IS-IS IPv6 Advertise Passive Only

The IS-IS IPv6 Advertise Passive Only feature allows you to configure the Intermediate System-to-Intermediate System (IS-IS) instance on a device to advertise only IPv6 prefixes that belong to passive interfaces and exclude other connected IPv6 prefixes.

Prerequisites for IS-IS IPv6 Advertise Passive Only

Before you can use the IS-IS IPv6 Advertise Passive Only feature to exclude IPv6 prefixes of connected networks from IS-IS link-state protocol (LSP) data unit advertisements, the integrated IS-IS routing protocol must be configured. See the "Configuring a Basic IS-IS Network" section of the *IP Routing: ISIS Configuration Guide*.

Information About IS-IS IPv6 Advertise Passive Only

IPv6 Prefixes Only Allowed on Passive Interfaces

You can configure the IS-IS instance on a device to allow only IPv6 prefixes that belong to passive interfaces in its LSP advertisements. This configuration reduces the number of IPv6 prefixes carried in the LSP advertisement.

How to Configure IS-IS IPv6 Advertise Passive Only

Configuring IS-IS Instances on a Device to Advertise Passive Interface IPv6 Prefixes Only

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **router isis** [*area-tag*]
4. **net** *net1*
5. **interface loopback** *number*
6. **ipv6 address** {*ipv6-address/prefix-length* | *prefix-name sub-bits/prefix-length*}
7. **exit**
8. **interface** *type number*
9. **ipv6 address** {*ipv6-address/prefix-length* | *prefix-name sub-bits/prefix-length*}
10. **ipv6 router isis** [*area-tag*]
11. **exit**
12. **router isis** [*area-tag*]
13. **passive-interface** [**default**] *type number*
14. **address-family ipv6**
15. **advertise passive-only**
16. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable** **Example:** `Device> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 3	**router isis** [*area-tag*] **Example:** `Device(config)# router isis area1`	Configures an IS-IS routing process for IP on an interface, attaches an area designator to the routing process, and enters router configuration mode.
Step 4	**net** *net1* **Example:**	Configures an IS-IS network entity table (NET) for the routing process.

	Command or Action	Purpose
	`Device(config-router)# net 47.0010.0000.0000.0000.0001.0001.1111.1111.1111.00`	
Step 5	**interface loopback** *number* **Example:** `Device(config-router)# interface loopback 0`	Configures a loopback interface and enters interface configuration mode.
Step 6	**ipv6 address** {*ipv6-address/prefix-length* | *prefix-name sub-bits/prefix-length*} **Example:** `Device(config-if)# ipv6 address 2001:688:1001:1000::1/128`	Sets a primary IPv6 address for an interface.
Step 7	**exit** **Example:** `Device(config-if)# exit`	Returns to global configuration mode.
Step 8	**interface** *type* *number* **Example:** `Device(config)# interface FastEthernet 0/0`	Configures an interface type and enters interface configuration mode.
Step 9	**ipv6 address** {*ipv6-address/prefix-length* | *prefix-name sub-bits/prefix-length*} **Example:** `Device(config-if)# ipv6 address 2001:688:1001:100A::1/64`	Configures an IPv6 address for the interface.
Step 10	**ipv6 router isis** [*area-tag*] **Example:** `Device(config-if)# ipv6 router isis area1`	Configures an IS-IS routing process for IPv6 on an interface, attaches an area designator to the routing process, and enters router configuration mode.
Step 11	**exit** **Example:** `Device(config-if)# exit`	Returns to global configuration mode.
Step 12	**router isis** [*area-tag*] **Example:** `Device(config)# router isis area1`	Configures an IS-IS routing process for IP on an interface, attaches an area designator to the routing process, and enters router configuration mode.

	Command or Action	Purpose
Step 13	**passive-interface** [**default**] *type number* **Example:** `Device(config-router)# passive-interface loopback 0`	Disables sending routing updates on an interface.
Step 14	**address-family ipv6** **Example:** `Device(config-router)# address-family ipv6`	Enters address family configuration mode.
Step 15	**advertise passive-only** **Example:** `Device(config-router-af)# advertise passive-only`	Configures IS-IS to advertise only IPv6 prefixes that belong to passive interfaces.
Step 16	**end** **Example:** `Device(config-router-af)# end`	(Optional) Saves the configuration commands to the running configuration file and returns to privileged EXEC mode.

Configuration Examples for IS-IS IPv6 Advertise Passive Only

Example: Configuring IS-IS Instances on a Device to Advertise Only Passive Interfaces

```
Device> enable
Device# configure terminal
Device(config)# router isis area1
Device(config-router)# net 47.0010.0000.0000.0000.0001.0001.1111.1111.1111.00
Device(config-router)# interface loopback 0
Device(config-if)# ipv6 address 2001:688:1001:1000::1/128
Device(config-if)# exit
Device(config)# interface Ethernet 0/0
Device(config-if)# ipv6 address 2001:688:1001:100A::1/64
Device(config-if)# ipv6 router isis area1
Device(config-if)# exit
Device(config)# router isis area1
Device(config-router)# passive-interface loopback 0
Device(config-router)# address-family ipv6
Device(config-router-af)# advertise passive-only
```

Additional References

Related Documents

Related Topic	Document Title
IPv6 addressing and connectivity	*IPv6 Configuration Guide*
Cisco IOS commands	Cisco IOS Master Commands List, All Releases
IPv6 commands	*Cisco IOS IPv6 Command Reference*
Cisco IOS IPv6 features	*Cisco IOS IPv6 Feature Mapping*
IS-IS commands	*Cisco IOS IS-IS Command Reference*
Configuring the integrated IS-IS routing protocol	"Configuring a Basic IS-IS Network" module of the *IP Routing: ISIS Configuration Guide*

Standards and RFCs

Standard/RFC	Title
RFCs for IPv6	*IPv6 RFCs*

MIBs

MIB	MIBs Link
	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

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.	http://www.cisco.com/cisco/web/support/index.html

Feature Information for IS-IS IPv6 Advertise Passive Only

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.

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. An account on Cisco.com is not required.