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## 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

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CONFIG-SLA-TEST

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

## ip sla

IP-SLA (SLA-agent).

(no) IP-SLA.

```
[no] ip sla
```

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CONFIG

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

## ip sla logging

SLA.

(no) SLA.

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

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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

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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

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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
```

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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].

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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].

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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 – .

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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

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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 – .

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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].

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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].
```

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#### 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].
```

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#### 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
```

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## 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 .
```

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## 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...).
```

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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].
```

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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].

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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...).

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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].

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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

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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.

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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
```

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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

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## CONFIG-SLA-RESPONDER

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

## ttl

TTL SLA-responder .

(no) .

```
ttl <TTL>
```

```
no ttl
```

<TTL> – TTL, [1..255].

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## 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> -
```

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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 .
```

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CONFIG-SLA-TEST

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

## SLA Wealink ( )



### ip sla hostname

wiSLA.

(no) .

```
ip sla hostname <NAME>
```

```
no ip sla hostname
```

<NAME>- , 31 .

hostname .

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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 .
```

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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> –

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## CONFIG-SLA-TEST

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