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authentication required disable

PPP- PPTP L2TP-.

(no) PPP PPTP L2TP-.

[no] authentication required disable

CONFIG-PPTP-SERVER

CONFIG-L2TP-SERVER

CONFIG-OPENVPN-SERVER

```
esr(config-pptp-server)# authentication required disable
```

clear remote-access counters

OpenVPN, PPTP L2TP over IPsec-.

```
clear remote-access counters [ pptp | l2tp | openvpn ] [ server <SERVER-NAME> ] [ username <USER-NAME> ] [ ip-address <ADDR> ]
```

<SERVER-NAME> – OpenVPN, PPTP L2TP over IPsec-;

<USER-NAME> – OpenVPN, PPTP L2TP over IPsec-;

<ADDR> – IP- OpenVPN, PPTP L2TP over IPsec-.

OpenVPN, PPTP L2TP over IPsec-.

ROOT

```
esr# clear remote-access counters
```

clear remote-access session

OpenVPN, PPTP L2TP over IPsec-.

```
clear remote-access session [ pptp | l2tp | openvpn] [ server <SERVER-NAME> ] [ username <USER-NAME> ] [ ip-address <ADDR> ]
```

<SERVER-NAME> – OpenVPN, PPTP L2TP over IPsec-;

<USER-NAME> – OpenVPN, PPTP L2TP over IPsec-;

<ADDR> – IP- OpenVPN, PPTP L2TP over IPsec-. OpenVPN, PPTP L2TP over IPsec-.

ROOT

```
esr# clear remote-access session
```

description

OpenVPN, PPTP L2TP over IPsec-.

(no) .

```
description <DESCRIPTION>
no description
```

```
<DESCRIPTION> - , 255 .
```

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```
CONFIG-PPTP-SERVER
CONFIG-L2TP-SERVER
CONFIG-OPENVPN-SERVER
```

PPTP-:

```
esr(config-pptp-server)# description "Our remote workers"
```

enable

(no) .

```
[no] enable
```

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```
CONFIG-PPTP-SERVER
CONFIG-L2TP-SERVER
CONFIG-OPENVPN-SERVER
```

```
esr(config-pptp-server)# enable
```

encryption mppe

MPPE (Microsoft Point-to-Point Encryption) PPTP-.

(no) .

```
[no] encryption mppe
```

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CONFIG-PPTP-SERVER

```
esr(config-pptp-server)# encryption mppe
```

remote-access

(no) .

```
[no] remote-access <SERVER-TYPE> <NAME>
```

<SERVER-TYPE> - . l2tp, openvpn, pptp

<NAME> - , 31 .

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CONFIG

```
esr(config)# remote-access l2tp remote-workers  
esr(config-l2tp-server)#
```

show remote-access configuration

OpenVPN, PPTP L2TP over IPsec-.

```
show remote-access configuration { pptp | l2tp | openvpn } [ <NAME> ]
```

<NAME> – OpenVPN, PPTP L2TP over IPsec .

OpenVPN, PPTP L2TP over IPsec-.

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ROOT

```
esr# show remote-access configuration pptp pptpl
State: Enabled
Description: --
Security zone: trusted
Authentication mode: local
MTU: 1500
Local address: 192.168.1.1
Remote address: rem_pptp(10.0.10.20-10.0.10.40)
Outside address: 115.0.0.1
DNS server: --
WINS server: --
Users
~~~~~
#   Name      State    Encrypted password
---  -----
0   pptp     Enabled  8CB5107EA7005AFF
1   petr     Enabled  CCE5513EE45A1EAC
```

show remote-access counters

OpenVPN, PPTP L2TP over IPsec .

```
show remote-access counters [ pptp | l2tp | openvpn ] [ server <SERVER-NAME> ] [ username <USER-NAME> ] [ ip-address <ADDR> ]
```

<SERVER-NAME> – PPTP L2TP over IPsec ;

<USER-NAME> – OpenVPN, PPTP L2TP over IPsec ;

<ADDR> – IP- OpenVPN, PPTP L2TP over IPsec ;

OpenVPN, PPTP L2TP over IPsec .

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ROOT

```

esr# show remote-access counters
User          IP-address      UC recv    Bytes recv   Err recv   MC recv
-----  -----
ivan          10.20.20.5     262        25365       0          0
fedor         20.20.20.160   59         5236        0          0
User          IP-address      UC sent    Bytes sent   Err sent
-----  -----
ivan          10.20.20.5     249        29298       0
fedor         20.20.20.160   16         739         0
esr# show remote-access counters l2tp
PPTP Server: remote-workers
User: ivan(10.20.20.5)
  Packets received:           231
  Bytes received:            22229
  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:       189
  Bytes transmitted:         21858
  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 remote-access status

OpenVPN, PPTP L2TP over IPsec .

show remote-access status [pptp | l2tp | openvpn] [server <SERVER-NAME>] [username <USER-NAME>] [ip-address <ADDR>]

<SERVER-NAME> – OpenVPN, PPTP L2TP over IPsec ;

<USER-NAME> – OpenVPN, PPTP L2TP over IPsec ;

<ADDR> – IP- OpenVPN, PPTP L2TP over IPsec .

OpenVPN, PPTP L2TP over IPsec .

```

esr# show remote-access status
User           IP-address      Server
-----
ivan          10.20.20.5       pptp(remote-workers)
fedor         20.20.20.160     l2tp(remote-workers-l2tp)
Count sessions: 2

```

L2TP over IPsec/PPTP-

authentication mode

, PPTP L2TP over IPsec.
(no) .

```

authentication mode { local | radius }
no authentication mode

```

- local – , .
- radius – , RADIUS-.

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CONFIG-PPTP-SERVER

CONFIG-L2TP-SERVER

```

esr(config-pptp-server)# authentication mode local

```

authentication method

, PPTP L2TP over IPsec.
(no) .

```
[no] authentication method <METHOD>
```

<METHOD> – , [chap, mschap, mschap-v2, eap, pap].

chap

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CONFIG-PPTP-SERVER

CONFIG-L2TP-SERVER

```
esr(config-pptp-server)# authentication method mschap
```

dns-servers

DNS-, , PPTP L2TP over IPsec.

(no) DNS-.

```
dns-servers object-group <NAME>
```

```
no dns-servers
```

```
<NAME>- IP-, DNS-, 31 .
```

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CONFIG-PPTP-SERVER

CONFIG-L2TP-SERVER

```
esr(config-pptp-server)# dns-servers object-group pptp_dns
```

dscp

DSCP IP- PPTP L2TP over IPsec-.

(no) DSCP .

```
dscp <DSCP>
```

```
no dscp
```

```
<DSCP>- DSCP, [0..63].
```

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CONFIG-PPTP-SERVER

CONFIG-L2TP-SERVER

```
esr(config-pptp-server)# dscp 40
```

ipsec authentication method

IKE-, IKE-, «ipsec authentication pre-shared-key» ([ipsec authentication pre-shared-key](#)).

(no) .

ipsec authentication method pre-shared-key

no ipsec authentication method

pre-shared-key – , .

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CONFIG-L2TP-SERVER

```
esr(config-l2tp-server)# ipsec authentication method pre-shared-key
```

ipsec authentication pre-shared-key

(no) .

ipsec authentication pre-shared-key { ascii-text { <TEXT> | encrypted <ENCRYPTED-TEXT> } | hexadecimal {<HEX> | encrypted <ENCRYPTED-HEX> } }

no ipsec authentication pre-shared-key

<TEXT> – [1..64] ASCII .

<HEX> – [1..32] [2..128] (0xYYYY...) (YYYY...).

<ENCRYPTED-TEXT> – [1..32], [2..128];

<ENCRYPTED-HEX> – [2..64], [2..256].

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CONFIG-L2TP-SERVER

```
esr(config-l2tp-server)# ipsec authentication pre-shared-key ascii-text password
```

local-address

IP-, PPTP L2TP over IPsec IP- .

(no) IP- .

```
local-address { object-group <NAME> | ip-address <ADDR> }
no local-address
```

<NAME> – IP-, IP-, 31 .

<ADDR> – IP- AAA.BBB.CCC.DDD, [0..255].

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CONFIG-PPTP-SERVER

CONFIG-L2TP-SERVER

```
esr(config-pptp-server)# local-address object-group pptp_local
```

mtu

MTU , PPTP L2TP over IPsec.

(no) MTU .

```
mtu <MTU>
```

```
no mtu
```

<MTU> – MTU, [1280..1500].

1500

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CONFIG-PPTP-SERVER

CONFIG-L2TP-SERVER

```
esr(config-pptp-server)# mtu 1400
```

outside-address

IP-, PPTP L2TP over IPsec .

(no) .

```
outside-address { object-group <NAME> | ip-address <ADDR> | interface { <IF> | <TUN> } }
```

```
no outside-address
```

```
<NAME>- IP-, , PPTP L2TP over IPsec , 31 .  
<ADDR>- IP-, PPTP L2TP over IPsec , AAA.BBB.CCC.DDD, [0..255].  
<IF>- , .  
<TUN>- , .
```

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CONFIG-PPTP-SERVER

CONFIG-L2TP-SERVER

```
esr(config-pptp-server)# outside-address object-group pptp_outside
```

remote-address

```
IP-, PPTP L2TP over IPsec IP- .  
(no) IP- .
```

```
remote-address { object-group <NAME> | address-range <FROM-ADDR>-<TO-ADDR> }  
no remote-address
```

```
<NAME>- IP-, IP- , 31 .  
<FROM-ADDR>- IP-, AAA.BBB.CCC.DDD, [0..255].  
<TO-ADDR>- IP-, AAA.BBB.CCC.DDD, [0..255].
```

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CONFIG-PPTP-SERVER

CONFIG-L2TP-SERVER

```
esr(config-pptp-server)# remote-address object-group pptp_remote
```

remote network

```
IP-, PPTP/L2TP-.  
(no) IP-, PPTP/L2TP-.
```

```
remote network <ADDR/LEN>
no remote network

<ADDR/LEN> – IP- . AAA.BBB.CCC.DDD/EE, AAA – DDD [0..255] EE [1..32].
```

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CONFIG-PPP-USER

```
esr(config-ppp-user)# remote network 192.168.54.0/24
```

remote networks

```
IP- , PPTP/L2TP-,
(no) IP- , PPTP/L2TP-.
```

```
remote networks <OBJ-GROUP-NETWORK-NAME>
no remote network
```

```
<OBJ-GROUP-NETWORK-NAME> – IP/IPv6-, 31 .
```

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CONFIG-PPP-USER

```
esr(config-ppp-user)# remote network 192.168.54.0/24
```

username

```
PPTP L2TP over IPsec. , PPP-.
```

```
(no) .
```

```
PPTP USER L2TP USER .
```

```
[no] username <NAME>
```

```
<NAME> – , 31 .
```

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CONFIG-PPTP-SERVER

CONFIG-L2TP-SERVER

```
esr(config-pptp-server)# username fedor  
esr(config-pptp-user)#
```

wins-servers

WINS-, , PPTP L2TP over IPsec.

(no) WINS-.

```
wins-servers object-group <NAME>  
no wins-servers
```

<NAME>- IP-, WINS-, 31 .

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CONFIG-PPTP-SERVER

CONFIG-L2TP-SERVER

```
esr(config-pptp-server)# wins-servers object-group l2tp_wins
```

OpenVPN-

address-range

IP-, OpenVPN- IP- L2.

(no) IP- .

```
address-range <FROM-ADDR>-<TO-ADDR>
```

no address-range

<FROM-ADDR> - IP- , AAA.BBB.CCC.DDD, [0..255].

<TO-ADDR> - IP- , AAA.BBB.CCC.DDD, [0..255].

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# address-range 192.168.1.10-192.168.1.250
```

authentication algorithm

OpenVPN.

(no) .

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

<ALGORITHM> - :

- 8-128 bits key size: md4, rsa-md4, md5, rsa-md5, mdc2, rsa-mdc2
- 8-160 bits key size: sha, sha1, rsa-sha, rsa-sha1, rsa-sha1-2, dsa, dsa-sha, dsa-sha1, dsa-sha1-old, ripemd160, rsa-ripemd160, ecdsa-with-sha1
- 8-224 bits key size: sha-224, rsa-sha-224
- 8-256 bits key size: sha-256, rsa-sha-256
- 8-384 bits key size: sha-384, rsa-sha-384
- 8-512 bits key size: sha-512, rsa-sha-512, whirlpool

sha

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# authentication algorithm cleartext
```

bridge-group

OpenVPN L2-.

(no) L2-.

```
bridge-group <BRIDGE-ID>
no bridge-group
```

<BRIDGE-ID> - . , .

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# bridge-group 15
```

certificate

copy, [copy](#).

(no) .

```
certificate <CERTIFICATE-TYPE> <NAME>
no certificate <CERTIFICATE-TYPE>
```

```
<CERTIFICATE-TYPE> - , :
```

- ca - ;
- crl - ;
- dh - -;
- server-crt - ;
- server-key - ;
- ta - HMAC-
- client-key - OPENVPN-;
- client-crt - OPENVPN-.

```
<NAME> - , 31 .
```

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# certificate ca ca.crt
```

client-isolation

(no) .

```
[no] client-isolation
```

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# client-isolation
```

client-max

(no) .

```
client-max <VALUE>
no client-max
```

<VALUE>- , [1..65535].

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# clients-max 500
```

compression

OpenVPN.

(no) .

[no] compression

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# compression
```

dns-server

DNS- .

(no) DNS-.

dns-server <ADDR>

no dns-server { <ADDR> | all }

<ADDR> – IP- DNS-a, AAA.BBB.CCC.DDD, [0..255];

all – IP-.

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# dns-server 1.1.1.1
```

duplicate-cn

(no)

[no] duplicate-cn

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# duplicate-cn
```

encryption algorithm

(no) .

encryption algorithm <ALGORITHM>

no encryption algorithm

<ALGORITHM> – , : des, blowfish128, aes128, des-edc, aes192, 3des, desx, aes256.

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# encryption algorithm aes128
```

ip address

IP- . (no) IP- .

[no] ip address <ADDR>

<ADDR> – IP-, :

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

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CONFIG-OPENVPN-USER

```
esr(config-openvpn-server)# username client  
esr(config-openvpn-user)# ip address 10.10.100.15
```

login authentication

«default», – «local».

(no) .

login authentication <NAME>

no login authentication

<NAME> – , 31 .

default

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# login authentication OPENVPN-LIST
```

network

, IP- . IP- .
(no) .

```
network <ADDR/LEN>  
no network
```

<ADDR/LEN> – IP- , :
• AAA.BBB.CCC.DDD/EE – IP- , AAA-DDD [0..255] EE [1..32].

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# network 192.168.25.0/24
```

port

TCP/UDP-, OpenVPN- .
(no) .

```
port <PORT>  
no port  
  
<PORT> – TCP/UDP , [1..65535].
```

1194

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# port 5000
```

protocol

(no) .

```
protocol <PROTOCOL>
no protocol
```

<TYPE>- , :

- TCP- TCP-;
- UDP- UDP-.

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# protocol udp
```

redirect-gateway

OpenVPN-, . IP- OpenVPN-.

(no) .

[no] redirect-gateway

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# redirect-gateway
```

route

, IP OpenVPN- (IP- , network, network).

(no) .

```
route <ADDR/LEN>
no route { <ADDR/LEN> | all }

<ADDR/LEN> - IP-, :
AAA.BBB.CCC.DDD/EE - IP- , AAA-DDD [0..255] EE [1..32];
```

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# route 192.168.25.0/24, 192.168.26.0/24
```

timers holdtime

, . . 0. keepalive . , 3 *keepalive.
(no) .

```
timers holdtime <TIME>
no timers holdtime
```

<TIME> - , [1..65535].

120

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# timers holdtime 360
```

timers keepalive

(no) .

```
timers keepalive <TIME>
no timers keeaplive
```

```
<TIME> - , [1..65535].
```

10

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# timers keepalive 120
```

subnet

OpenVPN-

(no) .

```
[no] subnet <ADDRLEN>
```

<ADDR/LEN> – IP- : :

```
AAA.BBB.CCC.DDD/EE – IP- , AAA-DDD [0..255] EE [1..32].
```

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CONFIG-OPENVPN-USER

```
esr(config-openvpn-server)# username client
esr(config-openvpn-user)# subnet 192.168.25.128/28
```

tunnel

OpenVPN-.

(no) .

tunnel <TYPE>

no tunnel

<TYPE> – , :

- ip – -;
- ethernet – L2 .

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# tunnel ip
```

username

OpenVPN-.

(no) .

```
[no] username { <NAME> | all }
```

<NAME> – , 31 .

all – .

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# username client  
esr(config-openvpn-user)#
```

wins-server

WINS-.

(no) WINS-.

```
wins-server <ADDR>
```

```
no wins-server { <ADDR> | all }
```

<ADDR> – IP- WINS , AAA.BBB.CCC.DDD, [0..255].

all – IP- DNS .

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CONFIG-OPENVPN-SERVER

```
esr(config-openvpn-server)# wins-servers 1.1.1.1
```