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clock timezone

```
.
(no) .
```

```
clock timezone <OFFSET>
no clock timezone
```

<OFFSET> – , Greenwich Mean Time, [gmt -12 .. gmt +12].

```
gmt 0
```

```
15
```

```
CONFIG
```

```
:
```

```
esr(config)# clock timezone gmt +7
```

key

```
.
(no) .
```

```
key <ID>
no key
```

<ID> – , [1..255].

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CONFIG-NTP

:

```
esr(config-ntp)# key 245
```

maxpoll

NTP-.

(no) .

maxpoll <INTERVAL>

no maxpoll

<INTERVAL> – . , , , [10..17].

10 ($2^{10} = 1024 \cdot 17 \cdot 4$)

10

CONFIG-NTP

:

```
esr(ntp-remote)# maxpoll 11
```

minpoll

NTP-.

(no) .

minpoll <INTERVAL>

no minpoll

<INTERVAL> – , , , [4..6].

6 ($2^6 = 64 \cdot 1 \cdot 4$)

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CONFIG-NTP

:

```
esr(ntp-remote)# minpoll 4
```

ntp access-addresses

IP-, ntp-.

(no) .

ntp access-addresses <NAME>

no ntp access-addresses

<NAME> – IP-, 31 .

.

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CONFIG

:

```
esr(config)# ntp authentication trusted-key 25
```

ntp authentication enable

NTP-.

(no) .

[no] ntp authentication enable

.

.

15

CONFIG

:

```
esr(config)# ntp authentication enable
```

ntp authentication key-chain

md5 ,.

(no) .

ntp authentication key-chain <KEYCHAIN>

no ntp authentication key-chain

<KEYCHAIN> - , 16 .

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CONFIG

:

```
esr(config)# ntp authentication key-chain lock
```

ntp authentication trusted-key

.

(no) .

[no] ntp authentication trusted-key <ID>

<ID> - , [1..255].

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CONFIG

:

```
esr(config)# ntp authentication trusted-key 25
```

ntp broadcast-client enable

NTP- VRF. NTP-. NTP- , .

(no) .

```
[no] ntp broadcast-client enable
```

.

.

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CONFIG

:

```
esr(config)# ntp broadcast-client enable
```

ntp dscp

DSCP IP- NTP.

(no) DSCP .

```
ntp dscp <DSCP>
```

```
no ntp dscp
```

<DSCP> – DSCP, [0..63].

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CONFIG

:

```
esr(config)# ntp dscp 40
```

ntp enable

NTP VRF.

(no) NTP.

```
[no] ntp enable
```

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CONFIG

:

```
esr(config)# ntp enable
```

ntp ipv6 source address

source-IPv6- NTP- peer.

(no) source-IPv6- NTP- .

```
ntp ipv6 source address <IPv6-ADDR>
```

```
no ntp ipv6 source address
```

<IPv6-ADDR> – IPv6- RADIUS-, X:X:X:X::X, [0..FFFF].

IPv6-, NTP-.

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CONFIG

:

```
esr(config)# ntp ipv6 source address fc00::1
```

ntp object-group query-only

query-only, NTP IP-. control messages.

(no) .

```
ntp object-group query-only <NAME>
```

```
no ntp object-group query-only
```

<NAME> – IP-, 31 .

NTP- .

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CONFIG

:

```
esr(config)# ntp object-group query-only OG-NTP-QO
```

ntp object-group serve-only

serve-only, NTP IP-. NTP-; control messages .

(no) .

```
ntp object-group serve-only <NAME>
```

```
no ntp object-group serve-only
```

<NAME> – IP-, 31 .

NTP-

15

CONFIG

:

```
esr(config)# ntp object-group serve-only OG-NTP-SO
```

ntp peer

NTP- CONFIG-NTP.

NTP- NTP-, . NTP-, -.

(no) NTP-.

```
[no] ntp peer { <ADDR> | <IPV6-ADDR> } [ vrf <VRF> ]
```

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

<IPV6-ADDR> – IPv6-, X:X:X:X::X, [0..FFFF];

<VRF> – VRF, 31, NTP-.

CONFIG

:

```
esr(config)# ntp peer 10.100.100.1
esr(ntp-remote)#
```

ntp server

NTP- CONFIG-NTP.

NTP- . NTP.

(no) NTP-.

```
[no] ntp server { <ADDR> | <IPv6-ADDR> } [ vrf <VRF> ]
```

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

<IPv6-ADDR> – IPv6-, X:X:X:X::X, [0..FFFF];

<VRF> – VRF, 31, NTP-.

CONFIG

:

```
esr(config)# ntp server 10.100.100.2
esr(ntp-remote)#
```

ntp source address

source-IP- NTP- peer.

(no) source-IP- NTP- .

```
ntp source address <ADDR>
```

```
no ntp source address
```

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

IP-, NTP-.

CONFIG

:

```
esr(config)# ntp source address 10.100.100.2
```

prefer

NTP- . NTP- NTP-.

(no) .

[no] prefer

.

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CONFIG-NTP

:

```
esr(ntp-remote)# prefer
```

set date

.

set date <TIME> [<DAY> <MONTH> [<YEAR>]]

<TIME> – , HH:MM:SS,:

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

<DAY> – , [1..31];

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

<YEAR> – , [2001..2037].

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ROOT

:

```
esr# set date 16:35:00 15 May 2014
```

show date

.

```
show date
```

.

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ROOT

:

```
esr# show date
Thursday 23:48:33 GMT+7 May 15 2014
```

show ntp configuration

(RUNNING) NTP.

```
show ntp configuration
```

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ROOT

:

```
esr# show ntp configuration
NTP status: Enabled
NTP mode:   client/server
Address      Type      Prefer  NTP version  Min poll  Max poll
-----
10.100.100.1 peer     yes     NTPv4        6(1m 4s)  11(34m 8s)
10.100.100.2 peer     yes     NTPv4        6(1m 4s)  10(17m 4s)
1.2.3.4      server   no      NTPv4        6(1m 4s)  10(17m 4s)
```

show ntp peers

NTP- ().

6- ()

remote	DNS- IP- (). (), 7.
refid	IP-, (). 8.
st	.
t	()), 9.
when	, () , (“h” , “d”).
poll	()).
reach	, (1 = , 0 =), .
delay	() , .
offset	()).
jitter	()).

7 – ()

	, : <ul style="list-style-type: none"> • (); • , ; • () .
x	() , .
-	() , .
#	()), , (), , .
+	()), .
*	()), .

8 – ()

.ACST.	Manycast-.
.AUTH.	.
.AUTO.	.
.BCST.	Broadcast-.
.CRYPT.	.
.DENY.	.
.INIT.	.
.MCST.	Multicast-.
.TIME.	.
.STEP.	, (1000), , (125).
.RATE.	.

9 – ()

u	Unicast manycast-.
b	Broadcast unicast-.

s	().
A	Manycast-.
B	Broadcast-.
M	Multicast-.

show ntp peers

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ROOT

:

```
esr# sh ntp peers
Clock is synchronized, stratum 3, reference is 192.168.1.1
  remote      refid      st t when poll reach  delay  offset  jitter
-----
*192.168.1.1  192.168.1.2    2 u  45  128  377   0.283   0.204   0.049
```

version

NTP-.

(no) .

version <VERSION>

no version

<VERSION> – NTP-, [1..4].

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CONFIG-NTP

:

```
esr(ntp-remote)# version 3
```