IP SLA Configuration Commands

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Chapter 1　IPSLA Configuration Commands

1.1　ip sla　x<1-2147483647>

To attribute an operation with an ID, which is used to identify this operation, run this command.

Command mode

Config mode

Instruction

Only when the operation ID is set can the relevant operation types be configured.

Example

Router_config#ip sla 1 <cr>

Router_config_ip_sla#

After an operation ID is set, you can then configure the operation type (currently only TCP-connect, UDP-echo, ICMP-echo and DNS are supported).

1.1.1　Tcp-connect

tcp-connect　<ip address> <port>

To set the IP address and port of the peer and then relevant special options, run the above-mentioned command.

Command mode

Router_config_ip_sla #

Instruction

This command is used to conduct the TCP-connect operation.

Example

Router_config_ip_sla#tcp-connect 1.1.1.1 23 <cr>

Router_config_ip_sla_tcp#

The optional parameters of TCP-connect include below:

Timeout <milliseconds> 60000ms by default	Standing for the timeout time of this connection, which is
Frequency <seconds>	Standing for the frequency of job conduction (60s by default)
Threshold <milliseconds>	Standing for the threshold that is displayed after the job is successfully conducted; if the returning time exceeds the threshold, the job is considered to be failed (the default threshold is 5000ms)
Dest-ipaddr <ip address>	Modifying the peer's IP address
Dest-port <port>	Modifying the port ID of the peer.
Tos <1-255>	Modifying TOS (the default value is 0)
Control <enable | disable>	Switching the control packets; this command is enabled by default; if the control packets are to be switched over, the peer must enable the responder.

Example

Router_config_ip_sla_tcp#timeout 8000 <cr>   The command to resume the default settings is "no timeout <cr>."

Router_config_ip_sla_tcp#frequency 45 <cr>   The command to resume the default settings is "no frequency <cr>."

Router_config_ip_sla_tcp#threshold 6000 <cr>   The command to resume the default settings is "no threshold <cr>."

Router_config_ip_sla_tcp#dest-ipaddr 1.1.1.2 <cr>

Router_config_ip_sla_tcp#dest-port 21 <cr>

Router_config_ip_sla_tcp#tos 11 <cr>   The command to resume the default settings is "no tos <cr>."

Router_config_ip_sla_tcp#control disable <cr>

1.1.2   udp-echo

udp-echo   <ip address> <port>

To set the IP address and port of the peer and then relevant special options, run the above-mentioned command.

Command mode

Router_config_ip_sla#

Instruction

This command is used to conduct the UDP echo operation.

Example

Router_config_ip_sla#udp-echo 1.1.1.1 23 <cr>

Router_config_ip_sla_udp#

The optional parameters of UDP-Echo include below:

Timeout <milliseconds>   Standing for the timeout time of this connection, which is
50000ms by default.

Frequency <seconds>   Standing for the frequency of operation conduction (60s by
default)

Threshold <milliseconds>   Standing for the threshold of a successful operation; if the
response time exceeds this threshold, it is regarded being failed
(5000ms by default).

Dest-ipaddr <ip address>   Modifying the IP address of the peer

Dest-port <port>   Modifies the port ID of the peer.

Tos <1-255>   Modifying TOS (the default value is 0)

Control <enable | disable>   Switching the control packets; this command is enabled by
default; if the control packets are to be switched over, the peer
must enable the responder.

Request-data-size <0-1500>

Modifying the size of the transmitted UDP packets

Example

Router_config_ip_sla_udp#timeout 8000 <cr>   **The command to resume the default**
settings is "no timeout <cr>."

Router_config_ip_sla_udp#frequency 45 <cr>   **The command to resume the default**
settings is "no frequency <cr>."

Router_config_ip_sla_udp#threshold 6000 <cr>   **The command to resume the default**
settings is "no threshold <cr>."

Router_config_ip_sla_udp#dest-ipaddr 1.1.1.2 <cr>

Router_config_ip_sla_udp#dest-port 21 <cr>

Router_config_ip_sla_udp#tos 11 <cr>   The command to resume the default settings is "no tos <cr>."

Router_config_ip_sla_udp#control disable <cr>

Router_config_ip_sla_udp#request-data-size 500 <cr>

The command to resume the default settings is "no request-data-size <cr>."

1.1.3   icmp-echo

Icmp-echo <ip address>

To set the IP address of the peer to receive the ICMP echo packets, run the above-mentioned command.

Command mode

Router_config_ip_sla#

Instruction

This command is used to conduct the ICMP echo operation.

Example

Router_config_ip_sla#icmp-echo 1.1.1.1 <cr>

Router_config_ip_sla_icmp#

The optional parameters of ICMP-Echo include below:

Timeout <milliseconds>   Standing for the timeout time of this connection, which is 50000ms by default.

Frequency <seconds>   Standing for the frequency of   operation conduction (60s by default)

Threshold <milliseconds>   Standing for the threshold of a successful operation; if the response time exceeds this threshold, it is regarded being failed (5000ms by default).

Tos <1-255>   Modifying TOS (the default value is 0)

Request-data-size <0-1500> Modifying the size of the transmitted ICMP packets

Example

Router_config_ip_sla_icmp#timeout 8000 <cr>   The command to resume the default settings is "no timeout <cr>".

Router_config_ip_sla_icmp#frequency 45 <cr>   The command to resume the default settings is "no frequency <cr>".

Router_config_ip_sla_icmp#threshold 6000 <cr> The command to resume the default settings is "no threshold <cr>."

Router_config_ip_sla_icmp#tos 11 <cr>   The command to resume the default settings is "no tos <cr>."

Router_config_ip_sla_icmp#request-data-size 500 <cr>

The command to resume the default settings is "no request-data-size <cr>."

1.1.4   dns

Dns <query name> name-server <ip address>

To set the to-be-queried domain name and the IP address of the DNS server, run the above-mentioned command.

Command mode:

Router_config_ip_sla#

Instruction

This command is used to perform DNS query.

Example

Router_config_ip_sla#dns www.sina.com.cn **name-server 192.168.1.3   <cr>**

Router_config_ip_sla_dns#

The DNS parameters include:

Timeout <milliseconds>   Standing for the timeout time of this connection (9000ms   by default), which is not supported at present

Frequency <seconds>   Standing for the frequency of operation conduction (60s   by default)

Threshold <milliseconds> Standing for the threshold of a successful operation; if the response time exceeds this threshold, it is regarded being failed (5000ms by default).

Example

Router_config_ip_sla_dns#timeout 8000 <cr> The command to resume the default settings is "no timeout <cr>".

Router_config_ip_sla_dns#frequency 45 <cr> The command to resume the default settings is "no frequency <cr>".

Router_config_ip_sla_dns#threshold 6000 <cr> The command to resume the default settings is "no threshold <cr>."

1.1.5   udp-jitter

udp-jitter   <ip address> <port> {num-packets [value]}

To set the IP address and port of the peer, and the number of UDP packets to be sent each time (10 packets by default), run the above-mentioned command.

Command mode

Router_config_ip_sla#

Instruction

This command is used to conduct the UDP jitter operation.

Example

Router_config_ip_sla#udp-jitter 1.1.1.1 55555 num-packets 100 <cr>

Router_config_ip_sla_jitter#

The optional parameters of UDP-jitter include below:

Timeout <milliseconds>   Standing for the timeout time of this connection, which is 50000ms by default.

Frequency <seconds>   Standing for the frequency of operation conduction (60s by default)

Threshold <milliseconds>   Standing for the threshold of a successful operation; if the response time exceeds this threshold, it is regarded being failed (5000ms by default).

Dest-ipaddr <ip address>   Modifying the IP address of the peer

Dest-port <port>   Modifying the port ID of the peer

Tos <1-255>   Modifying TOS (the default value is 0)

Control <enable | disable> Switching the control packets; this command is enabled by default; if the control packets are to be switched over, the peer must enable the responder.

Request-data-size <0-1500> Modifying the size of the transmitted UDP packets

Example

Router_config_ip_sla_udp#timeout 8000 <cr>   **The command to resume the default settings is "no timeout <cr>".**

Router_config_ip_sla_udp#frequency 45 <cr>   **The command to resume the default settings is "no frequency <cr>".**

Router_config_ip_sla_udp#threshold 6000 <cr> **The command to resume the default settings is "no threshold <cr>."**

Router_config_ip_sla_udp#dest-ipaddr 1.1.1.2 <cr>

Router_config_ip_sla_udp#dest-port 21 <cr>

Router_config_ip_sla_udp#tos 11 <cr>   **The command to resume the default settings is "no tos <cr>."**

Router_config_ip_sla_udp#control disable <cr>

Router_config_ip_sla_udp#request-data-size 500 <cr>

The command to resume the default settings is "no request-data-size <cr>."

Note: When the UDP-Jitter job is enabled, IP SLA responder must be enabled on the peer.

1.2   ip sla responder

To enable the IP SLA responder, run **ip sla responder**.

Command mode:

Config mode

Instruction

In the case that **ip sla responder** is enabled, if the control packets from other routers are received, the corresponding port will be enabled and monitored for a period, and then forward the acknowledge packets or the deny packets because the corresponding port cannot be enabled for the peer. Considering the security, you can designate the IP address of the peer

of the corresponding port; if the corresponding port is not designated with an IP address, all visitors are allowed.

Example

Router_config#ip sla responder <cr>

Note: To enable the responder, you have to set this command and the UDP control packets must be received on port 1967.

Router_config#ip sla responder tcp-connect ipaddr 1.1.1.2 port 53456 <cr>

Router_config#ip sla responder tcp-connect port 53457 <cr>

After the two commands are set, port 53456 only allows IP 1.1.1.2 to conduct the TCP connection and rejects the requests from other peers, while port 53457 receives the requests from all peers.

Router_config#ip sla responder udp-echo ipaddr 1.1.1.2 port 53456 <cr>

Router_config#ip sla responder udp-echo port 53457 <cr>

It is the same as TCP connection.

1.3   ip sla reset

To reset all IP SLA jobs, run **ip sla reset**.

Command mode:

Config mode

Instruction

This command will be used to delete all IP SLA jobs and all corresponding data. It is irreversible operation, you must be careful before doing it.

Example

Router_config#ip sla reset <cr>

1.4   ip sla restart

To restart the corresponding job and erase the corresponding statistics data, run this command.

Command mode:

Config mode

Instruction

This command is used to restart a specific job or all jobs.

Example

Router_config#ip sla restart <cr>   Restarting all jobs

Router_config#ip sla restart 1 <cr> Restarting job 1

1.5   ip sla schedule

To configure the lifetime of a job and the starting time of the job (currently only the immediate start is supported), run this command.

Command mode:

Config mode

Instruction

This command is used to start a job. It is noted that a job cannot be set once it starts but can be deleted or waited until its lifetime is over.

Example

Router_config#ip sla schedule 1 life 4500 <cr>

The default lifetime is 3600 seconds, but you can run **life forever** to conduct a job continuously until it is deleted.

Router_config#ip sla schedule 1 start-time now <cr>

It is to start job 1.

1.6   show ip sla

1.6.1   show ip sla responder

To browse the related information about ip sla responder, run this command.

Example

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Router#show ip sla responder <cr>

1.6.2   show ip sla configuration

To browse the configuration information about a job or all SLA jobs, run this command.

Example

Router#show ip sla configuration <cr> Browsing the configuration information about all
jobs

Browsing the configuration information about

**Router#show ip sla configuration 1
<cr>** job 1

1.6.3   show ip sla statistic

To browse the statistics information about the IP SLA job, run this command.

Example

Router#show ip sla statistic <cr>   Browsing the statistics information about all
IP SLA jobs

Router#show ip sla statistic 1 <cr>   Browsing the statistics information about job
1

Router#show ip sla statistic 1 rtt-info <cr> Browsing the RTT data in the latest 10 times