DHCPv6 Server Timer Options

The Dynamic Host Configuration Protocol for IPv6 (DHCPv6) server options are part of DHCP stateless autoconfiguration.

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. An account on Cisco.com is not required.

Information About DHCPv6 Server Timer Options

Information Refresh Server Option

The DHCPv6 information refresh option can specify an upper boundary for the length of time a client should wait before refreshing information retrieved from DHCPv6. This option is used with stateless DHCPv6, because there are no addresses or other entities with lifetimes that can tell the client when to contact the DHCPv6 server to refresh its configuration.

NIS- and NIS+-Related Server Options

Users can configure the network information service (NIS) or NIS plus (NIS+) address or domain name of a DHCPv6 server using NIS- and NIS+-related options, and then import that information to the DHCPv6 client.

SNTP Server Option

The SNTP server option provides a list of one or more IPv6 addresses of SNTP servers available to the client for synchronization. The clients use these SNTP servers to synchronize their system time to that of the standard time servers. The server may list the SNTP servers in decreasing order of preference, but clients must treat the list of SNTP servers as an ordered list.

How to Configure DHCPv6 Server Timer Options

Configuring the Information Server Refresh Option

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **ipv6 dhcp pool** *poolname*
4. **information refresh** {*days* [*hours minutes*] | **infinity**}
5. **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	**ipv6 dhcp pool** *poolname* **Example:** `Device(config)# ipv6 dhcp pool pool1`	Configures a DHCPv6 configuration information pool and enters DHCPv6 pool configuration mode.

	Command or Action	Purpose
Step 4	**information refresh** {*days* [*hours minutes*] | **infinity**} **Example:** `Device(config-dhcp)# information refresh 1 1 1`	Specifies the information refresh time to be sent to the client.
Step 5	**end** **Example:** `Device(config-dhcp)# end`	Returns to privileged EXEC mode.

Importing the Information Server Refresh Option

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **ipv6 dhcp pool** *poolname*
4. **import information refresh**
5. **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	**ipv6 dhcp pool** *poolname* **Example:** `Device(config)# ipv6 dhcp pool pool1`	Configures a DHCPv6 configuration information pool and enters DHCPv6 pool configuration mode.

	Command or Action	Purpose
Step 4	**import information refresh** **Example:** `Device(config-dhcp)# import information refresh`	Imports the information refresh time option to a DHCPv6 client.
Step 5	**end** **Example:** `Device(config-dhcp)# end`	Returns to privileged EXEC mode.

Configuring NIS- and NISP-Related Server Options

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **ipv6 dhcp pool** *poolname*
4. **nis address** *ipv6-address*
5. **nis domain-name** *domain-name*
6. **nisp address** *ipv6-address*
7. **nisp domain-name** *domain-name*
8. **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.

	Command or Action	Purpose
Step 3	**ipv6 dhcp pool** *poolname* **Example:** `Device(config)# ipv6 dhcp pool pool1`	Configures a DHCPv6 configuration information pool and enters DHCPv6 pool configuration mode.
Step 4	**nis address** *ipv6-address* **Example:** `Device(config-dhcp)# nis address 2001:DB8:1000:1000::30`	Specifies the NIS address of an IPv6 server to be sent to the client.
Step 5	**nis domain-name** *domain-name* **Example:** `Device(config-dhcp)# nis domain-name domain1`	Enables a server to convey a client's NIS domain name information to the client.
Step 6	**nisp address** *ipv6-address* **Example:** `Device(config-dhcp)# nisp address 2001:DB8:3000:3000::42`	Specifies the NIS+ address of an IPv6 server to be sent to the DHCPv6 client.
Step 7	**nisp domain-name** *domain-name* **Example:** `Device(config-dhcp)# nisp domain-name domain2`	Enables a server to convey a client's NIS+ domain name information to the DHCPv6 client.
Step 8	**end** **Example:** `Device(config-dhcp)# end`	Returns to privileged EXEC mode.

Importing NIS- and NIS+-Related Server Options

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **ipv6 dhcp pool** *poolname*
4. **import nis address**
5. **import nis domain-name**
6. **import nisp address**
7. **import nisp domain-name**
8. **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	**ipv6 dhcp pool** *poolname* **Example:** `Device(config)# ipv6 dhcp pool pool1`	Configures a DHCPv6 configuration information pool and enters DHCPv6 pool configuration mode.
Step 4	**import nis address** **Example:** `Device(config-dhcp)# import nis address`	Imports the NIS servers option to a DHCPv6 client.
Step 5	**import nis domain-name** **Example:** `Device(config-dhcp)# import nis domain-name`	Imports the NIS domain name option to a DHCPv6 client.

	Command or Action	Purpose
Step 6	**import nisp address** **Example:** `Device(config-dhcp)# import nisp address`	Imports the NISP address option to a DHCPv6 client.
Step 7	**import nisp domain-name** **Example:** `Device(config-dhcp)# import nisp domain-name`	Imports the NISP domain name option to a DHCPv6 client.
Step 8	**end** **Example:** `Device(config-dhcp)# end`	Returns to privileged EXEC mode.

Configuring the SNTP Server Option

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **ipv6 dhcp pool** *poolname*
4. **sntp address** *ipv6-address*
5. **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.

	Command or Action	Purpose
Step 3	**ipv6 dhcp pool** *poolname* **Example:** `Device(config)# ipv6 dhcp pool pool1`	Configures a DHCPv6 configuration information pool and enters DHCPv6 pool configuration mode.
Step 4	**sntp address** *ipv6-address* **Example:** `Device(config-dhcp)# sntp address 2001:DB8:2000:2000::33`	Specifies the SNTP server list to be sent to the client.
Step 5	**end** **Example:** `Device(config-dhcp)# end`	Returns to privileged EXEC mode.

Importing the SNTP Server Option

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **ipv6 dhcp pool** *poolname*
4. **import sntp address** *ipv6-address*
5. **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.

	Command or Action	Purpose
Step 3	**ipv6 dhcp pool** *poolname* **Example:** `Device(config)# ipv6 dhcp pool pool1`	Configures a DHCPv6 configuration information pool and enters DHCPv6 pool configuration mode.
Step 4	**import sntp address** *ipv6-address* **Example:** `Device(config-dhcp)# import sntp address 2001:DB8:2000:2000::33`	Imports the SNTP server option to a DHCPv6 client.
Step 5	**end** **Example:** `Device(config-dhcp)# end`	Returns to privileged EXEC mode.

Configuration Examples for DHCPv6 Server Timer Options

Example: Configuring DHCPv6 Server Timer Options

```
Device# show ipv6 dhcp pool

DHCPv6 pool: pool1
  Domain name: domain1
  NIS server domain name: ndomain1
  NIS server domain name: ndomain2
  SNTP server address: 2001:DB8::1
  Imported Information refresh: 90060
  Active clients: 0
```

Additional References

Related Documents

Related Topic	Document Title
IPv6 addressing and connectivity	*IPv6 Configuration Guide*
Cisco IOS commands	Cisco IOS Master Command List, All Releases

Related Topic	Document Title
IPv6 commands	Cisco IOS IPv6 Command Reference
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 DHCPv6 Server Timer Options

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 DHCPv6 Server Timer Options

Feature Name	Releases	Feature Information
DHCPv6 Client Information Refresh Option	Cisco IOS XE Release 3.2SE	The DHCPv6 information refresh option can specify an upper boundary for the length of time a client should wait before refreshing information retrieved from DHCPv6. The following commands were introduced or modified: **import information refresh**, **information refresh**, **ipv6 dhcp pool**, **show ipv6 dhcp pool**.
DHCPv6 Server Timer Options	Cisco IOS XE Release 3.2SE	The DHCPv6 server options are part of DHCP stateless autoconfiguration. The following commands were introduced or modified: **import nis-address**, **import nis domain-name**, **import nisp address**, **import nisp domain-name**, **ipv6 dhcp pool**, **nis address**, **nis domain-name**, **nisp address**, **nisp domain-name**, **show ipv6 dhcp pool**.