SLA

SLA

enable

SLA-.

(no) SLA-.

```
[no] enable
```

CONFIG-SLA-TEST

```
esr(config-sla-test)# enable
```

frequency

SLA-.

(no) .

```
frequency <TIME>
no frequency
```

<TIME> – , [1..604800]

10

10

CONFIG-SLA-TEST

```
esr(config-sla-test)# frequency 3600
```

ip sla

IP-SLA (SLA-agent).

(no) IP-SLA.

```
[no] ip sla
```

10

CONFIG

```
esr(config)# ip sla
```

ip sla logging

SLA.

(no) SLA.

```
[no] ip sla logging
```

10

CONFIG

```
esr(config)# ip sla logging
```

ip sla logging level

IP-SLA.

(no) .

```
ip sla logging level <SEVERITY>
no ip sla logging level
```

<SEVERITY> – , ( ):

- error – ;
- warning – , ;
- notice – ;
- information – ;
- debug – , ;
- trace – .

info

10

CONFIG

```
esr(config)# ip sla logging level warning
```

ip sla mode

SLA-agent.

(no) .

```
ip sla mode <MODE>
no ip sla mode
```

<MODE> – SLA-agent. :

eltex – SLA-agent Eltex;

wisla-local – SLA-agent Wellink;

wisla-remote – SLA-client Wellink.

eltex

10

CONFIG

```
esr(config)# ip sla mode wisla
```

ip sla responder cisco

SLA-responder Cisco-SLA-agent.

(no) SLA-responder Cisco-SLA-agent.

```
[no] ip sla responder cisco
```

10

CONFIG-GI

CONFIG-TE

CONFIG-SUBIF

CONFIG-QINQ-IF

CONFIG-PORT-CHANNEL

CONFIG-BRIDGE

CONFIG-GRE

CONFIG-IP4IP

CONFIG-L2TP

CONFIG-PPTP

CONFIG-VTI

CONFIG-E1

CONFIG-MULTILINK

CONFIG-LOOPBACK

```
esr(config-if-gi)# ip sla responder cisco
```

ip sla responder cisco port

UDP-, Cisco-SLA-agent.

(no) .

```
ip sla responder cisco port <PORT>
no ip sla responder cisco port
```

<PORT> – UDP-, [1..65535].

10

CONFIG-GI

CONFIG-TE

CONFIG-SUBIF

CONFIG-QINQ-IF

CONFIG-PORT-CHANNEL

CONFIG-BRIDGE

CONFIG-GRE

CONFIG-IP4IP

CONFIG-L2TP

CONFIG-PPTP

CONFIG-VTI

CONFIG-E1

CONFIG-MULTILINK

CONFIG-LOOPBACK

```
esr(config-if-gi)# ip sla responder cisco port 7777
```

ip sla test

SLA- (SLA-agent) .

(no) SLA-.

```
[no] ip sla test <NUM>
```

<NUM> – SLA-, [1..10000].

10

CONFIG

```
esr(config)# ip sla test 10
```

ip sla schedule

SLA-. SLA- , .

(no) SLA .

```
ip sla schedule <TEST-NUMBER> [ life { <LIFE-TIME> | forever } ] [ start-time { <MONTH> <DAY> <TIME> | now } ]
[no] ip sla schedule <TEST-NUMBER>
```

<TEST-NUMBER> – SLA , [1..10000].

<LIFE-TIME> – , [1..2147483647] .

forever – .

<TIME> – , HH:MM:SS, :

- HH – , [0..23];
- MM – , [0..59];
- SS – , [0..59].

<MONTH> – , [January / February / March / April / May / June / July / August / September / October / November / December];

<DAY> – , [1..31];

now – .

10

CONFIG

```
esr(config)# ip sla schedule 1 forever now
```

packet-size

SLA-responder .

(no) .

```
packet-size <SIZE>
no packet-size
```

<SIZE> – SLA-, [70..10000] .

74

10

CONFIG-SLA-TEST

```
esr(config-sla-test)# packet-size 256
```

show ip sla configuration

SLA-agent.

```
show ip sla configuration
```

.

1

ROOT

```
esr# show ip sla configuration
Mode:                        Eltex
State:                       Enabled
Logging:                     information
```

show ip sla test configuration

SLA-.

```
show ip sla test configuration [ <NUM> ] [ vrf <VRF> ]
```

<NUM> – SLA-, [1..10000];

<VRF> – VRF, 31 .

1

ROOT

```
esr# sh ip sla test configuration 1
Test number:                 1
State:                       Enabled
Control phase:               Disabled
Authentication:              Disabled
Destination address:         1.1.1.1
Destination port:            1000
Frequency:                   10
Interval:                    20
Number of packets:           100
Packet size:                 74
Source address:              192.168.1.100
Source interface:            --
Source port:                 --
DSCP:                        0
COS:                         0
Timeout:                     3000
Number of history records:   10
esr#
```

show ip sla test statistics

SLA-.

```
show ip sla test statistics [ <NUM> ] [ vrf <VRF> ] [ microseconds ]
```

<NUM> – SLA-, [1..10000];

<VRF> – VRF, 31 ;

microseconds – .

1

ROOT

```
esr# sh ip sla test statistics 1
Test number:                                1
Transmitted packets:                        100
Lost packets:                               0 (0%)
Lost packets in forward direction:          0 (0%)
Lost packets in reverse direction:          0 (0%)
One-way delay forward min/avg/max:          0/0/12 milliseconds
One-way delay reverse min/avg/max:          0/0/12 milliseconds
One-way jitter forward min/avg/max:         1/1/1 milliseconds
One-way jitter reverse min/avg/max:         1/1/1 milliseconds
Two-way delay min/avg/max:                  0/0/25 milliseconds
Duplicate packets:                          0
Out of sequence packets in forward direction: 0
Out of sequence packets in reverse direction: 0
```

thresholds delay

(high) (low) .

(no) .

```
thresholds delay { high <DELAY> | low <DELAY> | forward { high <DELAY> | low <DELAY> } | reverse {high <DELAY> | low <DELAY> } }
```

```
no thresholds delay { high | low | forward { high | low } | reverse { high | low } }
```

high – .

low – .

forward – SLA-agent SLA-responder.

reverse – SLA- responder SLA-agent.

forward/reverse – .

<DELAY> – , [1..60000] .

10

CONFIG-SLA-TEST

```
esr(config-sla-test)# thresholds delay low 2000
```

thresholds jitter

(high) (low) .

(no) .

```
thresholds jitter { high <JITTER> | low <JITTER> | forward { high <JITTER> | low <JITTER> } | reverse { high <JITTER> | low <JITTER> } }
```

```
no thresholds jitter { high | low | forward { high | low } | reverse { high | low } }
```

high – .

low – .

forward – SLA-agent SLA-responder.

reverse – SLA- responder SLA-agent.

forward/reverse – .

<JITTER> – , [1..60000] .

10

CONFIG-SLA-TEST

```
esr(config-sla-test)# thresholds jitter 50000
```

thresholds losses

(high) (low) .

(no) .

```
thresholds losses { high <NUM-PACKETS> | low <NUM-PACKETS> | forward { high <NUM-PACKETS> | low <NUM-PACKETS> } |
reverse { high <NUM-PACKETS> | low <NUM-PACKETS> } }
```

```
no thresholds losses { high | low | forward | low } | reverse { high | low } }
```

high – .

low – .

forward – SLA-agent SLA-responder.

reverse – SLA- responder SLA-agent.

forward/reverse – .

<NUM-PACKETS> – , [1..60000] .

10

CONFIG-SLA-TEST

```
esr(config-sla-test)# thresholds losses
```

Eltex-SLA

authentication algorithm

SLA-agent.

(no) SLA-agent.

```
authentication algorithm <ALGORITHM>
no authentication algorithm
```

<ALGORITHM> – : sha-256, hmac-sha-256

15

CONFIG-SLA-RESPONDER

```
esr(config-sla-responder)# authentication algorithm sha-256
```

authentication key-chain

SLA-agent.

(no) SLA-agent.

```
authentication key-chain <KEYCHAIN>
no authentication key-chain
```

<KEYCHAIN> – , 16 .

15

CONFIG-SLA-RESPONDER

```
esr(config-sla-responder)# authentication key-chain sla-chain
```

authentication key-string

SLA-agent.

(no) SLA-agent.

```
authentication key-string ascii-text { <CLEAR-TEXT> | encrypted <ENCRYPTED-TEXT> }
no authentication key-string
```

<CLEAR-TEXT> – , 8 16 ;
<ENCRYPTED-TEXT> – 8 16 (16 32) (0xYYYY...) (YYYY...).

15

CONFIG-SLA-RESPONDER

```
esr(config-sla-responder)# authentication key-string ascii-text aukey
```

control-phase authentication algorithm

SLA-.

(no) .

```
control-phase authentication algorithm <ALGORITHM>
no control-phase authentication algorithm
```

<ALGORITHM> – , [sha-256, hmac-sha-256].

15

CONFIG-SLA-TEST

```
esr(config-sla-test)# control-phase authentication algorithm hmac-sha-256
```

control-phase authentication key-id

key-chain, ip sla key-chain (. authentication key-chain), SLA-responder.

(no) .

```
control-phase authentication key-id <ID>
no control-phase authentication key-id
```

<ID> – , [1..255].

15

CONFIG-SLA-TEST

```
esr(config-sla-test)# control-phase authentication key-id 2
```

control-phase authentication key-string

, SLA-responder.

(no) , SLA-responder.

```
control-phase authentication key-string ascii-text { <CLEAR-TEXT> |encrypted <ENCRYPTED-TEXT>}
no control-phase authentication key-string
```

<CLEAR-TEXT> – , 8 16 ;

<ENCRYPTED-TEXT> – 8 16 (16 32) (0xYYYY...) (YYYY...).

15

CONFIG-SLA-TEST

```
esr(config-sla-test)# control-phase authentication key-string ascii-text conphkey
```

control-phase destination-port

UDP-, Eltex-SLA-responder.

(no) .

```
control-phase destination-port <PORT>
no control-phase destination-port
```

<PORT> – UDP-, [1..65535].

1800

15

CONFIG-SLA-TEST

```
esr(config-sla-test)# control-phase destination-port 9999
```

control-phase retry

SLA-.

(no) .

```
control-phase retry <TIME>
no control-phase retry
```

<TIME> – SLA-, [1..86400].

1

15

CONFIG-SLA-TEST

```
esr(config-sla-test)# control-phase retry 300
```

control-phase source-port

UDP-, c Eltex-SLA-responder.

(no) .

```
control-phase source-port <PORT>
no control-phase source-port
```

<PORT> – UDP-, [1..65535].

15

CONFIG-SLA-TEST

```
esr(config-sla-test)# control-phase source-port 3333
```

control-phase timeout

SLA-responder, SLA- .

(no) .

```
control-phase timeout <TIME>
no control-phase timeout
```

<TIME> – SLA-, [1..4294967295].

3000

15

CONFIG-SLA-TEST

```
esr(config-sla-test)# control-phase timeout 5000
```

dscp

DSCP SLA-responder .

(no) .

```
dscp <DSCP>
no dscp
```

<DSCP> – DSCP, [0..63].

0

10

CONFIG-SLA-TEST

```
esr(config-sla-test)# dscp 58
```

history

SLA-.

(no) .

```
history <SIZE>
no history
```

<SIZE> – , [1..10000].

10

10

CONFIG-SLA-TEST

```
esr(config-sla-test)# history 100
```

icmp-echo

icmp- .

(no) .

```
icmp-echo <DST-ADDRESS> { source-ip <SRC-ADDRESS> | source-interface { <IF> | <TUN> } } [ interval <INTERVAL> ] [ num-packets <NUM-PACKETS> ]
no icmp-echo
```

<DST-ADDRESS> – ipv4- SLA- responder. IP-, AAA.BBB.CCC.DDD, [0..255];

<SRC-ADDRESS> – IP-, AAA.BBB.CCC.DDD, [0..255];

<IF> – / IP- , , ;

<TUN> – , , ;

<INTERVAL> – , [1..6000] ;

<NUM-PACKETS> – , , [1..100000];

<INTERVAL> – 20

<NUM-PACKETS> – 100

10

CONFIG-SLA-TEST

```
esr(config-sla-test)# icmp-echo 10.10.1.1 source-ip 192.168.54.22 num-packets 50 interval 15
```

ip sla key-chain

md5 SLA-responder/agent.

(no) .

```
ip sla key-chain <NAME>
no ip sla key-chain
```

<NAME> – , 1 16 .

10

CONFIG

```
esr(config)# ip sla key-chain KEY10
```

ip sla responder

SLA-responder.

(no) SLA-responder.

```
[no] ip sla responder [ vrf <VRF> ]
```

<VRF> – VRF, 31 . SLA-responder VRF.

10

CONFIG

```
esr(config)# ip sla responder
```

ip sla responder eltex

SLA-responder Eltex-SLA-agent.

(no) SLA-responder Eltex -SLA-agent.

```
[no] ip sla responder eltex
```

10

CONFIG-GI

CONFIG-TE

CONFIG-SUBIF

CONFIG-QINQ-IF

CONFIG-PORT-CHANNEL

CONFIG-BRIDGE

CONFIG-GRE

CONFIG-IP4IP

CONFIG-L2TP

CONFIG-PPTP

CONFIG-VTI

CONFIG-E1

CONFIG-MULTILINK

CONFIG-LOOPBACK

```
esr(config)# ip sla responder eltex
```

ip sla responder eltex port

UDP-, Eltex-SLA-agent.

(no) .

```
ip sla responder eltex port <PORT>
no ip sla responder eltex port
```

<PORT> – UDP-, [1..65535].

1800

10

CONFIG-GI

CONFIG-TE

CONFIG-SUBIF

CONFIG-QINQ-IF

CONFIG-PORT-CHANNEL

CONFIG-BRIDGE

CONFIG-GRE

CONFIG-IP4IP

CONFIG-L2TP

CONFIG-PPTP

CONFIG-VTI

CONFIG-E1

CONFIG-MULTILINK

CONFIG-LOOPBACK

```
esr(config)# ip sla responder eltex port 5555
```

timeout

SLA-responder, SLA-agent SLA-.

(no) .

```
timeout <TIME>
no timeout
```

<TIME> – , [1..4294967295].

3000

10

CONFIG-SLA-TEST

```
esr(config-sla-test)# timeout 1000
```

timeout

SLA-agent, SLA-responder SLA-.

(no) .

```
timeout <TIME>
no timeout
```

<TIME> – SLA-, [1..4294967295].

3000

10

CONFIG-SLA-RESPONDER

```
esr(config-sla-responder)# timeout
```

ttl

TTL SLA-responder .

(no) .

```
ttl <TTL>
no ttl
```

<TTL> – TTL, [1..255].

64

10

CONFIG-SLA-TEST

```
esr(config-sla-test)# ttl
```

udp-jitter

udp- .

(no) .

```
udp-jitter <DST-ADDRESS> <DST-PORT> { source-ip <SRC-ADDRESS> | source-interface { <IF> | <TUN> } } [ source-port <SRC-PORT> ]  [ interval <INTERVAL> ] [ num-packets <NUM-PACKETS> ]
no udp-jitter
```

<DST-ADDRESS> – ipv4- SLA- responder. IP-, AAA.BBB.CCC.DDD, [0..255];

<DST-PORT> – UDP- , [1..65535];

<SRC-ADDRESS> – IP-, AAA.BBB.CCC.DDD, [0..255];

<IF> – / IP- , , ;

<TUN> – , , ;

<SRC-PORT> – UDP- , [1..65535];

<INTERVAL> – , [1..255] ;

<NUM-PACKETS> – , , [1..6000];

<SRC-ADDRESS> – source SLA , ipv4-. ipv4-.

control enable

<INTERVAL> – 20

<NUM-PACKETS> – 100

<SRC-PORT> –

10

CONFIG-SLA-TEST

```
esr(config-sla-test)# udp-jitter 10.10.1.1 50000 source-ip 192.168.54.22 num-packets 50 interval 15
```

vrf

VRF, SLA-.

(no) SLA- .

```
vrf <VRF>
no vrf
```

<VRF> – VRF, 31 .

10

CONFIG-SLA-TEST

```
esr(config-sla-test)# vrf subrouter
```

SLA Weelink ( )

⚠ .

ip sla hostname

wiSLA.

(no) .

```
ip sla hostname <NAME>
no ip sla hostname
```

<NAME> – , 31 .

hostname .

10

CONFIG

```
esr(config)# ip sla hostname esr2517
```

ip sla portal

wiSLA.

(no) .

```
ip sla portal <URL>
no ip sla portal
```

<URL> – , 8 255 .

.

10

CONFIG

```
esr(config)# ip sla portal wislaurl.loc
```

ip sla responder udp ports

SLA responder TCP/UDP-.

(no) SLA responder.

```
[no] ip sla responder udp ports <PORT-SET-NAME>
```

<PORT-SET-NAME> – TCP/UDP-, 31 .

.

10

CONFIG

```
esr(config)# ip sla responder udp ports SLA_PORTS
```

ip sla responder udp ports

UDP- IP SLA-.

(no) .

```
ip sla responder udp ports <OBJECT-GROUP-SERVICE>

no ip sla responder udp ports
```

<OBJECT-GROUP-SERVICE> – TCP/UDP-, 31 .

.

10

CONFIG

```
esr(config)# ip sla responder udp ports OGS_SLA
```

udp-jitter

udp jitter .

(no) udp jitter .

```
[no] udp-jitter <DST-ADDRESS> <DST-PORT> [ control { enable | disable } ] [ interval <INTERVAL> ] [ num-packets
<NUM-PACKETS> ] [ source-ip <SRC-ADDRESS> ] [ source-port <SRC-PORT> ]
```

<DST-ADDRESS> – responder SLA , ipv4-. ipv4-.

IP-, AAA.BBB.CCC.DDD, [0..255].

<DST-PORT> – UDP- , [1..65535].

enable – .

disable – .

<INTERVAL> – , [1..6000] .

<NUM-PACKETS> – , , [1..100000].

<SRC-ADDRESS> – source SLA , ipv4-. ipv4-.

IP-, AAA.BBB.CCC.DDD, [0..255].

<SRC-PORT> – UDP- , [1..65535].

control enable

<INTERVAL> – 20

<NUM-PACKETS> – 100

<SRC-ADDRESS> – IP- , SLA responder

<SRC-PORT> –

10

CONFIG-SLA-TEST

```
esr(config-sla-test)# udp-jitter 10.10.1.1 50000 control enable num-packets 50 interval 15
```