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- show ipv6 neighbors configuration
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## clear arp-cache

ARP.

```
clear arp-cache [ <OPTIONS> ]
```

<OPTIONS> – , :

- vrf <VRF> – VRF, 31 . , ARP- VRF;
- <IF> – , , ;
- ip-address <ADDR> – IP-, , AAA.BBB.CCC.DDD, [0..255];
- mac-address <ADDR> – -, , XX:XX:XX:XX:XX:XX, [00..FF].

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ROOT

```
esr# clear arp-cache ip-address 10.0.0.8
```

## clear ipv6 neighbors

IPv6 Neighbor Discovery .

```
clear ipv6 neighbors [ <OPTIONS> ]
```

<OPTIONS> – , :

- vrf <VRF> – VRF, 31 . IPv6 Neighbor Discovery VRF;
- <IF> – , , ;
- ipv6-address <IPv6-ADDR> – IPv6-, , X:X:X:X::X, [0..FFFF];
- mac-address <ADDR> – -, , XX:XX:XX:XX:XX:XX, [00..FF].

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ROOT

```
esr# clear ipv6 neighbors
```

## clear mac address-table

MAC-.

```
clear mac address-table [ { dynamic | static } ] [ { interface { <IF> | host-port <U/S/P> } | bridge <BRIDGE-ID>
| tunnel { gre | softgre } <ID> | vlan <VLAN-ID> }
```

<IF> - , , ;

<U/S/P> - (1), (0) ;

<BRIDGE-ID> - , , ;

<ID> - ;

<VLAN-ID> - vlan. vlan " , ", vlan "-" / .

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ROOT

```
esr# clear mac address-table
```

## ip arp

ARP-.

(no) ARP-.

```
ip arp [ vrf <VRF> ] <IP> <MAC> { <IF> | <TUN> }
```

```
no ip arp [ vrf <VRF> ] <IP>
```

<VRF> - VRF, 31 ;

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

<MAC> - -, IPv6-, XX:XX:XX:XX:XX:XX, [00..FF];

<IF> - , , ;

<TUN> - , , .

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## CONFIG

```
esr(config-if-gi)# ip arp 192.168.54.22 a8:f9:4b:ab:2e:d0 bridge 3
```

## ip arp reachable-time

ARP-.

(no) arp reachable-time .

```
ip arp reachable-time <TIME>
```

```
no ip arp reachable-time
```

< TIME > - MAC-, . 5000 100000000 . [0,5;1,5]\*< TIME >.

10

160000

## CONFIG

CONFIG-GI

CONFIG-TE

CONFIG-SUBIF

CONFIG-QINQ-IF

CONFIG-PORT-CHANNEL

CONFIG-LOOPBACK

CONFIG-BRIDGE

```
esr(config-if-gi)# ip arp reachable-time 6000
```

## ipv6 nd

ND-.

(no) ND-.

```
ipv6 nd [ vrf <VRF> ] <IPV6> <MAC> {<IF> | <TUN>}
```

```
no ipv6 nd [ vrf <VRF> ] <IP>
```

<VRF> - VRF, 31 ;

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

<MAC> --, IPv6-, XX:XX:XX:XX:XX:XX, [00..FF];

<IF> --, , ;

<TUN> --, , .

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CONFIG

```
esr(config-if-gi)# ip arp 192.168.54.22 a8:f9:4b:ab:2e:d0 bridge 3
```

## ipv6 nd reachable-time

, IPv6 .

(no) nd reachable-time .

ipv6 nd reachable-time <TIME>

no ipv6 nd arp reachable-time

<TIME> -- IPv6 ND, . 5000 100000000 . [0,5;1,5]\*< TIME >.

30000

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CONFIG

CONFIG-GI

CONFIG-TE

CONFIG-SUBIF

CONFIG-QINQ-IF

CONFIG-LOOPBACK

CONFIG-PORT-CHANNEL

CONFIG-BRIDGE

```
esr(config-if-gi)# ipv6 nd reachable-time 27000
```

## mac address-table aging-time

MAC- forwarding-.

(no) «aging time» .

```
mac address-table aging-time <AGING TIME>
[no] mac address-table aging time
```

<AGING TIME> – MAC-, . :

- ESR-1000/1200/1500/1511/1700 – 10 630 . 0 .
- ESR-10/12V/12VF/14VF/20/21/100/200 – 20 630 .

300

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CONFIG

```
esr(config)# mac address-table aging-time 30
```

## mac address-table save-secure-freq



ESR-1000.

(secure) MAC-.

(no) «mac address-table save-secure-freq» .

```
mac address-table save-secure-freq <SAVE-SECURE-FREQ>
[no] mac address-table save-secure-freq
```

<SAVE-SECURE-FREQ> – (secure) MAC-, [600..86400] .

1200

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CONFIG

```
esr(config)# mac address-table save-secure-freq 650
```

## port-security max



ESR-1000.

MAC-, .

(no) «port-security».

```
port-security max <MAX>
```

```
no port-security max
```

<MAX> – MAC-, , [1..1024].

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CONFIG-GI

CONFIG-TE

```
esr(config-if-gi)# port-security max 1
```

## port-security mode



ESR-1000.

«port-security».

(no) .

```
port-security mode [<OPTIONS>]
```

```
no port-security mode
```

<OPTIONS> – port-security:

limited – :

- MAC-;
- , ;
- MAC- ;
- MAC- MAC- forwarding-.

lock – :

- MAC-;
- ;
- MAC- ;
- MAC- MAC- forwarding-.

secure-delete-on-reset – :

- MAC-;
- , ;
- MAC- ;
- MAC- MAC- forwarding-.

secure-permanent – :

- MAC-;
- , , ;
- MAC- ;
- MAC- MAC- forwarding-.

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CONFIG-GI

CONFIG-TE

```
esr(config-if-gi)# port-security mode secure-delete-on-reset
esr(config-if-gi)# port-security mode secure-permanent
```

## port-security unknown-sa-action



ESR-1000.

MAC-.

(no) MAC-.

port-security unknown-sa-action discard

no port-security unknown-sa-action

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CONFIG-GI

CONFIG-TE

```
esr(config-if-gi)# port-security unknown-sa-action discard
```

## show arp

ARP-.

show arp [<OPTIONS>]

<options> – , :

- vrf <VRF> – VRF, 31. ARP- VRF;
- <IF> – , , . ;
- <TUN> – , , .
- mac-address <MAC> – -, , XX:XX:XX:XX:XX:XX, [00..FF];
- ip-address <ADDR> – IP-, , AAA.BBB.CCC.DDD, [0..255].

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ROOT

```
esr# show arp
```

Interface	IP address	MAC address	State	Age(min)
-----	-----	-----	-----	-----
bridge 1	192.168.1.1	a8:f9:4b:aa:00:40	--	--
gil/0/5	10.255.100.1	d8:50:e6:d2:f0:46	reachable	2
gil/0/5	10.255.100.5	a8:f9:4b:aa:00:45	--	--

show arp configuration

ARP-.

show arp configuration <IF>

<IF>- , , ;

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ROOT

```
esr# sh arp configuration gigabitethernet 1/0/1-5
Globally configured ARP reachable time is 6000 msec
```

Interface	ARP reachable time, msec
-----	-----
gil/0/1	6000
gil/0/2	6000
gil/0/3	6000
gil/0/4	6000
gil/0/4	6000

show ipv6 neighbors

IPv6 Neighbor Discovery .

show ipv6 neighbors [<OPTIONS>]

<OPTIONS>- , :

- vrf <VRF>- VRF, 31. IPv6 Neighbor Discovery VRF;
- <IF>- , , . ;
- mac-address <MAC>- -, , XX:XX:XX:XX:XX:XX, [00..FF];
- ipv6-address <IPV6-ADDR>- IPv6-, , X:X:X:X::X, [0..FFFF].



```
esr# show ipv6 neighbors
```

Interface	IPv6 address	MAC address	State	Age(min)
-----	-----	-----	-----	-----
gil/0/5	fc00::1	d8:50:e6:d2:f0:46	reachable	1
gil/0/5	fc00::2	a8:f9:4b:aa:00:45	--	--
bridge 1	fe80::aaf9:4bff:feaa:40	a8:f9:4b:aa:00:40	--	--
bridge 2	fe80::aaf9:4bff:feaa:40	a8:f9:4b:aa:00:40	--	--
gil/0/5	fe80::aaf9:4bff:feaa:45	a8:f9:4b:aa:00:45	--	--
gil/0/5	ff02::16	33:33:00:00:00:16	norarp	--
gil/0/5	ff02::fb	33:33:00:00:00:fb	norarp	--
gil/0/5	ff02::1:ff00:1	33:33:ff:00:00:01	norarp	--
gil/0/5	ff02::1:ff00:2	33:33:ff:00:00:02	norarp	--

show ipv6 neighbors configuration

ND.

show ipv6 neighbors configuration <IF>

<IF> - , , .

```
esr# sh ipv6 neighbors configuration tengigabitethernet 1/0/1-2
```

Globally configured NDP reachable time is 30000 msec

Interface	ND reachable time, msec
-----	-----
tel/0/1	30000
tel/0/2	30000

show mac address-table

, MAC-.

show mac address-table [ { count { bridge <BRIDGE-ID> | l2vpn p2p <P2P-NAME> } | { static | dynamic} { bridge <BRIDGE-ID> | l2vpn p2p <P2P-NAME> | interface { <IF> | host-port <U/S/P> } | tunnel { gre | softgre } <ID> | vlan <VLAN-ID> | mac <MAC-ADDR> <MAC-MASK> } } ]

- count - - . MAC- ;
- static - - ;
- dynamic - - MA-;

- <BRIDGE-ID>- , , ;
- <P2P-NAME>- p2p, 31 ;
- <IF>- , , ;
- <HOST-U/S/P>- . (1), (0) ;
- <ID>- , , ;
- <VLAN-ID>- vlan. vlan " , vlan "-" / ;
- <MAC-ADDR>- -, , XX:XX:XX:XX:XX:XX, [00..FF];
- [MAC-MASK]- -, , XX:XX:XX:XX:XX:XX, [00..FF]. , 0, MAC-, . FF:FF:FF:FF:FF:FF.

```

esr# show mac address-table
VID      MAC Address      Interface      Type
-----
102      a8:f9:4b:aa:44:bb     host-port 1/0/2    Dynamic
101      a8:f9:4b:aa:44:bb     host-port 1/0/2    Dynamic
100      a8:f9:4b:aa:44:bb     host-port 1/0/2    Dynamic
3 valid mac entries

```