



IPv6 Services: AAAA DNS Lookups over an IPv4 Transport

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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.

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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

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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. | 2.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.1.0.0.8.1. 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 | |
| | 15.0(2)SG | No commands were introduced or modified. |
| | 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 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 | IPv6 supports this feature. No commands were introduced or modified. |

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