



IPv6 Services: AAAA DNS Lookups over an IPv4 Transport

Last Updated: September 19, 2012

IPv6 basic connectivity can be enhanced by configuring support for AAAA record types in the DNS name-to-address and address-to-name lookup processes.

- [Finding Feature Information, page 1](#)
- [Information About IPv6 Services: AAAA DNS Lookups over an IPv4 Transport, page 1](#)
- [Additional References, page 2](#)
- [Feature Information for IPv6 Services: AAAA DNS Lookups over an IPv4 Transport, page 3](#)

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 at the end of this module.

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 IPv6 Services: AAAA DNS Lookups over an IPv4 Transport

- [DNS for IPv6, page 1](#)

DNS for IPv6

IPv6 supports DNS record types that are supported in the DNS name-to-address and address-to-name lookup processes. The DNS record types support IPv6 addresses. IPv6 also supports the reverse mapping of IPv6 addresses to DNS names.

A name server is used to track information associated with domain names. A name server can maintain a database of hostname-to-address mappings. Each name can map to one or more IPv4 addresses, IPv6



Americas Headquarters:
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

addresses, or both address types. In order to use this service to map domain names to IPv6 addresses, you must specify a name server and enable the DNS.

Cisco software maintains a cache of hostname-to-address mappings for use by the **connect**, **telnet**, and **ping** commands, related Telnet support operations, and many other commands that generate command output. This cache speeds the conversion of names to addresses.

Similar to IPv4, IPv6 uses a naming scheme that allows a network device to be identified by its location within a hierarchical name space that provides for domains. Domain names are joined with periods (.) as the delimiting characters. For example, Cisco is a commercial organization that is identified by a com domain name, so its domain name is cisco.com. A specific device in this domain, the FTP server, for example, is identified as ftp.cisco.com.

The following table lists the IPv6 DNS record types.

Table 1 *IPv6 DNS Record Types*

Record Type	Description	Format
AAAA	Maps a hostname to an IPv6 address. (Equivalent to an A record in IPv4.)	www.abc.test AAAA 3FFE:YYYY:C18:1::2
PTR	Maps an IPv6 address to a hostname. (Equivalent to a pointer record [PTR] in IPv4.) Note Cisco software supports resolution of PTR records for the IP6.INT domain.	2.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.1.0.0.0.8.1. c.0.y.y.y.e.f.f.3.ip6.int PTR www.abc.test

Additional References

Related Documents

Related Topic	Document Title
IPv6 addressing and connectivity	<i>IPv6 Configuration Guide</i>
IPv4 services configuration	<i>IP Application Services Configuration Guide</i>
Cisco IOS commands	Cisco IOS Master Commands List, All Releases
IPv6 commands	<i>Cisco IOS IPv6 Command Reference</i>
Cisco IOS IPv6 features	Cisco IOS IPv6 Feature Mapping

Standards and RFCs

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

MIBs

MIB	MIBs Link
None.	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 Services: AAAA DNS Lookups over an IPv4 Transport

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 2 Feature Information for IPv6 Services: AAAA DNS Lookups over an IPv4 Transport

Feature Name	Releases	Feature Information
IPv6 Services: AAAA DNS Lookups over an IPv4 Transport	12.2(2)T	IPv6 basic connectivity can be enhanced by configuring support for AAAA record types in the DNS name-to-address and address-to-name lookup processes.
	12.2(25)SEA	
	12.2(25)SG	
	12.2(33)SRA	
	12.2(17a)SX1	No commands were introduced or modified.
	15.0(2)SG	
	Cisco IOS XE Release 2.1 3.2.0SG	

Feature Name	Releases	Feature Information
IPv6 Services: DNS Lookups over an IPv6 Transport	12.2(8)T	IPv6 supports this feature. No commands were introduced or modified.
	12.2(25)SED	
	12.2(25)SG	
	12.2(33)SRA	
	12.2(17a)SX1	
	15.0(2)SG	
	Cisco IOS XE Release 2.1	
	3.2.0SG	

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: www.cisco.com/go/trademarks. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)

Any Internet Protocol (IP) addresses and phone numbers used in this document are not intended to be actual addresses and phone numbers. Any examples, command display output, network topology diagrams, and other figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses or phone numbers in illustrative content is unintentional and coincidental.

© 2012 Cisco Systems, Inc. All rights reserved.