IPv6 Source Specific Multicast Mapping

Source-specific multicast (SSM) SSM mapping for IPv6 supports both static and dynamic Domain Name System (DNS) mapping for MLD version 1 receivers. This feature allows deployment of IPv6 SSM with hosts that are incapable of providing MLD version 2 support in their TCP/IP host stack and their IP multicast receiving application.

Information About IPv6 Source Specific Multicast Mapping

SSM mapping for IPv6 supports both static and dynamic Domain Name System (DNS) mapping for MLD version 1 receivers. This feature allows deployment of IPv6 SSM with hosts that are incapable of providing MLD version 2 support in their TCP/IP host stack and their IP multicast receiving application.

SSM mapping allows the device to look up the source of a multicast MLD version 1 report either in the running configuration of the device or from a DNS server. The device can then initiate an (S, G) join toward the source.

How to Configure IPv6 Source Specific Multicast Mapping

Configuring IPv6 SSM

When the SSM mapping feature is enabled, DNS-based SSM mapping is automatically enabled, which means that the device will look up the source of a multicast MLD version 1 report from a DNS server.

You can configure either DNS-based or static SSM mapping, depending on your device configuration. If you choose to use static SSM mapping, you can configure multiple static SSM mappings. If multiple static SSM mappings are configured, the source addresses of all matching access lists will be used.

Before you begin

Note To use DNS-based SSM mapping, the device needs to find at least one correctly configured DNS server to which the device can be directly attached.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **ipv6 mld** [**vrf** *vrf-name*] **ssm-map enable**
4. **no ipv6 mld** [**vrf** *vrf-name*] **ssm-map query dns**
5. **ipv6 mld** [**vrf** *vrf-name*] **ssm-map static** *access-list source-address*
6. **end**
7. **show ipv6 mld** [**vrf** *vrf-name*] **ssm-map** [*source-address*]

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	**ipv6 mld** [**vrf** *vrf-name*] **ssm-map enable** **Example:** `Device(config)# ipv6 mld ssm-map enable`	Enables the SSM mapping feature for groups in the configured SSM range.
Step 4	**no ipv6 mld** [**vrf** *vrf-name*] **ssm-map query dns** **Example:** `Device(config)# no ipv6 mld ssm-map query dns`	Disables DNS-based SSM mapping.
Step 5	**ipv6 mld** [**vrf** *vrf-name*] **ssm-map static** *access-list source-address* **Example:** `Device(config)# ipv6 mld ssm-map static SSM_MAP_ACL_2 2001:DB8:1::1`	Configures static SSM mappings.

	Command or Action	Purpose
Step 6	**end** **Example:** `Device(config-if)# end`	Returns to privileged EXEC mode.
Step 7	**show ipv6 mld** [**vrf** *vrf-name*] **ssm-map** [*source-address*] **Example:** `Device# show ipv6 mld ssm-map`	Displays SSM mapping information.

Configuration Examples for IPv6 Source Specific Multicast Mapping

Example: IPv6 SSM Mapping

```
Device# show ipv6 mld ssm-map 2001:DB8::1

 Group address  : 2001:DB8::1
 Group mode ssm : TRUE
 Database       : STATIC
 Source list    : 2001:DB8::2
                  2001:DB8::3

Device# show ipv6 mld ssm-map 2001:DB8::2

 Group address  : 2001:DB8::2
 Group mode ssm : TRUE
 Database       : DNS
 Source list    : 2001:DB8::3
                  2001:DB8::1
```

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
IP multicast commands	Cisco IOS IP Multicast Command Reference
IPv6 commands	Cisco IOS IPv6 Command Reference

Related Topic	Document Title
Cisco IOS IPv6 features	Cisco IOS IPv6 Feature Mapping

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 IPv6 Source Specific Multicast Mapping

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.