



DNS Client Configuration Mode Commands

The DNS Client Configuration Mode is used to manage the system's DNS interface and caching parameters.

Command Modes Exec > Global Configuration > Context Configuration > DNS Client Configuration

configure > context *context_name* > **dns-client** *client_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-dns-client)#
```



Important The commands or keywords/variables that are available are dependent on platform type, product version, and installed license(s).

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bind

Binds the DNS client to a pre-configured logical IP interface.

| | |
|----------------------|--|
| Product | All |
| Privilege | Security Administrator, Administrator |
| Command Modes | Exec > Global Configuration > Context Configuration > DNS Client Configuration |

configure > context *context_name* > **dns-client** *client_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-dns-client)#
```

Syntax Description

bind { address *ip_address* **[port** *number* **] | query-over-gtp }**
no bind address

no

Removes the binding of the client to a specified interface.

bind address *ip_address*

Specifies the IP address of the interface to which the DNS client is being bound in IPv4 dotted-decimal notation.

bind port *number*

Specifies the UDP port number of the interface to which the DNS client is being bound as an integer from 1 to 65535. Default: 6011

bind query-over-gtp

Specifies that DNS client query is to be performed over GTP.

Usage Guidelines

Use this command to associate the client with a specific logical IP address.

Example

The following command binds the DNS client to a logical interface with an IP address of *10.2.3.4* and a port number of *6000*:

```
bind address 10.2.3.4 port 6000
```

cache algorithm

Configures the method of use for the DNS VPN and session cache.

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All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > DNS Client Configuration

configure > context *context_name* > **dns-client** *client_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-dns-client)#
```

Syntax Description

```
cache algorithm { central | local } { FIFO | LRU | LFU }
default cache algorithm { central | local }
```

default

Sets the DNS VPN and session cache method to default setting.

central | local

central: Specifies the central proclet (VPN manager)

local: Specifies the local proclet (session manager)

FIFO | LRU | LFU

FIFO: First in first out. This is the default setting for the central proclet.

LRU: Least recently used. This is the default value for the local proclet.

LFU: Least frequently used.

Usage Guidelines

Use this command to configure the method by which entries are added and removed from the DNS cache.

Example

The following command configures the cache algorithm for the central proclet to least frequently used (LFU):

```
cache algorithm central lfu
```

cache size

Configures the maximum number of entries allowed in the DNS cache.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > DNS Client Configuration

configure > context *context_name* > **dns-client** *client_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-dns-client)#
```

Syntax Description

```
cache size { central | local } max_size
default cache size { central | local }
```

default

Sets the maximum number of entries allowed in the DNS cache to default setting.

{ central | local } max_size

central max_size: Specifies the maximum number of entries allowed in the central proclet cache as an integer from 100 through 65535. Default: 50000.

local max_size: Specifies the maximum number of entries allowed in the local proclet cache as an integer from 100 through 65535. Default: 1000.

Usage Guidelines

Use this command to configure the maximum number of entries allowed in the DNS cache.

Example

The following command configures the cache size of the central proclet to 20000:

```
cache size central 20000
```

cache ttl

Configures the DNS cache time to live (TTL) for positive and negative responses.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > DNS Client Configuration

configure > context context_name > dns-client client_name

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-dns-client)#
```

Syntax Description

```
cache ttl { negative | positive } seconds
default cache ttl { negative | positive }
no cache [ ttl { negative | positive } ]
```

no

Disables any or all configured DNS cache parameters.

default

Sets the DNS cache time to live for positive and negative responses to the default setting.

{ negative | positive } seconds

negative seconds: Specifies the time to live for negative responses as an integer from 60 through 86400. Default: 60.



Note The DNS client is always reinitialized when the **ip name-servers** CLI configuration is changed for a context. As a result, the **cache ttl negative** value is reset to the default value if **no cache ttl negative** CLI is configured for the DNS client in the context. Therefore, check and reconfigure the **no cache ttl negative** CLI after the **ip name-servers** CLI configuration is changed on the node.

positive seconds: Specifies the time to live for positive responses. as an integer from 60 through 86400. Default: 86400 (1 day).

Usage Guidelines

Use this command to adjust the DNS cache time to live.

Example

The following commands set the TTL DNS cache to 90 seconds for negative responses and 43200 seconds for positive responses:

```
cache ttl negative 90
cache ttl positive 43200
```

case-sensitive

Configures the case sensitivity requirement for responses to DNS requests.

Product

All

Privilege

Administrator

Command Modes

Exec > Global Configuration > Context Configuration > DNS Client Configuration

configure > context *context_name* > **dns-client** *client_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-dns-client)#
```

Syntax Description

[**default** | **no**] **case-sensitive response**

default

Returns the command to its default setting of disabled.

no

Disables the requirement for case sensitivity in DNS responses.

case-sensitive response

Enables the requirement for case sensitivity in DNS responses.

Usage Guidelines

Use this command to require case sensitivity (identical case usage between request and response) on all responses to DNS request messages.

description

Allows you to enter descriptive text for this configuration.

Product

All

Privilege

Security Administrator, Administrator

Syntax Description

description *text*
no description

no

Clears the description for this configuration.

text

Enter descriptive text as an alphanumeric string of 1 to 100 characters.

If you include spaces between words in the description, you must enclose the text within double quotation marks (" "), for example, "AAA BBBB".

Usage Guidelines

The description should provide useful information about this configuration.

end

Exits the current configuration mode and returns to the Exec mode.

Product

All

Privilege

Security Administrator, Administrator

Syntax Description

end

Usage Guidelines

Use this command to return to the Exec mode.

exit

Exits the current mode and returns to the parent configuration mode.

Product

All

Privilege

Security Administrator, Administrator

Syntax Description

exit

Usage Guidelines

Use this command to return to the parent configuration mode.

randomize-answers

Configures the DNS client to return DNS answers in random fashion if multiple results are available for a DNS query.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > DNS Client Configuration

configure > **context** *context_name* > **dns-client** *client_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-dns-client)#
```

Syntax Description

[**no** | **default**] **randomize-answers**

no

Removes the configured random method for DNS answers.

default

Disables the random method for DNS answers.

randomize-answers

Enables the random method for DNS answers.

Usage Guidelines

Use this command to configure the DNS client to return the DNS results in a random fashion if multiple results are available for a DNS query.

Only one valid option can be used for distribution of DNS answers: default, round-robin, or randomized.

Example

The following command configures the DNS client to use randomize the DNS query answers if multiple results are available for a DNS query:

```
randomize-answers
```

resolver

Configures the number of DNS query retries and the retransmission interval once the response timer expires.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > DNS Client Configuration

configure > **context** *context_name* > **dns-client** *client_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-dns-client)#
```

Syntax Description

resolver { **number-of-retries** *retries* | **retransmission-interval** *time* }
default resolver { **number-of-retries** | **retransmission-interval** }

default

Resets the specified resolver configuration to the default.

number-of-retries *retries*

Configures the number of DNS query retries on DNS response timeout as an integer from 0 through 4. Default: 2.

retransmission-interval *time*

Configures the initial retransmission interval (in seconds) for retransmission after the DNS response timeout as an integer from 2 to 5. Default is 3 seconds. The retransmission interval doubles after each retry when only one server is configured. In case both primary and secondary servers are configured, the retransmission time is doubled for the last retry.

Usage Guidelines

Set the DNS retransmission retries or the retransmission interval. Issue the command twice to configure both parameters, one-at-a-time.

Example

The following command sets the DNS resolver retries to 4:

```
resolver number-of-retries 4
```

round-robin answers

Configures the DNS client to return the DNS results in round-robin fashion if multiple results are available for a DNS query.

Product

All

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > DNS Client Configuration

configure > **context** *context_name* > **dns-client** *client_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-dns-client)#
```

Syntax Description `[no | default] round-robin-answers`**no**

Removes the configured round robin method for DNS answer.

default

Disables the round robin method for DNS answer.

round-robin-answers

Enables the round robin method for DNS answer.

Usage Guidelines Use this command to configure the DNS client to return the DNS results in round-robin fashion if multiple results are available for a DNS query.**Example**

The following command configures the DNS client to use round robin method for DNS query answers:

round-robin-answers

round-robin answers