

- ESR
- 
- 
- Ethernet
- RS-232
- 
- 
- «admin»
- 
- 
- 
- 
- 

ESR

, . SNAT . , , .

2 «Trusted» «Untrusted» . :

1. «Untrusted» (WAN). DHCP- IP- .

:

- ESR-10/12V: GigabitEthernet 1/0/1;
- ESR-12VF/ESR-14VF: GigabitEthernet 1/0/1; GigabitEthernet 1/0/9;
- ESR-20: GigabitEthernet 1/0/1;
- ESR-21: GigabitEthernet 1/0/1;
- ESR-100/200: GigabitEthernet 1/0/1;
- ESR-1000/1500/3100: GigabitEthernet 1/0/1, TengigabitEthernet 1/0/1-2;
- ESR-1200/1700: GigabitEthernet 1/0/1, TengigabitEthernet 1/0/1, TengigabitEthernet 1/0/2;
- ESR-1511: GigabitEthernet 1/0/1, FortygigabitEthernet 1/0/1-2;

L2- Bridge 2.

2. «Trusted» (LAN). Telnet SSH , ICMP- , DHCP- IP- . «Untrusted» .

:

- ESR-10: GigabitEthernet 1/0/2-6;
- ESR-12V(F)/ESR-14VF: GigabitEthernet 1/0/2-8;
- ESR-20: GigabitEthernet 1/0/2-4;
- ESR-21: GigabitEthernet 1/0/2-12;
- ESR-100: GigabitEthernet 1/0/2-4;
- ESR-200: GigabitEthernet 1/0/2-8;
- ESR-1000: GigabitEthernet 1/0/2-24;
- ESR-1200: GigabitEthernet 1/0/2-16, TengigabitEthernet 1/0/3-8;
- ESR-1500: GigabitEthernet 1/0/2-8, TengigabitEthernet 1/0/3-4;
- ESR-1511: GigabitEthernet 1/0/2-8, TengigabitEthernet 1/0/1-4;
- ESR-1700: GigabitEthernet 1/0/2-4, TengigabitEthernet 1/0/3-12;
- ESR-3100: GigabitEthernet 1/0/2-8, TengigabitEthernet 1/0/3-8.

L2- Bridge 1.

Bridge 2 DHCP- IP- . Bridge 1 IP- 192.168.1.1/24. IP- . DHCP- 192.168.1.2-192.168.1.254 255.255.255.0. Internet Source NAT.

:

,	,		
Trusted	Untrusted	TCP, UDP, ICMP	
Trusted	Trusted	TCP, UDP, ICMP	
Trusted	self	TCP/22 (SSH), ICMP, UDP/67 (DHCP Server), UDP/123 (NTP)	
Untrusted	self	UDP/68 (DHCP Client)	



'admin' "password".



IP- Bridge 1 – 192.168.1.1/24.

ESR

- IP- ( ), ;
- , ;
- , (NAT, Firewall ).

## Ethernet



ESR

(-) , «*Trusted*», , .

DHCP- IP- 192.168.1.0/24.

IP- -, , , 192.168.1.1, 192.168.1.0/24.

## RS-232

RJ-45/DBF9, , «Console» RS-232 .

(, HyperTerminal Minicom) . VT100.

RS-232:

```
:115200 /  
:8  
:  
:1  
:
```

, , :

```
esr# commit  
Configuration has been successfully committed
```

"" . "" :

```
esr# confirm  
Configuration has been successfully confirmed
```

"" – 600 . :

```
esr(config)# system config-confirm timeout <TIME>
```

- <TIME> – , [120..86400].

:

- «admin».
- .
- (Hostname).
- .
- .
- .

«admin»

«admin».



techsupport ;

remote – RADIUS, TACACS+, LDAP;

admin, techsupport, remote . .

«admin» :

```
esr# configure
esr(config)# username admin
esr(config-user)# password <new-password>
esr(config-user)# exit
```

: , , , - :

```
esr(config)# username <name>
esr(config-user)# password <password>
esr(config-user)# privilege <privilege>
esr(config-user)# exit
```



1-9 , . 10-14 , . 15 , .

«fedor» c «12345678» 15 «ivan» «password» 1:

```
esr# configure
esr(config)# username fedor
esr(config-user)# password 12345678
esr(config-user)# privilege 15
esr(config-user)# exit
esr(config)# username ivan
esr(config-user)# password password
esr(config-user)# privilege 1
esr(config-user)# exit
```



1-9 , . 10-14 , . 15 , .

«fedor» c «12345678» 15 «ivan» «password» 1:

```
esr# configure
esr(config)# username fedor
esr(config-user)# password 12345678
esr(config-user)# privilege 15
esr(config-user)# exit
esr(config)# username ivan
esr(config-user)# password password
esr(config-user)# privilege 1
esr(config-user)# exit
```

:

```
esr# configure
esr(config)# hostname <new-name>
```

, <new-name>.

, - IP-, .

IP- - **Gigabit Ethernet 1/0/2.150** **VLAN 150.**

:

- IP- – 192.168.16.144;
- – 255.255.255.0;
- IP- – 192.168.16.1.

```
esr# configure
esr(config)# interface gigabitethernet 1/0/2.150
esr(config-subif)# ip address 192.168.16.144/24
esr(config-subif)# exit
esr(config)# ip route 0.0.0.0/0 192.168.16.1
```

, , :

```
esr# show ip interfaces
IP address          Interface          Type
-----
192.168.16.144/24    gigabitethernet 1/0/2.150    static
```

. IP- DHCP, DHCP.

, IP- DHCP- **Gigabit Ethernet 1/0/10:**

```
esr# configure
esr(config)# interface gigabitethernet 1/0/10
esr(config-if)# ip address dhcp
esr(config-if)# exit
```

, , :

```
esr# show ip interfaces
IP address          Interface          Type
-----
192.168.11.5/25      gigabitethernet 1/0/10      DHCP
```

Telnet SSH «trusted». , , , firewall.

:

- **source-zone** -, ;
- **self** -, .

:

```
esr# configure
esr(config)# security zone-pair <source-zone> self
esr(config-zone-pair)# rule <number>
esr(config-zone-rule)# action permit
esr(config-zone-rule)# match protocol tcp
esr(config-zone-rule)# match source-address <network object-group>
esr(config-zone-rule)# match destination-address <network object-group>
esr(config-zone-rule)# match destination-port <service object-group>
esr(config-zone-rule)# enable
esr(config-zone-rule)# exit
esr(config-zone-pair)# exit
```

«untrusted» IP- 132.16.0.5-132.16.0.10 IP- 40.13.1.22 SSH:

```
esr# configure
esr(config)# object-group network clients
esr(config-addr-set)# ip address-range 132.16.0.5-132.16.0.10
esr(config-addr-set)# exit
esr(config)# object-group network gateway
esr(config-addr-set)# ip address-range 40.13.1.22
esr(config-addr-set)# exit
esr(config)# object-group service ssh
esr(config-port-set)# port-range 22
esr(config-port-set)# exit
esr(config)# security zone-pair untrusted self
esr(config-zone-pair)# rule 10
esr(config-zone-rule)# action permit
esr(config-zone-rule)# match protocol tcp
esr(config-zone-rule)# match source-address clients
esr(config-zone-rule)# match destination-address gateway
esr(config-zone-rule)# match destination-port ssh
esr(config-zone-rule)# enable
esr(config-zone-rule)# exit
esr(config-zone-pair)# exit
```