Port Forwarding Overview

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 remotely accessing DVR/NVR Controller, IP Cameras, Web Server or online gaming (via game console or computer).

Port forwarding works by "forwarding" a specific TCP or UDP port from the NF17ACV to the computer or device you are using.
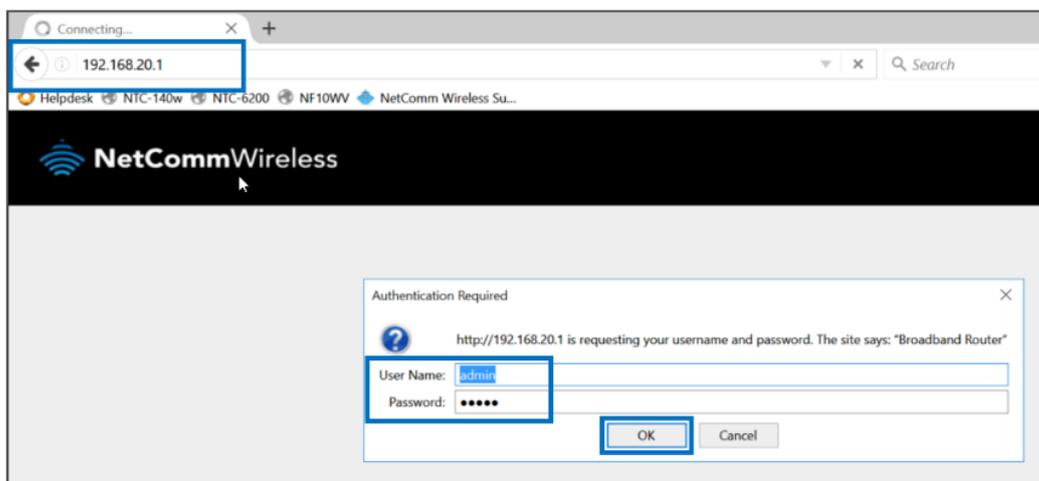
Prerequisite

Prior to setting the port forwarding function you must know which ports need to be opened. If you are not sure, contact the application vendor or developer.

Add a Port Forwarding Rule
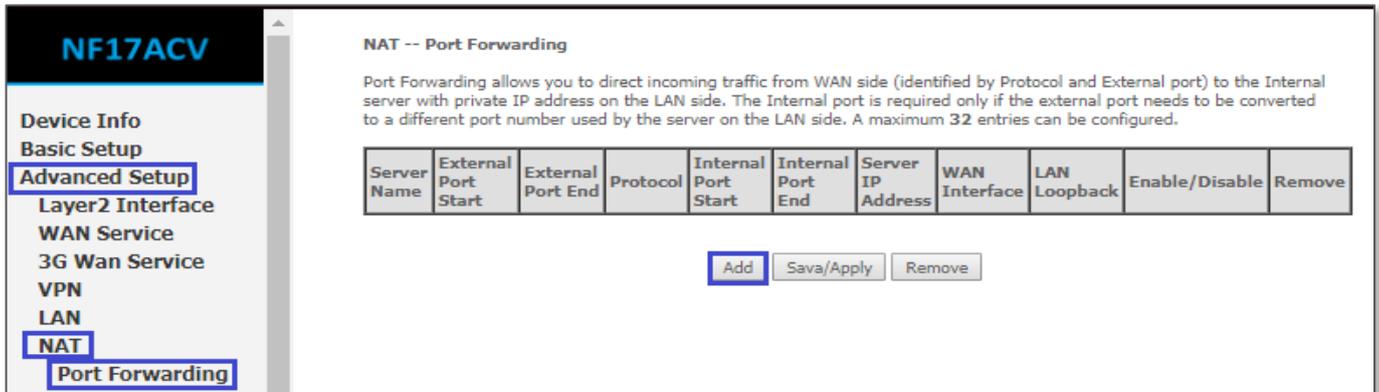
Open NF17ACV Web interface

1   Open a web browser (such as Internet Explorer, Google Chrome or Firefox), type **http://192.168.20.1** into the address bar and press **Enter**.

2   At the login screen, type `admin` into both the **User Name** and the **Password** fields and click **OK**.

3   The **NF17ACV** user interface will open in the browser.

Set up a Virtual Server

1. From the **Advanced Setup** menu, open the **NAT** sub-menu and then select **Port Forwarding.**
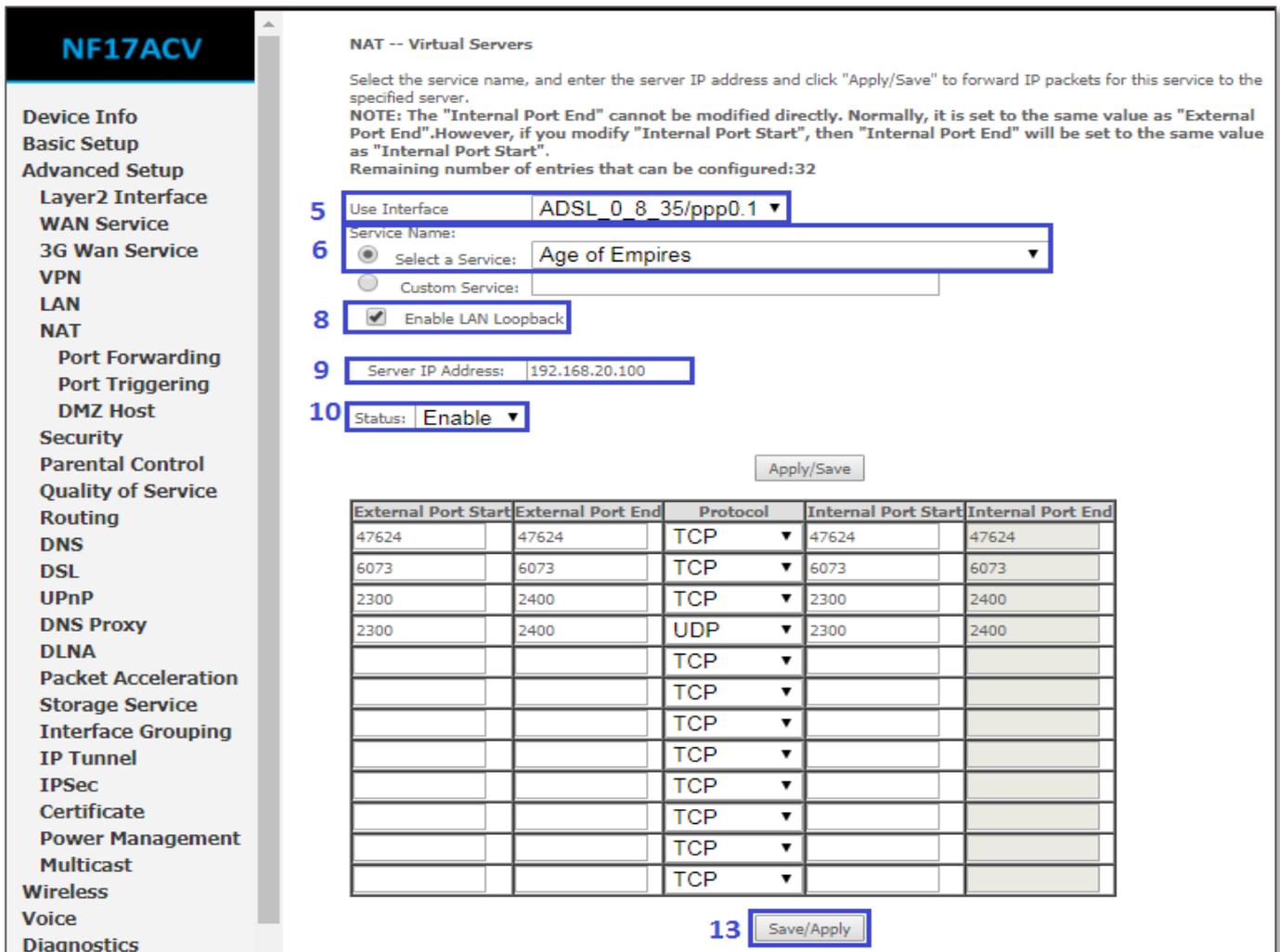
2. The **NAT – Port Forwarding** screen will open:

3. Click the **Add** button to add a port forwarding rule.

4. The **NAT – Virtual Servers** screen will open:

5   Select the correct Interface in the **Use Interface** field as a misconfiguration will result in communications failure.

> **Note** – You can check the correct interface from **Device Info > WAN**.
>
> If you have multiple entries, choose one with an available IPv4 address.

6   The **Service Name** drop down list has a predefined list of port forwarding rules for many services and games.

If you can find your desired service listed, select the item in the drop-down list and check ⊙ **Select a Service**.

A sample configuration for "*Age of Empires*" is shown, above.

> **Important** – If you found an appropriate service in the **Service Name** drop down list, then you can skip steps 7, 11 and 12, below.

7   If you could not find one, you may create your own defined port forwarding rule, select the ⊙ **Custom Service** button and enter a unique name for the new port forwarding rule.

A sample configuration for allowing Remote desktop and custom application access toward a single private IP is as follows:

8   Tick ☑ **Enable LAN Loopback**.

9   In either case you must enter the Private IP address of the computer or device you wish to port forward to in the **Server IP Address** field.

This will be a local IP address in the subnet 192.168.20.xx (by default); where xx can be any integer from 2 to 254.

10   Open the **Status** drop down list and select **Enable**.

11   Enter the port number or port range into the **External Port Start** and **External Port End** fields.
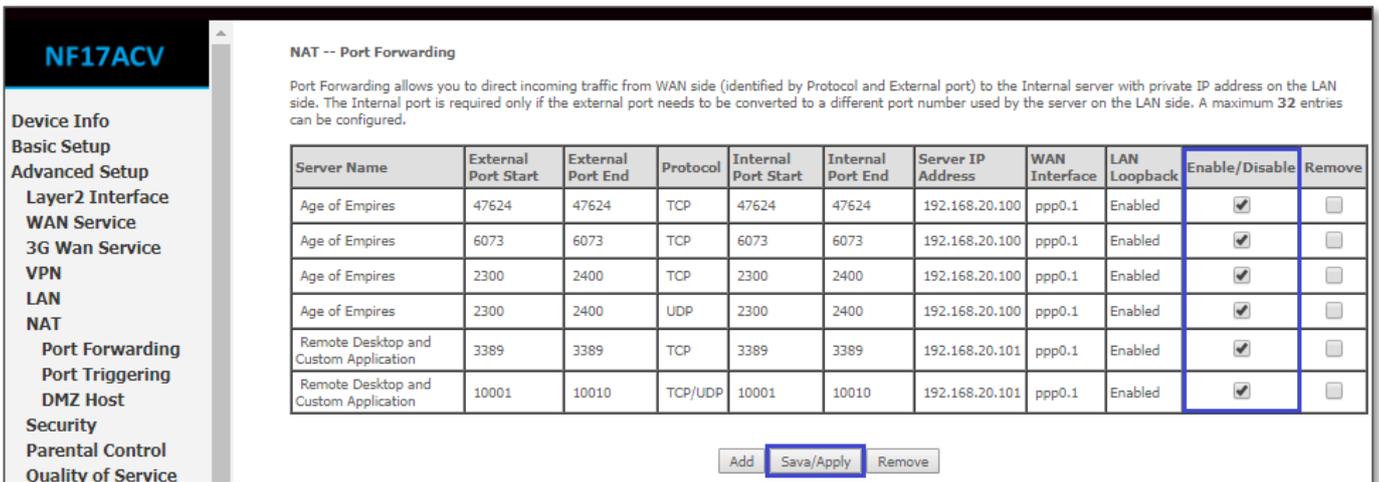
If you only want to open one port, then enter the same number in **Start** and **End** port fields, but if you want to open range of ports, then enter the start number in **Port Start** field and end number in **Port End** field.

Note that the **Internal Port Start** *and* **Internal Port End** *fields will automatically populate with the same port numbers.*

12   Select the **Protocol** to be used for the port forwarding rule: **TCP**, **UDP** or **TCP/UDP both**

13   Click the **Apply/Save** button.

14   The port forwarding rule will now be added to the list.

The example created in the above steps in this user guide is displayed in the bottom row, below.

NF17ACV

Device Info
Basic Setup
Advanced Setup
  Layer2 Interface
  WAN Service
  3G Wan Service
  VPN
  LAN
  NAT
    Port Forwarding
    Port Triggering
    DMZ Host
  Security
  Parental Control
  Quality of Service

NAT -- Port Forwarding

Port Forwarding allows you to direct incoming traffic from WAN side (identified by Protocol and External port) to the Internal server with private IP address on the LAN side. The Internal port is required only if the external port needs to be converted to a different port number used by the server on the LAN side. A maximum **32** entries can be configured.

Server Name	External Port Start	External Port End	Protocol	Internal Port Start	Internal Port End	Server IP Address	WAN Interface	LAN Loopback	Enable/Disable	Remove
Age of Empires	47624	47624	TCP	47624	47624	192.168.20.100	ppp0.1	Enabled	☑	☐
Age of Empires	6073	6073	TCP	6073	6073	192.168.20.100	ppp0.1	Enabled	☑	☐
Age of Empires	2300	2400	TCP	2300	2400	192.168.20.100	ppp0.1	Enabled	☑	☐
Age of Empires	2300	2400	UDP	2300	2400	192.168.20.100	ppp0.1	Enabled	☑	☐
Remote Desktop and Custom Application	3389	3389	TCP	3389	3389	192.168.20.101	ppp0.1	Enabled	☑	☐
Remote Desktop and Custom Application	10001	10010	TCP/UDP	10001	10010	192.168.20.101	ppp0.1	Enabled	☑	☐

Add   Sava/Apply   Remove

15   Click on **Save/Apply** button to save the changes.

Port forwarding is now configured.

Check or uncheck ☑ **Enable**/ ☐ **Disable** in the rule's row and click the **Save/Apply** button to enable or temporarily disable the rule.

To permanently delete a rule, check ☑ **Remove** in the rule's row and then click the **Remove** button.

Please note

- We recommend that you set a Static IP address on the end device, instead of obtaining one automatically, to make sure that the request is forwarded to the appropriate machine every individual time.

- 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 will 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.

- Similarly, remote access and the webserver must have unique port numbers. For example, you cannot host a web server accessible through port 80 of your public IP and enable remote http administration of the NF17ACV through port 80, you must provide both with unique port numbers.

- Note also that ports 22456 to 32456 are reserved for RTP protocol in VOIP services. Do not use any of these ports for any other service.