

Probe Configuration Mode Commands

Probe configuration mode commands allow you to configure health monitoring on the ACE to track the state of a server by sending out probes. Also referred to as out-of-band health monitoring, the ACE verifies the server response or checks for any network problems that can prevent a client from reaching a server. Based on the server response, the ACE can place the server in or out of service and can make reliable load-balancing decisions. You can also use health monitoring to detect failures for a gateway or host in high availability configurations. The ACE identifies the health of a server in the following categories:

- **Passed**—The server returns a valid response.
- **Failed**—The server fails to provide a valid response to the ACE or the ACE is unable to reach a server for a specified number of retries.

The ACE supports 4000 unique probe configurations and 256 scripted probes. The ACE also allows the opening of 1000 sockets simultaneously.

You can associate the same probe with multiple real servers or server farms. Each time that you use the same probe again, the ACE counts it as another probe instance. You can allocate a maximum of 16384 probe instances.

To configure probes and access probe configuration mode for that probe type, use the **probe** command. The CLI prompt changes to (config-probe-*probe_type*). For information about the commands in all probe configuration mode, see the commands in this section. See the Command Modes section for each command to find out to which probe-type configuration mode applies.

Use the **no** form of this command to remove a probe from the configuration.

```
probe probe_type probe_name
```

```
no probe probe_type probe_name
```

Syntax Description

<i>probe_type</i>	Type of probe to configure. The probe type determines what the probe sends to the server. Enter one of the following types: <ul style="list-style-type: none"> • dns—Sends a request to a DNS server that gives it a configured domain (by default, the domain is www.cisco.com). To determine if the server is up, the ACE must receive one of the configured IP addresses for that domain. • echo {tcp udp}—Sends a specified string to the server and compares the response with the original string. You must configure the string that needs to be echoed. If the response string matches the original string, the server is marked as passed. If you do not configure a string, the probe behaves like a TCP or UDP probe and you must do one of the following: <ul style="list-style-type: none"> – If the probe uses a TCP connection, use the tcp keyword to configure TCP attributes. – If the probe uses a UDP connection, use the udp keyword to configure UDP attributes.
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- **finger**—Uses a Finger query to a server for an expected response string. The ACE searches the the response for the configured string. If the ACE finds the expected response string, the server is marked as passed. If you do not configure an expected response string, the ACE ignores the server response.
- **ftp**—Establishes a TCP connection to the server and then issues a **quit** command.
- **http**—Establishes a TCP connection and issues an HTTP request to the server for an expected string and status code. The ACE can compare the received response with configured codes, looking for a configured string in the received HTTP page, or verifying hash for the HTTP page. If any of these checks fail, the server is marked as failed.

For example, if you configure an expected string and status code and the ACE finds them both in the server response, the server is marked as passed. However, if the ACE does not receive either the server response string or the expected status code, it marks the server as failed.

If you do not configure a status code, any response code from the server is marked as failed.

- **https**—Similar to an HTTP probe except that it uses Secure Sockets Layer (SSL) to generate encrypted data.
- **icmp**—Sends an ICMP echo request and listens for a response. If a server returns a response, the ACE marks the server as passed. If the server does not send a response that causes the probe to time out, or the server sends an unexpected ICMP echo response type, the ACE marks the probe as failed.
- **imap**—Makes a server connection and sends user credential (login, password, and mailbox) information. The ACE can send a configured command. Based on the server response, the ACE marks the probe as passed or failed.
- **pop**—Initiates a session and sends the configured credentials. The ACE can send a configured command. Based on the server response, the ACE marks the probe as passed or failed.
- **radius**—Sends a query using a configured username, password, and shared secret to a Remote Authentication Dial-In User Service (RADIUS) server. If the server is up, it is marked as passed. If you configure a Network Access Server (NAS) address, the ACE uses it in the outgoing packet. Otherwise, the ACE uses the IP address associated with the outgoing interface as the NAS address.
- **scripted**—Allows you to run a script to execute the probe that you created for health monitoring. You can author specific scripts with features not present in standard health probes.
- **smtp**—Initiates an SMTP session by logging into the server, sends a HELLO message, and then disconnects from the server.
- **tcp**—Initiates a TCP 3-way handshake (SYN, SYN-ACK, ACK) and expects the server to send a response. By default, a successful response causes the probe to mark the server as passed and send a FIN to end the session. If the response is not valid or if there is no response, the probe marks the server as failed.

- **telnet**—Establishes a connection to the server and verifies that a greeting from the application was received.
- **udp**—Sends a UDP packet to a server and marks the server as failed only if the server returns an ICMP Port Unreachable message. If the ACE does not receive any ICMP errors for the UDP request that was sent, the probe is marked as passed. Optionally, you can configure this probe to send specific data and expect a specific response to mark the server as passed.

If the IP interface of the server is down or disconnected, the UDP probe by itself would not know that the UDP application is not reachable.

<i>probe_name</i>	Identifier for the probe. Use the probe name to associate the probe to the server. Enter an unquoted text string with no spaces and a maximum of 64 alphanumeric characters.
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Command Modes

Configuration mode
Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

This command requires the probe feature in your user role. For details about role-based access control (RBAC) and user roles, see the *Cisco 4700 Series Application Control Engine Appliance Virtualization Configuration Guide*.

Examples

To define a TCP probe named PROBE, and access its mode, enter:

```
host1/Admin(config)# probe tcp PROBE1
host1/Admin(config-probe-tcp)#
```

To delete the TCP probe named PROBE1 for TCP and access its mode, enter:

```
host1/Admin(config)# probe tcp PROBE1
```

Related Commands

[clear stats](#)
[show probe](#)
[show running-config](#)
[show stats](#)

(config-probe-*probe_type*) connection term

By default, the ACE terminates a TCP connection gracefully by sending a FIN to the server. To configure the ACE to terminate a TCP connection by sending a RST, use the **connection term** command. Use the **no** form of this command to reset its default of graceful termination.

connection term forced

no connection term forced

Syntax Description This command has no keywords or arguments.

Command Modes ECHO TCP, Finger, FTP, HTTP, HTTPS, IMAP, POP, SMTP, TCP, and Telnet probe configuration modes
Admin and user contexts

Command History	Release	Modification
	A1(7)	This command was introduced.

Usage Guidelines This command applies only to TCP-based probes.

Examples To terminate a TCP connection by sending a RST for a TCP probe, enter:

```
host1/Admin(config-probe-tcp)# connection term forced
```

To reset the method to terminate a connection gracefully, enter:

```
host1/Admin(config-probe-tcp)# no connection term forced
```

Related Commands [show probe](#)

(config-probe-*probe_type*) credentials

To configure the credentials for username and password authentication of a probe to access a server, use the **credentials** command. For a Remote Authentication Dial-In User Service (RADIUS) probe, a shared secret may also be required. For an Internet Message Access Protocol (IMAP) probe, you can provide a mailbox username. Use the **no** form of this command to remove the credentials from the configuration.

For HTTP, HTTPS, and POP probes, the syntax is as follows:

```
credentials username [password]
```

For RADIUS probes, the syntax is as follows:

```
credentials username password [secret shared_secret]
```

For IMAP probes, the syntax is as follows:

```
credentials {username password} | {mailbox name}
```

For HTTP, HTTPS, IMAP, POP, and RADIUS probes, the syntax is as follows:

```
no credentials
```

For IMAP probes, the syntax is as follows:

```
no credentials username | mailbox
```

Syntax Description		
<i>username</i>		User identifier used for authentication. Enter an unquoted text string with a maximum of 64 alphanumeric characters.
<i>password</i>		(Optional except for RADIUS and IMAP probes) Password used for authentication. Enter an unquoted text string with a maximum of 64 alphanumeric characters.
mailbox <i>name</i>		(IMAP probe) Specifies the user mailbox name from which to retrieve e-mail for an IMAP probe. Enter an unquoted text string with a maximum of 64 alphanumeric characters.
secret <i>shared_secret</i>		(RADIUS probe) Specifies the password used for the MD5 hash encryption algorithm. Enter an unquoted text string with a maximum of 64 alphanumeric characters.

Command Modes	
	HTTP, HTTPS, IMAP, POP, and RADIUS probe configuration modes Admin and user contexts

Command History	Release	Modification
	A1(7)	This command was introduced.

Usage Guidelines	
	This command has no usage guidelines.

Examples

To configure the username ENG1 and a password TEST for an HTTP probe, enter:

```
host1/Admin(config-probe-http)# credentials ENG1 TEST
```

To delete the credentials for a probe, enter:

```
host1/Admin(config-probe-http)# no credentials
```

Related Commands

[show probe](#)

(config-probe-*probe_type*) description

To provide a description for a probe, use the **description** command. Use the **no** form of this command to remove the description for the probe.

description *text*

no description

Syntax Description

<i>text</i>	Description for the probe. Enter a text string with a maximum of 240 alphanumeric characters.
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Command Modes

All probe-type configuration modes
Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

This command has no usage guidelines.

Examples

To configure a description THIS PROBE IS FOR TCP SERVERS for a TCP probe, enter:

```
host1/Admin(config-probe-tcp)# description THIS PROBE IS FOR TCP SERVERS
```

To remove the description THIS PROBE IS FOR TCP SERVERS for a TCP probe, enter:

```
host1/Admin(config-probe-tcp)# no description
```

Related Commands

[show probe](#)

(config-probe-*probe_type*) domain

To configure the domain name that the probe sends to the server to resolve, use the **domain** command. Use the **no** form of this command to remove the domain.

domain *name*

no domain

Syntax Description	<i>name</i>	Domain that the probe sends to the DNS server. Enter an unquoted text string with a maximum of 255 alphanumeric characters.
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Command Modes	DNS probe configuration mode Admin and user contexts
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Command History	Release	Modification
	A1(7)	This command was introduced.

Usage Guidelines	The DNS probe sends a domain name for the DNS server to resolve. By default, the probe uses the www.cisco.com domain.
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Examples	To configure the domain name of MARKET, enter: host1/Admin(config-probe-dns)# domain MARKET
	To remove the domain from the configuration, enter: host1/Admin(config-probe-dns)# no domain

Related Commands	show probe
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(config-probe-*probe_type*) expect address

To configure one or more IP addresses that the ACE expects as a server response to a DNS request, use the **expect address** command. The probe matches the received IP address with the configured addresses. Use the **no** form of this command to remove the expected IP address from the configuration.

expect address *ip_address*

no expect address *ip_address*

Syntax Description

<i>ip_address</i>	IP address expected from the DNS server in response to the DNS probe request for a domain. Enter a unique IPv4 address in dotted-decimal notation (for example, 192.168.12.15).
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Command Modes

DNS probe configuration mode
Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

A DNS probe sends a request for a domain to a DNS server. The ACE uses the IP address specified in the **expect address** command to decide whether to pass or fail the DNS probe for the server based on the server response.

Examples

To configure an expected IP address of 192.168.12.15, enter:

```
host1/Admin(config-probe-dns)# expect address 192.168.12.15
```

To remove an IP address, enter:

```
host1/Admin(config-probe-dns)# no expect address 192.168.12.15
```

Related Commands

[show probe](#)

(config-probe-*probe_type*) expect regex

To configure what the ACE expects as a response from the probe destination server, use the **expect regex** command. Use the **no** form of this command to remove the expectation of a response expression.

```
expect regex string [offset number]
```

For TCP and UDP probes, the syntax is as follows:

```
no expect
```

For Finger, HTTP, and HTTPS probes, the syntax is as follows:

```
no expect regex
```

Syntax Description

<i>string</i>	Expected response string from the probe destination. Enter an unquoted text string with no spaces. If the string includes spaces, enclose the string in quotes. The string can be a maximum of 255 alphanumeric characters.
offset <i>number</i>	(Optional) Sets the number of characters into the received message or buffer where the probe starts searching for the defined expression. Enter a number from 1 to 4000.

Command Modes

Finger, HTTP, HTTPS, TCP, and UDP probe configuration modes

Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

When you configure a probe to expect a string from a server, it searches the response for a configured string. If the ACE finds the expected string, the server is marked as passed. If you do not configure an expected string, the ACE ignores the server response.

If you configure the **expect regex** command for TCP probes, you must configure the **send-data** command. Otherwise, the probe performs a connection open and close without checking the response from the server.

Examples

To configure a TCP probe to expect an ACK response, enter:

```
host1/Admin(config-probe-tcp)# expect regex ack
```

To remove the expectation of a response expression for a TCP probe, enter:

```
host1/Admin(config-probe-tcp)# no expect
```

To remove the expectation of a response expression for an HTTP probe, enter:

```
host1/Admin(config-probe-http)# no expect regex
```

Related Commands [show probe](#)

(config-probe-*probe_type*) expect status

To configure a single status code or a range of status code responses that the ACE expects from the probe destination, use the **expect status** command. You can specify multiple status code ranges with this command by entering the command with different ranges separately. Use the **no** form of this command to remove the expected status code or codes from the configuration.

```
expect status min_number max_number
```

```
no expect status min_number max_number
```

Syntax Description		
<i>min_number</i>		Single status code or the lower limit of a range of status codes. Enter an integer from 0 to 999.
<i>max_number</i>		Upper limit of a range of status codes. Enter an integer from 0 to 999. When configuring a single code, reenter the <i>min_number</i> value.

Command Modes	
	FTP, HTTP, HTTPS, and SMTP probe configuration modes Admin and user contexts

Command History	Release	Modification
	A1(7)	This command was introduced.

Usage Guidelines

You can specify multiple status code ranges with this command by entering the command with different ranges one at a time. Both the *min_number* and the *max_number* values can be any integer between 0 and 999 if the *max_number* is greater than or equal to the *min-number*. When the *min_number* and *max_number* values are the same, the ACE uses a single status code number.

When the ACE receives a response from the server, it expects a status code to mark a server as passed. By default, there are no status codes configured on the ACE. If you do not configure a status code, any response code from the server is marked as failed.

Examples

To configure an expected status code of 200 that indicates that the HTTP request was successful, enter:

```
host1/Admin(config-probe-http)# expect status 200 200
```

To configure a range of expected status codes from 200 to 202, enter:

```
host1/Admin(config-probe-http)# expect status 200 202
```

To configure multiple ranges of expected status codes from 200 to 202 and 204 to 205, configure each range separately. Enter:

```
host1/Admin(config-probe-http)# expect status 200 202  
host1/Admin(config-probe-http)# expect status 204 205
```

To remove a single expected status code of 200, enter:

```
host1/Admin(config-probe-http)# no expect status 200 200
```

To remove a range of expected status codes, enter the range of 200 to 202, enter:

```
host1/Admin(config-probe-http) # no expect status 200 202
```

To remove multiple ranges of expected status codes, you must remove each range separately. If you have set two different ranges (200 to 202 and 204 to 205), enter:

```
host1/Admin(config-probe-http) # no expect status 200 202  
host1/Admin(config-probe-http) # no expect status 204 205
```

Related Commands [show probe](#)

(config-probe-*probe_type*) faildetect

Before the ACE marks a server as failed, it must detect that probes have failed a consecutive number of times. By default, when three consecutive probes have failed, the ACE marks the server as failed. To configure this number of failed probes, use the **faildetect** command. Use the **no** form of this command to reset the number of probe retries to its default.

faildetect *retry-count*

no faildetect

Syntax Description	<i>retry_count</i>	Consecutive number of failed probes before marking the server as failed. Enter a number from 1 to 65535. The default is 3.
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Command Modes	All probe-type configuration modes Admin and user contexts
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Command History	Release	Modification
	A1(7)	This command was introduced.

Usage Guidelines	This command has no usage guidelines.
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Examples	To configure the number of failed probes at 5 before declaring the server as failed for a TCP probe, enter: host1/Admin(config-probe-tcp)# faildetect 5
	To reset the number of probe failures to the default of 3, enter: host1/Admin(config-probe-tcp)# no faildetect

Related Commands	show probe
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(config-probe-*probe_type*) hash

To configure the ACE to dynamically generate the MD5 hash value or manually configure the value, use the **hash** command. By default, no hash value is configured on the ACE. Use the **no** form of this command to configure the ACE to no longer compare the referenced hash value to the computed hash value.

hash [*value*]

no hash

Syntax Description	<i>value</i> (Optional) The MD5 hash value that you want to manually configure. Enter the MD5 hash value as a hexadecimal string with exactly 32 characters (16 bytes).
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Command Modes	HTTP and HTTPS probe configuration mode Admin and user contexts
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Command History	Release	Modification
	A1(7)	This command was introduced.

Usage Guidelines	If you do not use this command to configure the hash value, the ACE does not calculate a hash value on the HTTP data returned by the probe.
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When you enter this command with no argument, the ACE generates the hash on the HTTP data returned by the first successful probe. If subsequent HTTP server hash responses match the generated hash value, the ACE marks the server as passed. If a mismatch occurs due to changes to the HTTP data, the probe fails and the **show probe ... detail** command displays an MD5 mismatch error in the Last disconnect error field.

To clear the reference hash and have the ACE recalculate the hash value at the next successful probe, change the URL or method by using the **request method** command.

The server response must include the Content-Length header for the **hash** command to function. Otherwise, the probe does not attempt to parse the hash value.

You can configure the **hash** command on a probe using the HEAD method, however there is no data to hash and has no effect causing the probe to always succeed.

Examples	To configure the ACE to generate the hash on the HTTP data returned by the first successful probe, enter:
-----------------	---

```
host1/Admin(config-probe-http) # hash
```

To manually configure a hash value, enter:

```
host1/Admin(config-probe-http) # hash 0123456789abcdef0123456789abcdef
```

To configure the ACE to no longer compare the referenced hash value to the computed hash value, enter:

```
host1/Admin(config-probe-http) # no hash
```

Related Commands[show probe](#)[\(config-probe-probe_type\) request method get | head](#)

(config-probe-*probe_type*) header

To configure an HTTP header or multiple header fields for the HTTP probe, use the **header** command. Use the **no** form of this command to remove an HTTP header field from the probe configuration.

header *field_name* **header-value** *value*

no header *field_name*

Syntax Description

<i>field_name</i>	Identifier for a standard header field. Enter a text string with a maximum of 64 alphanumeric characters. If the header field includes spaces, enclose its string with quotes. You can also enter one of the following header keywords: <ul style="list-style-type: none"> • Accept—Accept request header • Accept-Charset—Accept-Charset request header • Accept-Encoding—Accept-Encoding request header • Accept-Language—Accept-Language request header • Authorization—Authorization request header • Cache-Control—Cache-Control general header • Connection—Connection general header • Content-MD5—Content-MD5 entity header • Expect—Expect request header • From—From request header • Host—Host request header • If-Match—If-Match request header • Pragma—Pragma general header • Referer—Referer request header • Transfer-Encoding—Transfer-Encoding general header • User-Agent—User-Agent request header • Via—Via general header
<i>field-value</i>	Value assigned to the header field. Enter a text string with a maximum of 255 alphanumeric characters. If the value string includes spaces, enclose the string with quotes.

Command Modes

HTTP and HTTPS probe configuration mode
Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

You can configure multiple header fields for each probe in your configuration.

Examples

To configure the Accept-Encoding HTTP header with a field value of identity, enter:

```
host1/Admin(config-probe-http)# header Accept-Encoding header-value identity
```

To remove the header with the Accept-Encoding field name from the probe, enter:

```
host1/Admin(config-probe-http)# no header Accept-Encoding
```

Related Commands

[show probe](#)

(config-probe-*probe_type*) interval

To change the time interval between probes, use the **interval** command. The time interval between probes is the frequency that the ACE sends probes to the server marked as passed. Use the **no** form of this command to reset the default time interval of 120 seconds.

interval *seconds*

no interval

Syntax Description	<i>seconds</i>	Time interval in seconds. Enter a number from 2 to 65535. The default is 120.
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Command Modes	All probe-type configuration modes Admin and user contexts
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Command History	Release	Modification
	A1(7)	This command was introduced.

Usage Guidelines	This command has no usage guidelines.
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Examples	To configure a time interval of 50 seconds for a TCP probe, enter: host1/Admin(config-probe-tcp) # interval 50
	To reset the time interval to the default of 120 seconds, enter: host1/Admin(config-probe-tcp) # no interval

Related Commands	show probe
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(config-probe-*probe_type*) ip address

To override the destination address that the probe uses, use the **ip address** command. By default, the probe uses the IP address from the real server or server farm configuration for the destination IP address. Use the **no** form of this command to reset the default of the probe.

ip address *ip_address* [**routed**]

no ip address

Syntax Description		
	<i>ip_address</i>	Destination IP address. The default is the IP address from the real server or server farm configuration. Enter a unique IPv4 address in dotted-decimal notation (for example, 192.168.12.15).
	routed	(Optional) Routes the address according to the ACE internal routing table.

Command Modes	
	All probe-type configuration modes except scripted probe configuration mode Admin and user contexts

Command History	Release	Modification
	A1(7)	This command was introduced.

Usage Guidelines	
	This command has no usage guidelines.

Examples	
	To configure a TCP probe destination IP address 192.168.12.15, enter: <pre>host/Admin1(config-probe-tcp)# ip address 192.168.12.15</pre>
	To reset the default of the probe using the IP address from the real server or server farm configuration, enter: <pre>host1/Admin(config-probe-tcp)# no ip address</pre>

Related Commands	
	show probe

(config-probe-*probe_type*) nas ip address

To configure a Network Access Server (NAS) address, use the **nas ip address** command. Use the **no** form of this command to remove the NAS address.

```
nas ip address ip_address
```

```
no nas ip address
```

Syntax Description	<i>ip_address</i>	NAS IP address. Enter a unique IPv4 address in dotted-decimal notation (for example, 192.168.12.15). By default, if a NAS address is not configured for the Remote Authentication Dial-In User Service (RADIUS) probe, the ACE uses the IP address associated with the outgoing interface as the NAS address.
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Command Modes	RADIUS probe configuration mode Admin and user contexts
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Command History	Release	Modification
	A1(7)	This command was introduced.

Usage Guidelines	If a NAS address is not configured for the RADIUS probe, the ACE performs a route lookup on the RADIUS server IP address.
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Examples	To configure a NAS address of 192.168.12.15, enter: <pre>host1/Admin(config-probe-radius)# nas ip address 192.168.12.15</pre> To remove the NAS IP address, enter: <pre>host1/Admin(config-probe-radius)# no nas ip address</pre>
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Related Commands	show probe
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(config-probe-*probe_type*) open

To configure the time interval for a connection to be established through a TCP 3-way handshake, use the **open** command. By default, when the ACE sends a probe, it waits 10 seconds to open and establish the connection with the server. Use the **no** form of this command to reset its default of 10 seconds.

open *timeout*

no open

Syntax Description	<i>timeout</i>	Time in seconds. Enter an integer from 1 to 65535. The default is 10.
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Command Modes	Echo TCP, Finger, FTP, HTTP, HTTPS, IMAP, POP, scripted, SMTP, TCP, and Telnet probe configuration mode Admin and user contexts
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Command History	Release	Modification
	A1(7)	This command was introduced.

Usage Guidelines	This command has no usage guidelines.
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Examples	To configure the wait time interval to 25 seconds for a TCP probe, enter:
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```
host1/Admin(config-probe-tcp)# open 25
```

To reset the time interval to its default of 10 seconds, enter:

```
host1/Admin(config-probe-tcp)# no open
```

Related Commands	show probe
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(config-probe-*probe_type*) **passdetect**

To configure the time interval to send a probe to a failed server and the number of probes to mark the server as passed, use the **passdetect** command. Use the **no** form of this command to reset the default of waiting 300 seconds before sending out a probe to a failed server and marking a server as passed if it receives 3 consecutive successful responses.

```
passdetect {interval seconds | count number}
```

```
no passdetect {interval | count}
```

Syntax Description	Parameter	Description
	interval <i>seconds</i>	Specifies the wait time interval in seconds. Enter a number from 2 to 65535. The default is 300.
	count <i>number</i>	Specifies the number of successful probe responses from the server. Enter a number from 1 to 65535. The default is 3.

Command Modes All probe-type configuration modes except scripted probe configuration mode
Admin and user contexts

Command History	Release	Modification
	A1(7)	This command was introduced.

Usage Guidelines After the ACE marks a server as failed, it waits a period of time and then sends a probe to the failed server. When the ACE receives a number of consecutive successful probes, it marks the server as passed. By default, the ACE waits 300 seconds before sending out a probe to a failed server and marks a server as passed if it receives 3 consecutive successful responses.

Examples To configure a wait interval of 10 seconds for a TCP probe, enter:

```
host1/Admin(config-probe-tcp)# passdetect interval 10
```

To configure five success probe responses from the server before declaring it as passed, enter:

```
host1/Admin(config-probe-tcp)# passdetect count 5
```

To reset the wait interval to its default, enter:

```
host1/Admin(config-probe-tcp)# no passdetect interval
```

To reset the successful probe responses to its default, enter:

```
host1/Admin(config-probe-tcp)# no passdetect count
```

Related Commands [show probe](#)

(config-probe-*probe_type*) port

To configure the port number that the probe uses, use the **port** command. Use the **no** form of this command to reset the port number based on the probe type.

port *port-number*

no port

Syntax Description	<i>port-number</i>	Port number for the probe. Enter an integer from 1 to 65535.
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Command Modes	All probe-type configuration modes except ICMP probe configuration mode Admin and user contexts
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Command History	Release	Modification
	A1(7)	This command was introduced.

Usage Guidelines [Table 2-10](#) lists the default port numbers for each probe type.

Table 2-10 Default Port Numbers for Probe Types

Probe Type	Default Port Number
DNS	53
Echo	7
Finger	79
FTP	21
HTTP	80
HTTPS	443
ICMP	Not applicable
IMAP	143
POP	110
RADIUS	1812
SMTP	25
Telnet	23
TCP	80
UDP	53

Examples

To configure a port number of 88 for an HTTP probe, enter:

```
host1/Admin(config-probe-HTTP) # port 88
```

To reset the port number to its default, in this case, port 80 for an HTTP probe, enter:

```
host1/Admin(config-probe-HTTP) # no port
```

Related Commands

[show probe](#)

(config-probe-*probe_type*) receive

To configure the time period that the ACE expects to receive a server response to the probe, use the **receive** command. Use the **no** form of this command to reset its default of 10 seconds.

receive *seconds*

no receive

Syntax Description

<i>seconds</i>	Time to wait in seconds. Enter an integer from 1 to 65535. The default is 10.
----------------	---

Command Modes

All probe-type configuration modes
Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

By default, when the ACE sends a probe, it expects a response within a time period of 10 seconds. For example, for an HTTP probe, the timeout period is the number of seconds to receive an HTTP reply for a GET or HEAD request. If the server fails to respond to the probe, the ACE marks the server as failed.

Examples

To configure the timeout period for a response at 5 seconds for a TCP probe, enter:

```
host1/Admin(config-probe-TCP)# receive 5
```

To reset the time period to receive a response from the server to its default of 10 seconds, enter:

```
host1/Admin(config-probe-TCP)# no receive
```

Related Commands

[show probe](#)

(config-probe-*probe_type*) request command

To configure the request command used by an IMAP or POP probe, use the **request command** command. Use the **no** form of this command to remove the request command from the configuration.

request command *command*

no request

Syntax Description	<i>command</i>	Request command for the probe. Enter a text string with a maximum of 32 alphanumeric characters with no spaces.
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Command Modes	IMAP and POP probe configuration modes Admin and user contexts
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Command History	Release	Modification
	A1(7)	This command was introduced.

Usage Guidelines	This command has no usage guidelines.
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Examples To configure the last request command for an IMAP probe, enter:

```
host1/Admin(config-probe-imap) # request command last
```

To remove the request command for the probe, enter:

```
host1/Admin(config-probe-imap) # no request
```

Related Commands	show probe
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(config-probe-*probe_type*) request method get | head

To configure the HTTP method and URL used by the probe, use the **request method get | head** command. By default, the HTTP request method is a GET with a URL of a forward slash (/). Use the **no** form of this command to reset the default request method.

request method {get | head} url path

no request method {get | head} url path

Syntax Description

get	Configures the HTTP GET request method to direct the server to get the page. This method is the default.
head	Configures the HTTP HEAD request method to direct the server to get only the header for the page.
url path	Specifies the URL string used by the probe. Enter an alphanumeric string with a maximum of 255 characters. The default path is forward slash (/).

Command Modes

HTTP and HTTPS probe configuration modes
Admin and user contexts

Command History

Release	Modification
A1(7)	This command was introduced.

Usage Guidelines

If you do not configure a URL, the probe behaves as a TCP probe.

Examples

To configure the HEAD HTTP method and the /digital/media/graphics.html URL used by an HTTP probe, enter:

```
host1/Admin(config-probe-http)# request method head url /digital/media/graphics.html
```

To reset the HTTP method for the probe of GET with a URL of "/", enter:

```
host1/Admin(config-probe-http)# no request method head url /digital/media/graphics.html
```

Related Commands

[show probe](#)
[\(config-probe-*probe_type*\) hash](#)

(config-probe-*probe_type*) script

To specify the script name and the arguments to be passed to a scripted probe, use the **script** command. Use the **no** form of this command to remove the script and its arguments from the configuration.

```
script script_name [script_arguments]
```

```
no script
```

Syntax Description		
<i>script_name</i>	Name of the script. Enter an unquoted text string with no spaces and a maximum of 255 alphanumeric characters.	
<i>script_arguments</i>	(Optional) Data sent to the script. Enter a text string with a maximum of 255 alphanumeric characters including spaces and quotes. Separate each argument by a space. If a single argument contains spaces, enclose the argument string in quotes.	

Command Modes	
	Scripted probe configuration mode Admin and user contexts

Command History	Release	Modification
	A1(7)	This command was introduced.

Usage Guidelines	
	Scripted probes run probes from a configured script to perform health probing. You can also configure arguments that are passed to the script. Before you can associate a script file with a probe, you must copy and load the script on the ACE. For information on TCL scripts, see the <i>Cisco 4700 Series Application Control Engine Appliance Administration Guide</i> .

Examples	
	To configure the script name of PROBE-SCRIPT and arguments of double question marks (??), enter: <pre>host1/Admin(config-probe-scrptd)# script PROBE-SCRIPT ??</pre>
	To remove the script and its arguments from the configuration, enter: <pre>host1/Admin(config-probe-scrptd)# no script</pre>

Related Commands	
	show probe show script (config) script file

(config-probe-*probe_type*) send-data

To configure the ASCII data that the probe sends when the ACE connects to the server, use the **send-data** command. Use the **no** form of this command to remove the data from the configuration.

send-data *expression*

no send-data

Syntax Description	<i>expression</i>	ASCII data that the probe sends. Enter an unquoted text string with no spaces and a maximum of 255 alphanumeric characters.
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Command Modes	ECHO, Finger, TCP, and UDP probe configuration modes Admin and user contexts
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Command History	Release	Modification
	A1(7)	This command was introduced.

Usage Guidelines	If you do not configure the send-data command for a UDP probe, the probe sends one byte, 0x00.
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Examples To configure a TCP probe to send TEST as the data, enter:

```
host1/Admin(config-probe-tcp)# send-data TEST
```

To remove the data, enter:

```
host1/Admin(config-probe-tcp)# no send-data
```

Related Commands	show probe
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(config-probe-*probe_type*) ssl cipher

To configure the probe to expect a specific type of RSA cipher suite from the back-end server, use the **ssl cipher** command. Use the **no** form of this command to reset its default of accepting any RSA configured cipher suites.

```
ssl cipher RSA_ANY | cipher_suite
```

```
no ssl cipher
```

Syntax Description		
	RSA_ANY	Specifies that any of the RSA cipher suites from those allowed on the ACE is accepted from the server. This is the default.
	<i>cipher_suite</i>	RSA cipher suite that the probe expects from the back-end server. Enter one of the following keywords: RSA_WITH_RC4_128_MD5 RSA_WITH_RC4_128_SHA RSA_WITH_DES_CBC_SHA RSA_WITH_3DES_EDE_CBC_SHA RSA_EXPORT_WITH_RC4_40_MD5 RSA_EXPORT_WITH_DES40_CBC_SHA RSA_EXPORT1024_WITH_RC4_56_MD5 RSA_EXPORT1024_WITH_DES_CBC_SHA RSA_EXPORT1024_WITH_RC4_56_SHA RSA_WITH_AES_128_CBC_SHA RSA_WITH_AES_256_CBC_SHA

Command Modes	
	HTTPS probe configuration mode Admin and user contexts

Command History	Release	Modification
	A1(7)	This command was introduced.

Usage Guidelines	
	This command has no usage guidelines.

Examples	
	To configure the HTTPS probes with the RSA_WITH_RC4_128_SHA cipher suite, enter: <pre>host1/Admin(config-probe-https)# ssl cipher RSA_WITH_RC4_128_SHA</pre>
	To reset the default of the HTTPS probes accepting any RSA cipher suite, enter: <pre>host1/Admin(config-probe-https)# ssl cipher RSA_ANY</pre>

To reset the default by using the **no ssl cipher** command, enter:

```
host1/Admin(config-probe-https)# no ssl cipher
```

Related Commands [show probe](#)

(config-probe-*probe_type*) ssl version

To configure the version of Secure Sockets Layer (SSL) that the probe supports, use the **ssl version** command. Use the **no** form of this command to reset the default to SSL version 3.

```
ssl version SSLv2 | SSLv3 | TLSv1
```

```
no ssl version
```

Syntax Description	SSLv2	Configures the probe to support SSL version 2.
	SSLv3	Configures the probe to support SSL version 3. This is the default.
	TLSv1	Configures the probe to support TLS version 1.

Command Modes	HTTPS probe configuration mode Admin and user contexts
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Command History	Release	Modification
	A1(7)	This command was introduced.

Usage Guidelines	The version in the ClientHello message sent to the server indicates the highest supported version.
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Examples	To configure the SSL version 2, enter: <pre>host1/Admin(config-probe-https)# ssl version SSLv2</pre> To reset the default of SSL version 3, enter: <pre>host1/Admin(config-probe-https)# no ssl version</pre>
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Related Commands	show probe
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