

IPv6 DAD Proxy

IPv6 Duplicate Address Detection (DAD) Proxy feature responds to the DAD queries on behalf of a node that owns the queried address. It is useful in environments where nodes cannot communicate directly on the link.

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Restrictions for IPv6 DAD Proxy

- The IPv6 Duplicate Address Detection (DAD) Proxy feature is not supported on Etherchannel ports.

Information About IPv6 DAD Proxy

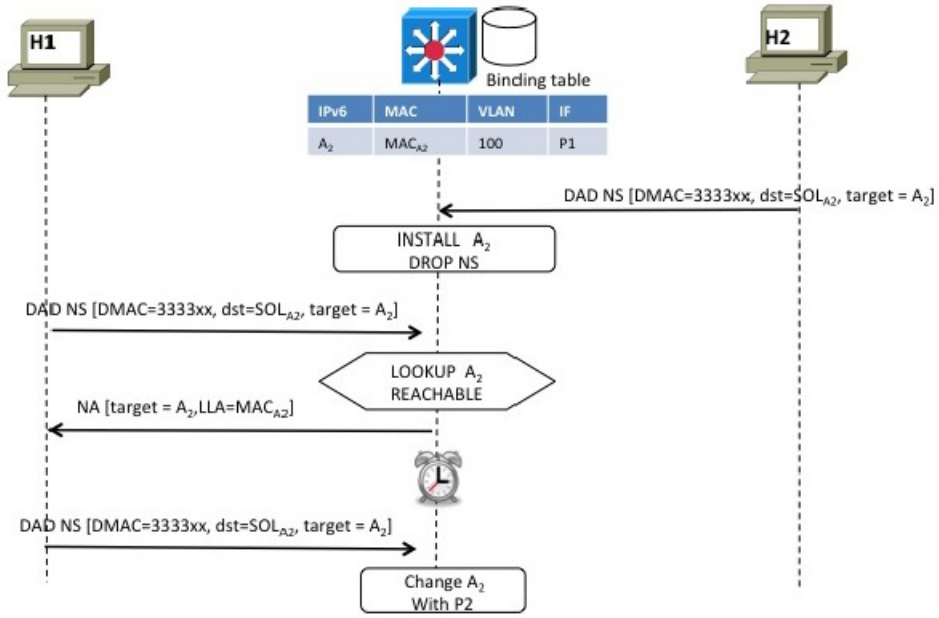
Overview of IPv6 DAD Proxy

The IPv6 Duplicate Address Detection (DAD) feature ensures that all the IP addresses assigned on a particular segment are unique. The process operates when IPv6 hosts directly communicate with one another where hosts cannot communicate directly, and a proxy is required.

After a host verifies that its address is unique, it enables the DAD procedure. However, when two hosts cannot communicate with each other, this procedure cannot detect a duplicate address. If the DAD procedure cannot run, both the hosts assigns the same link-local address, which causes both hosts to fail when they try to reach the Dynamic Host Configuration Protocol version 6 (DHCPv6)server. The IPv6 DAD Proxy feature responds on behalf of the address owner when an address is in use.

The following figure provides an overview of the IPv6 DAD Proxy feature:

Figure 1: IPv6 DAD Proxy



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How to Configure IPv6 DAD Proxy

Configuring IPv6 DAD Proxy

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **interface** *type number*
4. **[no] ipv6 nd dad-proxy**
5. **end**

DETAILED STEPS

Procedure

	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	**interface** *type number* **Example:** `Device(config)# interface GigabitEthernet 0/0/1`	Specifies an interface type and number, and enters interface configuration mode.
Step 4	**[no] ipv6 nd dad-proxy** **Example:** `Device(config-if)# ipv6 nd dad-proxy`	Specifies if the ND suppress must operate in DAD-proxy mode. In this mode, the DAD messages are not forwarded. They respond to an existing entry or are added to the binding table.
Step 5	**end** **Example:** `Device(config-if)# end`	Exits router interface configuration mode and returns to privileged EXEC mode.

Configuration Examples for IPv6 DAD Proxy

Example: Configuring IPv6 DAD Proxy

```
Device> enable
Device# configure terminal
Device(config)# interface Ethernet 0/0
Device(config-if)# ipv6 nd dad-proxy
Device(config-if)# end
```

Additional References for IPv6 DAD Proxy

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*

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 DAD Proxy

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.

Table 1: Feature Information for IPv6 DAD Proxy

Feature Name	Releases	Feature Information
IPv6 DAD Proxy		The following commands were introduced or modified: **ipv6 nd dad-proxy**, **mode dad-proxy**, **mode md-proxy**.