1:1 NAT

Overview

> **Warning:**
> We **strongly** recommend that you **only** perform these actions on a new installation of cPanel & WHM. **Do not** attempt a 1:1 NAT configuration on an existing production server.

When you install cPanel & WHM, the installer will detect whether your server is on a NAT-configured network. If the installer detects a NAT-configured network, your server will configure itself for NAT mode and attempt to automatically map local IP addresses to public IP addresses.

> **Notes:**
> - If you use a NAT environment, your server **must** reside in a 1:1 NAT configuration to install cPanel & WHM.
> - For a list of ports that you must open to allow cPanel & WHM services to function on your server, read our How to Configure Your Firewall for cPanel Services documentation.

The mapping process

The system attempts to map all non-loopback IP addresses bound to any network interface on the server to a public IP address.

To complete this process, the system performs the following actions:

1. Your server will send an outgoing connection from each local IP address to the `http://myip.cpanel.net/v1.0/` server.
2. The `http://myip.cpanel.net/v1.0/` server responds with the public IP address from which it received the request.
3. The system maps the local IP address to this public IP address.

> **Warning:**
> We do **not** recommend that you map more than one local IP map address to a single public IP address.

Manage IP addresses

You can manage the maps for local and remote IP addresses with the following WHM interfaces:

- The *Add a New IP Address* interface (*WHM >> Home >> IP Functions >> Add a New IP Address*).
- The *Show or Delete Current IP Address* interface (*WHM >> Home >> IP Functions >> Show or Delete Current IP Address*).
- The *IP Migration Wizard* interface (*WHM >> Home >> IP Functions >> IP Migration Wizard*).

Each interface displays the warning notice *NAT mode enabled* if NAT is enabled on your server.

> **Warning:**
> If multiple local IP addresses match the same public IP address, the system will only map the first local IP address in the `/var/cpanel/cpnat` file.

The build_cpnat script

The `/usr/local/cpanel/scripts/build_cpnat` script uses the `http://myip.cpanel.net/v1.0/` server to map local IP addresses to public IP addresses. However, if you wish to use a different IP address lookup service, perform the following steps:

1. Open the `/etc/cpsources.conf` file with a text editor and add the following line:

```
MYIP=https://ifconfig.me/ip
```

2. Run the `/usr/local/cpanel/scripts/build_cpnat` script.

> **Notes:**
> - For more information about the `build_cpnat` script, run the following command:
>
>   ```
>   /usr/local/cpanel/scripts/build_cpnat --man
>   ```
>
> - If you accidentally delete your `cpnat` file or the file becomes becomes corrupted, rebuild it with the `/usr/local/cpanel/scripts/build_cpnat` script.
> - The `/var/cpanel/cpnat` file acts as a flag file for NAT mode. If the installer mistakenly detects a NAT-configured network, delete the `/var/cpanel/cpnat` file to disable NAT mode.

3. Update your cPanel accounts' local IP addresses in WHM's *IP Migration Wizard* interface (*WHM >> Home >> IP Functions >> IP Migration Wizard*).

Additional documentation

Suggested documentation For cPanel users For WHM users For developers

- 1:1 NAT

- Basic WebHost Manager Setup

- Show or Delete Current IP Addresses

- Change Hostname

- Initial Setup Assistant - Set Up IP Addresses

- IP Blocker

- 1:1 NAT

- How to Disable Network Manager

- Basic WebHost Manager Setup

- Passive FTP and NAT Configuration Temporary Workaround

- Show or Delete Current IP Addresses

- WHM API 1 Functions - nat_set_public_ip

- WHM API 1 Functions - nat_checkip