

DHCP Server Commands

This chapter contains the following sections:

- address (DHCP Host), on page 2
- address (DHCP Network), on page 3
- auto-default-router, on page 4
- bootfile, on page 5
- clear ip dhcp binding, on page 6
- client-name, on page 7
- default-router, on page 8
- dns-server, on page 9
- domain-name, on page 10
- ip dhcp excluded-address, on page 11
- ip dhcp pool host, on page 12
- ip dhcp pool network, on page 13
- ip dhcp server, on page 14
- lease, on page 15
- netbios-name-server, on page 16
- netbios-node-type, on page 17
- next-server, on page 18
- next-server-name, on page 19
- option , on page 20
- show ip dhcp, on page 22
- show ip dhcp allocated, on page 23
- show ip dhcp binding, on page 24
- show ip dhcp declined, on page 26
- show ip dhcp excluded-addresses, on page 27
- show ip dhcp expired, on page 28
- show ip dhcp pool host, on page 29
- show ip dhcp pool network, on page 30
- show ip dhcp pre-allocated, on page 31
- show ip dhcp server statistics, on page 32
- time-server, on page 33

address (DHCP Host)

To manually bind an IP address to a DHCP client, use the **address** command in DHCP Pool Host Configuration mode. To remove the IP address binding to the client, use the **no** form of this command.

Syntax

address *ip-address* {*mask* | *prefix-length*} {**client-identifier** *unique-identifier* | **hardware-address** *mac-address*}

no address

Parameters

- ***address***—Specifies the client IP address.
- ***mask***—Specifies the client network mask.
- ***prefix-length***—Specifies the number of bits that comprise the address prefix. The prefix is an alternative way of specifying the client network mask. The prefix length must be preceded by a forward slash (/).
- ***unique-identifier***—Specifies the distinct client identification in dotted hexadecimal notation. Each byte in a hexadecimal character string is two hexadecimal digits. Bytes are separated by a period or colon. For example, 01b7.0813.8811.66.
- ***mac-address***—Specifies the client MAC address.

Default Configuration

No address are bound.

Command Mode

DHCP Pool Host Configuration mode

User Guidelines

To classify the DHCP client, DHCP server uses either the client identifier passed in Option 61, if the **client-identifier** keyword is configured or the client MAC address, if the **hardware-address** keyword is configured.

Example

The following example manually binds an IP address to a DHCP client.

```
switchxxxxxx(config)# ip dhcp pool host aaaa
switchxxxxxx(config-dhcp)# address 10.12.1.99 255.255.255.0 client-identifier
01b7.0813.8811.66
switchxxxxxx(config-dhcp)# exit
switchxxxxxx(config)# ip dhcp pool host bbbb
switchxxxxxx(config-dhcp)# address 10.12.1.88 255.255.255.0 hardware-address 00:01:b7:08:13:88
switchxxxxxx(config-dhcp)# exit
switchxxxxxx(config)#
```

address (DHCP Network)

To configure the subnet number and mask for a DHCP address pool on a DHCP server, use the **address** command in DHCP Pool Network Configuration mode. To remove the subnet number and mask, use the **no** form of this command.

Syntax

address {*network-number* | **low** *low-address* **high** *high-address*} {*mask* | *prefix-length*}

no address

Parameters

- ***network-number***—Specifies the IP address of the DHCP address pool.
- ***mask***—Specifies the pool network mask.
- ***prefix-length***—Specifies the number of bits that comprise the address prefix. The prefix is an alternative way of specifying the client network mask. The prefix length must be preceded by a forward slash (/).
- **low** *low-address*—Specifies the first IP address to use in the address range.
- **high** *high-address*—Specifies the last IP address to use in the address range.

Default Configuration

DHCP address pools are not configured.

If the low address is not specified, it defaults to the first IP address in the network.

If the high address is not specified, it defaults to the last IP address in the network.

Command Mode

DHCP Pool Network Configuration mode

Example

The following example configures the subnet number and mask for a DHCP address pool on a DHCP server.

```
switchxxxxxx(config-dhcp)# address 10.12.1.0 255.255.255.0
```

auto-default-router

To enable auto default router, use the **auto-default-router** command in DHCP Pool Network Configuration mode or in DHCP Pool Host Configuration mode. To disable auto default router, use the **no** form of this command.

Syntax

auto-default-router

no auto-default-router

Command Mode

DHCP Pool Network Configuration mode

DHCP Pool Host Configuration mode

Default Configuration

Enabled.

User Guidelines

If the feature is enabled then the DHCP server returns an IP address defined on the input interface as a default router when an default router is not configured in the following case:

- Default router is not configurable.
- DHCP client is directly connected.
- IP Routing is enabled.
- Default router was required by the client.

Example

The following example disable auto default router sending.

```
switchxxxxxx(config-dhcp)# no auto-default-router
```

bootfile

To specify the default boot image file name for a DHCP client, use the **bootfile** command in DHCP Pool Network Configuration mode or in DHCP Pool Host Configuration mode. To delete the boot image file name, use the **no** form of this command.

Syntax

bootfile *filename*

no bootfile

Parameters

- ***filename***—Specifies the file name used as a boot image. (Length: 1–128 characters).

Command Mode

DHCP Pool Network Configuration mode

DHCP Pool Host Configuration mode

Example

The following example specifies boot_image_file as the default boot image file name for a DHCP client.

```
switchxxxxxx(config-dhcp)# bootfile boot_image_file
```

clear ip dhcp binding

To delete the dynamic address binding from the DHCP server database, use the **clear ip dhcp binding** command in Privileged EXEC mode.

Syntax

clear ip dhcp binding {*address* | ***}

Parameters

- ***address*** —Specifies the binding address to delete from the DHCP database.
- ***** —Clears all dynamic bindings.

Command Mode

Privileged EXEC mode

User Guidelines

Typically, the address supplied denotes the client IP address. If the asterisk (*) character is specified as the address parameter, DHCP clears all dynamic bindings.

Use the **no ip dhcp pool** Global Configuration mode command to delete a manual binding.

Example

The following example deletes the address binding 10.12.1.99 from a DHCP server database:

```
switchxxxxxx# clear ip dhcp binding 10.12.1.99
```

client-name

To define the name of a DHCP client, use the **client-name** command in DHCP Pool Host Configuration mode. To remove the client name, use the **no** form of this command.

Syntax

client-name *name*

no client-name

Parameters

- ***name***—Specifies the client name, using standard ASCII characters. The client name should not include the domain name. For example, the .name Mars should not be specified as mars.yahoo.com. (Length: 1–32 characters).

Command Mode

DHCP Pool Host Configuration mode

Default Configuration

No client name is defined.

Example

The following example defines the string **client1** as the client name.

```
switchxxxxxx(config-dhcp)# client-name client1
```

default-router

To configure the default router list for a DHCP client, use the **default-router** command in DHCP Pool Network Configuration mode or in DHCP Pool Host Configuration mode. To remove the default router list, use the **no** form of this command.

Syntax

default-router *ip-address* [*ip-address2 ... ip-address8*]

no default-router

Parameters

- ***ip-address*** [*ip-address2 ... ip-address8*]—Specifies the IP addresses of default routers. Up to eight addresses can be specified in one command line.

Command Mode

DHCP Pool Network Configuration mode

DHCP Pool Host Configuration mode

Default Configuration

No default router is defined.

User Guidelines

The router IP address should be on the same subnet as the client subnet.

If the auto-default-router command is configured then the DHCP server returns an IP address defined on the input interface as a default router when an default router is not configured in the following case:

- Default router is not configurable.
- DHCP client is directly connected.
- IP Routing is enabled.
- Default router was required by the client.

Example

The following example specifies 10.12.1.99 as the default router IP address.

```
switchxxxxxx(config-dhcp)# default-router 10.12.1.99
```

dns-server

To configure the Domain Name System (DNS) IP server list available to a DHCP client, use the **dns-server** command in DHCP Pool Network Configuration mode or in DHCP Pool Host Configuration mode. To remove the DNS server list, use the **no** form of this command.

Syntax

dns-server *ip-address* [*ip-address2 ... ip-address8*]

no dns-server

Parameters

- ***ip-address*** [*ip-address2 ... ip-address8*]—Specifies the IP addresses of DNS servers. Up to eight addresses can be specified in one command line.

Command Mode

DHCP Pool Network Configuration mode

DHCP Pool Host Configuration mode

Default Configuration

No DNS server is defined.

User Guidelines

If DNS IP servers are not configured for a DHCP client, the client cannot correlate host names to IP addresses.

Example

The following example specifies 10.12.1.99 as the client domain name server IP address.

```
switchxxxxxx(config-dhcp)# dns-server 10.12.1.99
```

domain-name

To specify the domain name for a DHCP client, use the **domain-name** command in DHCP Pool Network Configuration mode or in DHCP Pool Host Configuration mode. To remove the domain name, use the **no** form of this command.

Syntax

domain-name *domain*

no domain-name

Parameters

- ***domain***—Specifies the DHCP client domain name string. (Length: 1–32 characters).

Command Mode

DHCP Pool Network Configuration mode

DHCP Pool Host Configuration mode

Default Configuration

No domain name is defined.

Example

The following example specifies yahoo.com as the DHCP client domain name string.

```
switchxxxxxx(config-dhcp)# domain-name yahoo.com
```

ip dhcp excluded-address

To specify IP addresses that a DHCP server must not assign to DHCP clients, use the **ip dhcp excluded-address** command in Global Configuration mode. To remove the excluded IP addresses, use the **no** form of this command.

Syntax

ip dhcp excluded-address *low-address* [*high-address*]

no ip dhcp excluded-address *low-address* [*high-address*]

Parameters

- ***low-address***—Specifies the excluded IP address, or first IP address in an excluded address range.
- ***high-address***—(Optional) Specifies the last IP address in the excluded address range.

Default Configuration

All IP pool addresses are assignable.

Command Mode

Global Configuration mode

User Guidelines

The DHCP server assumes that all pool addresses can be assigned to clients. Use this command to exclude a single IP address or a range of IP addresses.

Example

The following example configures an excluded IP address range from 172.16.1.100 through 172.16.1.199.

```
switchxxxxxx(config)# ip dhcp excluded-address 172.16.1.100 172.16.1.199
```

ip dhcp pool host

To configure a DHCP static address on a DHCP server and enter the DHCP Pool Host Configuration mode, use the **ip dhcp pool host** command in Global Configuration mode. To remove the address pool, use the **no** form of this command.

Syntax

ip dhcp pool host *name*

no ip dhcp pool host *name*

Parameters

- ***name***—Specifies the DHCP address pool name. It can be either a symbolic string (such as Engineering) or an integer (such as 8). (Length: 1–32 characters).

Default Configuration

DHCP hosts are not configured.

Command Mode

Global Configuration mode

User Guidelines

During execution of this command, the configuration mode changes to the DHCP Pool Configuration mode. In this mode, the administrator can configure host parameters, such as the IP subnet number and default router list.

Example

The following example configures **station** as the DHCP address pool:

```
switchxxxxxx(config)# ip dhcp pool host station
switchxxxxxx(config-dhcp)#
```

ip dhcp pool network

To configure a DHCP address pool on a DHCP Server and enter DHCP Pool Network Configuration mode, use the **ip dhcp pool network** command in Global Configuration mode. To remove the address pool, use the **no** form of this command.

Syntax

ip dhcp pool network *name*

no ip dhcp pool network *name*

Parameters

- ***name***—Specifies the DHCP address pool name. It can be either a symbolic string (such as 'engineering') or an integer (such as 8). (Length: 1–32 characters).

Default Configuration

DHCP address pools are not configured.

Command Mode

Global Configuration mode

User Guidelines

During execution of this command, the configuration mode changes to DHCP Pool Network Configuration mode. In this mode, the administrator can configure pool parameters, such as the IP subnet number and default router list.

Example

The following example configures Pool1 as the DHCP address pool.

```
switchxxxxxx(config)# ip dhcp pool network Pool1
switchxxxxxx(config-dhcp)#
```

ip dhcp server

To enable the DHCP server features on the device, use the **ip dhcp server** command in Global Configuration mode. To disable the DHCP server, use the **no** form of this command.

Syntax

ip dhcp server

no ip dhcp server

Default Configuration

The DHCP server is disabled.

Command Mode

Global Configuration mode

Example

The following example enables the DHCP server on the device:

```
switchxxxxxx(config)# ip dhcp server
```

lease

To configure the time duration of the lease for an IP address that is assigned from a DHCP server to a DHCP client, use the **lease** command in DHCP Pool Network Configuration mode. To restore the default value, use the **no** form of this command.

Syntax

lease *days* [*hours* [*minutes*]] | **infinite**

no lease

Parameters

- ***days***—Specifies the number of days in the lease.
- ***hours***—(Optional) Specifies the number of hours in the lease. A *days* value must be supplied before configuring an *hours* value.
- ***minutes***—(Optional) Specifies the number of minutes in the lease. A *days* value and an *hours* value must be supplied before configuring a *minutes* value.
- **infinite**—Specifies that the duration of the lease is unlimited.

Default Configuration

The default lease duration is 1 day.

Command Mode

DHCP Pool Network Configuration mode

Examples

The following example shows a 1-day lease.

```
switchxxxxxx(config-dhcp)# lease 1
```

The following example shows a one-hour lease.

```
switchxxxxxx(config-dhcp)# lease 0 1
```

The following example shows a one-minute lease.

```
switchxxxxxx(config-dhcp)# lease 0 0 1
```

The following example shows an infinite (unlimited) lease.

```
switchxxxxxx(config-dhcp)# lease infinite
```

netbios-name-server

To configure the NetBIOS Windows Internet Naming Service (WINS) server list that is available to Microsoft DHCP clients, use the **netbios-name-server** in DHCP Pool Network Configuration mode or in DHCP Pool Host Configuration mode. To remove the NetBIOS name server list, use the **no** form of this command.

Syntax

netbios-name-server *ip-address* [*ip-address2 ... ip-address8*]

no netbios-name-server

Parameters

- ***ip-address*** [***ip-address2*** ... ***ip-address8***]—Specifies the IP addresses of NetBIOS WINS name servers. Up to eight addresses can be specified in one command line.

Command Mode

DHCP Pool Network Configuration mode

DHCP Pool Host Configuration mode

Default Configuration

No bios server is defined.

Example

The following example specifies the IP address of a NetBIOS name server available to the DHCP client.

```
switchxxxxxx(config-dhcp)# netbios-name-server 10.12.1.90
```

netbios-node-type

To configure the NetBIOS node type for Microsoft DHCP clients, use the **netbios-node-type** command in DHCP Pool Network Configuration mode or in DHCP Pool Host Configuration mode. To return to default, use the **no** form of this command.

Syntax

netbios-node-type {**b-node** | **p-node** | **m-node** | **h-node**}

no netbios-node-type

Parameters

- **b-node**—Specifies the Broadcast NetBIOS node type.
- **p-node**—Specifies the Peer-to-peer NetBIOS node type.
- **m-node**—Specifies the Mixed NetBIOS node type.
- **h-node**—Specifies the Hybrid NetBIOS node type.

Command Mode

DHCP Pool Network Configuration mode

DHCP Pool Host Configuration mode

Default Configuration

h-node (Hybrid NetBIOS node type).

Example

The following example specifies the client's NetBIOS type as mixed.

```
switchxxxxxx(config-dhcp)# netbios node-type m-node
```

next-server

To configure the next server (siaddr) in the boot process of a DHCP client, use the **next-server** command in DHCP Pool Network Configuration mode or in DHCP Pool Host Configuration mode. To remove the next server, use the **no** form of this command.

Syntax

next-server *ip-address*

no next-server

Parameters

- ***ip-address***—Specifies the IP address of the next server in the boot process.

Default Configuration

If the **next-server** command is not used to configure a boot server list, the DHCP server uses inbound interface helper addresses as boot servers.

Command Mode

DHCP Pool Network Configuration mode

DHCP Pool Host Configuration mode

User Guidelines

The client will connect, using the SCP/TFTP protocol, to this server in order to download the configuration file.

Example

The following example specifies 10.12.1.99 as the IP address of the next server:

```
switchxxxxxx(config-dhcp)# next-server 10.12.1.99
```

next-server-name

To configure the next server name (sname) in the boot process of a DHCP client, use the **next-server-name** command in DHCP Pool Network Configuration mode or in DHCP Pool Host Configuration mode. To remove the boot server name, use the **no** form of this command.

Syntax

next-server-name *name*

no next-server-name

Parameters

- ***name***—Specifies the name of the next server in the boot process. (Length: 1–64 characters).

Command Mode

DHCP Pool Network Configuration mode

DHCP Pool Host Configuration mode

Default Configuration

No next server name is defined.

User Guidelines

The client will connect, using the SCP/TFTP protocol, to this server in order to download the configuration file.

Example

The following example specifies www.bootserver.com as the name of the next server in the boot process of a DHCP client.

```
switchxxxxxx(config-dhcp)# next-server www.bootserver.com
```

option

To configure the DHCP server options, use the **option** command in DHCP Pool Network Configuration mode or in DHCP Pool Host Configuration mode. To remove the options, use the **no** form of this command.

Syntax

option *code* {**boolean** {**false** | **true**} | **integer** *value* | **ascii** *string* | **hex** {*string* | **none**} | **ip** {*address*} | **ip-list** {*ip-address1* [*ip-address2* …]}} [**description** *text*]

no option *code*

Parameters

- ***code***—Specifies the DHCP option code. The supported values are defined in the User Guidelines.
- **boolean** {**false** | **true**}—Specifies a boolean value. The values are coded by integer values of one octet: 0 = false and 1 = true.
- **integer** *value*—Specifies an integer value. The option size depends on the option code.
- **ascii** *string*—Specifies a network virtual terminal (NVT) ASCII character string. ASCII character strings that contain white spaces must be delimited by quotation marks. The ASCII value is truncated to the first 160 characters entered.
- **ip** *address*—Specifies an IP address.
- **ip-list** {*ip-address1* [*ip-address2* ...]}—Specifies up to 8 IP addresses.
- **hex** *string*—Specifies dotted hexadecimal data. The hexadecimal value is truncated to the first 320 characters entered. Each byte in hexadecimal character strings is two hexadecimal digits. Each byte can be separated by a period, colon, or white space.
- **hex none**—Specifies the zero-length hexadecimal string.
- **description** *text*—User description

Command Mode

DHCP Pool Network Configuration mode

DHCP Pool Host Configuration mode

User Guidelines

The **option** command enables defining any option that cannot be defined by other special CLI commands. A new definition of an option overrides the previous definition of this option.

The **boolean** keyword may be configured for the following options: 19, 20, 27, 29-31, 34, 36, and 39.

The **integer** keyword may be configured for the following options: 2, 13, 22-26, 35, 37-38, 132-134, and 211. The switch checks the value range and builds the value field of the size in accordance with the **option** definition.

The **ascii** keyword may be configured for the following options: 14, 17-18, 40, 64, 130, 209, and 210.

The **ip** keyword may be configured for the following options: 16, 28, 32, 128-129, 131, 135, and 136.

The **ip-list** keyword may be configured for the following options: 5, 7-11, 33, 41, 42, 45, 48, 49, 65, 68-76, and 150.

The **hex** keyword may be configured for any option in the range 1-254 except for the following: 1, 3-4, 6, 12, 15, 44, 46, 50-51, 53-54, 56, 66-67, 82, and 255. The switch does not validate the syntax of an option defined by this format.

Example 1. The following example configures DHCP option 19, which specifies whether the client should configure its IP layer for packet forwarding:

```
switchxxxxxx(config-dhcp)# option 19 boolean true description "IP Forwarding Enable/Disable
 Option"
```

Example 2. The following example configures DHCP option 2, which specifies the offset of the client in seconds from Coordinated Universal Time (UTC):

```
switchxxxxxx(config-dhcp)# option 2 integer 3600
```

Example 3. The following example configures DHCP option 72, which specifies the World Wide Web servers for DHCP clients. World Wide Web servers 172.16.3.252 and 172.16.3.253 are configured in the following example:

```
switchxxxxxx(config-dhcp)# option 72 ip-list 172.16.3.252 172.16.3.253
```

show ip dhcp

To display the DHCP configuration, use the **show ip dhcp** command in User EXEC mode.

Syntax

show ip dhcp

Command Mode

User EXEC mode

Example

The following example displays the DHCP configuration.

```
switchxxxxxx# show ip dhcp
DHCP server is enabled.
```

show ip dhcp allocated

To display the allocated address or all the allocated addresses on the DHCP server, use the **show ip dhcp allocated** command in User EXEC mode.

Syntax

show ip dhcp allocated [*ip-address*]

Parameters

- ***ip-address*** —(Optional) Specifies the IP address.

Command Mode

User EXEC mode

Example

The following example displays the output of various forms of this command:

```
switchxxxxxx# show ip dhcp allocated
DHCP server enabled
The number of allocated entries is 3
IP address   Hardware address Lease expiration      Type
----------   ---------------- --------------------  ---------
172.16.1.11  00a0.9802.32de   Feb 01 1998 12:00 AM  Dynamic
172.16.3.253 02c7.f800.0422   Infinite              Automatic
172.16.3.254 02c7.f800.0422   Infinite              Static
switchxxxxxx# show ip dhcp allocated 172.16.1.11
DHCP server enabled
The number of allocated entries is 2
IP address   Hardware address Lease expiration      Type
----------   ---------------- --------------------  --------
172.16.1.11  00a0.9802.32de   Feb 01 1998 12:00 AM  Dynamic
switchxxxxxx# show ip dhcp allocated 172.16.3.254
DHCP server enabled
The number of allocated entries is 2
IP address   Hardware address Lease expiration      Type
----------   ---------------- --------------------  -------
172.16.3.254 02c7.f800.0422   Infinite              Static
The following table describes the significant fields shown in the display.
```

Field	Description
IP address	The host IP address as recorded on the DHCP Server.
Hardware address	The MAC address or client identifier of the host as recorded on the DHCP Server.
Lease expiration	The lease expiration date of the host IP address.
Type	The manner in which the IP address was assigned to the host.

show ip dhcp binding

To display the specific address binding or all the address bindings on the DHCP server, use the **show ip dhcp binding** command in User EXEC mode.

Syntax

show ip dhcp binding [***ip-address***]

Parameters

- ***ip-address***—(Optional) Specifies the IP address.

Command Mode

User EXEC mode

Examples

The following examples display the DHCP server binding address parameters.

```
switchxxxxxx# show ip dhcp binding
DHCP server enabled
The number of used (all types) entries is 6
The number of pre-allocated entries is 1
The number of allocated entries is 1
The number of expired entries is 1
The number of declined entries is 2
The number of static entries is 1
The number of dynamic entries is 2
The number of automatic entries is 1
IP address Client Identifier  Lease Expiration Type    State
---------- -----------------  -------------    ------- ---------
1.16.1.11  00a0.9802.32de     Feb 01 1998     dynamic allocated
1.16.3.23  02c7.f801.0422     12:00AM         dynamic expired
1.16.3.24  02c7.f802.0422                     dynamic declined
1.16.3.25  02c7.f803.0422                     dynamic pre-allocated
1.16.3.26  02c7.f804.0422                     dynamic declined
switchxxxxxx# show ip dhcp binding 1.16.1.11
DHCP server enabled
IP address Client Identifier  Lease Expiration  Type    State
---------- -----------------  ----------------- ------- ---------
1.16.1.11  00a0.9802.32de     Feb 01 1998      dynamic allocated
                              12:00 AM
switchxxxxxx# show ip dhcp binding 1.16.3.24
IP address Client Identifier   Lease Expiration  Type    State
---------- -----------------   ---------------  ------- ---------
1.16.3.24  02c7.f802.0422                       dynamic declined
```

The following table describes the significant fields shown in the display.

Field	Description
IP address	The host IP address as recorded on the DHCP Server.
Client Identifier	The MAC address or client identifier of the host as recorded on the DHCP Server.

Field	Description
Lease expiration	The lease expiration date of the host IP address.
Type	The manner in which the IP address was assigned to the host.
State	The IP Address state.

show ip dhcp declined

To display the specific declined address or all of the declined addresses on the DHCP server, use the **show ip dhcp declined** command in User EXEC mode.

Syntax

show ip dhcp declined [*ip-address*]

Parameters

- ***ip-address***—(Optional) Specifies the IP address.

Command Mode

User EXEC mode

Example

The following example displays the output of various forms of this command:

```
switchxxxxxx# show ip dhcp declined
DHCP server enabled
The number of declined entries is 2
IP address   Hardware address
172.16.1.11  00a0.9802.32de
172.16.3.254 02c7.f800.0422
switchxxxxxx# show ip dhcp declined 172.16.1.11
DHCP server enabled
The number of declined entries is 2
IP address    Hardware address
172.16.1.11   00a0.9802.32de
```

show ip dhcp excluded-addresses

To display the excluded addresses, use the **show ip dhcp excluded-addresses** command in User EXEC mode.

Syntax

show ip dhcp excluded-addresses

Command Mode

User EXEC mode

Example

The following example displays excluded addresses.

```
switchxxxxxx# show ip dhcp excluded-addresses
The number of excluded addresses ranges is 2
Excluded addresses:
10.1.1.212- 10.1.1.219, 10.1.2.212- 10.1.2.219
```

show ip dhcp expired

To display the specific expired address or all of the expired addresses on the DHCP server, use the **show ip dhcp expired** command in User EXEC mode.

Syntax

show ip dhcp expired [*ip-address*]

Parameters

- ***ip-address***—(Optional) Specifies the IP.

Command Mode

User EXEC mode

Example

```
switchxxxxxx# show ip dhcp expired
DHCP server enabled
The number of expired entries is 1
IP address   Hardware address
172.16.1.11  00a0.9802.32de
172.16.3.254 02c7.f800.0422
switchxxxxxx# show ip dhcp expired 172.16.1.11
DHCP server enabled
The number of expired entries is 1
IP address  Hardware address
172.16.1.13 00a0.9802.32de
```

show ip dhcp pool host

To display the DHCP pool host configuration, use the **show ip dhcp pool host** command in User EXEC mode.

Syntax

show ip dhcp pool host [*address* | *name*]

Parameters

- ***address***—(Optional) Specifies the client IP address.
- ***name***—(Optional) Specifies the DHCP pool name. (Length: 1-32 characters)

Command Mode

User EXEC mode

Example 1. The following example displays the configuration of all DHCP host pools:

```
switchxxxxxx# show ip dhcp pool host
The number of host pools is 1
Name        IP Address  Hardware Address   Client Identifier
----------  ----------  ----------------   -----------------
station 172.16.1.11 01b7.0813.8811.66
```

Example 2. The following example displays the DHCP pool host configuration of the pool named **station**:

```
switchxxxxxx# show ip dhcp pool host station
Name        IP Address  Hardware Address   Client Identifier
----------  ----------  ----------------   -----------------
station 172.16.1.11 01b7.0813.8811.66

Mask: 255.255.0.0
Auto Default router: enabled
Default router: 172.16.1.1
Client name: client1
DNS server: 10.12.1.99
Domain name: yahoo.com
NetBIOS name server: 10.12.1.90
NetBIOS node type: h-node
Next server: 10.12.1.99
Next-server-name: 10.12.1.100
Bootfile: Bootfile
Time server 10.12.1.99
Options:
Code Type     Len Value             Description
---  -------  --- ----------------  --------------------------------
2    integer    4 3600
14   ascii     16 qq/aaaa/bbb.txt
19   boolean    1 false                "IP Forwarding Enable/Disable
                                         Option"
21   ip         4 134.14.14.1
31   ip-list    8 1.1.1.1, 12.23.45.2
47   hex        5 02af00aa00
```

show ip dhcp pool network

To display the DHCP network configuration, use the **show ip dhcp pool network** command in User EXEC mode.

Syntax

show ip dhcp pool network [*name*]

Parameters

- ***name***—(Optional) Specifies the DHCP pool name. (Length: 1-32 characters).

Command Mode

User EXEC mode

Example 1—The following example displays configuration of all DHCP network pools:

```
switchxxxxxx# show ip dhcp pool network
The number of network pools is 2
Name Address range mask Lease
-----------------------------------------------------
marketing 10.1.1.17-10.1.1.178 255.255.255.0 0d:12h:0m
finance 10.1.2.8-10.1.2.178 255.255.255.0 0d:12h:0m
```

Example 2—The following example displays configuration of the DHCP network pool **marketing**:

```
switchxxxxxx# show ip dhcp pool network marketing
Name Address range mask Lease
-------------------------------- ------------------------
marketing 10.1.1.17-10.1.1.178 255.255.255.0 0d:12h:0m
Statistics:
All-range Available Free Pre-allocated Allocated Expired   Declined
---------- ---------   ----- -------------   --------- --------- --------
162 150 68 50 20        3         9
Auto Default router: enabled
Default router: 10.1.1.1
DNS server: 10.12.1.99
Domain name: yahoo.com
NetBIOS name server: 10.12.1.90
NetBIOS node type: h-node
Next server: 10.12.1.99
Next-server-name: 10.12.1.100
Bootfile: Bootfile
Time server 10.12.1.99
Options:
Code Type     Len Value                Description
---  -------  --- -------------------  --------------------------------
2    integer    4 3600
14   ascii     16 qq/aaaa/bbb.txt
19   boolean    1 false                "IP Forwarding Enable/Disable
                                         Option"
21   ip         4 134.14.14.1
31   ip-list    8 1.1.1.1, 12.23.45.2
47   hex        5 02af00aa00
```

show ip dhcp pre-allocated

To display the specific pre-allocated address or all the pre-allocated addresses on the DHCP server, use the **show ip dhcp pre-allocated** command in User EXEC mode.

Syntax

show ip dhcp pre-allocated [*ip-address*]

Parameters

- ***ip-address***—(Optional) Specifies the IP.

Command Mode

User EXEC mode

Examples

```
switchxxxxxx# show ip dhcp pre-allocated
DHCP server enabled
The number of pre-allocated entries is 1
IP address   Hardware address
172.16.1.11  00a0.9802.32de
172.16.3.254 02c7.f800.0422
switchxxxxxx# show ip dhcp pre-allocated 172.16.1.11
DHCP server enabled
The number of pre-allocated entries is 1
IP address   Hardware address
172.16.1.15  00a0.9802.32de
```

show ip dhcp server statistics

To display DHCP server statistics, use the **show ip dhcp server statistics** command in User EXEC mode.

Syntax

show ip dhcp server statistics

Command Mode

User EXEC mode

Example

The following example displays DHCP server statistics

```
switchxxxxxx# show ip dhcp server statistics
DHCP server enabled
The number of network pools is 7
The number of excluded pools is 2
The number of used (all types) entries is 7
The number of pre-allocated entries is 1
The number of allocated entries is 3
The number of expired entries is 1
The number of declined entries is 2
The number of static entries is 1
The number of dynamic entries is 2
The number of automatic entries is 1
```

time-server

To specify the time servers list for a DHCP client, use the **time-server** command in DHCP Pool Network Configuration mode or in DHCP Pool Host Configuration mode. To remove the time servers list, use the **no** form of this command.

Syntax

time-server *ip-address* [*ip-address2 ... ip-address8*]

no time-server

Parameters

- ***ip-address*** [*ip-address2 ... ip-address8*]—Specifies the IP addresses of Time servers. Up to eight addresses can be specified in one command line.

Command Mode

DHCP Pool Network Configuration mode

DHCP Pool Host Configuration mode

Default Configuration

No time server is defined.

User Guidelines

The time server's IP address should be on the same subnet as the client subnet.

Example

The following example specifies 10.12.1.99 as the time server IP address.

```
switchxxxxxx(config-dhcp)# time-server 10.12.1.99
```