

- - clear interfaces counters
  - description
  - history statistics
  - interface
  - ip tcp adjust-mss
  - load-average
  - mode
  - mtu
  - rate-limit arp-broadcast
  - rate-limit arp-broadcast pps
  - show interfaces counters
  - show interfaces description
  - show interfaces history
  - show interfaces status
  - show interfaces utilization
  - show system jumbo-frames
  - shutdown
  - speed
  - switchport dot1q ethertype egress stag
  - switchport mode
  - system jumbo-frames
- - snmp trap link-status
  - show interfaces protected-ports
  - show interfaces sfp
  - show interfaces switch-port configuration
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  - threshold rx-utilization
  - threshold rx-utilization monitoring
  - threshold tx-utilization
  - threshold tx-utilization monitoring
  - switchport community
  - switchport protected
  - switchport protected-port
- - channel-group
  - lacp port-priority
  - lacp system-priority
  - lacp timeout
  - port-channel load-balance
  - show interfaces port-channel
  - show lacp counters
  - show lacp interfaces
  - show lacp parameters
- E1/multilink
  - enable
  - ip tcp header-compression
  - ip tcp compression-connections
  - mrru
  - password
  - ppp authentication chap
  - ppp chap hostname
  - ppp chap password
  - ppp chap refuse
  - ppp chap username
  - ppp ipcp accept-address
  - ppp ipcp remote-address
  - ppp max-configure
  - ppp max-failure
  - ppp max-terminate
  - ppp mru
  - ppp multilink
  - ppp multilink-group
  - ppp timeout keepalive
  - ppp timeout retry
  - show controllers e1
  - switchport e1 slot
  - switchport e1 clock source
  - switchport e1 crc
  - switchport e1 framing
  - switchport e1 invert data
  - switchport e1 linecode
  - switchport e1 timeslots
  - switchport e1 unframed

- - switchport mode e1
- - chat-script
  - clear line aux
  - databits
  - dialer
  - dialer idle-timeout
  - dialer in-band
  - dialer map
  - dialer string
  - flowcontrol
  - line aux
  - modem inout
  - parity
  - show line aux
  - speed
  - stopbits
  - transport telnet port
- - allowed-auth
  - allowed-mode
  - apn
  - cellular modem
  - cellular profile
  - device
  - enable
  - ip-version
  - mru
  - number
  - password
  - pin
  - preferred-mode
  - profile
  - show cellular configuration modem
  - show cellular configuration profile
  - show cellulas status modem
  - user
- - authentication name
  - authentication password
  - call-forwarding busy
  - call-forwarding busy number
  - call-forwarding no-answer
  - call-forwarding no-answer number
  - call-forwarding no-answer timeout
  - call-forwarding unconditional
  - call-forwarding unconditional number
  - call-waiting
  - caller-id mode
  - dial-type
  - enable
  - flash call-transfer
  - flash call-transfer mode
  - flash timer
  - hotline
  - hotline ipt
  - hotline pstn
  - hotline number
  - hotline number ipt
  - hotline number pstn
  - hotline timeout
  - hotline timeout ipt
  - hotline timeout pstn
  - hybrid rx
  - hybrid tx
  - ipt prefix-name
  - ipt prefix-number
  - ipt offhook-ringing
  - ipt ring-number
  - profile sip
  - profile pbx
  - pstn transmit-number
  - pstn transmit-prefix
  - shutdown
  - sip port
  - sip user display-name
  - sip user phone
  - timing delay
  - timing digit

- [timing flash](#)
  - [timing pulse-digit](#)
  - [timing pulse-interdigit](#)
  - [timing pulse-pause](#)
  - [timing tone-digit](#)
  - [timing tone-interdigit](#)
- - [test voice-port start](#)
  - [test voice-port status](#)

, (), () .

## clear interfaces counters

```
clear interfaces counters [<IF>]
```

<IF> – , , .

«,» «~». , . .

10

ROOT

:

```
esr# clear interfaces counters gigabitethernet 1/0/5
```

## description

(no) .

```
description <DESCRIPTION>
```

```
no description
```

<DESCRIPTION> – , 255 .

10

CONFIG-GI

CONFIG-TE

CONFIG-SUBIF

CONFIG-QINQ-IF

CONFIG-PORT-CHANNEL  
CONFIG-LOOPBACK  
CONFIG-E1  
CONFIG-MULTILINK  
CONFIG-SERVICE-PORT  
CONFIG-CELLULAR-PROFILE  
CONFIG-CELLULAR-MODEM  
CONFIG-VOICE-PORT  
CONFIG-VOIP-PROFILE  
CONFIG-LINE-AUX <sup>1</sup>

:

```
esr(config-if-gi)# description "Uplink interface"
```

 <sup>1</sup> ESR-21.

**history statistics**

.  
(no) .

[no] history statistics

.

10

CONFIG-GI  
CONFIG-TE  
CONFIG-SUBIF  
CONFIG-QINQ-IF  
CONFIG-SERIAL  
CONFIG-PORT-CHANNEL  
CONFIG-LOOPBACK  
CONFIG-MULTILINK  
CONFIG-E1  
CONFIG-BRIDGE  
CONFIG-CELLULAR-MODEM

:

```
esr:esr(config-if-gi)# history statistics
esr:esr(config-if-gi)#
```

## interface

(no) .

[no] interface <IF>

<IF> - , , .

10

### CONFIG

1

Ethernet- gi 1/0/20:

```
esr(config)# interface gigabitethernet 1/0/20
esr(config-if-gi)#
```

2

Ethernet- te 1/0/2:

```
esr(config)# interface tengigabitethernet 1/0/2
esr(config-if-te)#
```

3

:

```
esr(config)# interface loopback 5
esr(config-loopback)#
```

4

c:

```
esr(config)# interface gigabitethernet 1/0/20.20
esr(config-subif)#
```

5

port-channel 2:

```
esr(config)# interface port-channel 2
esr(config-port-channel)#
```

6

e1 1/0/1:

```
esr(config)# interface e1 1/0/1
esr(config-e1)#
```

7

multilink 1:

```
esr(config)# interface multilink 1
esr(config-multilink)#
```

## ip tcp adjust-mss

MSS (Maximum segment size) TCP-.

(no) MSS.

ip tcp adjust-mss <MSS>

no ip tcp adjust-mss

<MSS> – MSS, [500..1460].

1460

10

CONFIG-GI

CONFIG-TE

CONFIG-SUBIF

CONFIG-QINQ-IF

CONFIG-PORT-CHANNEL

CONFIG-BRIDGE

CONFIG-LOOPBACK

```
esr(config-if-gi)# ip tcp adjust-mss 1400
```

## load-average

,

.

load-average <TIME>

no load-average

<TIME> – , [5..150].

5

10

- CONFIG-GI
- CONFIG-TE
- CONFIG-SUBIF
- CONFIG-QINQ-IF
- CONFIG-SERIAL
- CONFIG-PORT-CHANNEL
- CONFIG-E1
- CONFIG-MULTILINK
- CONFIG-BRIDGE
- CONFIG-LOOPBACK
- CONFIG-CELLULAR-MODEM

:

```
esr(config-if-gi)# load-average 30
```

mode

/.

(no) .

mode <MODE>  
no mode

<MODE> – /, :

- switchport – L2-. vlan, IP- /qinq-.
- routerport – L3-. IP- /qinq-, vlan .
- hybrid – vlan, IP- /qinq-<sup>1</sup>.

routerport

10

- CONFIG-GI
- CONFIG-TE

## CONFIG-PORT-CHANNEL

:

```
esr(config-if-gi)# mode switchport
```



<sup>1</sup> ESR-1000/1200/1500/1511/1700.

## mtu

MTU (Maximum Transmission Unit) .

(no) MTU .

mtu <MTU>

no mtu

<MTU> – MTU , :

ESR-10/12V/12VF/14VF – [552..9600]

ESR-20/21 – [552..9500]

ESR-100/200/1000/1200/1500/1511/1700 – [552..10000]

ESR-3100 – [552..9190]

Serial, E1 multilink- – [552-1500] .

MTU 1500 Jumbo-, [system jumbo-frames](#).

1500

10

CONFIG-GI

CONFIG-TE

CONFIG-SUBIF

CONFIG-QINQ-IF

CONFIG-SERIAL

CONFIG-PORT-CHANNEL

CONFIG-BRIDGE

CONFIG-E1

CONFIG-MULTILINK

CONFIG-CELLULAR-MODEM

:

```
esr(config-if-gi)# mtu 1400
```



## rate-limit arp-broadcast

arp- bridge-.

(no) arp- bridge-.

[no] rate-limit arp-broadcast

.

.

10

CONFIG-BRIDGE

:

```
esr(config-bridge)# rate-limit arp-broadcast
```

## rate-limit arp-broadcast pps

arp- bridge-      arp- bridge-

(no) .

rate-limit arp-broadcast pps <PPS>

no rate-limit arp-broadcast pps

<PPS> – arp-, [1..65535].

100

10

CONFIG-BRIDGE

:

```
esr(config-bridge)# rate-limit arp-broadcast pps 2000
```

## show interfaces counters

.,.,.,.

show interfaces counters [ <IF> ]

<IF>- , , .  
 , .  
 . , . , . .

1

ROOT

:

```
esr# show interfaces counters gigabitethernet 1/0/4-6
Interface      UC recv      Bytes recv   Errors recv   MC recv
-----
gil/0/4        0            0            0            0
gil/0/5        0            0            0            0
gil/0/6        0            0            0            0
Interface      UC sent      Bytes sent   Errors sent
-----
gil/0/4        0            0            0
gil/0/5        1138         393748       0
gil/0/6        0            0            0
esr# show interfaces counters gigabitethernet 1/0/4
Packets received:      0
Bytes received:        0
Dropped on receive:    0
Receive errors:        0
Multicasts received:   0
Receive length errors: 0
Receive buffer overflow errors: 0
Receive CRC errors:    0
Receive frame errors:  0
Receive FIFO errors:   0
Receive missed errors: 0
Receive compressed:    0
Packets transmitted:   0
Bytes transmitted:     0
Dropped on transmit:   0
Transmit errors:       0
Transmit aborted errors: 0
Transmit carrier errors: 0
Transmit FIFO errors:  0
Transmit heartbeat errors: 0
Transmit window errors: 0
Transmit compressed:   0
Collisions:            0
```

show interfaces description

.  
  
show interfaces description [ <IF> ]

<IF>- , , .  
 . , . .

ROOT

:

```
esr# show interfaces description gigabitethernet 1/0/4-5
Interface      Admin   Link   Description
              State   State
-----
gil/0/4        Up      Down   Link to NSK
gil/0/5        Up      Down   Link to MSK
```

**show interfaces history**

.

show interfaces history [<IF>] [timer <TIMER>]

<IF>- , , .

<TIMER>- timer. :

- hours 72
- minutes 60
- seconds 60
- timer, 3 ()

ROOT

:

```

esr# show interfaces history gi 1/0/1 timer minutes
gi1/0/1
Last 60 minutes:
Timer   Recv utilization, Kbit/s   Sent utilization, Kbit/s   Recv errors   Sent errors   Output drops
-----
0-1     240           16           0             0             0
1-2     961           64           0             0             0
2-3     962           64           0             0             0
3-4     962           64           0             0             0
4-5     960           64           0             0             0
5-6     961           64           0             0             0
6-7     719           64           0             0             0
7-8     960           64           0             0             0
8-9     800           65           0             0             0
9-10    962           64           0             0             0
10-11   865           64           0             0             0
11-12   962           64           0             0             0
12-13   817           65           0             0             0
13-14   962           65           0             0             0
14-15   961           65           0             0             0
15-16   880           60           0             0             0
16-17   960           63           0             0             0
17-18   0             0           0             0             0
18-19   0             0           0             0             0
19-20   0             0           0             0             0
20-21   0             0           0             0             0
21-22   0             0           0             0             0

```

show interfaces status

.

show interfaces status [<IF>]

<IF> - , , .

. , . , . .

1

ROOT

:

```

esr# show interfaces status gigabitethernet 1/0/1-2
Interface      Admin   Link   MTU   MAC address      Uptime
      state   state
-----
gi1/0/1        Up      Down   1500   a8:f9:4b:aa:53:fc  --
gi1/0/2        Up      Up     1500   a8:f9:4b:aa:53:fd  15 hours, 17 minutes and 52 seconds

```

show interfaces utilization

.

show interfaces utilization [ <IF> ]

<IF>- , , .  
« , » «-». , . .

1

ROOT

:

```
esr# show interfaces utilization gigabitethernet 1/0/3-5,1/0/9
```

Port	Period, s	Sent, Kbit/s	Recv, Kbit/s	Frames Sent	Frames Recv
-----	-----	-----	-----	-----	-----
gil/0/3	5	0	0	0	0
gil/0/4	5	0	0	0	0
gil/0/5	5	0	0	0	0
gil/0/9	5	0	0	0	0

show system jumbo-frames

 ESR-200/1000/1200/1500/1511/1700

jumbo-.

show system jumbo-frames

.

1

ROOT

:

```
esr# show system jumbo-frames
```

Jumbo frames are disabled
Jumbo frames will be disabled after reset

shutdown

.

(no) .

[no] shutdown

10

CONFIG-GI

CONFIG-TE

CONFIG-SUBIF

CONFIG-QINQ-IF

CONFIG-SERIAL

CONFIG-PORT-CHANNEL

CONFIG-LOOPBACK

CONFIG-E1

CONFIG-MULTILINK

:

```
esr(config-if-gi)# shutdown
```

.

## speed

, . : 10 /, 100 /, 1000 /, 10 / auto.

(no) .

speed <SPEED> <DUPLEX>

no speed

<SPEED> – :

- 10M – 10 /;
- 100M – 100 /;
- 1000M – 1000 /;
- 10G – 10 /;
- auto – ( 10G-).

<DUPLEX> – , :

- full-duplex – ;
- half-duplex – .

auto

10

CONFIG-GI

CONFIG-TE

CONFIG-PORT-CHANNEL

1

```
esr(config-if-te)# speed 10G
```

10/.

2

```
esr(config-if-gi)# speed 10M full-duplex
```

10/,.

## switchport dot1q ethertype egress stag

EtherType VLAN .

(no) .

```
[no] switchport dot1q ethertype egress stag { 802.1q | 802.1ad }
```

.

802.1q (0x8100)

10

CONFIG-GI

CONFIG-TE

CONFIG-PORT-CHANNEL

:

```
esr(config-if-gi)# switchport dot1q ethertype egress stag 802.1ad
```

## switchport mode

VLAN.

(no) .

```
switchport mode <MODE>
```

```
no switchport mode
```

<MODE> – :

- access <sup>1</sup> – , VLAN;
- trunk <sup>1</sup> – , VLAN, **switchport trunk native vlan** , **switchport trunk native-vlan**;
- general <sup>2</sup> – general;
- e1 – E1 ( ).

access <sup>1</sup>

general <sup>2</sup>

10

CONFIG-GI

CONFIG-TE

CONFIG-PORT-CHANNEL

:

```
esr(config-if-gi)# switchport mode trunk
```



1 ESR-10/12V/12VF/14VF/20/21/100/200/3100.

2 ESR-1000/1200/1500/1511/1700.

## system jumbo-frames

Jumbo- .

(no) Jumbo-.

[no] system jumbo-frames

.

.

10

CONFIG

:

```
esr(config)# system jumbo-frames
```

## snmp trap link-status

snmp-trap / .

(no) snmp-trap / .



```
[no] snmp trap link-status
```

.

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CONFIG-GI

CONFIG-TE

:

```
esr(config-if-gi)# snmp trap link-status
```

## show interfaces protected-ports



ESR-1000/1200/1500/1511/1700

```
show interfaces protected-ports [ <IF> ]
```

<IF> - , , .

. , . , . .

1

ROOT

:

```
esr# show interfaces protected-ports
Interface      State           Community
-----
gi1/0/5        Protected       4
```

## show interfaces sfp

SFP-.

```
show interfaces sfp [ <IF> ]
```

<IF> - , , . . , . , . .

ROOT

:

```
esr# show interfaces sfp
Interface 'tel/0/1':
  SFP present:      Yes
  Connector Type:   LC
  Type:             SFP/SFP+
  Compliance code:  10G BASE-SR
  Laser wavelength: 850 nm
  Transfer distance: 300.00 m
  Vendor OUI:       24:00:00
  Vendor name:      Modultech
  Vendor PN:        MT-PP-85192-SR
  Vendor SN:        M1204011007
  Vendor date:      04.05.12
  Vendor revision:  1.0
  DDM supported:    Yes
  Temperature:      40.562 C
  Voltage:          3.3364 V
  Current:          6.004 mA
  RX Power:         0.0001 mW / -40.0000 dBm
  TX Power:         0.4398 mW / -3.5674 dBm
  RX LOS:           Yes
  TX Fault:         No
  TX Disable:       No
  Soft TX Disable:  No
Interface 'tel/0/2':
  SFP present:      Yes
  Connector Type:   SC
  Type:             SFP/SFP+
  Compliance code:  1000BASE-LX
  Laser wavelength: 1310 nm
  Transfer distance: 20.00 km
  Vendor OUI:       --
  Vendor name:      OEM
  Vendor PN:        APSB35123CXS20
  Vendor SN:        SG35224701333
  Vendor date:      12.12.12
  Vendor revision:  1.00
  DDM supported:    No
```

## show interfaces switch-port configuration



ESR-1000/1200/1500/1500/1511/1700

show interfaces switch-port configuration [ <IF> ]

<IF> – , , .

«-». , . .

ROOT

:

```
esr# show interfaces switch-port configuration gigabitethernet 1/0/5-7
```

Port	Media	Duplex	Speed	Neg	Flow control	Admin State	Back Pressure
-----	-----	-----	-----	-----	-----	-----	-----
gil/0/5	none	Half	10 Mbps	Enabled	Off	Up	Disabled
gil/0/6	none	Half	10 Mbps	Enabled	Off	Up	Disabled
gil/0/7	none	Half	10 Mbps	Enabled	Off	Up	Disabled

show interfaces switch-port status

.

show interfaces switch-port status [ <IF> ]

<IF> – , , .  
« , » «-». , . , . .

ROOT

:

```
esr# show interfaces switch-port status
```

Port	Media	Duplex	Speed	Neg	Flow ctrl	Link State	Back Pressure	MDI Mode	Port Mode
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
gil/0/1	--	--	--	Enabled	--	Down	--	--	access
gil/0/2	--	--	--	Enabled	--	Down	--	--	access
gil/0/3	--	--	--	Enabled	--	Down	--	--	access
gil/0/4	--	--	--	Enabled	--	Down	--	--	access
gil/0/5	--	--	--	Enabled	--	Down	--	--	access
gil/0/6	--	--	--	Enabled	--	Down	--	--	access

  

```
esr# show interfaces switch-port status gigabitethernet 1/0/2
```

Interface	gigabitethernet 1/0/2
Status:	up
Media:	copper
Speed:	100 Mbps
Duplex:	full
Flow control:	no
MAC address:	a8:f9:b5:00:00:25
MAC status:	
Buffers full:	no
Doing back pressure:	no
Sending PAUSE frames:	no
Receiving PAUSE frames:	no
Auto-Negotiation done:	yes
Sync fail:	no

## threshold rx-utilization

```
snmp-trap eltexInterfaceRxUtilizationHigh eltexInterfaceRxUtilizationHighOk.
```

```
(no) .
```

```
threshold rx-utilization <TH-HIGH> clear <TH-LOW>
```

```
no threshold rx-utilization
```

```
<TH-HIGH> – snmp-trap eltexInterfaceRxUtilizationHigh;
```

```
<TH-LOW> – snmp-trap eltexInterfaceRxUtilizationHighOk.
```

```
<TH-HIGH> – 90%;
```

```
<TH-LOW> – 85%.
```

10

CONFIG-GI

CONFIG-TE

CONFIG-PORT-CHANNEL

:

```
esr(config-if-gi)# threshold rx-utilization 90 clear 80
```

## threshold rx-utilization monitoring

```
snmp-trap eltexInterfaceRxUtilizationHigh eltexInterfaceRxUtilizationHighOk.
```

```
(no) snmp-trap eltexInterfaceRxUtilizationHigh eltexInterfaceRxUtilizationHighOk.
```

```
[no] threshold rx-utilization monitoring
```

.

.

10

CONFIG-GI

CONFIG-TE

CONFIG-PORT-CHANNEL

:

```
esr(config-if-gi)# threshold rx-utilization monitoring
```

## threshold tx-utilization

```
snmp-trap eltexInterface T xUtilizationHigh eltexInterface T xUtilizationHighOk.
```

(no) .

```
threshold tx-utilization <TH-HIGH> clear <TH-LOW>
```

```
no threshold tx-utilization
```

<TH-HIGH> – snmp-trap eltexInterfaceTxUtilizationHigh ;

<TH-LOW> – snmp-trap eltexInterfaceTxUtilizationHighOk.

<TH-HIGH> – 90%;

<TH-LOW> – 85%.

10

CONFIG-GI

CONFIG-TE

CONFIG-PORT-CHANNEL

:

```
esr(config-if-gi)# threshold tx-utilization 90 clear 80
```

## threshold tx-utilization monitoring

```
snmp-trap eltexInterface T xUtilizationHigh eltexInterface T xUtilizationHighOk.
```

(no) snmp-trap eltexInterface T xUtilizationHigh eltexInterface T xUtilizationHighOk.

```
[no] threshold tx-utilization monitoring
```

.

.

10

CONFIG-GI

CONFIG-TE

## CONFIG-PORT-CHANNEL

:

```
esr(config-if-gi)# threshold tx-utilization monitoring
```

## switchport community



ESR-1000/1200/1500/1511/1700.

Private VLAN , .

(no) Private VLAN.

```
switchport community <ID>
```

```
no switchport community
```

<ID> – , [1..30].

10

## CONFIG-GI

## CONFIG-TE

## CONFIG-PORT-CHANNEL

:

```
esr(config-if-gi)# switchport community 10
```

## switchport protected



ESR-1000/1200/1500/1511/1700.

Private VLAN , .

(no) Private VLAN.

```
switchport protected <IF>
```

```
no switchport protected
```

<IF> – , , .

Private VLAN .

10

CONFIG-GI

CONFIG-TE

CONFIG-PORT-CHANNEL

:

```
esr(config-if-gi)# switchport protected gigabitethernet 1/0/1
```

## switchport protected-port



ESR-1000/1200/1500/1511/1700.

. , .

(no) .

```
[no] switchport protected-port
```

.

.

10

CONFIG-GI

CONFIG-TE

CONFIG-PORT-CHANNEL

:

```
esr:esr(config-if-gi)# switchport protected-port
```

## channel-group

.

(no) .

```
channel-group <ID> mode <MODE>
```

```
no channel-group
```

<ID> – , [1..12].

<MODE> – :

- auto – LACP;
- on – .

10

CONFIG-GI

CONFIG-TE

:

```
esr(config-if-gi)# channel-group 6 mode auto
```

## lacp port-priority

LACP- Ethernet.

.

lacp port-priority <PRIORITY>

no lacp port-priority

<PRIORITY> –, [1..65535].

1

10

CONFIG-GI

CONFIG-TE

:

```
esr(config-if-gi)# lacp port-priority 5000
```

## lacp system-priority

LACP.

(no) .

lacp system-priority <PRIORITY>

no lacp system-priority

<PRIORITY> –, [1..65535].



1

10

CONFIG

:

```
esr(config)# lacp system-priority 5000
```

## lacp timeout

LACP.

.

```
lacp timeout { short | long }
```

```
no lacp timeout
```

long – (90);

short – (3).

long

10

CONFIG-GI

CONFIG-TE

:

```
esr(config-if-gi)# lacp timeout short
```

## port-channel load-balance

.

(no) .

```
port-channel load-balance {src-dst-mac-ip|src-dst-mac|src-dst-ip|src-dst-mac-ip-port}
```

```
no port-channel load-balance
```

ESR-1000, ESR-1200 ESR-1500, ESR-1511 ESR-1700

src-dst-mac – MAC- ;

src-dst-ip – IP- ;

src-dst-mac-ip – MAC- IP- ;  
src-dst-ip-port – IP- tcp/udp- ;  
src-dst-mac-ip-port – MAC-, IP- .

ESR-10, ESR-12V, ESR-12VF, ESR-14VF, ESR-20, ESR-21, ESR-100, ESR-200 ESR-3100

active-backup – , down;  
src-dst-mac – MAC- ;  
src-dst-mac-ip – MAC- IP- ;  
src-dst-ip-port – IP- tcp/udp- ;

src-dst-mac

10

CONFIG

:

```
esr(config)# port-channel load-balance src-dst-mac-ip
```

**show interfaces port-channel**

.

show interfaces port-channel [<ID>]

<ID> – , [1..12].

1

ROOT

:

```
esr# show interfaces port-channel 1
load-balance: src-dst-mac
Channels      Ports
-----
po1           gil/0/21
```

**show lacp counters**



ESR-1000/1200/1500/1511/1700.

LACP- Ethernet.

show lacp counters [ <IF> ]

<IF>- , , .  
. , . , .

1

ROOT

:

```
esr# show lacp counters port-channel 2
```

Interface	Sent	Recv	Link failure
-----	-----	-----	-----
po2	42	814	2

show lacp interfaces

LACP.

show lacp interfaces [ <IF> ]

<IF>- , , .  
. , LACP- .

1

ROOT

:

```
esr# show lacp interfaces port-channel 2
```

port-channel 2 [aggregator 1, active] ports count: 1		
	Actor Port	Partner Port
-----	-----	-----
System Priority	32768	1
System MAC	a8:f9:4b:aa:12:40	a8:f9:4b:83:01:80
Key	8000	1
port-channel 2 [aggregator 2, backup] ports count: 1		
	Actor Port	Partner Port
-----	-----	-----
System Priority	32768	65535
System MAC	a8:f9:4b:aa:12:40	00:00:00:00:00:00
Key	8000	FFFF

```
esr# show lacp interfaces gigabitethernet 1/0/1
```

gigabitethernet 1/0/1 [active] up		
	Actor Port	Partner Port
-----	-----	-----
Port Priority	32768	1
LACP Activity	Active	Active

show lacp parameters

LACP Ethernet.

show lacp parameters [ <IF> ]

<IF> – , , . .  
. , . , .

1

ROOT

:

```
esr# show lacp parameters tengigabitethernet 1/0/2
LACP parameters
~~~~~
Interface  Port Priority  Timeout  Mode
-----
te1/0/2    32768          Short    Active
```

E1/multilink

enable

PPP-.  
(no) PPP-.

[no] enable

.

PPP-.

10

CONFIG-PPP-USER

:

```
esr(config-ppp-user)# enable
```

ip tcp header-compression

tcp. .  
(no) tcp.

```
[no] ip tcp header-compression
```

.

10

CONFIG-E1

CONFIG-MULTILINK

:

```
(config-e1)# ip tcp header-compression
```

## ip tcp compression-connections

tcp-, tcp .

(no) tcp-, tcp .

```
ip tcp compression-connections <NUMBER>
```

```
no ip tcp compression-connections
```

<NUMBER> – tcp-, tcp . [2..16].

16

10

CONFIG-E1

CONFIG-MULTILINK

:

```
esr:esr(config-e1)# ip tcp compression-connections 32
esr:esr(config-e1)#
```

## mrru

MLPPP .

(no) mrru .

```
mrru { <MRRU> }
```

```
no mrru
```

<MRRU> – MLPPP, [1500..10000].

1500

10

CONFIG-MULTILINK

:

```
esr(config-multilink)# mrru 1700
```

## password

· · · · ·

(no) .

password ascii-text { <CLEAR-TEXT> | encrypted <ENCRYPTED-TEXT> }

no password

<CLEAR-TEXT> – , [1..64], [0-9a-fA-F];

<ENCRYPTED-TEXT> – , [2..128].



, ·

15

CONFIG-PPP-USER

:

```
esr(config-ppp-user)# password ascii-text 01234567
```

## ppp authentication chap

CHAP-.

(no) .

[no] ppp authentication chap

.

CONFIG-SERIAL

CONFIG-E1

CONFIG-MULTILINK

:

```
esr(config-e1)# ppp authentication chap
```

## ppp chap hostname

, CHAP-.

(no) .

ppp chap hostname <NAME>

no ppp chap hostname

<NAME> - , 31 .

(hostname).

CONFIG-SERIAL

CONFIG-E1

CONFIG-MULTILINK

:

```
esr(config-e1)# ppp chap hostname esr1
```

## ppp chap password

, CHAP-.

(no) .

ppp chap password ascii-text { <CLEAR-TEXT> | encrypted <ENCRYPTED-TEXT> }

no ppp chap password

<CLEAR-TEXT> - , [1 .. 64] , [0-9a-fA-F];

<ENCRYPTED-TEXT> - , [2..128] .



15

CONFIG-SERIAL

CONFIG-E1

CONFIG-MULTILINK

:

```
esr(config-e1)# ppp chap password ascii-text 01234567
```

## ppp chap refuse

.

(no) .

[no] ppp chap refuse

.

.

15

CONFIG-SERIAL

CONFIG-E1

CONFIG-MULTILINK

:

```
esr(config-e1)# ppp chap refuse
```

## ppp chap username

.

(no) .

[no] ppp chap username <NAME>

<NAME> - , 31 .



15

CONFIG-SERIAL

CONFIG-E1

CONFIG-MULTILINK

:

```
esr(config-e1)# ppp chap username xap
```

## ppp ipcp accept-address

IP- IP-.

(no) .

[no] ppp ipcp accept-address

.

IP- .

10

CONFIG-SERIAL

CONFIG-E1

CONFIG-MULTILINK

:

```
esr(config-e1)# ppp ipcp accept-address
```

## ppp ipcp remote-address

IP-, .

(no) IP- .

ppp ipcp remote-address <ADDR>

no ppp ipcp remote-address

<ADDR> – IP- .

10

CONFIG-SERIAL

CONFIG-E1

CONFIG-MULTILINK

:

```
esr(config-e1)# ppp ipcp remote-address 192.168.1.2
```

## ppp max-configure

Configure-Request , .

(no) .

ppp max-configure <VALUE>

no ppp max-configure

<VALUE> – , [1..255].

10

10

CONFIG-SERIAL

CONFIG-E1

CONFIG-MULTILINK

:

```
esr(config-e1)#i ppp max-configure 4
```

## ppp max-failure

Configure-NAK , .

(no) .

ppp max-failure <VALUE>

no ppp max-failure

<VALUE> – , [1..255].

10

10

CONFIG-SERIAL

CONFIG-E1

CONFIG-MULTILINK

:

```
esr(config-if-gi)#i ppp max-failure 3
```

## ppp max-terminate

Terminate-Request, .

(no) .

ppp max-terminate <VALUE>

no ppp max-terminate

<VALUE> – , [1..255].

2

10

CONFIG-SERIAL

CONFIG-E1

CONFIG-MULTILINK

:

```
esr(config-if-gi)#i ppp max-terminate 4
```

## ppp mru

MRU (Maximum Receive Unit) .

(no) MRU .

ppp mru <MRU>

no ppp mru

<MRU> – MRU, [552..1500].

1500

10

CONFIG-SERIAL

CONFIG-E1

CONFIG-MULTILINK

:

```
esr(config-if-gi)# mru 1400
```

## ppp multilink

MLPPP E1-.

(no) MLPPP.

[no] ppp multilink

.

10

CONFIG-E1

:

```
esr(config-e1)# ppp multilink
```

## ppp multilink-group

E1- .

(no) .

ppp multilink-group <GROUP-ID>

<GROUP-ID> - , [1..4].

10

CONFIG-E1

:

```
esr(config-e1)# ppp multilink-group 1
```

## ppp timeout keepalive

, keepalive-.

(no) .

```
ppp timeout keepalive [ <TIME >]
```

```
no ppp timeout keepalive
```

<TIME> – , [1..32767].

10

10

CONFIG-SERIAL

CONFIG-E1

CONFIG-MULTILINK

:

```
esr(config-if-gi)# ppp timeout keepalive 200
```

## ppp timeout retry

, .

(no) .

```
ppp timeout retry <TIME>
```

```
no ppp timeout retry
```

<TIME> – , [1..255].

3

10

CONFIG-SERIAL

CONFIG-E1

CONFIG-MULTILINK

:

```
esr(config-if-gi)# ppp timeout retry 3
```

## show controllers e1

1.

```
show controllers e1 [<IF>]
```

<IF>- , , ;

1

ROOT

:

```
esr# show controllers e1
Interface 'tel/0/1':
  SFP present:      Yes
  SFP Vendor name:  NSC-COM
  SFP Vendor PN:    611.900
  Line code:        HDB3
  Clock source:     Internal
  Timeslot:         24
  Invert Data:      No
  Framing CRC4:     No
  Loopback:         --
  CRC algorithm:    FCS16
  E1 Link:          Down
  E1 Synced:        No
  E1 RX AIS:        No
  E1 RX RAI:        No
```

## switchport e1 slot

1 . (no) .

```
[no] switchport e1 slot <SLOT>
```

<SLOT>- , [0..12].

10

CONFIG-GI

CONFIG-TE

:

```
esr(config-if-gi)# switchport e1 0
```

## switchport e1 clock source

e1-

(no)

```
switchport e1 clock source { internal | line }
```

```
no switchport e1 clock source
```

internal – ;

line – .

internal

10

CONFIG-GI

CONFIG-TE

:

```
esr:esr(config-if-gi)# switchport e1 clock source line
```

## switchport e1 crc

.

(no) .

```
switchport e1 crc { 16 | 32 }
```

```
no switchport e1 crc
```

16 – 16- (RC);

32 – 32- (RC).

16

10

CONFIG-GI

CONFIG-TE

:

```
esr:esr(config-if-gi)# switchport e1 crc 16
```

## switchport e1 framing

CRC4

(no)

```
switchport e1 framing { crc4 | no-crc4 }  
no switchport e1 framing
```

crc4 – CRC4;

no-crc4 – CRC4.

.

10

CONFIG-GI

CONFIG-TE

:

```
esr:esr(config-if-gi)# switchport e1 framing crc4
```

## switchport e1 invert data

.

(no)

```
[no] switchport e1 invert data
```

.

.

10

CONFIG-GI

CONFIG-TE

:



```
esr:esr(config-if-gi)# switchport e1 invert data
```

## switchport e1 linecode

, .

(no) .

```
switchport e1 linecode { ami | hdb3 }
```

ami – ami;

hdb3 – hdb3.

hdb3

10

CONFIG-GI

CONFIG-TE

:

```
esr:esr(config-if-gi)# switchport e1 linecode ami
```

## switchport e1 timeslots

64/ 1.

(no) .

```
switchport e1 timeslots < RANGE >
```

```
no switchport e1 timeslots
```

< RANGE > – 64, [1..31].

31

10

CONFIG-GI

CONFIG-TE

:

```
esr:esr(config-if-gi)# switchport e1 timeslots 16
```

## switchport e1 unframed

1 64/.

(no) .

[no] switchport e1 unframed

.

.

10

CONFIG-GI

CONFIG-TE

:

```
esr:esr(config-if-gi)# switchport e1 unframed
```

## switchport mode e1

SFP 1 .

(no) .

[no] switchport mode e1

.

10

CONFIG-GI

CONFIG-TE

:

```
esr(config-if-gi)# switchport mode e1
```



ESR-21.

## chat-script

chat-script, dialup.

(no) chat-script.

```
chat-script <NAME> <TEXT>
```

```
no chat-script { <NAME> | all }
```

<NAME> – , 31.

<TEXT> – , 255.       "\" .

all – .

15

CONFIG

:

```
esr(config)# chat-script DIAL "\\(ABORT ERROR ABORT BUSY \\\" \\\"ATZ\\\" OK \\\"ATDTT\\\" TIMEOUT 30 CONNECT\\\" )"
```

## clear line aux

.

```
clear line aux [ <NUM> ]
```

<NUM> – , [1..3].

15

ROOT

:

```
esr# clear line aux 2
```

## databits

.

(no) .

databits <BITS>

no databits

<BITS> – . [7..8]

8

15

CONFIG-LINE-AUX

:

```
esr(config-line-aux)# databits 7
```

## dialer

.

(no) .

[no] dialer

.

.

10

CONFIG-SERIAL

:

```
esr(config-serial)# dialer
```

## dialer idle-timeout

.

(no) .

dialer idle-timeout <TIME>  
no dialer idle-timeout

<TIME> – , [1..65535].

30

10

CONFIG-SERIAL

:

```
esr(config-serial)# dialer idle-timeout 210
```

## dialer in-band

serial- V.25bis.

(no) .

[no] dialer in-band

.

.

10

CONFIG-SERIAL

:

```
esr(config-serial)# dialer in-band
```

## dialer map

IP- .

(no) .

```
dialer map ip <SUBNET> name <PPPUSE> [ modem-script <SCRIPT-NAME> ] <PHONE-NU>  
no dialer map ip
```

<SUBNET> - , AAA.BBB.CCC.DDD/NN, AAA-DDD [0..255] NN [1..32].

<PPPUSE> - , 31.

<SCRIPT-NAME> - , 31.

<PHONE-NU> - . 15, .

10

CONFIG-SERIAL

:

```
esr(config-serial)# dialer map ip 192.168.33.0/27 name SITE12 5512
```

## dialer string

dialup-.

(no) dialup-.

```
dialer string <PHONE-NUM>
no dialer string
```

<PHONE-NUM> – . 15, .

.

15

CONFIG-SERIAL

:

```
esr(config-serial)# dialer string 3835401
```

## flowcontrol

.

(no) .

```
flowcontrol <MODE>
no flowcontrol
```

<MODE> – . :

- software – ;
- hardware – ;
- disabled – .

.

15

CONFIG-LINE-AUX

:

```
esr(config-line-aux)# flowcontrol software
```

## line aux

.

line aux <NUM>

<NUM> - , [1..3].

15

CONFIG

:

```
esr(config)# line aux 1
esr(config-line-aux)#
```

## modem inout

.

(no) .

modem inout

no modem inout

.

, .

15

CONFIG-LINE-AUX

:

```
esr(config-line-aux)# modem inout
```

## parity

.  
(no) .

parity <MODE>  
no parity

<MODE> - . :  
• odd -  
• even -  
• none - .

none.

15

CONFIG-LINE-AUX

:

```
esr(config-line-aux)# parity even
```

## show line aux

.

show line aux [ <NUM> ]

<NUM> - , [1..3].

10

ROOT

:

```
esr# show line aux
AUX Line 1
  Baud rate:      115200
  Databits:       8
  Parity:         NONE
  Stopbits:       1
  Flowcontrol:    Disabled
  Timeout Exec (min): 300
  Telnet port:    2001
  Modem mode:     Disabled
```



## speed

.

(no) .

speed <SPEED>

no speed

<SPEED> – /. :

- 300;
- 1200;
- 2400;
- 4800;
- 9600;
- 19200;
- 38400;
- 57600;
- 115200.

115200.

15

CONFIG-LINE-AUX

:

```
esr(config-line-aux)# speed 9600
```

## stopbits

.

(no) .

stopbits <STOP-BITS>

no stopbits

<STOP-BITS> – . [1..2].

1

15

CONFIG-LINE-AUX

:

```
esr(config-line-aux)# stopbits 2
```

## transport telnet port

TCP- . telnet- IP- TCP-, , .  
(no) TCP- .

```
transport telnet port <PORT>  
no transport telnet port
```

<PORT> – TCP- . [1..65535].

.

15

CONFIG-LINE-AUX

:

```
esr(config-line-aux)# transport telnet port 2001
```

## allowed-auth

.  
(no) .

```
allowed-auth <TYPE>  
no allowed-auth
```

<TYPE> – [none, PAP, CHAP, MSCHAP, MSCHAPv2, EAP]

PAP

15

CONFIG-CELLULAR-PROFILE

:

```
esr(config-cellular-profile)# allowed-auth MSCHAP
```

## allowed-mode

USB-

(no) .

[no] allowed-mode <MODE>

<MODE> - USB- [ 2g, 3g, 4g ]

, "Allowed modes:" show cellular status modem <ID>.

10

CONFIG-CELLULAR-MODEM

:

```
esr(config-cellular-modem)# allowed-mode 4g
```

## apn

.

apn <NAME>

<NAME> - , 253 .

.

10

CONFIG-CELLULAR-PROFILE

:

```
esr(config-cellular-profile)# apn internet
```

## cellular modem

USB- USB-

(no) USB-.

[no] cellular modem <ID>

<ID> – USB- [1..10].

10

CONFIG

:

```
esr(config)# cellular modem 1
```

## cellular profile

USB- .

(no) USB-.

[no] cellular profile <ID>

<ID> – USB- [1..10].

10

CONFIG

:

```
esr(config)# cellular profile 1
```

## device

USB- .

(no) .

device <WORD>

no device

<WORD> – USB [1..12].

"USB port device" show cellular status modem.

.

10

## CONFIG-CELLULAR-MODEM

:

```
esr(config-cellular-modem)# device 1-1
```

## enable

USB-.

(no) USB-.

[no] enable

.

USB- .

10

## CONFIG-CELLULAR-MODEM

:

```
esr(config-cellular-modem)#
```

## ip-version

IP- .

(no) IPv4 IPv6.

ip-version { ipv4 | ipv6 }

no ip-version

ipv4 – IPv4;

ipv6 – IPv6;

IPv4 IPv6.

10

## CONFIG-CELLULAR-PROFILE

:

```
esr(config-cellular-profile)# ip-version ipv4
```

## mru

.

(no) .

```
mru { <MRU> }
```

```
no mru
```

<MRU> – MRU, [128..16383].

1500

10

CONFIG-CELLULAR-MODEM

:

```
esr(config-cellular-modem)# mru 1476
```

## number

.

(no) .

```
number <WORD>
```

```
no number
```

<WORD> – , 1 15.

.

10

CONFIG-CELLULAR-PROFILE

:

```
esr(config-cellular-profile)# number *99#
```

## password

password .  
(no) .

```
password ascii-text { <CLEAR-TEXT> | encrypted <ENCRYPTED-TEXT> }  
no password
```

<CLEAR-TEXT> – , [1..64], [0-9a-fA-F];

<ENCRYPTED-TEXT> – , [2..128].



, .

15

CONFIG-PPP-USER

:

```
esr(config-ppp-user)# password ascii-text 01234567
```

## pin

SIM-.

(no) SIM-.

```
pin <WORD>
```

```
no pin
```

<WORD> – SIM- [4..8]. .

PIN .

15

CONFIG-CELLULAR-MODEM

:

```
esr(config-cellular-modem)# pin 4856
```

## preferred-mode

USB- .

(no) USB- .

preferred-mode { <MODE> }

no preferred-mode

<MODE> – USB- [2g, 3g, 4g].

USB-.

10

CONFIG-CELLULAR-MODEM

:

```
esr(config-cellular-modem)# preferred-mode 4g
```

## profile

USB- USB-.

(no) USB-.

profile <ID>

no profile

<ID> – USB- [1..10].

ID .

10

CONFIG-CELLULAR-MODEM

:

```
esr(config-cellular-modem)# profile 1
```

## show cellular configuration modem

USB-

show cellular configuration modem [ <ID> ]



<ID>- USB- [1..10].

USB- USB-.

10

ROOT

:

```
esr# show cellular configuration modem
Number  State      Description                               USB port device  Profile
modem
-----  -
1       Enabled    megafon                               1-1              1
2       Enabled    mts                                   1-2              2

esr# show cellular configuration modem 2
State:           Enabled
Description:      mts
USB port device: 1-2
Pin:             --
MRU:             --
MTU:             1500
Preferred mode:   none
Allowed modes:    all
Profile:          2
Description:      MTS
  User name:      mts
  Number:         *99#
  APN:            internet.mts.ru
  Password (encrypted): 91A010
  IP version:     both
  Allowed auth:    EAP
  Security zone:  --
```

**show cellular configuration profile**

USB-.

show cellular configuration profile [ <ID> ]

<ID>- USB- [1..10].

USB- USB-.

10

ROOT

:

```
esr# show cellular configuration profile
```

Number	User name	APN	Number	Description
--------	-----------	-----	--------	-------------

profile

1	gdata	internet	*99#	MEGAFON
2	mts	internet.mts.ru	*99#	MTS

```
esr# show cellular configuration profile 1
```

Description: MEGAFON  
User name: gdata  
Number: \*99#  
APN: internet  
Password (encrypted): 9BB00279B1  
IP version: both  
Allowed auth: EAP

## show cellulas status modem

USB-

```
show cellular status modem [ <ID> ]
```

<ID> – USB- [1..10].

USB- USB-

1

ROOT

:

```

esr# show cellular status modem
Number  USB port  Manufacturer  Model      Current state  Inteface      Link
device  -----  -----  -----  -----  -----  state
-----  -----  -----  -----  -----  -----  -----
1        1-1        huawei        E3372      disabled      --           Down

esr# show cellulars status modem 1
Interface 'modem 1' status information:
  USB port device:      1-1
  Manufacturer:         huawei
  Model:                E3372
  Revision:             21.180.01.00.00
  IMEI:                 861821036192893
  Status SIM lock:      --
  Status unlock retries: sim-pin (3) sim-pin2 (3) sim-puk (10) sim-puk2 (10)
  Current state:        disabled
  Access tech:          unknown
  Signal level:         0
  Support modes:
    allowed 2G; preferred none;
    allowed 3G; preferred none;
    allowed 4G; preferred none;
    allowed 2G 3G 4G; preferred none;
  Allowed modes:        2G 3G 4G
  Preferred modes:      none
  Type IP:              IPv4
  Operator name:
  Registration:         unknown

```

## user

. .

(no) .

[no] user <NAME>

<NAME>- , 1 31 .

.

15

## CONFIG-CELLULAR-PROFILE

:

```
esr(config-cellular-profile)# user gdata
```



ESR-12V/12VF/14VF.

## authentication name

, SIP- ( ).  
(no) .

authentication name {<LOGIN> | as-phone}  
no authentication name

<LOGIN> – , , 31 as-phone, , ;  
As-phone – , .

.

15

CONFIG-VOICE-PORT-FXO  
CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxo)# authentication name userlogin
```

## authentication password

, SIP- ( ).  
(no) .

authentication password { <PASS> | encrypted <ENCRYPTED-PASS> }  
no authentication password

<PASS> – , 16;  
<ENCRYPTED-PASS> – - sha512, [2..32].

.

10

CONFIG-VOICE-PORT-FXO  
CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxs)# authentication password superpassword
```

call-forwarding busy

CFB (Call Forward at Busy) – .  
(no) « ».

[no] call-forwarding busy

.

CFB .

10

CONFIG-VOICE-PORT-FXS

:

esr(config-voice-port-fxs)# call-forwarding busy

call-forwarding busy number

, , « ».  
(no) .

call-forwarding busy number <PHONE>  
no call-forwarding busy number

<PHONE> – , , 50 .

.

10

CONFIG-VOICE-PORT-FXS

:

esr(config-voice-port-fxs)# call-forwarding busy number 4596

call-forwarding no-answer

CFNA ( Call Forward at No Answer )– .  
(no) « ».

[no] call-forwarding no-answer

.

CFNA .

10

CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxs)# call-forwarding no-answer
```

## call-forwarding no-answer number

, , « ».

(no) .

call-forwarding no-answer number <PHONE>

no call-forwarding no-answer number

<PHONE> – , , 50 .

.

10

CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxs)# call-forwarding no-answer number 4685
```

## call-forwarding no-answer timeout

, , « ».

(no) .

call-forwarding no-answer timeout <TIME>

no call-forwarding no-answer timeout

<TIME> – , , [0-120].

0

10

CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxs)# call-forwarding no-answer timeout 15
```

## call-forwarding unconditional

CFU (Call Forward Unconditional) – .

(no) « ».

```
[no] call-forwarding unconditional
```

.

CFU .

10

CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxs)# call-forwarding unconditional
```

## call-forwarding unconditional number

.

(no) .

```
call-forwarding unconditional number <PHONE>
```

```
no call-forwarding unconditional number
```

<PHONE> –, , « », 50 .

.

10

## CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxs)# call-forwarding unconditional number 4685
```

## call-waiting

« ».

(no) « ».

[no] call-waiting

.

CW.

10

## CONFIG-VOICE-PORT-FXS

### CONFIG-VOIP-PROFILE

:

```
esr(config-voice-port-fxs)# call-waiting
```

## caller-id mode

– (Caller ID).

(no) – (Caller ID).

caller-id mode <MODE>

no caller-id mode

<MODE> – – (Caller ID), :

- auto – , Caller-id. FXO-;
- dtmf – DTMF. DTMF ;
- fsk-bell – FSK Bell202. ;
- fsk-v23 – FSK ITU-T V.23. .

Caller ID.

10



CONFIG-VOICE-PORT-FXO

CONFIG-VOICE-PORT-FXS

CONFIG-VOIP-PROFILE

:

```
esr(config-voice-port-fxs)# caller-id mode fsk-v23
```

## dial-type

FXO-.

(no) .

dial-type <MODE>

no dial-type

<MODE> – FXO-, :

- dtmf – ;
- pulse – .

dtmf

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# dial-type pulse
```

## enable

.

(no) .

[no] enable

.

.

10

## CONFIG-VOIP-PROFILE

:

```
esr(config-config-voip-sip-proxy)# enable
```

## flash call-transfer

flash ( ).

(no) .

flash call-transfer <METHOD>

no flash call-transfer

<METHOD> – flash, :

- attended – flash ( );
- unattended – flash ( );
- transmit-flash – flash ( , transfer flash SIP-);
- local-transfer – , REFER.

transmit-flash

10

## CONFIG-VOICE-PORT-FXS

## CONFIG-VOIP-PROFILE

:

```
esr(config-voice-port-fxs)# flash call-transfer attended
```

## flash call-transfer mode

– Attended calltransfer Local calltransfer .

(no) .

flash call-transfer mode <MODE>

no flash call-transfer mode

<MODE> – , :

- r4 – R 4;
- hook – ;
- both – R 4.

r4

10

CONFIG-VOICE-PORT-FXS

CONFIG-VOIP-PROFILE

:

```
esr(config-voice-port-fxs)# flash call-transfer mode hook
```

## flash timer

flash ( ).

(no) .

flash timer <TIME>

no flash timer

<TIME> – flash , [80..1000]

100

10

CONFIG-VOICE-PORT-FXS

CONFIG-VOIP-PROFILE

:

```
esr(config-voice-port-fxs)# flash timer 200
```

## hotline

«/», – « », « ».

[no] hotline

.

«/ ».

10

CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxs)# hotline
```

## hotline ipt

«/ » VoIP.

(no) «/ » VoIP.

[no] hotline ipt

.

«/ » .

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# hotline ipt
```

## hotline pstn

«/ » VoIP .

(no) «/ » VoIP .

[no] hotline pstn

.

«/ » .

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# hotline pstn
```

## hotline number

,       «/».  
(no)   "/".

hotline number <PHONE>  
no hotline number

<PHONE> – ,       , 1 50 .

.

10

CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxs)# hotline number 5462
```

## hotline number ipt

,       «/»       VoIP.  
(no)   «/»       VoIP.

hotline number ipt <PHONE>  
no hotline number ipt

<PHONE> – ,       «/»       VoIP, 1 50 .

.

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# hotline number ipt 6347
```

## hotline number pstn

,       «/»       VoIP .  
(no)   «/»       VoIP .

hotline number pstn <PHONE>  
no hotline number pstn

<PHONE> – , 50.

.

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# hotline number pstn 5462
```

## hotline timeout

« » .

(no) .

hotline timeout <TIME>  
no hotline timeout

<TIME> – , , [0..60].

0

10

CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxs)# hotline timeout 10
```

## hotline timeout ipt

« » c « » VoIP.

(no) .

hotline timeout ipt <TIME>  
no hotline timeout ipt

<TIME> – , , [0..60].

0

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# hotline timeout ipt 10
```

## hotline timeout pstn

« » c « » VoIP .

(no) .

hotline timeout pstn <TIME>

no hotline timeout pstn

<TIME> – , , [0..60].

0

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# hotline timeout pstn 10
```

## hybrid rx

.

hybrid rx <NUM>

no hybrid rx

<NUM> – -200 200

0

10

CONFIG-VOICE-PORT-FXO

CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxs)# hybrid rx 100
```

## hybrid tx

.

hybrid rx <NUM>

no hybrid rx

<NUM> – -200 200

0

10

CONFIG-VOICE-PORT-FXO

CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxs)# hybrid rx 20
```

## ipt prefix-name

CallerID, VoIP.

(no) .

ipt prefix-name <NAME>

no ipt prefix-name

<NAME> –, CallerID, 1 21 .

.

10



CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# ipt prefix-name localPSTN
```

## ipt prefix-number

CallerID, VoIP.

(no) .

```
ipt prefix-number <NUMBER>
```

```
no ipt prefix-number
```

<NUMBER>- , CallerID, 1 21 .

.

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# ipt prefix-number 7
```

## ipt offhook-ringing

TDM IP VoIP.

(no) TDM IP , SIP-. «Hotline».

```
[no] ipt offhook-ringing
```

.

TDM IP .

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# no ipt offhook-ringing
```

## ipt ring-number

« », FXO (« ») « ».

(no) .

```
ipt ring-number <COUNT>
```

```
no ipt ring-number
```

<COUNT> – « », FXO , [2..10].

2

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# ipt ring-number 4
```

## profile sip

SIP- .

```
profile sip <PROFILE>
```

<PROFILE> – SIP, [1..5].

.

10

CONFIG-VOICE-PORT-FXO

CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxo)# profile sip 1
```

## profile pbx

SIP- .

profile pbx<PROFILE>

<PROFILE> – SIP, PBX, 1 31 .

.

10

CONFIG-VOICE-PORT-FXO

CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxo)# profile pbx fxs_ports
```

## pstn transmit-number

, IP ( Request URI INVITE) , .

, IP.

[no] pstn transmit-number

.

.

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# pstn transmit-number
```

## pstn transmit-prefix

FXO-.

FXO-.

[no] pstn transmit-prefix

.

FXO-.

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# pstn transmit-prefix
```

## shutdown

.

(no) .

[no] shutdown

.

.

10

CONFIG-VOICE-PORT-FXO

CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxs)# shutdown
```

## sip port

UDP- SIP , SIP- .

(no) .

sip port <PORT>

no sip port

<PORT> – UDP-, [1..65535].

5060

10

CONFIG-VOICE-PORT-FXO

CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxs)# sip port 5080
```

## **sip user display-name**

, ( Display-Name From SIP).

(no) .

```
sip user display-name <LOGIN>
```

```
no sip user display-name
```

<LOGIN> – , Display-Name, 31 .

.

10

CONFIG-VOICE-PORT-FXO

CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxs)# sip user display-name "port-1"
```

## **sip user phone**

, .

(no) .

```
sip user phone <PHONE>
```

```
no sip user phone
```

<PHONE> – , , 50 .

.

10

CONFIG-VOICE-PORT-FXO

CONFIG-VOICE-PORT-FXS

:

```
esr(config-voice-port-fxs)# sip user phone 4101
```

## timing delay

.

(no) .

timing delay <TIME>

no timing delay

<TIME> – , [0..10].

2

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# timing delay 4
```

## timing digit

FXS-.

(no) .

timing digit <TIME>

no timing pulse-interdigit

<TIME> – , [150...20000].

200

10

CONFIG-VOICE-PORT-FXS

CONFIG-VOIP-PROFILE

:

```
esr(config-voice-port-fxs)# timing interdigit 300
```

## timing flash

«flash».

(no) .

timing flash <TIME>

no timing flash

<TIME> – , [70..1000].

100

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# timing flash 150
```

## timing pulse-digit

.

(no) .

timing pulse-digit <TIME>

no timing pulse-digit

<TIME> – , [50..120].

80

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# timing pulse-digit 75
```

## timing pulse-interdigit

FXO-.

(no) .

```
timing pulse-interdigit <TIME>
```

```
no timing pulse-interdigit
```

<TIME> – , [80...2500].

200

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# timing pulse-interdigit 300
```

## timing pulse-pause

.

(no) .

```
timing pulse-pause <TIME>
```

```
no timing pulse-pause
```

<TIME> – , [50..100].

80

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# timing pulse-pause 75
```



## timing tone-digit

.  
(no) .

```
timing tone-digit <TIME>
no timing tone-digit
```

<TIME> – , [65..100].

80

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# timing tone-digit 75
```

## timing tone-interdigit

.  
(no) .

```
timing tone-interdigit <TIME>
no timing tone-interdigit
```

<TIME> – , [80..2500].

100

10

CONFIG-VOICE-PORT-FXO

:

```
esr(config-voice-port-fxo)# timing tone-interdigit 150
```



ESR-12V/12VF/14VF.

## test voice-port start

test voice-port <NUM> start

<NUM> – FXS-, [1..3].

1

ROOT

:

```
esr# test voice-port 3 start
Voice-port 3 test started. The result will be available in 80 seconds, or more if the test run on other ports.
```

## test voice-port status

test voice-port <NUM> status

<NUM> – FXS-, [1..3].

1

ROOT

:

```
esr# test voice-port 3 status
Testing voice-port 3 is idle
Last test start: Sat May 20 16:01:37 2017
Number voip-port 3
  Foreign DC voltage A (TIP):    0.128377 U
  Foreign DC voltage B (RING):   0.144342 U
  Foreign AC voltage A (TIP):    0.026239 U
  Foreign AC voltage B (RING):   0.032287 U
  Cross current:                 0.260343 mA
  Longitudinal current:         -0.101857 mA
  Line supply voltage:          -50.370598 U
  Resistance A (TIP) - B (RING): 1007.203674 kOm
  Resistance A (TIP) - Ground:   402.105469 kOm
  Resistance B (RING) - Ground:  874.041443 kOm
  Capacity A (TIP) - B (RING):   50.000000 nF
  Capacity A (TIP) - Ground:    573.000000 nF
```