



## Information About NAT 44 Pool Exhaustion Alerts

The NAT 44 pool exhaustion alert feature enables generation of alerts before addresses in an address pool are exhausted. The alerts are generated for TCP and UDP ports and separate Syslog entries are generated for each protocol. This feature can help the administrator take action before the address pool is exhausted.

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### Define Thresholds for Address Pool

You can define high and low thresholds for the address pool. These thresholds are set in terms of percentage. You can use `ip nat settings` command to configure the threshold limits.

### Thresholds Applicable for Different Address Pools

When you specify a threshold, the usage of the address pools are as follows:

Address Pool Type	Pool Usage Based On
Pool for port-address translation (PAT)	Pool usage for such pools will be based total ports allocated from the pool
Pool for Address translation	Pool usage for such pools will be based on address allocated from the pool
Pool with BPA configured	Pool usage will be based on the total number of port-sets allocated from the pool

## Prerequisites for NAT 44 Pool Exhaustion Alerts

Before performing the tasks in this module, you must be familiar with the concepts described in the “Monitoring and Maintaining NAT” module and have NAT configured in your network.

## Restrictions for NAT 44 Pool Exhaustion Alerts

The NAT 44 Pool Exhaustion Alert feature does not support setting alerts for ICMP ports.

## Use Case on How NAT 44 Pool Exhaustion Alerts Work

Let us assume you have defined thresholds for the address pool using the following command:

```
ip nat settings pool watermark high 80 low 50
```

This means that the higher threshold and lower threshold for the address pool is set at 80 and 50 percent respectively.

Pool Usage	Syslog Status
Pool usage from 78-80	Syslogs are generated
Pool usage falls to 60	No Syslogs are generated
Pool usage increased again to more than or equal to 80	No Syslogs are generated
Pool usage decreased to less than or equal to 50	No Syslogs are generated
Pool usage increased to more than or equal to 80	Syslogs are generated

## Additional References for NAT 44 Pool Exhaustion Alerts

### Related Documents

Related Topic	Document Title
Cisco IOS commands	<a href="#">Cisco IOS Master Command List, All Releases</a>
NAT commands: complete command syntax, command mode, command history, defaults, usage guidelines, and examples	<a href="#">Cisco IOS IP Addressing Services Command Reference</a>

**Technical Assistance**

Description	Link
The Cisco Support and Documentation website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies. Access to most tools on the Cisco Support and Documentation website requires a Cisco.com user ID and password.	<a href="http://www.cisco.com/cisco/web/support/index.html">http://www.cisco.com/cisco/web/support/index.html</a>

## Feature Information for NAT 44 Pool Exhaustion Alerts

*Table 1: Feature Information for NAT 44 Pool Exhaustion Alerts*

Feature Name	Releases	Feature Information
NAT 44 Pool Exhaustion Alerts	Cisco IOS XE Fuji 16.8	<p>The NAT 44 pool exhaustion alert feature enables generation of alerts before addresses in an address pool are exhausted. The alerts are generated for TCP and UDP ports and separate Syslog entries are generated for each protocol. This feature can help the administrator take action before the address pool is exhausted..</p> <p>The following command is introduced : <b>ip nat settings pool watermark, .</b></p>

