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Before You Start

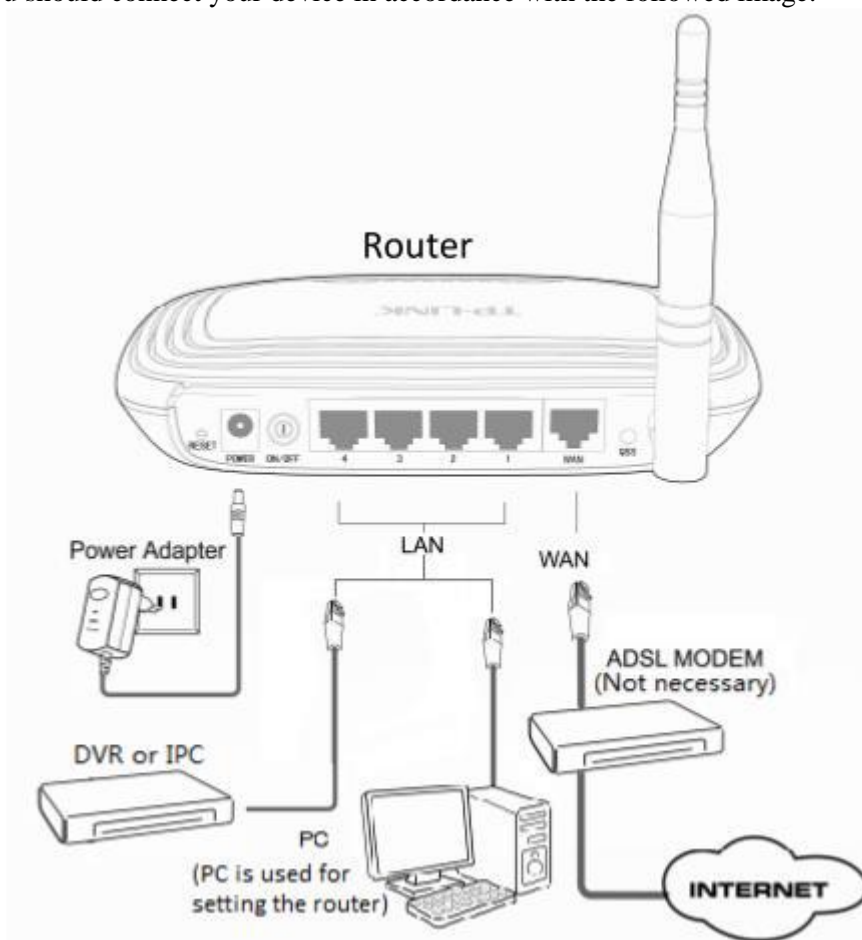
Port forwarding should only be used when the devices need to be accessed via the internet. To ensure proper security configuration, please follow below points:

1. Minimize the port numbers exposed to the internet. Port forwarding should only be configured when absolutely necessary. For example, to use web service, only port 443 should be forwarded.
2. Avoid common ports and reconfigure them to customized ports. For example, port 80 is commonly used for HTTP. User is recommended to change to a customized port on the device other than port 80 for the designated service, following TCIP/IP port rule (1 – 65535).

Instructions

1. Network Topology

At first, you should connect your device in accordance with the followed image:



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2. Ports to be forwarded

Generally speaking, you need to open all the three http, rtsp, server ports, 80, 800, 554 are as default. You can find the port number via web:

The screenshot shows the Hikvision web interface. On the left is a sidebar with 'Local', 'System', and 'Network' sections. The 'Network' section is expanded, showing 'Basic Settings', 'Advanced Settings', 'Video/Audio', and 'Image'. The 'Basic Settings' is selected. On the right, the 'Port' tab is active under the 'Configuration' menu. It shows four ports: HTTP Port (80), RTSP Port (554), HTTPS Port (443), and Server Port (8000). Each port has a green checkmark to its right. A red 'Save' button is at the bottom.

For back-end device, you can also find the port number in “More Settings” locally.

The screenshot shows the Hikvision web interface. On the left is a sidebar with 'General', 'Network', 'Alarm', 'RS-232', 'Live View', 'Exceptions', and 'User' sections. The 'Network' section is expanded. On the right, the 'More Settings' tab is active under the 'Configuration' menu. It shows three ports: Server Port (8000), HTTP Port (80), and RTSP Service Port (554). The 'Server Port' field is highlighted with a yellow box.

3. Open ports in router

You can select to open ports manually, or use the UPnP to open ports automatically. Open ports manually is more reliable. It's because in the UPnP mode, external ports are assigned by the router automatically, there might be ports conflicts if there are many devices in your network.

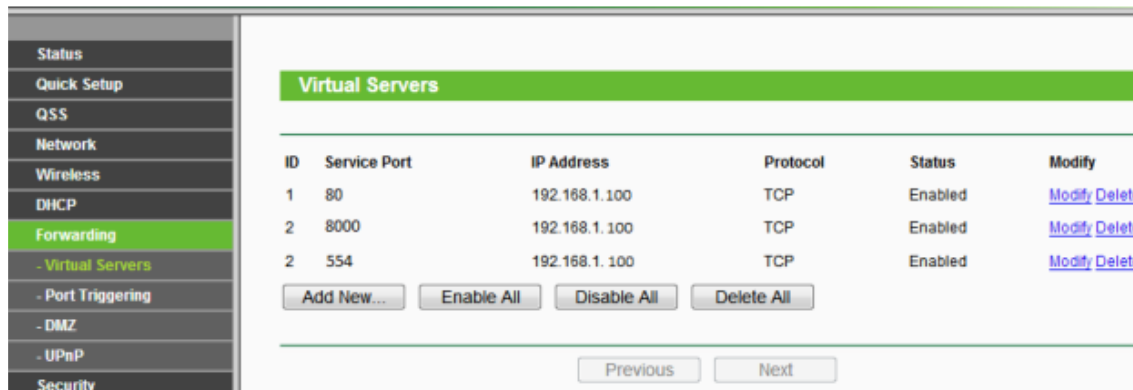
Open ports manually:

Steps:

- 1) Login your router, go to **Forwarding->Virtual Servers**;
- 2) Click **Add New** to add ports;
- 3) Input the port number, IP address(which is the same with your IPC/NVR), select **Protocol** as **ALL**;

The screenshot shows the 'Add or Modify a Virtual Server Entry' form. It has a green header. The form contains the following fields: 'Service Port' (80), 'IP Address' (192.168.1.100), 'Protocol' (ALL), 'Status' (Enabled), and 'Common Service Port' (--Select One--). There are 'Save' and 'Back' buttons at the bottom.

- 4) Repeat the step to open all the three ports.

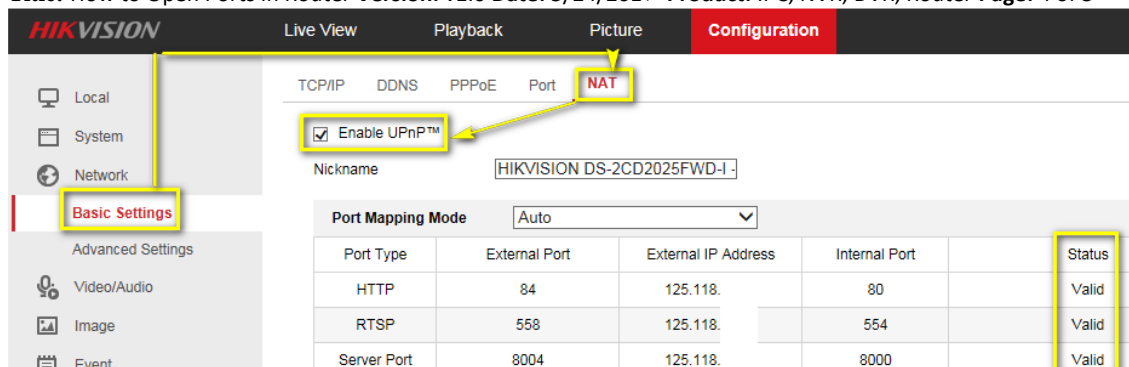


Open ports automatically:

Steps:

- 1) Login your router, go to **Forwarding->UPnP**, enable it; (this function is enabled as default for many routers)
- 2) Login your IPC/NVR via web, go to **Configuration->Network->Basic Settings->NAT**, enable **UPnP**, select the **Port Mapping Mode** as **Auto**.
- 3) Refresh the page, all the parameters like **External Port**, **External IP address** will be filled automatically. If the **Status** turns to **Valid**, it means the configuration is done.

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Note:

- 1) DMZ function is suggested to be Disabled;
- 2) Different routers may have different interfaces; but the procedures are the same.
- 3) The default No. of Server Port (for client software viewing) is 8000, which can be effective from 2000 to 65535;
- 4) The default No. of HTTP Port (for PC web viewing) is 80, which can be effective from 1 to 65535;
- 5) The default No. of RTSP Port is 554 (for data transmission), which can be effective from 1024 to 65535.
- 6) Sometimes 80 or 8000 may be occupied by some other applications, so you may change them respectively to 81/82 or 8001/8002.
- 7) If you modify 80 to any other No., you need to input "Colon + Port No." after the public IP or address in the web browser when you try to access your device via web, such as <http://57.63.91.xx:81>.

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