://192.168.1.1/'. The page title is 'NAT -- Virtual Servers'. Below the title, there is a note: 'Select the service name, and enter the server IP address and click "Save/Apply" to forward IP packets for this service to the specified server. NOTE: The "Internal Port End" cannot be changed. It is the same as "External Port End" normally and will be the same as the "Internal Port Start" or "External Port End" if either one is modified. Remaining number of entries that can be configured:32'. There are two radio buttons: 'Select a Service:' (selected) and 'Custom Server:'. The 'Select a Service:' dropdown is set to 'Telnet Server'. The 'Server IP Address:' field contains '192.168.1.2'. A 'Save/Apply' button is visible. Below this is a table with columns: 'External Port Start', 'External Port End', 'Protocol', 'Internal Port Start', and 'Internal Port End'. The first row has '23' in the first two columns, 'TCP' in the third, and '23' in the last two. There are 12 rows in total, all with 'TCP' in the Protocol column. A second 'Save/Apply' button is at the bottom of the table.

External Port Start	External Port End	Protocol	Internal Port Start	Internal Port End
23	23	TCP	23	23
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		

Note: If you wish to enter more Port Forwarding rules for this IP Address, then you can repeat steps 8-10.

14. On entering the port forwarding rules and pressing the "Save/Apply" button each entry will be displayed at Advanced > NAT > Port Forwarding as below.

The screenshot shows the NetComm Integrated Access Device web interface in Internet Explorer. The browser address bar shows 'http://192.168.1.1/'. The page title is 'NB9W - Windows Internet Explorer'. The main content area is titled 'Advanced > NAT > Port Forwarding'. Below the title, there is a description of Virtual Server and two buttons: 'Add' and 'Remove'. A table lists two port forwarding entries:

Server Name	External Port Start	External Port End	Protocol	Internal Port Start	Internal Port End	Server IP Address	Remove	Edit
Telnet Server	23	23	TCP	23	23	192.168.1.2	<input type="checkbox"/>	Edit
Test_Port_8080	8080	8080	TCP	8080	8080	192.168.1.2	<input type="checkbox"/>	Edit

The left sidebar contains a navigation menu with categories: Basic, Voice, Wireless, Management, Advanced, WAN, LAN, NAT, Port Forwarding, Port Triggering, DMZ Host, Security, Quality of Service, Routing, DNS, DSL, Port Mapping, and Status.

**Please note:** Some services require more than one port forwarded. You can do this by specifying a sequential range of ports instead of just one.

**For example:** 6881-6999.

To do this, you would enter "6881" in the "Port Start" fields and "6999" in the "Port End" fields for both the "External Packet" and "Forward to Internal Host" sections.

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Please consult your VOIP provider or game manufacturer for assistance with this.

