

BRAS (Broadband Remote Access Server)



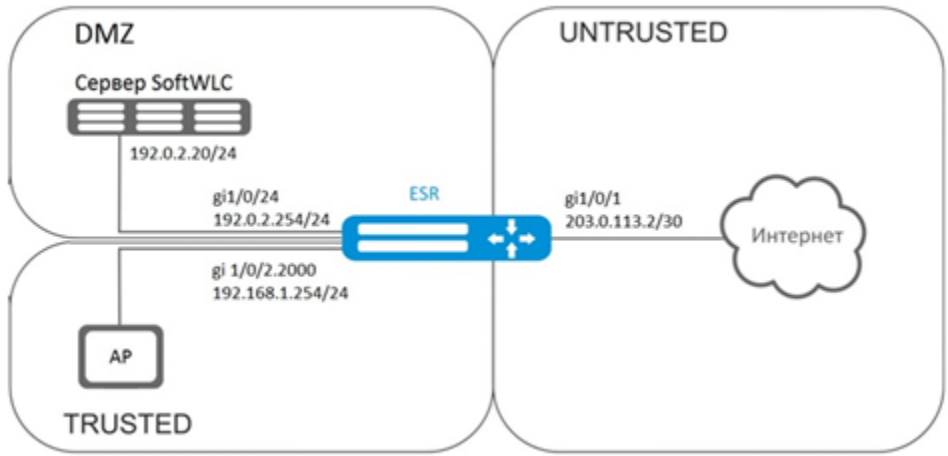
1	RADIUS-	esr(config)# radius-server host { <IP-ADDR> <IPv6-ADDR> } [vrf <VRF>] esr(config-radius-server)#	<IP-ADDR> – IP- RADIUS-, AAA.BBB.CCC.DDD, [0..255]; <IPv6-ADDR> – IPv6- RADIUS-, X:X:X:X::X, [0..FFFF] <VRF> – VRF, 31 .
2	RADIUS-	esr(config-radius-server)# key ascii-text { <TEXT> encrypted <ENCRYPTED-TEXT> }	<TEXT> – [8..16] ASCII-; <ENCRYPTED-TEXT> – , [8..16], [16..32] .
3	.	esr(config)# aaa radius-profile <NAME>	<NAME> – , 31 .
4	AAA RADIUS-	esr(config-aaa-radius-profile)# radius-server host { <IP-ADDR> <IPv6-ADDR> }	<IP-ADDR> – IP- RADIUS-, AAA.BBB.CCC.DDD, [0..255]; <IPv6-ADDR> – IPv6- RADIUS-, X:X:X:X::X, [0..FFFF].
5	DAS-	esr(config)# das-server <NAME>	<NAME> – DAS-, 31 .
6	DAS-	esr(config-das-server)# key ascii-text {<TEXT> encrypted <ENCRYPTED-TEXT> }	<TEXT> – [8..16] ASCII-; <ENCRYPTED-TEXT> – , [8..16], [16..32] .
7	AAA DAS-	esr(config)# aaa das-profile <NAME>	<NAME> – DAS-, 31 .
8	DAS- DAS-	esr(config-aaa-das-profile)# das-server <NAME>	<NAME> – DAS-, 31 .
9	BRAS.	esr(config)# subscriber-control [vrf <VRF>]	<VRF> – VRF, 31 , .
10	(DAS), CoA- PCRF	esr(config-subscriber-control)# aaa das-profile <NAME>	<NAME> – (DAS), 31 .
11	RADIUS-	esr(config-subscriber-control)# aaa services-radius-profile <NAME>	<NAME> – RADIUS-, 31 .
12	RADIUS- .	esr(config-subscriber-control)# aaa sessions-radius-profile <NAME>	<NAME> – RADIUS-, 31 .
13	IP-, IP- RADIUS .	esr(config-subscriber-control)# nas-ip-address <ADDR>	<ADDR> – IP-, AAA.BBB.CCC.DDD, [0..255].
14	MAC- ().	esr(config-subscriber-control)# session mac-authentication	
15	(DHCP, DNS ..) .	esr(config-subscriber-control)# bypass-traffic-a I <NAME>	<NAME> – ACL, 31 .
16	.	esr(config-subscriber-control)# default-service	
17	QoS- .	esr(config-subscriber-default-service)# class-map <NAME>	<NAME> – , 31 .
18	URL, HTTP/HTTPS .	esr(config-subscriber-default-service)# filter-name { local<LOCAL-NAME> remote<REMOTE-NAME> }	<LOCAL-NAME> – URL, 31 ; <REMOTE-NAME> – URL , 31 .
19	, HTTP/HTTPS-, URL URL, «filter-name».	esr(config-subscriber-default-service)# filter-action<ACT>	<ACT> – : <ul style="list-style-type: none"> • permit – ; • deny – ; redirect <URL> – URL, 255 .
20	, HTTP/HTTPS-, URL URL, «filter-name».	esr(config-subscriber-default-service)# default - action<ACT>	<ACT> – : <ul style="list-style-type: none"> • permit – ; • deny – ; redirect <URL> – URL, 255 .
21	.	esr(config-subscriber-control)# enable	
22	(, -) ().	esr(config-if)# location <ID>	<ID> – , 220 .
23	.	esr(config-if-gi)# service-subscriber-control {any} object-group <NAME>}	<NAME> – IP-, 31 .
24	().	esr(config-subscriber-control)# quota-expired-reauth	

25	IP- ().	esr(config-subscriber-control)# session ip-authentication	
26	backup BRAS ().	esr(config-subscriber-control)# backup traffic-processing transparent	
27	, URL ().	esr(config)# subscriber-control unused-filters-remove-delay <DELAY>	<DELAY> – , [10800..86400].
28	, , , ().	esr(config-subscriber-default-service)# session-timeout <SEC>	<SEC> – , [120..3600].
29	VRRP-, (/) ().	esr(config-subscriber-control)# vrrp-group <GRID>	<GRID> – VRRP-, [1..32].
30	TCP- HTTP Proxy- ().	esr(config-subscriber-control)# ip proxy http listen-ports <NAME>	<NAME> – TCP/UDP-, 31 .
31	HTTP Proxy- ().	esr(config-subscriber-control)# ip proxy http redirect-port <PORT>	<PORT> – , [1..65535].
32	TCP- HTTPS Proxy- ().	esr(config-subscriber-control)# ip proxy https listen-ports <NAME>	<NAME> – TCP/UDP-, 31 .
33	HTTPS Proxy- ().	esr(config-subscriber-control)# ip proxy https redirect-port <PORT>	<PORT> – , [1..65535].
34	IP-, IP- Proxy- HTTP/HTTPS ().	esr(config-subscriber-control)# ip proxy source-address <ADDR>	<ADDR> – IP-, AAA.BBB.CCC.DDD, [0..255].
35	URL-, ().	esr(config)# subscriber-control apps-server-url <URL>	<URL> – , 8 255 .
36	().	esr(config-if-gi)# subscriber-control application-filter <NAME>	<NAME> – , 31 .
37	/ BRAS ().	esr(config-subscriber-control)# thresholds sessions-number high <Threshold>	<Threshold> – BRAS: <ul style="list-style-type: none"> • [0-50000] – ESR-1700 • [0-10000] – ESR-1200/1000/1500 /1511/3100 • [0-1000] – ESR-100/200
38	/ BRAS ().	esr(config-subscriber-control)# thresholds sessions-number low <Threshold>	<Threshold> – BRAS: <ul style="list-style-type: none"> • [0-50000] – ESR-1700 • [0-10000] – ESR-1200/1000/1500 /1511/3100 • [0-1000] – ESR-100/200

SoftWLC

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SoftWLC. SoftWLC :

https://docs.eltex-co.ru/display/doc/v1.17_SoftWLC – SoftWLC;

<https://docs.eltex-co.ru/pages/viewpage.action?pageId=76808938> – SoftWLC .

BRAS, .

, :

```
esr# configure
esr(config)# security zone trusted
esr(config-zone)# exit
esr(config)# security zone untrusted
esr(config-zone)# exit
esr(config)# security zone dmz
esr(config-zone)# exit
```

:

```
esr(config)# interface gigabitethernet 1/0/1
esr(config-if-gi)# security-zone untrusted
esr(config-if-gi)# ip address 203.0.113.2/30
esr(config-if-gi)# service-policy dynamic upstream
esr(config-if-gi)# exit
esr(config)# ip route 0.0.0.0/0 203.0.113.1
```

SoftWLC:

```
esr (config)# interface gigabitethernet 1/0/24
esr (config-if-gi)# security-zone dmz
esr (config-if-gi)# ip address 192.0.2.1/24
esr (config-if-gi)# exit
```

Wi-Fi .

```
esr(config)# bridge 2
esr(config-bridge)# security-zone trusted
esr(config-bridge)# ip address 192.168.0.254/24
esr(config-bridge)# ip helper-address 192.0.2.20
esr(config-bridge)# service-subscriber-control object-group users
esr(config-bridge)# location ssid1
esr(config-bridge)# enable
esr(config-bridge)# exit
esr(config)# interface gigabitethernet 1/0/2.2000
esr(config-subif)# bridge-group 1
esr(config-subif)# exit
esr(config)# interface gigabitethernet 1/0/2
esr(config-if-gi)# service-policy dynamic downstream
esr (config-if-gi)# exit
```



, location (bridge 2) .

, -, eltex-radius IP- SoftWLC. - SoftWLC.

:

```
esr(config)# radius-server host 192.0.2.20
esr(config-radius-server)# key ascii-text password
esr(config-radius-server)# auth-port 31812
esr (config-radius-server)# acct-port 31813
esr (config-radius-server)# exit
```

AAA:

```
esr(config)# aaa radius-profile RADIUS
esr(config-aaa-radius-profile)# radius-server host 192.0.2.20
esr(config-aaa-radius-profile)# exit
```

DAS (Direct-attached storage):-

```
esr(config)# object-group network server
esr(config-object-group-network)# ip address-range 192.0.2.20
esr(config-object-group-network)# exit
esr(config)# das-server CoA
esr(config-das-server)# key ascii-text password
esr(config-das-server)# port 3799
esr(config-das-server)# clients object-group server
esr(config-das-server)# exit
esr(config)# aaa das-profile CoA
esr(config-aaa-das-profile)# das-server CoA
esr(config-aaa-das-profile)# exit
```

trusted, DHCP- DNS-. DHCP- DNS:-

```
esr(config)# ip access-list extended DHCP
esr(config-acl)# rule 10
esr(config-acl-rule)# action permit
esr(config-acl-rule)# match protocol udp
esr(config-acl-rule)# match source-address any
esr(config-acl-rule)# match destination-address any
esr(config-acl-rule)# match source-port 68
esr(config-acl-rule)# match destination-port 67
esr(config-acl-rule)# enable
esr(config-acl-rule)# exit
esr(config-acl)# rule 11
esr(config-acl-rule)# action permit
esr(config-acl-rule)# match protocol udp
esr(config-acl-rule)# match source-address any
esr(config-acl-rule)# match destination-address any
esr(config-acl-rule)# match source-port any
esr(config-acl-rule)# match destination-port 53
esr(config-acl-rule)# enable
esr(config-acl-rule)# exit
esr(config-acl)# exit
```

:

```
esr(config)# ip access-list extended WELCOME
esr(config-acl)# rule 10
esr(config-acl-rule)# action permit
esr(config-acl-rule)# match protocol any
esr(config-acl-rule)# match source-address any
esr(config-acl-rule)# match destination-address any
esr(config-acl-rule)# enable
esr(config-acl-rule)# exit
esr(config-acl)# exit
esr(config)# ip access-list extended INTERNET
esr(config-acl)# rule 10
esr(config-acl-rule)# action permit
esr(config-acl-rule)# match protocol any
esr(config-acl-rule)# match source-address any
esr(config-acl-rule)# match destination-address any
esr(config-acl-rule)# enable
esr(config-acl-rule)# exit
esr(config-acl)# exit
```

web- :

```
esr(config)# object-group url defaultservice
esr(config-object-group-url)# url http://eltex.nsk.ru
esr(config-object-group-url)# exit
```

URL SoftWLC (IP- SoftWLC, , URL):

```
esr(config)# subscriber-control filters-server-url http://192.0.2.20:7070/Filters/file/
```

BRAS, NAS IP SoftWLC, - IP- gigabitethernet 1/0/24:

```
esr(config)# subscriber-control
esr(config-subscriber-control)# aaa das-profile CoA
esr(config-subscriber-control)# aaa sessions-radius-profile RADIUS
esr(config-subscriber-control)# nas-ip-address 192.0.2.1
esr(config-subscriber-control)# session mac-authentication
esr(config-subscriber-control)# bypass-traffic-acl DHCP
esr(config-subscriber-control)# default-service
esr(config-subscriber-default-service)# class-map INTERNET
esr(config-subscriber-default-service)# filter-name local defaultservice
esr(config-subscriber-default-service)# filter-action permit
esr(config-subscriber-default-service)# default-action redirect http://192.0.2.20:8080/eltex_portal/
esr(config-subscriber-default-service)# session-timeout 3600
esr(config-subscriber-default-service)# exit
esr(config-subscriber-control)# enable
esr(config-subscriber-control)# exit
```

```
esr(config)# object-group service telnet
esr(config-object-group-service)# port-range 23
esr(config-object-group-service)# exit
esr(config)# object-group service ssh
esr(config-object-group-service)# port-range 22
esr(config-object-group-service)# exit
esr(config)# object-group service dhcp_server
esr(config-object-group-service)# port-range 67
esr(config-object-group-service)# exit
esr(config)# object-group service dhcp_client
esr(config-object-group-service)# port-range 68
esr(config-object-group-service)# exit
esr(config)# object-group service ntp
esr(config-object-group-service)# port-range 123
esr(config-object-group-service)# exit
```

trusted dmz:

```

esr(config)# security zone-pair trusted untrusted
esr(config-zone-pair)# rule 10
esr(config-zone-pair-rule)# action permit
esr(config-zone-pair-rule)# match protocol any
esr(config-zone-pair-rule)# match source-address any
esr(config-zone-pair-rule)# match destination-address any
esr(config-zone-pair-rule)# enable
esr(config-zone-pair-rule)# exit
esr(config-zone-pair)# exit
esr(config)# security zone-pair dmz untrusted
esr(config-zone-pair)# rule 10
esr(config-zone-pair-rule)# action permit
esr(config-zone-pair-rule)# match protocol any
esr(config-zone-pair-rule)# match source-address any
esr(config-zone-pair-rule)# match destination-address any
esr(config-zone-pair-rule)# enable
esr(config-zone-pair-rule)# exit
esr(config-zone-pair)# exit
esr(config)# security zone-pair dmz trusted
esr(config-zone-pair)# rule 10
esr(config-zone-pair-rule)# action permit
esr(config-zone-pair-rule)# match protocol any
esr(config-zone-pair-rule)# match source-address any
esr(config-zone-pair-rule)# match destination-address any
esr(config-zone-pair-rule)# enable
esr(config-zone-pair-rule)# exit
esr(config-zone-pair)# exit

```

DHCP trusted dmz:

```

esr (config)# security zone-pair trusted dmz
esr (config-zone-pair)# rule 10
esr(config-zone-pair-rule)# action permit
esr(config-zone-pair-rule)# match protocol udp
esr(config-zone-pair-rule)# match source-address any
esr(config-zone-pair-rule)# match destination-address any
esr(config-zone-pair-rule)# match source-port dhcp_client
esr(config-zone-pair-rule)# match destination-port dhcp_server
esr(config-zone-pair-rule)# enable
esr(config-zone-pair-rule)# exit
esr(config-zone-pair)# exit

```

ICMP , BRAS -- TCP 3129/3128 (NetPort Discovery Port/Active API Server Port):

```

esr(config)# object-group service bras
esr(config-object-group-service)# port-range 3129
esr(config-object-group-service)# port-range 3128
esr(config-object-group-service)# exit
esr(config)# security zone-pair trusted self
esr(config-zone-pair)# rule 10
esr(config-zone-pair-rule)# action permit
esr(config-zone-pair-rule)# match protocol tcp
esr(config-zone-pair-rule)# match source-address any
esr(config-zone-pair-rule)# match destination-address any
esr(config-zone-pair-rule)# match source-port any
esr(config-zone-pair-rule)# match destination-port bras
esr(config-zone-pair-rule)# enable
esr (config-zone-pair-rule)# exit
esr(config-zone-pair)# rule 20
esr(config-zone-pair-rule)# action permit
esr(config-zone-pair-rule)# match protocol icmp
esr(config-zone-pair-rule)# match source-address any
esr(config-zone-pair-rule)# match destination-address any
esr(config-zone-pair-rule)# enable
esr(config-zone-pair-rule)# exit
esr(config-zone-pair-rule)# exit
esr(config)# security zone-pair dmz self
esr(config-zone-pair)# rule 20
esr(config-zone-pair-rule)# action permit
esr(config-zone-pair-rule)# match protocol icmp
esr(config-zone-pair-rule)# match source-address any
esr(config-zone-pair-rule)# match destination-address any
esr(config-zone-pair-rule)# enable
esr(config-zone-pair-rule)# exit
esr(config-zone-pair-rule)# exit
esr(config)# security zone-pair untrusted self
esr(config-zone-pair)# rule 20
esr(config-zone-pair-rule)# action permit
esr(config-zone-pair-rule)# match protocol icmp
esr(config-zone-pair-rule)# match source-address any
esr(config-zone-pair-rule)# match destination-address any
esr(config-zone-pair-rule)# enable
esr(config-zone-pair-rule)# exit
esr(config-zone-pair-rule)# exit

```

DHCP-Relay:

```

esr(config)# ip dhcp-relay

```

SNAT gigabitethernet 1/0/1:

```

esr(config)# nat source
esr(config-snat)# ruleset inet
esr(config-snat-ruleset)# to interface gigabitethernet 1/0/1
esr(config-snat-ruleset)# rule 10
esr(config-snat-rule)# match source-address any
esr(config-snat-rule)# action source-nat interface
esr(config-snat-rule)# enable
esr(config-snat-rule)# end

```

SoftWLC

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BRAS SoftWLC.

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10.10.0.0/16, FreeRADIUS- 192.168.1.1/24

:

1:

RADIUS-

FreeRADIUS- , . users FreeRADIUS :

:

```
<MACADDR> Cleartext-Password := <MACADDR>
```

#

```
User-Name = <USER_NAME> ,
```

#

```
Session-Timeout = <SECONDS> ,
```

#

```
Idle-Timeout = <SECONDS> ,
```

#

```
Acct-Interim-Interval = <SECONDS> ,
```

(A- , N-)

```
Cisco-Account-Info = " {A|N}<SERVICE_NAME>"
```

:

```
<SERVICE_NAME> Cleartext-Password := <MACADDR>
```

class-map ESR

```
Cisco-AVPair = "subscriber:traffic-class=<CLASS_MAP>" ,
```

, ESR (permit, deny, redirect)

```
Cisco-AVPair = "subscriber:filter-default-action=<ACTION>" ,
```

IP- (enabled-uplink, enabled-downlink, enabled, disabled)

```
Cisco-AVPair = "subscriber:flow-status=<STATUS>"
```

clients.conf , ESR:

```
client ESR {  
  ipaddr = <SUBNET>  
  secret = <RADIUS_KEY>  
}
```

RADIUS- :

«clients.conf» :

```
client BRAS {
  ipaddr = 192.168.1.1
  secret = password
}
```

«users» (<MAC> MAC-):

```
"54-E1-AD-8F-37-35" Cleartext-Password := "54-E1-AD-8F-37-35"
User-Name = "Bras_user",
Session-Timeout = 259200,
Idle-Timeout = 259200,
Cisco-AVPair += "subscriber:policer-rate-in=1000",
Cisco-AVPair += "subscriber:policer-rate-out=1000",
Cisco-AVPair += "subscriber:policer-burst-in=188",
Cisco-AVPair += "subscriber:policer-burst-out=188",
Cisco-Account-Info = "AINTERNET"
INTERNET Cleartext-Password := "INTERNET"
User-Name = "INTERNET",
Cisco-AVPair = "subscriber:traffic-class=INTERNET",
Cisco-AVPair += "subscriber:filter-default-action=permit"
```

2:

ESR.

BRAS BRAS.

```
esr(config)# do sh licence
Licence information
-----
Name:      Eltex
Version: 1.0
Type:      ESR-X
S/N:       NP00000000
MAC:       XX:XX:XX:XX:XX:XX
Features:
  BRAS - Broadband Remote Access Server
```

RADIUS:

```
esr(config)# radius-server host 192.168.1.2
esr(config-radius-server)# key ascii-text encrypted 8CB5107EA7005AFF
esr(config-radius-server)# source-address 192.168.1.1
esr(config-radius-server)# exit
```

AAA:

```
esr(config)# aaa radius-profile bras_radius
esr(config-aaa-radius-profile)# radius-server host 192.168.1.2
esr(config-aaa-radius-profile)# exit
esr(config)# aaa radius-profile bras_radius_servers
esr(config-aaa-radius-profile)# radius-server host 192.168.1.2
esr(config-aaa-radius-profile)# exit
```

DAS:

```
esr(config)# das-server das
esr(config-das-server)# key ascii-text encrypted 8CB5107EA7005AFF
esr(config-das-server)# exit
esr(config)# aaa das-profile bras_das
esr(config-aaa-das-profile)# das-server das
esr(config-aaa-das-profile)# exit
esr(config)# vlan 10
esr(config-vlan)# exit
```

:

```
esr(config)# ip access-list extended BYPASS
esr(config-acl)# rule 1
esr(config-acl-rule)# action permit
esr(config-acl-rule)# match protocol udp
esr(config-acl-rule)# match source-address any
esr(config-acl-rule)# match destination-address any
esr(config-acl-rule)# match source-port 68
esr(config-acl-rule)# match destination-port 67
esr(config-acl-rule)# enable
esr(config-acl-rule)# exit
esr(config-acl)# rule 2
esr(config-acl-rule)# action permit
esr(config-acl-rule)# match protocol udp
esr(config-acl-rule)# match source-address any
esr(config-acl-rule)# match destination-address any
esr(config-acl-rule)# match source-port any
esr(config-acl-rule)# match destination-port 53
esr(config-acl-rule)# enable
esr(config-acl-rule)# exit
esr(config)# ip access-list extended INTERNET
esr(config-acl)# rule 1
esr(config-acl-rule)# action permit
esr(config-acl-rule)# match protocol any
esr(config-acl-rule)# match source-address any
esr(config-acl-rule)# match destination-address any
esr(config-acl-rule)# enable
esr(config-acl-rule)# exit
esr(config)# ip access-list extended WELCOME
esr(config-acl)# rule 10
esr(config-acl-rule)# action permit
esr(config-acl-rule)# match protocol tcp
esr(config-acl-rule)# match source-address any
esr(config-acl-rule)# match destination-address any
esr(config-acl-rule)# match source-port any
esr(config-acl-rule)# match destination-port 443
esr(config-acl-rule)# enable
esr(config-acl-rule)# exit
esr(config-acl)# rule 20
esr(config-acl-rule)# action permit
esr(config-acl-rule)# match protocol tcp
esr(config-acl-rule)# match source-address any
esr(config-acl-rule)# match destination-address any
esr(config-acl-rule)# match source-port any
esr(config-acl-rule)# match destination-port 8443
```

```

esr(config-acl-rule)# enable
esr(config-acl-rule)# exit
esr(config-acl)# rule 30
esr(config-acl-rule)# action permit
esr(config-acl-rule)# match protocol tcp
esr(config-acl-rule)# match source-address any
esr(config-acl-rule)# match destination-address any
esr(config-acl-rule)# match source-port any
esr(config-acl-rule)# match destination-port 80
esr(config-acl-rule)# enable
esr(config-acl-rule)# exit
esr(config-acl)# rule 40
esr(config-acl-rule)# action permit
esr(config-acl-rule)# match protocol tcp
esr(config-acl-rule)# match source-address any
esr(config-acl-rule)# match destination-address any
esr(config-acl-rule)# match source-port any
esr(config-acl-rule)# match destination-port 8080
esr(config-acl-rule)# enable
esr(config-acl-rule)# exit

```

URL, , http-proxy BRAS :

```

esr(config)# object-group url defaultserv
esr(config-object-group-url)# url http://eltex.nsk.ru
esr(config-object-group-url)# url http://ya.ru
esr(config-object-group-url)# url https://ya.ru
esr(config-object-group-url)# exit

```

BRAS, NAS IP RADIUS- - IP- gigabitethernet 1/0/2:

```

esr(config)# subscriber-control
esr(config-subscriber-control)# aaa das-profile bras_das
esr(config-subscriber-control)# aaa sessions-radius-profile bras_radius
esr(config-subscriber-control)# aaa services-radius-profile bras_radius_servers
esr(config-subscriber-control)# nas-ip-address 192.168.1.1
esr(config-subscriber-control)# session mac-authentication
esr(config-subscriber-control)# bypass-traffic-acl BYPASS
esr(config-subscriber-control)# default-service
esr(config-subscriber-default-service)# class-map BYPASS
esr(config-subscriber-default-service)# filter-name local defaultserv
esr(config-subscriber-default-service)# filter-action permit
esr(config-subscriber-default-service)# default-action redirect http://192.168.1.2:8080/eltex_portal
esr(config-subscriber-default-service)# session-timeout 121
esr(config-subscriber-default-service)# exit
esr(config-subscriber-control)# enable
esr(config-subscriber-control)# exit

```

, BRAS ():

```

esr(config)# bridge 10
esr(config-bridge)# vlan 10
esr(config-bridge)# ip firewall disable
esr(config-bridge)# ip address 10.10.0.1/16
esr(config-bridge)# ip helper-address 192.168.1.2
esr(config-bridge)# service-subscriber-control any
esr(config-bridge)# location USER
esr(config-bridge)# protected-ports
esr(config-bridge)# protected-ports exclude vlan
esr(config-bridge)# enable
esr(config-bridge)# exit

```

RADIUS-:

```
esr(config)# interface gigabitethernet 1/0/2
esr(config-if-gi)# ip firewall disable
esr(config-if-gi)# ip address 192.168.1.1/24
esr(config-if-gi)# exit
```

:

```
esr(config)# interface gigabitethernet 1/0/3.10
esr(config-subif)# bridge-group 10
esr(config-subif)# ip firewall disable
esr(config-subif)# exit
```

SNAT gigabitethernet 1/0/2:

```
esr(config)# nat source
esr(config-snat)# ruleset factory
esr(config-snat-ruleset)# to interface gigabitethernet 1/0/2
esr(config-snat-ruleset)# rule 10
esr(config-snat-rule)# description "replace 'source ip' by outgoing interface ip address"
esr(config-snat-rule)# match protocol any
esr(config-snat-rule)# match source-address any
esr(config-snat-rule)# match destination-address any
esr(config-snat-rule)# action source-nat interface
esr(config-snat-rule)# enable
esr(config-snat-rule)# exit
esr(config-snat-ruleset)# exit
esr(config-snat)# exit
esr(config)# ip route 0.0.0.0/0 192.168.1.2
```

:

```
esr(config) # do commit
esr(config) # do confirm
```

- :

```
esr # sh subscriber-control sessions status
```

Session id	User name	IP address	MAC address	Interface	Domain
1729382256910270473	Bras_user	10.10.0.3	54:e1:ad:8f:37:35	gi1/0/3.10	--