



## default through drop Commands

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## default (crl configure)

To return all CRL parameters to their system default values, use the **default** command in **crl configure** configuration mode. The **crl configure** configuration mode is accessible from the **crypto ca trustpoint** configuration mode. These parameters are used only when the LDAP server requires them.

### default

**Syntax Description** This command has no arguments or keywords.

**Defaults** No default behaviors or values.

**Command Modes** The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Crl configure configuration	•	•	•	•	—

Command History	Release	Modification
	3.1(1)	This command was introduced.

**Usage Guidelines** Invocations of this command do not become part of the active configuration.

**Examples** The following example enters **ca-crl** configuration mode, and returns CRL command values to their defaults:

```
hostname(config)# crypto ca trustpoint central
hostname(ca-trustpoint)# crl configure
hostname(ca-crl)# default
hostname(ca-crl)#
```

Related Commands	Command	Description
	<b>crl configure</b>	Enters <b>crl configure</b> configuration mode.
	<b>crypto ca trustpoint</b>	Enters <b>trustpoint</b> configuration mode.
	<b>protocol ldap</b>	Specifies LDAP as a retrieval method for CRLs.

## default (crl configure)

To return all CRL parameters to their system default values, use the **default** command in crl configure configuration mode. The crl configure configuration mode is accessible from the crypto ca trustpoint configuration mode. These parameters are used only when the LDAP server requires them.

**default**

**Syntax Description** This command has no arguments or keywords.

**Defaults** No default behaviors or values.

**Command Modes** The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple Context	System
Crl configure configuration	•	•	•	•	—

Command History	Release	Modification
	3.1(1)	This command was introduced.

**Usage Guidelines** Invocations of this command do not become part of the active configuration.

**Examples** The following example enters ca-crl configuration mode, and returns CRL command values to their defaults:

```
hostname(config)# crypto ca trustpoint central
hostname(ca-trustpoint)# crl configure
hostname(ca-crl)# default
hostname(ca-crl)#
```

Related Commands	Command	Description
	<b>crl configure</b>	Enters crl configure configuration mode.
	<b>crypto ca trustpoint</b>	Enters trustpoint configuration mode.
	<b>protocol ldap</b>	Specifies LDAP as a retrieval method for CRLs.

# default-domain

To set a default domain name for users of the group policy, use the **default-domain** command in group-policy configuration mode. To delete a domain name, use the **no** form of this command.

**default-domain** {value *domain-name* | none}

**no default-domain** [*domain-name*]

## Syntax Description

<b>none</b>	Indicates that there is no default domain name. Sets a default domain name with a null value, thereby disallowing a default domain name. Prevents inheriting a default domain name from a default or specified group policy.
<b>value</b> <i>domain-name</i>	Identifies the default domain name for the group.

## Defaults

No default behavior or values.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Group-policy	•	—	•	—	—

## Command History

Release	Modification
3.1(1)	This command was introduced.

## Usage Guidelines

You can use only alphanumeric characters, hyphens (-), and periods (.) in default domain names.

To delete all default domain names, use the **no** form of this command without arguments. This deletes all configured default domain names, including a null list created by issuing the **default-domain none** command.

To prevent users from inheriting a domain name, use the **default-domain none** command.

The FWSM passes the default domain name to the IPSec client to append to DNS queries that omit the domain field. This domain name applies only to tunneled packets. When there are no default domain names, users inherit the default domain name in the default group policy.

## Examples

The following example shows how to set a default domain name of FirstDomain for the group policy named FirstGroup:

```
hostname(config)# group-policy FirstGroup attributes
hostname(config-group-policy)# default-domain value FirstDomain
```

Related Commands	Command	Description
	<b>split-dns</b>	Provides a list of domains to be resolved through the split tunnel.
	<b>split-tunnel-network-list</b>	Identifies the access list the FWSM uses to distinguish networks that require tunneling and those that do not.
	<b>split-tunnel-policy</b>	Lets an IPSec client conditionally direct packets over an IPSec tunnel in encrypted form, or to a network interface in cleartext form.

# default enrollment

To return all enrollment parameters to their system default values, use the **default enrollment** command in crypto ca trustpoint configuration mode.

## default enrollment

**Syntax Description** This command has no arguments or keywords.

**Defaults** No default behavior or values.

**Command Modes** The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple Context	System
Crypto ca trustpoint configuration	•	•	•	•	—

Release	Modification
3.1(1)	This command was introduced.

**Usage Guidelines** Invocations of this command do not become part of the active configuration.

**Examples** The following example enters crypto ca trustpoint configuration mode for trustpoint central, and returns all enrollment parameters to their default values within trustpoint central:

```
hostname(config)# crypto ca trustpoint central
hostname(ca-trustpoint)# default enrollment
```

Command	Description
<b>clear configure crypto ca trustpoint</b>	Removes all trustpoints.
<b>crl configure</b>	Enters crl configuration mode.
<b>crypto ca trustpoint</b>	Enters trustpoint configuration mode.

# default-group-policy

To specify the set of attributes that the user inherits by default, use the **default-group-policy** command in tunnel-group general-attributes configuration mode. To eliminate a default group policy name, use the **no** form of this command.

**default-group-policy** *group-name*

**no default-group-policy** *group-name*

## Syntax Description

<i>group-name</i>	Specifies the name of the default group.
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## Defaults

The default group name is DfltGrpPolicy.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Tunnel-group general attributes configuration	•		•		

## Command History

Release	Modification
7.0	This command was introduced.

## Usage Guidelines

The default group policy DfltGrpPolicy comes with the initial configuration of the FWSM. You can apply this attribute to all tunnel-group types.

## Examples

The following example entered in config-general configuration mode, specifies a set of attributes for users to inherit by default for an IPSec LAN-to-LAN tunnel group named standard-policy. This set of commands defines the accounting server, the authentication server, the authorization server and the address pools.

```
hostname(config)# tunnel-group standard-policy type ipsec-ra
hostname(config)# tunnel-group standard-policy general-attributes
hostname(config-general)# default-group-policy first-policy
hostname(config-general)# accounting-server-group aaa-server123
hostname(config-general)# address-pool (inside) addrpool1 addrpool2 addrpool3
hostname(config-general)# authentication-server-group aaa-server456
hostname(config-general)# authorization-server-group aaa-server78
hostname(config-general)#
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>clear-configure tunnel-group</b>	Clears all configured tunnel groups.
<b>group-policy</b>	Creates or edits a group policy
<b>show running-config tunnel group</b>	Shows the tunnel group configuration for all tunnel groups or for a particular tunnel group.
<b>tunnel-group-map default group</b>	Associates the certificate map entries created using the <b>crypto ca certificate map</b> command with tunnel groups.

# default-information originate

To generate a default external route into an OSPF routing domain, use the **default-information originate** command in router configuration mode. To disable this feature, use the **no** form of this command.

**default-information originate** [**always**] [**metric value**] [**metric-type** {**1** | **2**}] [**route-map name**]

**no default-information originate** [[**always**] [**metric value**] [**metric-type** {**1** | **2**}] [**route-map name**]]

## Syntax Description

<b>always</b>	(Optional) Always advertises the default route regardless of whether the software has a default route.
<b>metric value</b>	(Optional) Specifies the OSPF default metric value from 0 to 16777214.
<b>metric-type</b> { <b>1</b>   <b>2</b> }	(Optional) External link type associated with the default route advertised into the OSPF routing domain. Valid values are as follows: <ul style="list-style-type: none"> <li><b>1</b>—Type 1 external route.</li> <li><b>2</b>—Type 2 external route.</li> </ul>
<b>route-map name</b>	(Optional) Name of the route map to apply.

## Defaults

The default values are as follows:

- metric value** is 1.
- metric-type** is 2.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Router configuration	•	—	•	—	—

## Command History

Release	Modification
1.1(1)	This command was introduced.

## Usage Guidelines

Using the **no** form of this command with optional keywords and arguments only removes the optional information from the command. For example, entering **no default-information originate metric 3** removes the **metric 3** option from the command in the running configuration. To remove the complete command from the running configuration, use the **no** form of the command without any options: **no default-information originate**.

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**Examples**

The following example shows how to use the **default-information originate** command with an optional metric and metric type:

```
hostname(config-router)# default-information originate always metric 3 metric-type 2  
hostname(config-router)#
```

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**Related Commands**

Command	Description
<b>router ospf</b>	Enters router configuration mode.
<b>show running-config router</b>	Displays the commands in the global router configuration.

# delete

To delete a file in the disk partition, use the **delete** command in privileged EXEC mode.

```
delete [/noconfirm] [/recursive] [disk:]filename
```

Syntax Description		
<b>/noconfirm</b>	(Optional)	Specifies not to prompt for confirmation.
<b>/recursive</b>	(Optional)	Deletes the specified file recursively in all subdirectories.
<i>filename</i>		Specifies the name of the file to delete.
<b>disk:</b>		Specifies the nonremovable internal Flash, followed by a colon.

## Defaults

If you do not specify a directory, the directory is the current working directory by default.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Privileged EXEC	•	•	•	—	•

## Command History

Release	Modification
2.2(1)	This command was introduced.

## Usage Guidelines

The file is deleted from the current working directory if a path is not specified. Wildcards are supported when deleting files. When deleting files, you are prompted with the filename and you must confirm the deletion.

The following example shows how to delete a file named *test.cfg* in the current working directory:

```
hostname# delete test.cfg
```

## Related Commands

Command	Description
<b>cd</b>	Changes the current working directory to the one specified.
<b>rmdir</b>	Removes a file or directory.
<b>show file</b>	Displays the specified file.

# deny-request-cmd

To disallow specific commands within FTP requests, use the **deny-request-cmd** command in FTP map configuration mode, which is accessible by using the **ftp-map** command. To remove the configuration, use the **no** form of this command.

```
deny-request-cmd {all | appe | cdup | help | retr | rnfr | rnto | site | stor | stou }
```

```
no deny-request-cmd {all | appe | cdup | help | retr | rnfr | rnto | site | stor | stou }
```

## Syntax Description

<b>all</b>	Disallows all inspected commands.
<b>appe</b>	Disallows the command that appends to a file.
<b>cdup</b>	Disallows the command that changes to the parent directory of the current working directory.
<b>help</b>	Provides help information.
<b>retr</b>	Disallows the command that retrieves a file.
<b>rnfr</b>	Disallows the command that specifies rename-from filename.
<b>rnto</b>	Disallows the command that specifies rename-to filename.
<b>site</b>	Disallows the command that are specific to the server system. Usually used for remote administration.
<b>stor</b>	Disallows the command that stores a file.
<b>stou</b>	Disallows the command that stores a file using a unique file name.

## Defaults

No default behavior or values.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
FTP map configuration	•	•	•	•	—

## Command History

Release	Modification
7.0	This command was introduced.

## Usage Guidelines

This command is used for controlling the commands allowed within FTP requests traversing the FWSM when using strict FTP inspection.

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**Examples**

The following example causes the FWSM to drop FTP requests containing **stor**, **stou**, or **appe** commands:

```
hostname(config)# ftp-map inbound_ftp
hostname(config-ftp-map)# deny-request-cmd stor stou appe
hostname(config-ftp-map)# exit
```

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**Related Commands**

Commands	Description
class-map	Defines the traffic class to which to apply security actions.
clear configure ftp-map	Removes an FTP map and all its associated configurations.
ftp-map	Defines an FTP map and enables FTP map configuration mode.
inspect ftp	Applies a specific FTP map to use for application inspection.
policy-map	Associates a class map with specific security actions.

# dhcpd dns

To define the DNS servers for DHCP clients, use the **dhcpd dns** command in global configuration mode. To clear defined servers, use the **no** form of this command.

```
dhcpd dns dnsip1 [dnsip2]
```

```
no dhcpd dns [dnsip1 [dnsip2]]
```

## Syntax Description

<i>dnsip1</i>	IP address of the primary DNS server for the DHCP client.
<i>dnsip2</i>	(Optional) IP address of the alternate DNS server for the DHCP client.

## Defaults

No default behavior or values.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Global configuration	•	•	•	•	—

## Command History

Release	Modification
1.1(1)	This command was introduced.
3.1(1)	This command was changed from <b>dhcpd</b> .

## Usage Guidelines

The **dhcpd dns** command lets you specify the IP address or addresses of the DNS server(s) for the DHCP client. You can specify two DNS servers. The **no dhcpd dns** command lets you remove the DNS IP address(es) from the configuration.

## Examples

The following example shows how to use the **dhcpd address**, **dhcpd dns**, and **dhcpd enable** *interface\_name* commands to configure an address pool and DNS server for the DHCP clients on the **dmz** interface of the FWSM.

```
hostname(config)# dhcpd address 10.0.1.100-10.0.1.108 dmz
hostname(config)# dhcpd dns 192.168.1.2
hostname(config)# dhcpd enable dmz
```

## Related Commands

<b>Command</b>	<b>Description</b>
<b>clear configure dhcpd</b>	Removes all DHCP server settings.
<b>dhcpd address</b>	Specifies the address pool used by the DHCP server on the specified interface.
<b>dhcpd enable</b>	Enables the DHCP server on the specified interface.
<b>dhcpd wins</b>	Defines the WINS servers for DHCP clients.
<b>show running-config dhcpd</b>	Displays the current DHCP server configuration.

# dhcpd domain

To define the DNS domain name for DHCP clients, use the **dhcpd domain** command in global configuration mode. To clear the DNS domain name, use the **no** form of this command.

**dhcpd domain** *domain\_name*

**no dhcpd domain** [*domain\_name*]

## Syntax Description

*domain\_name* The DNS domain name, for example example.com.

## Defaults

No default behavior or values.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Global configuration	•	•	•	•	—

## Command History

Release	Modification
1.1(1)	This command was introduced.
3.1(1)	This command was changed from <b>dhcpd</b> .

## Usage Guidelines

The **dhcpd domain** command lets you specify the DNS domain name for the DHCP client. The **no dhcpd domain** command lets you remove the DNS domain server from the configuration.

## Examples

The following example shows how to use the **dhcpd domain** command to configure the domain name supplied to DHCP clients by the DHCP server on the FWSM:

```
hostname(config)# dhcpd address 10.0.1.101-10.0.1.110 inside
hostname(config)# dhcpd dns 198.162.1.2 198.162.1.3
hostname(config)# dhcpd wins 198.162.1.4
hostname(config)# dhcpd lease 3000
hostname(config)# dhcpd ping_timeout 1000
hostname(config)# dhcpd domain example.com
hostname(config)# dhcpd enable inside
```

## Related Commands

Command	Description
<b>clear configure dhcpd</b>	Removes all DHCP server settings.
<b>show running-config dhcpd</b>	Displays the current DHCP server configuration.

# dhcpd enable

To enable the DHCP server, use the **dhcpd enable** command in global configuration mode. To disable the DHCP server, use the **no** form of this command. The DHCP server provides network configuration parameters to DHCP clients. Support for the DHCP server within the FWSM means that the FWSM can use DHCP to configure connected clients.

**dhcpd enable** *interface*

**no dhcpd enable** *interface*

## Syntax Description

*interface* Specifies the interface on which to enable the DHCP server.

## Defaults

No default behavior or values.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Global configuration	•	•	•	•	—

## Command History

Release	Modification
1.1(1)	This command was introduced.
3.1(1)	This command was changed from <b>dhcpd</b> .

## Usage Guidelines

The **dhcpd enable** *interface* command lets you enable the DHCP daemon to listen for the DHCP client requests on the DHCP-enabled interface. The **no dhcpd enable** command disables the DHCP server feature on the specified interface.



### Note

For multiple context mode, you cannot enable the DHCP server on an interface that is used by more than one context (a shared VLAN).

When the FWSM responds to a DHCP client request, it uses the IP address and subnet mask of the interface where the request was received as the IP address and subnet mask of the default gateway in the response.



### Note

The FWSM DHCP server daemon does not support clients that are not directly connected to a FWSM interface.

Refer to the *Catalyst 6500 Series Switch and Cisco 7600 Series Router Firewall Services Module Configuration Guide* for information on how to implement the DHCP server feature into the FWSM.

### Examples

The following example shows how to use the **dhcpd enable** command to enable the DHCP server on the inside interface:

```
hostname(config)# dhcpd address 10.0.1.101-10.0.1.110 inside
hostname(config)# dhcpd dns 198.162.1.2 198.162.1.3
hostname(config)# dhcpd wins 198.162.1.4
hostname(config)# dhcpd lease 3000
hostname(config)# dhcpd ping_timeout 1000
hostname(config)# dhcpd domain example.com
hostname(config)# dhcpd enable inside
```

### Related Commands

Command	Description
<b>debug dhcpd</b>	Displays debug information for the DHCP server.
<b>dhcpd address</b>	Specifies the address pool used by the DHCP server on the specified interface.
<b>show dhcpd</b>	Displays DHCP binding, statistic, or state information.
<b>show running-config dhcpd</b>	Displays the current DHCP server configuration.

# dhcpd lease

To specify the DHCP lease length, use the **dhcpd lease** command in global configuration mode. To restore the default value for the lease, use the **no** form of this command.

**dhcpd lease** *lease\_length*

**no dhcpd lease** [*lease\_length*]

## Syntax Description

<i>lease_length</i>	Length of the IP address lease, in seconds, granted to the DHCP client from the DHCP server; valid values are from 300 to 1048575 seconds.
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## Defaults

The default *lease\_length* is 3600 seconds.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Global configuration	•	•	•	•	—

## Command History

Release	Modification
1.1(1)	This command was introduced.
3.1(1)	This command was changed from <b>dhcpd</b> .

## Usage Guidelines

The **dhcpd lease** command lets you specify the length of the lease, in seconds, that is granted to the DHCP client. This lease indicates how long the DHCP client can use the assigned IP address that the DHCP server granted.

The **no dhcpd lease** command lets you remove the lease length that you specified from the configuration and replaces this value with the default value of 3600 seconds.

## Examples

The following example shows how to use the **dhcpd lease** command to specify the length of the lease of DHCP information for DHCP clients:

```
hostname(config)# dhcpd address 10.0.1.101-10.0.1.110 inside
hostname(config)# dhcpd dns 198.162.1.2 198.162.1.3
hostname(config)# dhcpd wins 198.162.1.4
hostname(config)# dhcpd lease 3000
hostname(config)# dhcpd ping_timeout 1000
hostname(config)# dhcpd domain example.com
hostname(config)# dhcpd enable inside
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>clear configure dhcpd</b>	Removes all DHCP server settings.
<b>show running-config dhcpd</b>	Displays the current DHCP server configuration.

# dhcpd option

To configure DHCP options, use the **dhcpd option** command in global configuration mode. To clear the option, use the **no** form of this command. You can use the **dhcpd option** command to provide TFTP server information to Cisco IP Phones and routers.

```
dhcpd option code {ascii string} | {ip IP_address [IP_address]} | {hex hex_string}
```

```
no dhcpd option code
```

## Syntax Description

<b>ascii</b>	Specifies that the option parameter is an ASCII character string.
<i>code</i>	A number representing the DHCP option being set. Valid values are 0 to 255. See the “Usage Guidelines” section, below, for the list of DHCP option codes that are not supported.
<b>hex</b>	Specifies that the option parameter is a hexadecimal string.
<i>hex_string</i>	Specifies a hexadecimal string with an even number of digits and no spaces. You do not need to use a 0x prefix.
<b>ip</b>	Specifies that the option parameter is an IP address. You can specify a maximum of two IP addresses with the <b>ip</b> keyword.
<i>IP_address</i>	Specifies a dotted-decimal IP address.
<i>string</i>	Specifies an ASCII character string without spaces.

## Defaults

No default behavior or values.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Global configuration	•	•	•	•	—

## Command History

Release	Modification
1.1(1)	This command was introduced.
3.1(1)	This command was changed from <b>dhcpd</b> .

## Usage Guidelines

When a DHCP option request arrives at the FWSM DHCP server, the FWSM places the value or values that are specified by the **dhcpd option** command in the response to the client.

The **dhcpd option 66** and **dhcpd option 150** commands specify TFTP servers that Cisco IP Phones and routers can use to download configuration files. Use the commands as follows:

- **dhcpd option 66** *ascii string*, where *string* is either the IP address or hostname of the TFTP server. Only one TFTP server can be specified for option 66.
- **dhcpd option 150** *ip IP\_address [IP\_address]*, where *IP\_address* is the IP address of the TFTP server. You can specify a maximum of two IP addresses for option 150.

**Note**

The **dhcpd option 66** command only takes an **ascii** parameter, and the **dhcpd option 150** only takes an **ip** parameter.

Use the following guidelines when specifying an IP address for the **dhcpd option 66 | 150** commands:

- If the TFTP server is located on the DHCP server interface, use the local IP address of the TFTP server.
- If the TFTP server is located on a less secure interface than the DHCP server interface, then general outbound rules apply. Create a group of NAT, global, and **access-list** entries for the DHCP clients, and use the actual IP address of the TFTP server.
- If the TFTP server is located on a more secure interface, then general inbound rules apply. Create a group of static and **access-list** statements for the TFTP server and use the global IP address of the TFTP server.

For information about other DHCP options, refer to RFC 2132.

**Note**

The security appliance does not verify that the option type and value that you provide match the expected type and value for the option code as defined in RFC 2132. For example, you can enter `dhcpd option 46 ascii hello`, and the security appliance accepts the configuration although option 46 is defined in RFC 2132 as expecting a single-digit, hexadecimal value.

You cannot configure the following DHCP options with the **dhcpd option** command:

Option Code	Description
0	DHCPOPT_PAD
1	HCPOPT_SUBNET_MASK
12	DHCPOPT_HOST_NAME
50	DHCPOPT_REQUESTED_ADDRESS
51	DHCPOPT_LEASE_TIME
52	DHCPOPT_OPTION_OVERLOAD
53	DHCPOPT_MESSAGE_TYPE
54	DHCPOPT_SERVER_IDENTIFIER
58	DHCPOPT_RENEWAL_TIME
59	DHCPOPT_REBINDING_TIME
61	DHCPOPT_CLIENT_IDENTIFIER
67	DHCPOPT_BOOT_FILE_NAME
82	DHCPOPT_RELAY_INFORMATION
255	DHCPOPT_END

---

**Examples**

The following example shows how to specify a TFTP server for DHCP option 66:

```
hostname(config)# dhcpd option 66 ascii MyTftpServer
```

---

**Related Commands**

Command	Description
<b>clear configure dhcpd</b>	Removes all DHCP server settings.
<b>show running-config dhcpd</b>	Displays the current DHCP server configuration.

---

# dhcpd ping-timeout

To change the default timeout for DHCP ping, use the **dhcpd ping-timeout** command in global configuration mode. To return to the default value, use the **no** form of this command. To avoid address conflicts, the DHCP server sends two ICMP ping packets to an address before assigning that address to a DHCP client. This command specifies the ping timeout in milliseconds.

**dhcpd ping-timeout** *number*

**no dhcpd ping-timeout**

## Syntax Description

*number* The timeout value of the ping, in milliseconds. The minimum value is 10, the maximum is 10000. The default is 50.

## Defaults

The default number of milliseconds for *number* is 50.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Global configuration	•	•	•	•	—

## Command History

Release	Modification
1.1(1)	This command was introduced.
3.1(1)	This command was changed from <b>dhcpd</b> .

## Usage Guidelines

The FWSM waits for both ICMP ping packets to time out before assigning an IP address to a DHCP client. For example, if the default value is used, the FWSM waits for 1500 milliseconds (750 milliseconds for each ICMP ping packet) before assigning an IP address.

A long ping timeout value can adversely affect the performance of the DHCP server.

## Examples

The following example shows how to use the **dhcpd ping-timeout** command to change the ping timeout value for the DHCP server:

```
hostname(config)# dhcpd address 10.0.1.101-10.0.1.110 inside
hostname(config)# dhcpd dns 198.162.1.2 198.162.1.3
hostname(config)# dhcpd wins 198.162.1.4
hostname(config)# dhcpd lease 3000
hostname(config)# dhcpd ping-timeout 1000
hostname(config)# dhcpd domain example.com
hostname(config)# dhcpd enable inside
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>clear configure dhcpd</b>	Removes all DHCP server settings.
<b>show running-config dhcpd</b>	Displays the current DHCP server configuration.

# dhcpd wins

To define the WINS servers for DHCP clients, use the **dhcpd wins** command in global configuration mode. To remove the WINS servers from the DHCP server, use the **no** form of this command.

```
dhcpd wins server1 [server2]
```

```
no dhcpd wins [server1 [server2]]
```

## Syntax Description

<i>server1</i>	Specifies the IP address of the primary Microsoft NetBIOS name server (WINS server).
<i>server2</i>	(Optional) Specifies the IP address of the alternate Microsoft NetBIOS name server (WINS server).

## Defaults

No default behavior or values.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Global configuration	•	•	•	•	—

## Command History

Release	Modification
1.1(1)	This command was introduced.
3.1(1)	This command was changed from <b>dhcpd</b> .

## Usage Guidelines

The **dhcpd wins** command lets you specify the addresses of the WINS servers for the DHCP client. The **no dhcpd wins** command removes the WINS server IP addresses from the configuration.

## Examples

The following example shows how to use the **dhcpd wins** command to specify WINS server information that is sent to DHCP clients:

```
hostname(config)# dhcpd address 10.0.1.101-10.0.1.110 inside
hostname(config)# dhcpd dns 198.162.1.2 198.162.1.3
hostname(config)# dhcpd wins 198.162.1.4
hostname(config)# dhcpd lease 3000
hostname(config)# dhcpd ping_timeout 1000
hostname(config)# dhcpd domain example.com
hostname(config)# dhcpd enable inside
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>clear configure dhcpd</b>	Removes all DHCP server settings.
<b>dhcpd address</b>	Specifies the address pool used by the DHCP server on the specified interface.
<b>dhcpd dns</b>	Defines the DNS servers for DHCP clients.
<b>show dhcpd</b>	Displays DHCP binding, statistic, or state information.
<b>show running-config dhcpd</b>	Displays the current DHCP server configuration.

# dhcp-network-scope

To specify the range of IP addresses the FWSM DHCP server should use to assign addresses to users of this group policy, use the **dhcp-network-scope** command in group-policy configuration mode. To remove the attribute from the running configuration, use the **no** form of this command. This option allows inheritance of a value from another group policy. To prevent inheriting a value, use the **dhcp-network-scope none** command.

```
dhcp-network-scope {ip_address} | none
```

```
no dhcp-network-scope
```

## Syntax Description

<i>ip_address</i>	Specifies the IP subnetwork the DHCP server should use to assign IP addresses to users of this group policy.
<b>none</b>	Sets the DHCP subnetwork to a null value, thereby allowing no IP addresses. Prevents inheriting a value from a default or specified group policy.

## Defaults

No default behavior or values.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Group-policy	•	—	•	—	—

## Command History

Release	Modification
3.1(1)	This command was introduced.

## Examples

The following example shows how to set an IP subnetwork of 10.10.85.0 for the group policy named FirstGroup:

```
hostname(config)# group-policy FirstGroup attributes
hostname(config-group-policy)# dhcp-network-scope 10.10.85.0
```

# dhcprelay enable

To enable the DHCP relay agent, use the **dhcprelay enable** command in global configuration mode. To disable DHCP relay agent, use the **no** form of this command. The DHCP relay agent allows DHCP requests to be forwarded from a specified FWSM interface to a specified DHCP server.



## Note

There is a limit of 100 active DHCP bindings when configuring a dhcp relay using the **dhcprelay enable** command.

**dhcprelay enable** *interface\_name*

**no dhcprelay enable** *interface\_name*

## Syntax Description

<i>interface_name</i>	Name of the interface on which the DHCP relay agent accepts client requests.
-----------------------	--

## Defaults

The DHCP relay agent is disabled.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Global configuration	•	—	•	•	—

## Command History

Release	Modification
2.2(1)	This command was introduced.
3.1(1)	This command was changed from <b>dhcprelay</b> .

## Usage Guidelines

For the FWSM to start the DHCP relay agent with the **dhcprelay enable** *interface\_name* command, you must have a **dhcprelay server** command already in the configuration. Otherwise, the FWSM displays an error message similar to the following:

```
DHCPRA: Warning - There are no DHCP servers configured!
          No relaying can be done without a server!
          Use the 'dhcprelay server <server_ip> <server_interface>' command
```

You cannot enable DHCP relay under the following conditions:

- You cannot enable DHCP relay and the DHCP relay server on the same interface.
- You cannot enable DHCP relay and a DHCP server (**dhcpcd enable**) on the same interface.
- You cannot enable DHCP relay in a context at the same time as the DHCP server.

- For multiple context mode, you cannot enable DHCP relay on an interface that is used by more than one context (a shared VLAN).

The **no dhcprelay enable** *interface\_name* command removes the DHCP relay agent configuration for the interface that is specified by *interface\_name* only.

### Examples

The following example shows how to configure the DHCP relay agent for a DHCP server with an IP address of 10.1.1.1 on the outside interface of the FWSM, client requests on the inside interface of the FWSM, and a timeout value up to 90 seconds:

```
hostname(config)# dhcprelay server 10.1.1.1 outside
hostname(config)# dhcprelay timeout 90
hostname(config)# dhcprelay enable inside
hostname(config)# show running-config dhcprelay
dhcprelay server 10.1.1.1 outside
dhcprelay enable inside
dhcprelay timeout 90
```

The following example shows how to disable the DHCP relay agent:

```
hostname(config)# no dhcprelay enable inside
hostname(config)# show running-config dhcprelay
dhcprelay server 10.1.1.1 outside
dhcprelay timeout 90
```

### Related Commands

Command	Description
<b>clear configure dhcprelay</b>	Removes all DHCP relay agent settings.
<b>debug dhcp relay</b>	Displays debug information for the DHCP relay agent.
<b>dhcprelay server</b>	Specifies the DHCP server that the DHCP relay agent forwards DHCP requests to.
<b>dhcprelay setroute</b>	Defines IP address that the DHCP relay agent uses as the default router address in DHCP replies.
<b>show running-config dhcprelay</b>	Displays the current DHCP relay agent configuration.

# dhcprelay server

To specify the DHCP server that DHCP requests are forwarded to, use the **dhcprelay server** command in global configuration mode. To remove the DHCP server from the DHCP relay configuration, use the **no** form of this command. The DHCP relay agent allows DHCP requests to be forwarded from a specified FWSM interface to a specified DHCP server.

**dhcprelay server** *IP\_address interface\_name*

**no dhcprelay server** *IP\_address [interface\_name]*

## Syntax Description

<i>interface_name</i>	Name of the FWSM interface on which the DHCP server resides.
<i>IP_address</i>	The IP address of the DHCP server to which the DHCP relay agent forwards client DHCP requests.

## Defaults

No default behavior or values.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Global configuration	•	—	•	•	—

## Command History

Release	Modification
2.2(1)	This command was introduced.
3.1(1)	This command was changed from <b>dhcprelay</b> .

## Usage Guidelines

You can add up to four DHCP relay servers per interface; however, there is a limit of ten DHCP relay servers total that can be configured on the FWSM. You must add at least one **dhcprelay server** command to the FWSM configuration before you can enter the **dhcprelay enable** command. You cannot configure a DHCP client on an interface that has a DHCP relay server configured.

The **dhcprelay server** command opens UDP port 67 on the specified interface and starts the DHCP relay task as soon as the **dhcprelay enable** command is added to the configuration. If there is **no dhcprelay enable** command in the configuration, then the sockets are not opened and the DHCP relay task does not start.

When you use the **no dhcprelay server** *IP\_address [interface\_name]* command, the interface stops forwarding DHCP packets to that server.

The **no dhcprelay server** *IP\_address [interface\_name]* command removes the DHCP relay agent configuration for the DHCP server that is specified by *IP\_address [interface\_name]* only.

**Examples**

The following example shows how to configure the DHCP relay agent for a DHCP server with an IP address of 10.1.1.1 on the outside interface of the FWSM, client requests on the inside interface of the FWSM, and a timeout value up to 90 seconds:

```
hostname(config)# dhcprelay server 10.1.1.1 outside
hostname(config)# dhcprelay timeout 90
hostname(config)# dhcprelay enable inside
hostname(config)# show running-config dhcprelay
dhcprelay server 10.1.1.1 outside
dhcprelay enable inside
dhcprelay timeout 90
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>clear configure dhcprelay</b>	Removes all DHCP relay agent settings.
<b>dhcprelay enable</b>	Enables the DHCP relay agent on the specified interface.
<b>dhcprelay setroute</b>	Defines IP address that the DHCP relay agent uses as the default router address in DHCP replies.
<b>dhcprelay timeout</b>	Specifies the timeout value for the DHCP relay agent.
<b>show running-config dhcprelay</b>	Displays the current DHCP relay agent configuration.

# dhcprelay setroute

To set the default gateway address in the DHCP reply, use the **dhcprelay setroute** command in global configuration mode. To remove the default router, use the **no** form of this command. This command causes the default IP address of the DHCP reply to be substituted with the address of the specified FWSM interface.

**dhcprelay setroute** *interface*

**no dhcprelay setroute** *interface*

## Syntax Description

*interface* Configures the DHCP relay agent to change the first default IP address (in the packet sent from the DHCP server) to the address of *interface*.

## Defaults

No default behavior or values.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Global configuration	•	—	•	•	—

## Command History

Release	Modification
2.2(1)	This command was introduced.
3.1(1)	This command was changed from <b>dhcprelay</b> .

## Usage Guidelines

The **dhcprelay setroute** *interface* command lets you enable the DHCP relay agent to change the first default router address (in the packet sent from the DHCP server) to the address of *interface*.

If there is no default router option in the packet, the FWSM adds one containing the address of *interface*. This action allows the client to set its default route to point to the FWSM.

When you do not configure the **dhcprelay setroute** *interface* command (and there is a default router option in the packet), it passes through the FWSM with the router address unaltered.

## Examples

The following example shows how to use the **dhcprelay setroute** command to set the default gateway in the DHCP reply from the external DHCP server to the inside interface of the FWSM:

```
hostname(config)# dhcprelay server 10.1.1.1 outside
hostname(config)# dhcprelay timeout 90
hostname(config)# dhcprelay setroute inside
hostname(config)# dhcprelay enable inside
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>clear configure dhcprelay</b>	Removes all DHCP relay agent settings.
	<b>dhcprelay enable</b>	Enables the DHCP relay agent on the specified interface.
	<b>dhcprelay server</b>	Specifies the DHCP server that the DHCP relay agent forwards DHCP requests to.
	<b>dhcprelay timeout</b>	Specifies the timeout value for the DHCP relay agent.
	<b>show running-config dhcprelay</b>	Displays the current DHCP relay agent configuration.

# dhcprelay enable

To enable the DHCP relay agent, use the **dhcprelay enable** command in global configuration mode. To disable DHCP relay agent, use the **no** form of this command. The DHCP relay agent allows DHCP requests to be forwarded from a specified FWSM interface to a specified DHCP server.

**dhcprelay enable** *interface\_name*

**no dhcprelay enable** *interface\_name*

## Syntax Description

<i>interface_name</i>	Name of the interface on which the DHCP relay agent accepts client requests.
-----------------------	--

## Defaults

The DHCP relay agent is disabled.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Global configuration	•	—	•	•	—

## Command History

Release	Modification
2.2(1)	This command was introduced.
3.1(1)	This command was changed from <b>dhcprelay</b> .

## Usage Guidelines

For the FWSM to start the DHCP relay agent with the **dhcprelay enable** *interface\_name* command, you must have a **dhcprelay server** command already in the configuration. Otherwise, the FWSM displays an error message similar to the following:

```
DHCPRA: Warning - There are no DHCP servers configured!
No relaying can be done without a server!
Use the 'dhcprelay server <server_ip> <server_interface>' command
```

You cannot enable DHCP relay under the following conditions:

- You cannot enable DHCP relay and the DHCP relay server on the same interface.
- You cannot enable DHCP relay and a DHCP server (**dhcpd enable**) on the same interface.
- You cannot enable DHCP relay in a context at the same time as the DHCP server.
- For multiple context mode, you cannot enable DHCP relay on an interface that is used by more than one context (a shared VLAN).

The **no dhcprelay enable** *interface\_name* command removes the DHCP relay agent configuration for the interface that is specified by *interface\_name* only.

**Examples**

The following example shows how to configure the DHCP relay agent for a DHCP server with an IP address of 10.1.1.1 on the outside interface of the FWSM, client requests on the inside interface of the FWSM, and a timeout value up to 90 seconds:

```
hostname(config)# dhcprelay server 10.1.1.1 outside
hostname(config)# dhcprelay timeout 90
hostname(config)# dhcprelay enable inside
hostname(config)# show running-config dhcprelay
dhcprelay server 10.1.1.1 outside
dhcprelay enable inside
dhcprelay timeout 90
```

The following example shows how to disable the DHCP relay agent:

```
hostname(config)# no dhcprelay enable inside
hostname(config)# show running-config dhcprelay
dhcprelay server 10.1.1.1 outside
dhcprelay timeout 90
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>clear configure dhcprelay</b>	Removes all DHCP relay agent settings.
<b>debug dhcp relay</b>	Displays debug information for the DHCP relay agent.
<b>dhcprelay server</b>	Specifies the DHCP server that the DHCP relay agent forwards DHCP requests to.
<b>dhcprelay setroute</b>	Defines IP address that the DHCP relay agent uses as the default router address in DHCP replies.
<b>show running-config dhcprelay</b>	Displays the current DHCP relay agent configuration.

# dhcp-server

To configure support for DHCP servers that assign IP addresses to clients as a VPN tunnel is established, use the **dhcp-server** command in tunnel-group general-attributes configuration mode. To return this command to the default, use the **no** form of this command.

**dhcp-server** *hostname1* [...*hostname10*]

**no dhcp-server** *hostname*

## Syntax Description

<i>hostname1</i>	Specifies the IP address of the DHCP server. You can specify up to 10
<i>...hostname10</i>	DHCP servers.

## Defaults

No default behavior or values.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Tunnel-group general attributes configuration	•		•		

## Command History

Release	Modification
3.1(1)	This command was introduced.

## Usage Guidelines

You can apply this attribute to IPsec remote access tunnel-group types only.

## Examples

The following command entered in config-general configuration mode, adds three DHCP servers (dhcp1, dhcp2, and dhcp3) to the IPsec remote-access tunnel group remotegrp:

```
hostname(config)# tunnel-group remotegrp type ipsec_ra
hostname(config)# tunnel-group remotegrp general
hostname(config-general)# default-group-policy remotegrp
hostname(config-general)# dhcp-server dhcp1 dhcp2 dhcp3
hostname(config-general)
```

## Related Commands

Command	Description
clear-configure	Clears all configured tunnel groups.
tunnel-group	

Command	Description
<b>show running-config tunnel group</b>	Shows the tunnel group configuration for all tunnel groups or for a particular tunnel group.
tunnel-group-map default group	Associates the certificate map entries created using the <b>crypto ca certificate map</b> command with tunnel groups.

# dir

To display the directory contents, use the **dir** command in privileged EXEC mode.

**dir** [/all] [all-file systems] [/recursive] [flash: | system:] [path]

## Syntax Description

/all	(Optional) Displays all files.
all-file systems	(Optional) Displays the files of all file systems
/recursive	(Optional) Displays the directory contents recursively.
system:	(Optional) Displays the directory contents of the file system.
flash:	(Optional) Displays the directory contents of the default Flash partition.
path	(Optional) Specifies a specific path.

## Defaults

If you do not specify a directory, the directory is the current working directory by default.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Privileged EXEC	•	•	•	—	•

## Command History

Release	Modification
3.1(1)	Support for this command was introduced.

## Usage Guidelines

The **dir** command without keywords or arguments displays the directory contents of the current directory.

## Examples

The following example shows how to display the directory contents:

```
hostname# dir
Directory of disk0:/

 1      -rw-  1519      10:03:50 Jul 14 2003   my_context.cfg
 2      -rw-  1516      10:04:02 Jul 14 2003   my_context.cfg
 3      -rw-  1516      10:01:34 Jul 14 2003   admin.cfg
60985344 bytes total (60973056 bytes free)
```

This example shows how to display recursively the contents of the entire file system:

```
hostname# dir /recursive disk0:
Directory of disk0:/*
 1      -rw-  1519      10:03:50 Jul 14 2003   my_context.cfg
```

```
2      -rw-  1516      10:04:02 Jul 14 2003  my_context.cfg
3      -rw-  1516      10:01:34 Jul 14 2003  admin.cfg
60985344 bytes total (60973056 bytes free)
```

**Related Commands**

Command	Description
<b>cd</b>	Changes the current working directory to the one specified.
<b>pwd</b>	Displays the current working directory.
<b>mkdir</b>	Creates a directory.
<b>rmdir</b>	Removes a directory.

# disable

To exit privileged EXEC mode and return to unprivileged EXEC mode, use the **disable** command in privileged EXEC mode.

## disable

**Syntax Description** This command has no arguments or keywords.

**Defaults** No default behaviors or values.

**Command Modes** The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple Context	System
Privileged EXEC	•	•	•	•	•

Command History	Release	Modification
	1.1(1)	This command was introduced.

**Usage Guidelines** Use the **enable** command to enter privileged EXEC mode. The **disable** command lets you exit privileged EXEC mode and returns you to user EXEC mode.

**Examples** The following example shows how to enter privileged EXEC mode:

```
hostname> enable
hostname#
```

The following example shows how to exit privileged EXEC mode:

```
hostname# disable
hostname>
```

Related Commands	Command	Description
	<b>enable</b>	Enables privileged EXEC mode.

# distance ospf

To define OSPF route administrative distances based on route type, use the **distance ospf** command in router configuration mode. To restore the default values, use the **no** form of this command.

```
distance ospf [intra-area d1] [inter-area d2] [external d3]
```

```
no distance ospf
```

## Syntax Description

<i>d1</i> , <i>d2</i> , and <i>d3</i>	Distance for each route types. Valid values range from 1 to 255.
<b>external</b>	(Optional) Sets the distance for routes from other routing domains that are learned by redistribution.
<b>inter-area</b>	(Optional) Sets the distance for all routes from one area to another area.
<b>intra-area</b>	(Optional) Sets the distance for all routes within an area.

## Defaults

The default values for *d1*, *d2*, and *d3* are 110.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Router configuration	•	—	•	—	—

## Command History

Release	Modification
1.1(1)	This command was introduced.

## Usage Guidelines

You must specify at least one keyword and argument. You can enter the commands for each type of administrative distance separately, however they appear as a single command in the configuration. If you reenter an administrative distance, the administrative distance for only that route type changes; the administrative distances for any other route types remain unaffected.

The **no** form of the command does not take any keywords or arguments. Using the **no** form of the command restores the default administrative distance for all of the route types. If you want to restore the default administrative distance for a single route type when you have multiple route types configured, you can do one of the following:

- Manually set that route type to the default value.
- Use the **no** form of the command to remove the entire configuration and then reenter the configurations for the route types you want to keep.

**Examples**

The following example sets the administrative distance of external routes to 150:

```
hostname(config-router)# distance ospf external 105
hostname(config-router)#
```

The following example shows how entering separate commands for each route type appears as a single command in the router configuration:

```
hostname(config-router)# distance ospf intra-area 105 inter-area 105
hostname(config-router)# distance ospf intra-area 105
hostname(config-router)# distance ospf external 105
hostname(config-router)# exit
hostname(config)# show running-config router ospf 1
!
router ospf 1
  distance ospf intra-area 105 inter-area 105 external 105
!
hostname(config)#
```

The following example shows how to set each administrative distance to 105, and then change only the external administrative distance to 150. The **show running-config router ospf** command shows how only the external route type value changed, while the other route types retained the value previously set.

```
hostname(config-router)# distance ospf external 105 intra-area 105 inter-area 105
hostname(config-router)# distance ospf external 150
hostname(config-router)# exit
hostname(config)# show running-config router ospf 1
!
router ospf 1
  distance ospf intra-area 105 inter-area 105 external 150
!
hostname(config)#
```

**Related Commands**

Command	Description
<b>router ospf</b>	Enters router configuration mode.
<b>show running-config router</b>	Displays the commands in the global router configuration.

# dns domain-lookup

To enable the FWSM to send DNS requests to a DNS server to perform a name lookup for supported commands, use the **dns domain-lookup** command in global configuration mode. To disable DNS lookup, use the **no** form of this command.

```
dns domain-lookup interface_name
```

```
no dns domain-lookup interface_name
```

## Syntax Description

*interface\_name* Specifies the interface on which you want to enable DNS lookup. If you enter this command multiple times to enable DNS lookup on multiple interfaces, the FWSM tries each interface in order until it receives a response.

## Defaults

DNS lookup is disabled by default.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Global configuration	•	•	•	•	—

## Command History

Release	Modification
3.1(1)	This command was introduced.

## Usage Guidelines

Use the **dns name-server** command to configure the DNS server addresses to which you want to send DNS requests. See the **dns name-server** command for a list of commands that support DNS lookup.

The FWSM maintains a cache of name resolutions that consists of dynamically learned entries. Instead of making queries to external DNS servers each time an hostname-to-IP-address translation is needed, the FWSM caches information returned from external DNS requests. The FWSM only makes requests for names that are not in the cache. The cache entries time out automatically according to the DNS record expiration, or after 72 hours, whichever comes first.

## Examples

The following example enables DNS lookup on the inside interface:

```
hostname(config)# dns domain-lookup inside
```

## Related Commands

<b>Command</b>	<b>Description</b>
<b>dns name-server</b>	Configures a DNS server address.
<b>dns retries</b>	Specifies the number of times to retry the list of DNS servers when the FWSM does not receive a response.
<b>dns timeout</b>	Specifies the amount of time to wait before trying the next DNS server.
<b>domain-name</b>	Sets the default domain name.
<b>show dns-hosts</b>	Shows the DNS cache.

## dns name-server

To identify one or more DNS servers, use the **dns name-server** command in global configuration mode. To remove a server, use the **no** form of this command. The FWSM uses DNS to resolve server names in your certificate configuration (see the Usage Guidelines for a list of supported commands). Other features that define server names (such as AAA) do not support DNS resolution. You must enter the IP address or manually resolve the name to an IP address by using the **name** command.

```
[no] dns name-server ip_address [ip_address2] [...] [ip_address6]
```

### Syntax Description

<i>ip_address</i>	Specifies the DNS server IP address. You can specify up to six addresses as separate commands, or for convenience, up to six addresses in one command separated by spaces. If you enter multiple servers in one command, the FWSM saves each server in a separate command in the configuration. The FWSM tries each DNS server in order until it receives a response.
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### Defaults

No default behavior or values.

### Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Global configuration	•	•	•	•	—

### Command History

Release	Modification
3.1(1)	This command was introduced.

### Usage Guidelines

To enable DNS lookup, configure the **dns domain-lookup** command. If you do not enable DNS lookup, the DNS servers are not used.

Commands that support DNS resolution include the following:

- **enrollment url**
- **url**

You can manually enter names and IP addresses using the **name** command.

See the **dns retries** command to set how many times the FWSM tries the list of DNS servers.

### Examples

The following example adds three DNS servers:

```
hostname(config)-if# dns name-server 10.1.1.1 10.2.3.4 192.168.5.5
```

The FWSM saves the configuration as separate commands, as follows:

```
dns name-server 10.1.1.1
dns name-server 10.2.3.4
dns name-server 192.168.5.5
```

To add two additional servers, you can enter them as one command:

```
hostname(config-if)# dns name-server 10.5.1.1 10.8.3.8
hostname(config-if)# show running-config dns
dns name-server 10.1.1.1
dns name-server 10.2.3.4
dns name-server 192.168.5.5
dns name-server 10.5.1.1
dns name-server 10.8.3.8
...
```

Or you can enter them as two commands:

```
hostname(config)# dns name-server 10.5.1.1
hostname(config)# dns name-server 10.8.3.8
```

To delete multiple servers you can enter them as multiple commands or as one command, as follows:

```
hostname(config)# no dns name-server 10.5.1.1 10.8.3.8
```

#### Related Commands

Command	Description
<b>dns domain-lookup</b>	Enables the FWSM to perform a name lookup.
<b>dns retries</b>	Specifies the number of times to retry the list of DNS servers when the FWSM does not receive a response.
<b>dns timeout</b>	Specifies the amount of time to wait before trying the next DNS server.
<b>domain-name</b>	Sets the default domain name.
<b>show dns-hosts</b>	Shows the DNS cache.

# dns retries

To specify the number of times to retry the list of DNS servers when the FWSM does not receive a response, use the **dns retries** command in global configuration mode. To restore the default setting, use the **no** form of this command.

**dns retries** *number*

**no dns retries** [*number*]

## Syntax Description

*number* Specifies the number of retries between 0 and 10. The default is 2.

## Defaults

The default number of retries is 2.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Global configuration	•	•	•	•	—

## Command History

Release	Modification
3.1(1)	This command was introduced.

## Usage Guidelines

Add DNS servers using the **dns name-server** command.

## Examples

The following example sets the number of retries to 0. The FWSM only tries each server one time.

```
hostname(config)# dns retries 0
```

## Related Commands

Command	Description
<b>dns domain-lookup</b>	Enables the FWSM to perform a name lookup.
<b>dns name-server</b>	Configures a DNS server address.
<b>dns timeout</b>	Specifies the amount of time to wait before trying the next DNS server.
<b>domain-name</b>	Sets the default domain name.
<b>show dns-hosts</b>	Shows the DNS cache.

# description

To add a description for a named configuration unit (for example, for a context or for an object group), use the **description** command in various configuration modes. To remove the description, use the **no** form of this command. The description adds helpful notes in your configuration.

**description** *text*

**no description**

## Syntax Description

*text* Sets the description as a text string up to 200 characters in length. If you want to include a question mark (?) in the string, you must type **Ctrl-V** before typing the question mark so you do not inadvertently invoke CLI help.

## Defaults

No default behavior or values.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Class-map configuration	•	•	•	•	—
Context configuration	•	•	—	—	•
Gtp-map configuration	•	•	•	•	—
Interface configuration	•	•	•	•	•
Object-group configuration	•	•	•	•	—
Policy-map configuration	•	•	•	•	—

## Command History

Release	Modification
1.1(1)	This command was introduced.
3.1(1)	This command was added to several new configuration modes.

## Examples

The following example adds a description to the “Administration” context configuration:

```
hostname(config)# context administrator
hostname(config-ctx)# description This is the admin context.
hostname(config-ctx)# allocate-interface vlan 100
hostname(config-ctx)# allocate-interface vlan 200
hostname(config-ctx)# config-url disk://admin.cfg
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>class-map</b>	Identifies traffic to which you apply actions in the <b>policy-map</b> command.
<b>context</b>	Creates a security context in the system configuration and enters context configuration mode.
<b>interface</b>	Configures an interface and enters interface configuration mode.
<b>object-group</b>	Identifies traffic to include in the <b>access-list</b> command.
<b>policy-map</b>	Identifies actions to apply to traffic identified by the <b>class-map</b> command.

# dns-server

To set the IP address of the primary and secondary DNS servers, use the **dns-server** command in group-policy mode. To remove the attribute from the running configuration, use the **no** form of this command. This option allows inheritance of a DNS server from another group policy. To prevent inheriting a server, use the **dns-server none** command.

```
dns-server { value ip_address [ip_address] | none }
```

```
no dns-server
```

## Syntax Description

<b>none</b>	Sets dns-servers to a null value, thereby allowing no DNS servers. Prevents inheriting a value from a default or specified group policy.
<b>value ip_address</b>	Specifies the IP address of the primary and secondary DNS servers.

## Defaults

No default behavior or values.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Group-policy	•	—	•	—	—

## Command History

Release	Modification
3.1(1)	This command was introduced.

## Usage Guidelines

Every time you issue the **dns-server** command you overwrite the existing setting. For example, if you configure DNS server x.x.x.x and then configure DNS server y.y.y.y, the second command overwrites the first, and y.y.y.y becomes the sole DNS server. The same holds true for multiple servers. To add a DNS server rather than overwrite previously configured servers, include the IP addresses of all DNS servers when you enter this command.

## Examples

The following example shows how to configure DNS servers with the IP addresses 10.10.10.15, 10.10.10.30, and 10.10.10.45 for the group policy named FirstGroup.

```
hostname(config)# group-policy FirstGroup attributes
hostname(config-group-policy)# dns-server value 10.10.10.15 10.10.10.30 10.10.10.45
```

# dns timeout

To specify the amount of time to wait before trying the next DNS server, use the **dns timeout** command in global configuration mode. To restore the default timeout, use the **no** form of this command.

**dns timeout** *seconds*

**no dns timeout** [*seconds*]

## Syntax Description

*seconds* Specifies the timeout in seconds between 1 and 30. The default is 2 seconds. Each time the FWSM retries the list of servers, this timeout doubles. See the **dns retries** command to configure the number of retries.

## Defaults

The default timeout is 2 seconds.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Global configuration	•	•	•	•	—

## Command History

Release	Modification
3.1(1)	This command was introduced.

## Examples

The following example sets the timeout to 1 second:

```
hostname(config)# dns timeout 1
```

## Related Commands

Command	Description
<b>dns name-server</b>	Configures a DNS server address.
<b>dns retries</b>	Specifies the number of times to retry the list of DNS servers when the FWSM does not receive a response.
<b>dns domain-lookup</b>	Enables the FWSM to perform a name lookup.
<b>domain-name</b>	Sets the default domain name.
<b>show dns-hosts</b>	Shows the DNS cache.

# domain-name

To set the default domain name, use the **domain-name** command in global configuration mode. To remove the domain name, use the **no** form of this command. The FWSM appends the domain name as a suffix to unqualified names. For example, if you set the domain name to “example.com,” and specify a syslog server by the unqualified name of “jupiter,” then the security appliance qualifies the name to “jupiter.example.com.”

**domain-name** *name*

**no domain-name** [*name*]

## Syntax Description

*name* Sets the domain name, up to 63 characters.

## Defaults

The default domain name is default.domain.invalid.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple	
				Context	System
Global configuration	•	•	•	•	•

## Command History

Release	Modification
1.1(1)	This command was introduced.

## Usage Guidelines

For multiple context mode, you can set the domain name for each context, as well as within the system execution space.

## Examples

The following example sets the domain as example.com:

```
hostname(config)# domain-name example.com
```

## Related Commands

Command	Description
<b>dns domain-lookup</b>	Enables the FWSM to perform a name lookup.
<b>dns name-server</b>	Configures a DNS server address.

<b>Command</b>	<b>Description</b>
<b>hostname</b>	Sets the FWSM hostname.
<b>show running-config domain-name</b>	Shows the domain name configuration.

# drop

To drop specified GTP messages, use the **drop** command in GTP map configuration mode, which is accessed by using the **gtp-map** command. Use the **no** form to remove the command.

```
drop {apn access_point_name | message message_id | version version}
```

```
no drop {apn access_point_name | message message_id | version version}
```

## Syntax Description

<b>apn</b>	Drops GTP messages with the specified access point name.
<i>access_point_name</i>	The text string of the APN which will be dropped.
<b>message</b>	Drops specific GTP messages.
<i>message_id</i>	An alphanumeric identifier for the message that you want to drop. The valid range for <i>message_id</i> is 1 to 255.
<b>version</b>	Drops GTP messages with the specified version.
<i>version</i>	Use 0 to identify Version 0 and 1 to identify Version 1. Version 0 of GTP uses port 2123, while Version 1 uses port 3386.

## Defaults

All messages with valid message IDs, APNs, and version are inspected.  
Any APN is allowed.

## Command Modes

The following table shows the modes in which you can enter the command:

Command Mode	Firewall Mode		Security Context		
	Routed	Transparent	Single	Multiple Context	System
GTP map configuration	•	•	•	•	—

## Command History

Release	Modification
3.1(1)	This command was introduced.

## Usage Guidelines

Use the **drop message** command to drop specific GTP messages that you do not want to allow in your network.

Use the **drop apn** command to drop GTP messages with the specified access point. Use the **drop version** command to drop GTP messages with the specified version.

## Examples

The following example drops traffic to message ID 20:

```
hostname(config)# gtp-map gtp-policy
hostname(config-gtpmap)# drop message 20
```

<b>Related Commands</b>	<b>Commands</b>	<b>Description</b>
	<b>clear service-policy inspect gtp</b>	Clears global GTP statistics.
	<b>debug gtp</b>	Displays detailed information about GTP inspection.
	<b>gtp-map</b>	Defines a GTP map and enables GTP map configuration mode.
	<b>inspect gtp</b>	Applies a specific GTP map to use for application inspection.
	<b>show service-policy inspect gtp</b>	Displays the GTP configuration.

■ drop