

# Port Address Translation (PAT) Cheat Sheet for Cisco Beginners

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*This is a generic cheat sheet and not for a specific use case.*

## What is PAT?

**Port Address Translation (PAT)** allows multiple private IP addresses to share a single public IP address by using different port numbers. Also called "NAT Overload."

## Basic PAT Configuration

### Step 1: Define Inside and Outside Interfaces

```
Router(config)# interface gigabit0/0
Router(config-if)# ip nat inside

Router(config)# interface serial0/0/0
Router(config-if)# ip nat outside
```

### Step 2: Create Access List (Define Private Networks)

```
Router(config)# access-list 1 permit 192.168.1.0 0.0.0.255
Router(config)# access-list 1 permit 10.0.0.0 0.255.255.255
```

### Step 3: Configure PAT

```
Router(config)# ip nat inside source list 1 interface serial0/0/0 overload
```

## Essential Show Commands

### View NAT Translations

```
Router# show ip nat translations
Router# show ip nat translations verbose
```

### View NAT Statistics

```
Router# show ip nat statistics
```

### Clear NAT Translations

Router# clear ip nat translation \*

Router# clear ip nat translation inside [local-ip] [global-ip] outside [local-ip] [global-ip]