

Compatible Systems Tech Notes: NAT BitMasks and the External Range

Document ID: 17672

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Introduction

Based on your code, you might or might not be able to use a bitmask to identify your external range in the NAT Global section.

Prerequisites

Requirements

There are no specific requirements for this document.

Affected Products

1200i 1220i 1250i 1270i 2600i 2200R 2220R 2250R 2270R 3500R 4000S VSR-2 VSR-8 IntraPort 1
IntraPort 2 IntraPort 2+ IntraPort Enterprise-2 IntraPort Enterprise-8 IntraPort Carrier-2 IntraPort Carrier-8

Affected Versions

All versions

More Information

You cannot use a bitmask to define an ExternalRange in the NAT Global section using anything less than v5.1 code on any NAT capable device. The v5.1 code allows the use of a bitmask in the ExternalRange.

```
[ NAT Global ]
  enabled=on
  ExternalRange=204.144.171.64/29 << Good with v5.1 code and higher
  InternalRange=192.168.10.0/24
  PassThruRange=204.144.171.0/26
```

Note: The bitmask version of identifying the range does not use the first (network) or last (broadcast) address in the range. In this example, the first valid address for NAT Mapping or translation is the 204.144.171.65 address and the last is 204.144.171.70.

Alternative syntax for lower code versions is shown here:

```
[ NAT Global ]
  enabled=on
  ExternalRange=204.144.171.{65,66,67,68,69,70}
  InternalRange=192.168.10.0/24
  PassThruRange=204.144.171.0/26
```

Bitmasks work fine for InternalRange and PassThruRange for all NAT capable code.

Related Information

- [Technical Support & Documentation – Cisco Systems](#)
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Updated: Jun 20, 2007

Document ID: 17672
