



## 6PE Multipath

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The 6PE multipath feature uses multiprotocol internal BGP (MP-iBGP) to distribute IPv6 routes over the MPLS IPv4 core network and to attach an MPLS label to each route

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## Finding Feature Information

Your software release may not support all the features documented in this module. For the latest caveats and feature information, see [Bug Search Tool](#) and the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the feature information table.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to [www.cisco.com/go/cfn](http://www.cisco.com/go/cfn). An account on Cisco.com is not required.

## Information About 6PE Multipath

### 6PE Multipath

Internal and external BGP multipath for IPv6 allows the IPv6 device to load balance between several paths (for example, the same neighboring autonomous system or subautonomous system, or the same metric) to reach its destination. The 6PE multipath feature uses MP-iBGP to distribute IPv6 routes over the MPLS IPv4 core network and to attach an MPLS label to each route.

When MP-iBGP multipath is enabled on the 6PE device, all labeled paths are installed in the forwarding table with MPLS information (label stack) when MPLS information is available. This functionality enables 6PE to perform load balancing.

# How to Configure 6PE Multipath

## Configuring IBGP Multipath Load Sharing

Perform this task to configure IBGP multipath load sharing and control the maximum number of parallel IBGP routes that can be installed in a routing table.

### SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **router bgp** *as-number*
4. **address-family ipv6 [unicast]**
5. **maximum-paths ibgp** *number-of-paths*

### DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	<b>enable</b> <b>Example:</b> Device> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> <li>• Enter your password if prompted.</li> </ul>
<b>Step 2</b>	<b>configure terminal</b> <b>Example:</b> Device# configure terminal	Enters global configuration mode.
<b>Step 3</b>	<b>router bgp</b> <i>as-number</i> <b>Example:</b> Device(config)# router bgp 65000	Enters router configuration mode for the specified routing process.
<b>Step 4</b>	<b>address-family ipv6 [unicast]</b> <b>Example:</b> Device(config-router)# address-family ipv6	Specifies the IPv6 address family and enters address family configuration mode. <ul style="list-style-type: none"> <li>• The <b>unicast</b> keyword specifies the IPv6 unicast address family. By default, the device is placed in configuration mode for the IPv6 unicast address family if the <b>unicast</b> keyword is not specified with the <b>address-family ipv6</b> command.</li> </ul>
<b>Step 5</b>	<b>maximum-paths ibgp</b> <i>number-of-paths</i> <b>Example:</b> Device(config-router)# maximum-paths ibgp 3	Controls the maximum number of parallel IBGP routes that can be installed in a routing table.

# Configuration Examples for 6PE Multipath

## Example: Configuring 6PE Multipath

```
Device# show ipv6 cef internals
IPv6 CEF is enabled and running
Slow processing intvl = 1 seconds backoff level current/max 0/0
0 unresolved prefixes, 0 requiring adjacency update
IPv6 CEF default table
14 prefixes tableid 0
table version 17
root 6283F5D0
```

## Additional References

### Related Documents

Related Topic	Document Title
IPv6 addressing and connectivity	<i>IPv6 Configuration Guide</i>
Cisco IOS commands	<a href="#">Master Commands List, All Releases</a>
IPv6 commands	<a href="#">IPv6 Command Reference</a>
Cisco IOS IPv6 features	<a href="#">IPv6 Feature Mapping</a>

### Standards and RFCs

Standard/RFC	Title
RFCs for IPv6	<i>IPv6 RFCs</i>

### 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 6PE Multipath

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

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**Table 1: Feature Information for 6PE Multipath**

Feature Name	Releases	Feature Information
6PE Multipath	Cisco IOS XE Release 3.1S	<p>The 6PE multipath feature uses MP-iBGP to distribute IPv6 routes over the MPLS IPv4 core network and to attach an MPLS label to each route.</p> <p>The following commands were introduced or modified: <b>maximum-paths ibgp, router bgp, show ipv6 cef internals.</b></p>