

v1.14_ESR-10 OTT (1.6.0) .

- -
 -
 - - ESR-10
 - ELTEX-WIFI-SA
 - ISC-DHCP-SERVER
-
- EMS
-
- - BRAS
 -
 - SSID
 - L2
 - OTT
 - ESR-10 OTT
 - 1) OTT ESR-10
 - 2) EMS OTT, , MAC- ,
- - OTT , -
 -
 - default OTT
 -
 - , ESR-10 -

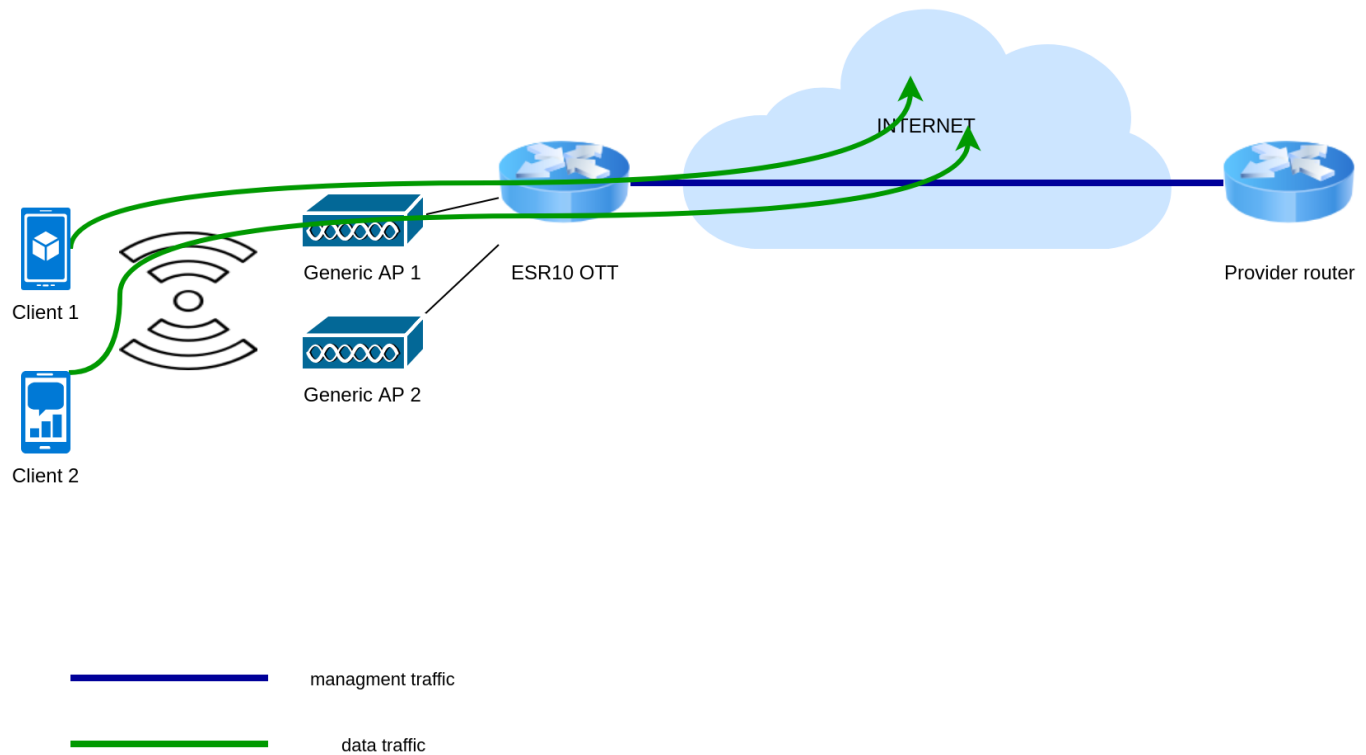
, SoftWLC OTT BRAS (,) .

GRE over IPsec ESR, OTT. .

, ESR-10, GRE over IPsec , ESR-10 .

"OTT " ESR-10 Jerry, [v1.12_Jerry](#).

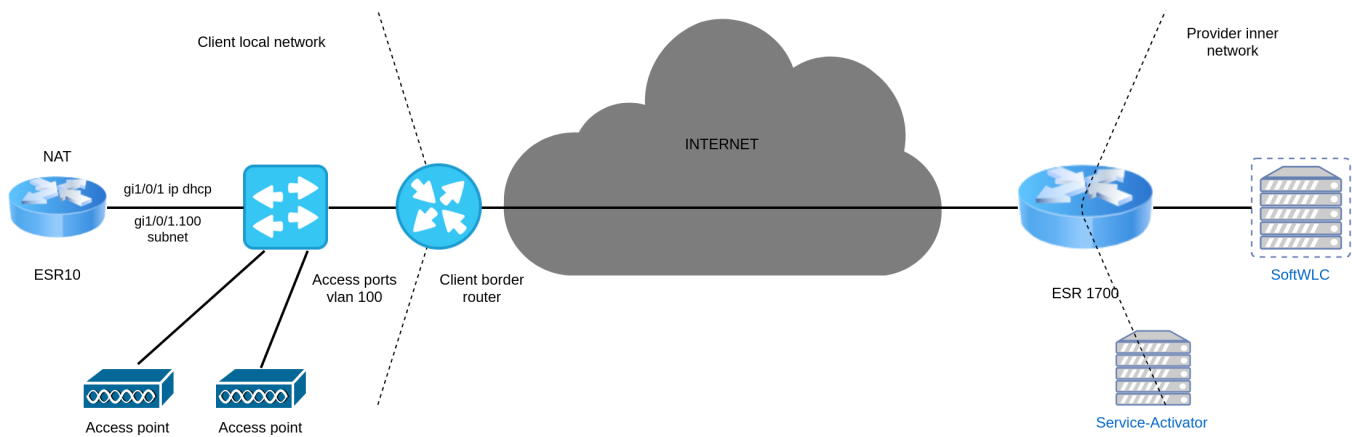
Общая схема подключения



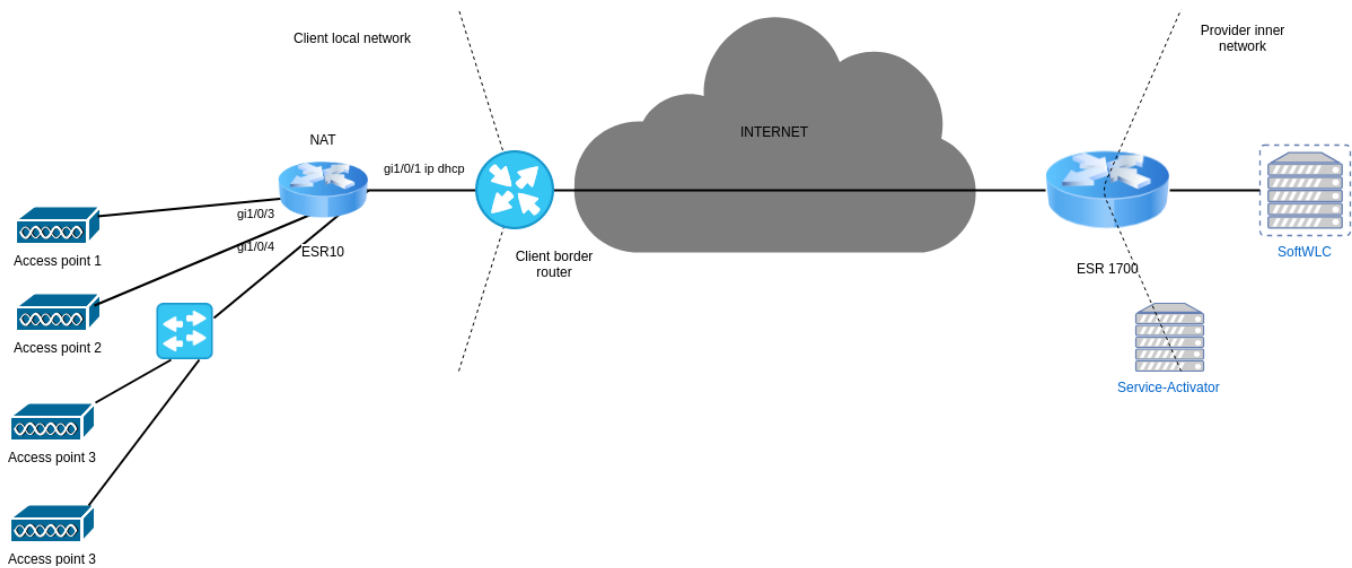
- 1) gi1/0/1 ESR10;
- 2) DHCP, default gateway DNS ;
- 3) ESR10 .

BRAS ESR-10 L3, , , ESR 10 . NAT ESR10, routing, NAT .

1. ESR-10 . ESR10 , SSID, , - ESR-10. ESR-10, , NAT.



2. ESR-10 , . ESR10 , - . ESR10 NAT, .



ESR-10 OTT:

- 1) ESR-10 - ESR10 , , , , .
- 2) , (OTT) MAC- ESR-10, , SoftWLC (L2,)- ESR-10 .

- ESR-10

ESR-10 OTT, . - - factory-config. , , ("password", -):

```
esr-10(change-expired-password)# password password
```

```
esr-10(change-expired-password)# comm
```

Configuration has been successfully applied and saved to flash. Commit timer started, changes will be reverted in 600 seconds.

2019-02-07T12:15:53+00:00 %CLI-I-CRIT: user admin from console input: commit

```
esr-10(change-expired-password)# confirm
```

Configuration has been confirmed. Commit timer canceled.

2019-02-07T12:15:57+00:00 %CLI-I-CRIT: user admin from console input: confirm

```
esr-10#
```

debug -:

```
esr-10# debug
```

```
esr-10(debug)# service-activator url https://sa.example.org:8043
```

- / DHCP url .

OTT - url -:

```
esr-10(debug)# no service-activator url
```

```
esr-10(debug)# show service-activator url
```

```
esr-10(debug)#
```

- ESR-10.

ELTEX-WIFI-SA

/var/lib/eltex-wifi-sa/firmware/

```
root@softwlc-ott:/tftpboot# mv -v /tftpboot/esr1x-1.6.0-build3.firmware /var/lib/eltex-wifi-sa/firmware/
```

```
'/tftpboot/esr1x-1.6.0-build3.firmware' -> '/var/lib/eltex-wifi-sa/firmware/esr1x-1.6.0-build3.firmware'  
removed '/tftpboot/esr1x-1.6.0-build3.firmware'
```

/etc/eltex-wifi-sa/factory-fw.conf ESR10:

```
"ESR-10" {  
  min = 1.6.0.3  
  file = esr1x-1.6.0-build3.firmware  
}
```

:

```
root@softwlc-ott:/tftpboot# service eltex-wifi-sa restart  
eltex-wifi-sa stop/waiting  
eltex-wifi-sa start/running, process 29739
```

ISC-DHCP-SERVER

ESR-10, OTT 43 15, GRE keepalive. , OTT . , SoftWLC 121 .

, GRE keepalive , 172.16.27.1:

```
0F:0B:31:37:32:2e:31:36:2e:32:37:2e:31
```

.. ESR10 OTT GRE over IPsec , , 43- 15 10, SNMP :

```
subnet 172.16.27.0 netmask 255.255.255.0 {
    pool {
        option routers 172.16.27.1;
        range 172.16.27.2 172.16.27.254;
        option vendor-encapsulated-options 0A:0E:31:39:32:2e:31:36:38:2e:34:32:2e:31:37:38:0f:0b:31:37:32:2e:31:36:2e:32:37:2e:31;
        option ms-classless-static-routes 24, 192,168,42, 172,16,27,1;
        option rfc3442-classless-static-routes 24, 192,168,42, 172,16,27,1;
        option ntp-servers 192.168.42.178;
        allow members of "ELTEX-DEVICES";
    }
}
```

ESR-10 , , . allow members of "ELTEX-DEVICES";

ESR "OTT .", , ESR-10 .

EMS

1. "Wireless" " ", "OTT ." "".

Правила

Привязки

OTT профили

OTT привязки

Черный список OTT

OTT индивидуальная конф.

Страница: 0 / 0 на странице: 20

Изменить поляОбновитьПросмотрДобавитьРедактироватьКлонироватьУдалить

ID	Name	Domain	Device type	Content	Length, b	Upload date	MD5
----	------	--------	-------------	---------	-----------	-------------	-----

Закреть

2. , - "default" (, ,), "device type" ESR-10 "".

Добавление нового объекта

Domain	★ OTT.root
Name	default
Device type	ESR-10

3. "".

Добавить 'default'

```

hostname ESR10-OTT-default

object-group network SoftWLC
 ip address-range 192.168.42.178
exit

line console
  aaa disable
exit
|
security zone trusted
exit
security zone untrusted
exit

snmp-server
snmp-server system-shutdown
snmp-server community "public11" ro
snmp-server community "private1" rw

snmp-server host 192.168.42.178
  source-interface bridge 1
exit

snmp-server enable traps
snmp-server enable traps links
snmp-server enable traps links status

```

ESR10:

```

hostname ESR10-OTT-default

object-group network SoftWLC
 ip address-range 192.168.42.178
exit

line console
  aaa disable
exit

security zone trusted
exit
security zone untrusted
exit

snmp-server
snmp-server system-shutdown
snmp-server community "public11" ro
snmp-server community "private1" rw

```

*snmp-server host 192.168.42.178
source-interface bridge 1
exit*

*snmp-server enable traps
snmp-server enable traps config
snmp-server enable traps config commit
snmp-server enable traps config confirm
snmp-server enable traps environment
snmp-server enable traps environment memory-flash-critical-low
snmp-server enable traps environment memory-flash-low
snmp-server enable traps environment memory-ram-critical-low
snmp-server enable traps environment memory-ram-low
snmp-server enable traps environment cpu-load
snmp-server enable traps environment cpu-critical-temp
snmp-server enable traps environment cpu-overheat-temp
snmp-server enable traps environment cpu-supercooling-temp
snmp-server enable traps file-operations
snmp-server enable traps file-operations successful
snmp-server enable traps file-operations failed
snmp-server enable traps file-operations canceled
snmp-server enable traps interfaces
snmp-server enable traps interfaces rx-utilization-high
snmp-server enable traps interfaces tx-utilization-high
snmp-server enable traps interfaces number-high
snmp-server enable traps screen
snmp-server enable traps screen dest-limit
snmp-server enable traps screen source-limit
snmp-server enable traps screen icmp-threshold
snmp-server enable traps screen udp-threshold
snmp-server enable traps screen syn-flood
snmp-server enable traps screen land
snmp-server enable traps screen winnuke
snmp-server enable traps screen icmp-frag
snmp-server enable traps screen udp-frag
snmp-server enable traps screen icmp-large
snmp-server enable traps screen syn-frag
snmp-server enable traps screen unknown-proto
snmp-server enable traps screen ip-frag
snmp-server enable traps screen port-scan
snmp-server enable traps screen ip-sweep
snmp-server enable traps screen syn-fin
snmp-server enable traps screen fin-no-ack
snmp-server enable traps screen no-flag
snmp-server enable traps screen spoofing
snmp-server enable traps screen reserved
snmp-server enable traps screen quench
snmp-server enable traps screen echo-request
snmp-server enable traps screen time-exceeded
snmp-server enable traps screen unreachable
snmp-server enable traps screen tcp-all-flags
snmp-server enable traps entity
snmp-server enable traps entity config-change
snmp-server enable traps entity-sensor
snmp-server enable traps entity-sensor threshold
snmp-server enable traps envmon
snmp-server enable traps envmon shutdown
snmp-server enable traps envmon temperature
snmp-server enable traps flash
snmp-server enable traps flash insertion
snmp-server enable traps flash removal
snmp-server enable traps snmp
snmp-server enable traps snmp authentication
snmp-server enable traps snmp coldstart
snmp-server enable traps snmp linkdown
snmp-server enable traps snmp linkup
snmp-server enable traps syslog*

*bridge 1
security-zone trusted
ip address dhcp
ip dhcp client ignore dns-nameserver
ip dhcp client ignore router
enable
exit*

```
interface gigabitethernet 1/0/1
description "UPLink"
ip address dhcp
security-zone untrusted
exit
interface gigabitethernet 1/0/2
shutdown
exit
interface gigabitethernet 1/0/3
shutdown
exit
interface gigabitethernet 1/0/4
shutdown
exit
interface gigabitethernet 1/0/5
shutdown
exit
interface gigabitethernet 1/0/6
shutdown
exit
interface loopback 1
exit
tunnel gre 1
keepalive dhcp dependent-interface bridge 1
keepalive dhcp dependent-interface gi1/0/1
mode ethernet
local address xauth ipsec_vpn
remote address xauth ipsec_vpn management-ip
enable
exit
tunnel gre 1.1
bridge-group 1
snmp init-trap
enable
exit

security zone-pair untrusted self
rule 1
action permit
match protocol icmp
enable
exit
exit
security zone-pair trusted self
rule 1
action permit
match source-address SoftWLC
enable
exit
exit

access profile acc_p
exit

security ike proposal ike_prop
exit

security ike policy ike_pol
authentication method xauth-psk-key
authentication mode client
proposal ike_prop
exit

security ike gateway ike_gw
ike-policy ike_pol
assign-interface loopback 1
local interface gigabitethernet 1/0/1
remote network dynamic client
mode policy-based
dead-peer-detection action restart
dead-peer-detection interval 10
exit

security ipsec proposal ipsec_prop
exit

security ipsec policy ipsec_pol
proposal ipsec_prop
exit
```

```
ip ssh server
```

Менеджер правил инициализации ТД

Правила

Привязки

ОТТ профили

ОТТ привязки

Черный список ОТТ

ОТТ индивидуальная конф.

Страница: 1 / 1 на странице: 20 Фильтр:

Изменить поля Обновить Добавить Редактировать Удалить Логин Перейти

ID	Тип устройства	Имя правила	Домен правила	Описание	Дата создания	...
7	WEP-12ac	default_OTT	OTT.root			C...
8	WEP-12ac-RevC	default_OTT	OTT.root			C...
9	WEP-2ac	default_OTT	OTT.root			C...
10	WEP-2ac-Smart	default_OTT	OTT.root			C...
11	WEP-12ac-RevB	default_OTT	OTT.root			C...
12	WB-15-W	default_OTT	OTT.root		02.06.2018 17:15:01	R...

Закреть

5. :

✕

□

Правило инициализации ТД

Главное

Тип устройства

★ ESR-10

Имя правила

★ default_OTT

Домен правила

★ OTT.root

Описание

RADIUS

Добавить ТД в RADIUS

☒

Ключ

★ testing123

Обновление ПО

Протокол загрузки ПО

FTP

Доступ

SNMP транспорт

UDP

SNMP Community (только чтение)

★ public11

SNMP Community (чтение/запись)

★ private1

Режим ESR

StationCE

Сервис BRAS

☒

✓ Принять

✕ Отменить

- :
- 1) " " - "ESR-10";
 - 2) " " - "default_OTT" (, OTT , OTT);
 - 3) " RADIUS" - ;
 - 4) "" - "testing123";
 - 5) " " - "FTP";
 - 6) "SNMP " - "UDP";
 - 7) "SNMP Community ()" - "public11" (ESR - 8);
 - 8) "SNMP Community (/)" - "private1";
 - 9) ESR - "StationCE" (, , PCRF /);
 - 10) " BRAS" - (ESR10 OTT , , OTT).
- "".
6. " " " "" OTT (, , OTT):

Менеджер правил инициализации ТД

Правила

Привязки

ОТТ профили

ОТТ привязки

Черный список ОТТ

ОТТ индивидуальная конф.

Страница: 1 / 1

на странице: 20

Фильтр:

Изменить поля

Обновить

Добавить

Редактировать

Удалить

Логи

ID привязки	Имя устройс...	Ключ	Имя правила	Домен прави...	Домен узла	ОТТ (Over-th...	ОТТ ин...
7	ОТТ	ott_default	default_ОТТ	ОТТ.root	default.ОТТ.root	Connected	default
9	ОТТ	a8:f9:4b:b6:04:...	default_ОТТ	ОТТ.root	shishmarev.ОТТ...	Connected	
10	ОТТ	e0:d9:e3:75:21:...	default_ОТТ	ОТТ.root	abarenov.ОТТ.r...	Connected	
11	ОТТ_limonov_re...	e0:d9:e3:70:01:...	default_ОТТ	ОТТ.root	limonov.ОТТ.root	Connected	
12	ОТТ_doronina_...	e0:d9:e3:70:38:...	default_ОТТ	ОТТ.root	doronina.ОТТ.r...	Connected	
13	ОТТ_haliullin_re...	e0:d9:e3:52:ee:...	default_ОТТ	ОТТ.root	haliullin.ОТТ.root	Connected	
15	ОТТ_WB	a8:f9:4b:b6:70:...	default_ОТТ	ОТТ.root	default.ОТТ.root	Connected	
19	ОТТ	e0:d9:e3:75:24:...	default_ОТТ	ОТТ.root	beletskaya.ОТТ...	Connected	
20		a8:f9:4b:b6:74:...	default_ОТТ	ОТТ.root	default.ОТТ.root	Connected	
22	WB-15-W_shkaf...	a8:f9:4b:b6:70:...	default_ОТТ	ОТТ.root	default.ОТТ.root	Connected	
23	ОТТ	a8:f9:4b:b6:74:...	default_ОТТ	ОТТ.root	default.ОТТ.root	Connected	

Закреть

7. , "ОТТ .", ESR10 SA.

Редактирование объекта

Имя устройства

ОТТ

Ключ

★ ott_default

?

Имя правила

★ default_ОТТ

←

Домен правила

ОТТ.root

●

Домен узла

★ default.ОТТ.root

🌐

ОТТ (Over-the-top)

☒

ОТТ индивидуальная конф.

←

✓ Принять

✗ Отменить

8. "default" "".

9. :

■■■■■

10. " ". ESR-10 , ,

- BRAS

BRAS. . , c OTT, WELCOME .

1. , " " " PCRF" "":

Тарифы
Сервисы PCRF
Сценарии сервисов PCRF

Фильтр:
Имя сервис
Домен
Обновить
Очистить

Добавить
Редактировать
Удалить
Экспорт

☐	Имя сервиса
☐	INTERNET
☐	Ttest01
☐	WELCOME

Создать новый сервис

Имя сервиса *

OTTInternet

Домен *

OTT.root

Класс трафика *

INTERNET

Квота по времени

?

Секунды

Квота по трафику

?

Байт

Интервал отправки аккаунтинга, с *

600

Приоритет *

10

Возможность прохождения IP потоков

Разрешить IP поток в оба нап

Фильтры URL

Действие по умолчанию *

permit

Имя фильтра

Действие

permit

Добавить

Удалить

Выбранные фильтры

Имя фильтра	Действие	URL

Сохранить

Отменить

- 1) " " - "OTTInternet";
- 2) "" - ;
- 3) " " - "INTERNET";
- 4) " " - "600";
- 5) "" - "10";
- 6) " IP " - " IP " .
"".
2. " PCRF" "", "PCRF/BRAS" "".

Тарифы

Сервисы PCRF

Сценарии сервисов

Фильтр: PCRF/BRAS

Имя

Добавить

Редактировать

Удалить

☐	Имя	Код
☐	INTERNET	INTE...

Записей на страницу: 30

<<

>>

Создать новый тариф

Наименование *

ОТТ_bras

Описание

Код тарифа *

ОТТbras

Домен *

ОТТ.root

Время жизни сессии

12 Часы

Время жизни сессии при бездействии пользователя *

10 Минуты

Интервал отправки аккаунтинга, с *

600

Количество одновременных сессий с одним логином и паролем

Цена, руб.

Состав услуг

Сценарии

Сервисы

☒ OTTInternet

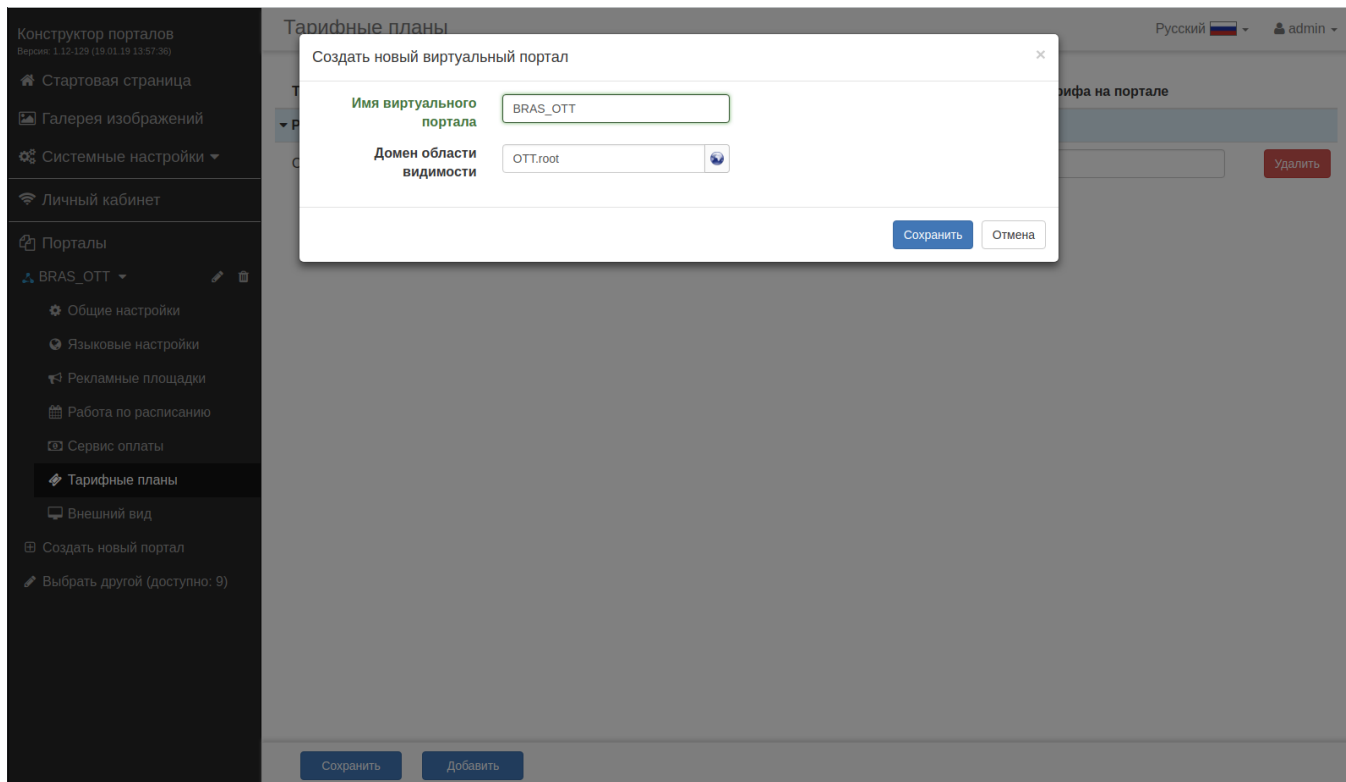
Сохранить

Отменить

- 1) "" - ;
- 2) "" - ;
- 3) "" - (,);
- 4) " " - "12";
- 5) " " - "10";
- 6) " " - "600";
- 7) "" - "OTTInternet";
- 8) "".

, BRAS. . . , BRAS .

1. , " ":



1) " " - ;

2) " " - ;

"".

2. " " "OTT_bras":

test_stan

Вариант

Changelis

Задачи

Bug #113

Bug #113

1.6.0 ESR

1.6.0 ESR

Bug #112

Личный

Eltex WiFi

Not secure | http://172.16.0.135:9001/epadmin/main.htm?vp=BRAS_OTT&menu=portalTariffs

Paul-base - SoftvASCII to Hex text

Конструктор порталов
Версия: 1.12-129 (19.01.19 13:57:36)

Стартовая страница

Галерея изображений

Системные настройки

Личный кабинет

Порталы

BRAS_OTT

Общие настройки

Языковые настройки

Рекламные площадки

Работа по расписанию

Сервис оплаты

Тарифные планы

Внешний вид

Создать новый портал

Выбрать другой (доступно: 9)

Тарифные планы

Русскийadmin

Тариф	Код	Домен	Название тарифа на портале
Работа через BRAS			
OTT_bras	OTTbras	OTT.root	OTT_bras Удалить

Сохранить

Добавить

'''.

SSID

SSID, BRAS: "Wireless" "SSID" "SSID":

Добавить SSID

Тип	Hotspot
Имя	★ SSID1
Описание	
Domain	★ office01.OTT.root
Статус SSID	Operational
Дата создания	2019-02-01 18:33:04
----- Оции -----	
Bridge, Location	SSID12
Статус VAP	Up
Режим трафика VAP (только для GRE)	Tunnel
Broadcast SSID	☒
Radio	All
Режим безопасности	Без шифрования
MAC Auth Type	Disable
Статус Client QoS	on
VLAN-ID	☒ 701
QoS method (down link)	802.1p
802.1p priority (up link)	0
VLAN trunk	☐
Изоляция клиентов	☐
Band steer	☒
Wireless Multicast Forwarding	☐
Hotspot 2.0	
DiffServ Policy Up	
DiffServ Policy Down	
Bandwidth Limit Up, kbps	0
Bandwidth Limit Down, kbps	0
VAP Limit Up, kbps	0
VAP Limit Down, kbps	0
----- Minimal signal -----	
Enabled	☐
----- Captive portal -----	
Enabled	☐
Virtual portal name	BRAS_OTT
----- Расписание работы ----- ?	
Включить	☐

 Принять

 Отменить

SSID1.

" VAP" "tunnel" - ESR-10 BRAS (SSID).

Добавить SSID

Тип	Hotspot
Имя	★ SSID2
Описание	
Domain	★ office01.OTT.root
Статус SSID	Operational
Дата создания	2019-02-01 18:33:04
----- Опции -----	
Bridge, Location	SSID12
Статус VAP	Up
Режим трафика VAP (только для GRE)	Tunnel
Broadcast SSID	☒
Radio	All
Режим безопасности	Без шифрования
MAC Auth Type	Disable
Статус Client QoS	on
VLAN-ID	☒ 702
QoS method (down link)	802.1p
802.1p priority (up link)	0
VLAN trunk	☐
Изоляция клиентов	☐
Band steer	☒
Wireless Multicast Forwarding	☐
Hotspot 2.0	
DiffServ Policy Up	
DiffServ Policy Down	
Bandwidth Limit Up, kbps	0
Bandwidth Limit Down, kbps	0
VAP Limit Up, kbps	0
VAP Limit Down, kbps	0
----- Minimal signal -----	
Enabled	☐
----- Captive portal -----	
Enabled	☐
Virtual portal name	BRAS_OTT
----- Расписание работы ----- ?	
Включить	☐

 Принять

 Отменить

SSID2.

, ESR-10.

L2

L2 " " . . . IP- DHCP, . . . L2 OTT (BRAS ESR10) - "MAC, " . , L2 NAS MAC. NAS IP :

- 1) (SNMP ESR-10 MAC);
- 2) ;
- 3) .

"Notify PCRF about IP changed for MAC-based subnets".

L2 - SSID1 SSID2.

" PCRF" " L2" "":

The screenshot shows a web application for PCRF configuration. A modal window titled "Редактировать подсеть" (Edit subnet) is open, displaying the configuration for a subnet named "SSID1". The configuration fields are as follows:

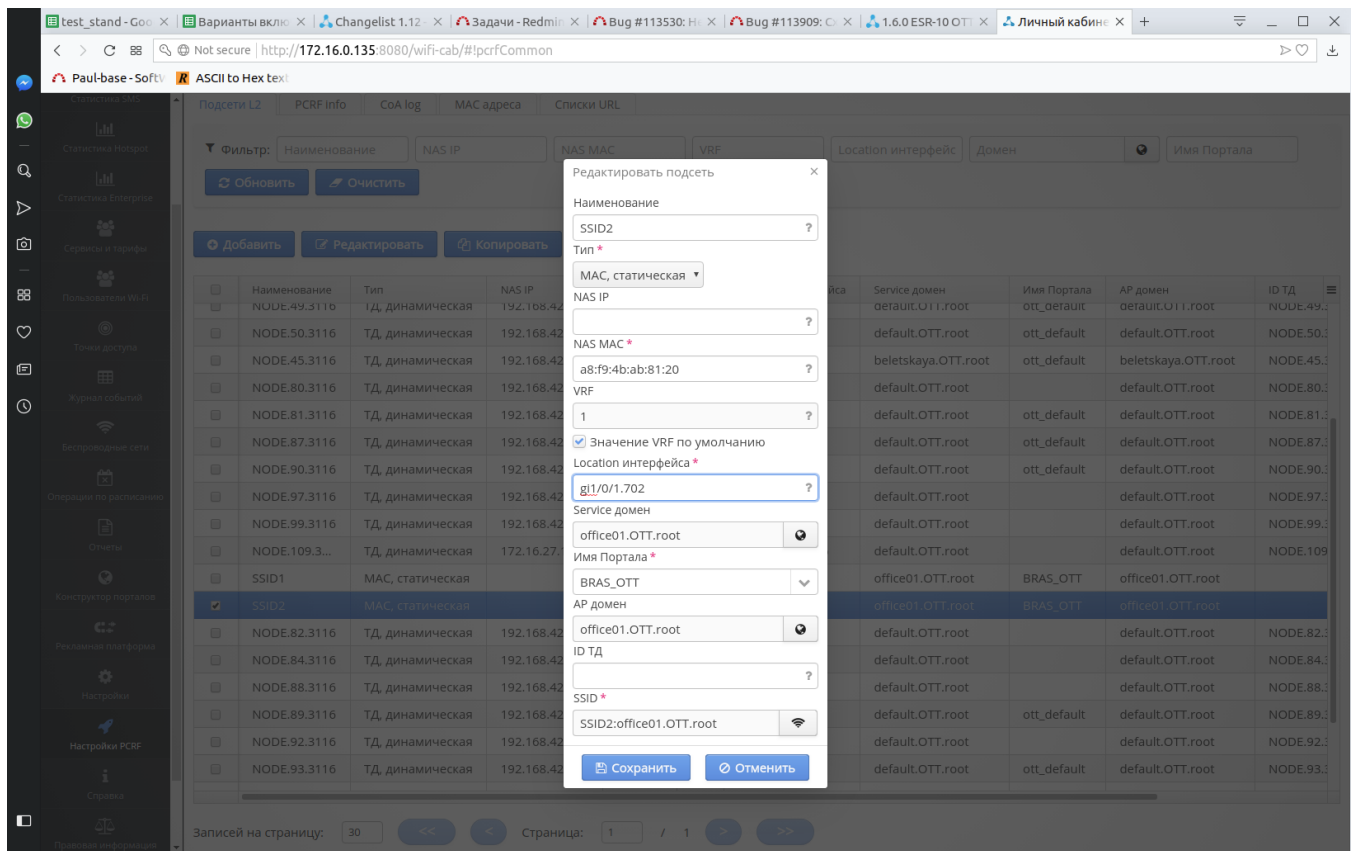
- Наименование: SSID1
- Тип: MAC, статическая
- NAS IP: (empty)
- NAS MAC: a8:f9:4b:ab:81:20
- VRF: 1
- Location интерфейс: gi1/0/1.701
- Service домен: office01.OTT.root
- Имя Портала: BRAS_OTT
- AP домен: office01.OTT.root
- ID ТД: (empty)
- SSID: SSID1:office01.OTT.root

The background shows a table of subnets with the following columns: Наименование, Тип, NAS IP, Service домен, Имя Портала, AP домен, ID ТД. The table contains several rows of data, including nodes like NODE.45.3116, NODE.80.3116, etc.

- "SSID1";

- 1) "NAS IP" - (IP);
- 2) "" - "MAC", " MAC- ESR10;
- 3) "VRF" - " VRF ";
- 4) "Location" - location gi1/0/1.701 (-, SSID1);
- 5) "Service" - SSID;
- 6) "AP" - ESR-10;
- 7) "SSID" - SSID (SSID1);
- "".

L2 SSID2:



ОТТ

1. " ", "ОТТ ." :

✖

Добавление нового объекта

Name

клиент офис 1

Domain

★ office01.OTT.root

Device type

ESR-10

✓ Принять

✖ Отменить

, , Device type "ESR-10", "".

2. :

✕

□

Добавить 'клиент офис 1'

hostname ESR10-OTT-of1

object-group service dns
port-range 53

exit

object-group service dhcp_server
port-range 67

exit

object-group service dhcp_client
port-range 68

exit

object-group service snmp
port-range 161-162

exit

object-group service redirect
port-range 3128-3129
port-range 3130-3131

exit

object-group network natpool
ip prefix 192.168.1.0/24

exit

object-group network SoftWLC
ip address-range 100.123.0.2

exit

radius_server_timeout 10

✓ Принять

✕ Отменить

hostname ESR10-OTT-of1

*object-group service dns
port-range 53
exit
object-group service dhcp_server
port-range 67
exit
object-group service dhcp_client
port-range 68
exit
object-group service snmp
port-range 161-162
exit
object-group service redirect
port-range 3128-3129
port-range 3130-3131
exit*

*object-group network natpool
ip prefix 192.168.1.0/24
exit
object-group network SoftWLC
ip address-range 192.168.42.178
exit*

```
radius-server timeout 10
radius-server retransmit 5
radius-server host 192.168.42.178
key ascii-text encrypted 88B11079B9014FAAF7B9
timeout 11
priority 20
source-interface bridge 1
auth-port 31812
acct-port 31813
retransmit 10
dead-interval 10
exit
aaa radius-profile PCRF
radius-server host 192.168.42.178
exit
das-server COA
key ascii-text encrypted 88B11079B9014FAAF7B9
port 3799
clients object-group SoftWLC
exit
aaa das-profile COA
das-server COA
exit
line console
aaa disable
exit
```

```
domain lookup enable
```

```
security zone trusted
exit
security zone untrusted
exit
security zone user
exit
```

```
ip access-list extended WELCOME
rule 1
action permit
match protocol tcp
match destination-port 443
enable
exit
rule 2
action permit
match protocol tcp
match destination-port 8443
enable
exit
rule 3
action permit
match protocol tcp
match destination-port 80
enable
exit
rule 4
action permit
match protocol tcp
match destination-port 8080
enable
exit
exit
```

```
ip access-list extended INTERNET
rule 1
action permit
enable
exit
exit
```

ip access-list extended unauthUSER

rule 1

action permit

match protocol udp

match source-port 68

match destination-port 67

enable

exit

rule 2

action permit

match protocol udp

match destination-port 53

enable

exit

exit

subscriber-control filters-server-url http://192.168.42.178:7070/filters/file

subscriber-control

aaa das-profile COA

aaa sessions-radius-profile PCRF

aaa services-radius-profile PCRF

nas-interface bridge 1

session mac-authentication

bypass-traffic-acl unauthUSER

default-service

class-map unauthUSER

filter-name remote gosuslugi

filter-action permit

default-action redirect http://192.168.42.178:8080/eltex_portal/

session-timeout 600

exit

enable

exit

snmp-server

snmp-server system-shutdown

snmp-server community "public11" ro

snmp-server community "private1" rw

snmp-server host 192.168.42.178

source-interface bridge 1

exit

snmp-server enable traps
snmp-server enable traps config
snmp-server enable traps config commit
snmp-server enable traps config confirm
snmp-server enable traps environment
snmp-server enable traps environment memory-flash-critical-low
snmp-server enable traps environment memory-flash-low
snmp-server enable traps environment memory-ram-critical-low
snmp-server enable traps environment memory-ram-low
snmp-server enable traps environment cpu-load
snmp-server enable traps environment cpu-critical-temp
snmp-server enable traps environment cpu-overheat-temp
snmp-server enable traps environment cpu-supercooling-temp
snmp-server enable traps file-operations
snmp-server enable traps file-operations successful
snmp-server enable traps file-operations failed
snmp-server enable traps file-operations canceled
snmp-server enable traps interfaces
snmp-server enable traps interfaces rx-utilization-high
snmp-server enable traps interfaces tx-utilization-high
snmp-server enable traps interfaces number-high
snmp-server enable traps bras
snmp-server enable traps bras sessions-number-high
snmp-server enable traps screen
snmp-server enable traps screen dest-limit
snmp-server enable traps screen source-limit
snmp-server enable traps screen icmp-threshold
snmp-server enable traps screen udp-threshold
snmp-server enable traps screen syn-flood
snmp-server enable traps screen land
snmp-server enable traps screen winnuke
snmp-server enable traps screen icmp-frag
snmp-server enable traps screen udp-frag
snmp-server enable traps screen icmp-large
snmp-server enable traps screen syn-frag
snmp-server enable traps screen unknown-proto
snmp-server enable traps screen ip-frag
snmp-server enable traps screen port-scan
snmp-server enable traps screen ip-sweep
snmp-server enable traps screen syn-fin
snmp-server enable traps screen fin-no-ack
snmp-server enable traps screen no-flag
snmp-server enable traps screen spoofing
snmp-server enable traps screen reserved
snmp-server enable traps screen quench
snmp-server enable traps screen echo-request
snmp-server enable traps screen time-exceeded
snmp-server enable traps screen unreachable
snmp-server enable traps screen tcp-all-flags
snmp-server enable traps entity
snmp-server enable traps entity config-change
snmp-server enable traps entity-sensor
snmp-server enable traps entity-sensor threshold
snmp-server enable traps envmon
snmp-server enable traps envmon shutdown
snmp-server enable traps envmon temperature
snmp-server enable traps flash
snmp-server enable traps flash insertion
snmp-server enable traps flash removal
snmp-server enable traps snmp
snmp-server enable traps snmp authentication
snmp-server enable traps snmp coldstart
snmp-server enable traps snmp linkdown
snmp-server enable traps snmp linkup
snmp-server enable traps syslog

```
bridge 1
security-zone trusted
ip address dhcp
ip dhcp client ignore dns-nameserver
ip dhcp client ignore router
enable
exit
bridge 11
security-zone user
ip address 192.168.1.1/24
service-subscriber-control any
location SSID12
enable
exit

interface gigabitethernet 1/0/1
description "UPLink"
ip address dhcp
security-zone untrusted
exit
interface gigabitethernet 1/0/1.701
bridge-group 11
exit
interface gigabitethernet 1/0/1.702
bridge-group 11
exit
interface gigabitethernet 1/0/2
shutdown
exit
interface gigabitethernet 1/0/3
shutdown
exit
interface gigabitethernet 1/0/4
shutdown
exit
interface gigabitethernet 1/0/5
shutdown
exit
interface gigabitethernet 1/0/6
shutdown
exit
interface loopback 1
exit
tunnel gre 1
keepalive retries 3
keepalive dhcp dependent-interface bridge 1
keepalive dhcp dependent-interface gi1/0/1
mode ethernet
local address xauth ipsec_vpn
remote address xauth ipsec_vpn management-ip
enable
exit
tunnel gre 1.1
bridge-group 1
snmp init-trap
enable
exit
```



```
security zone-pair untrusted self
rule 1
    action permit
    match protocol icmp
    enable
exit
security zone-pair trusted self
rule 1
    action permit
    enable
exit
security zone-pair user untrusted
rule 10
    action permit
    enable
exit
security zone-pair user self
rule 10
    action permit
    match protocol udp
    match source-port dhcp_client
    match destination-port dhcp_server
    enable
exit
rule 20
    action permit
    match protocol tcp
    match destination-port redirect
    enable
exit
rule 30
    action permit
    match protocol udp
    match destination-port dns
    enable
exit
exit

access profile acc_p
exit

security ike proposal ike_prop
exit

security ike policy ike_pol
    authentication method xauth-psk-key
    authentication mode client
    proposal ike_prop
exit

security ike gateway ike_gw
    ike-policy ike_pol
    assign-interface loopback 1
    local interface gigabitethernet 1/0/1
    remote network dynamic client
    mode policy-based
    dead-peer-detection action restart
    dead-peer-detection interval 10
exit

security ipsec proposal ipsec_prop
exit

security ipsec policy ipsec_pol
    proposal ipsec_prop
exit

security ipsec vpn ipsec_vpn
    mode ike
    ike establish-tunnel immediate
    ike gateway ike_gw
    ike ipsec-policy ipsec_pol
    enable
exit
```

```

nat source
ruleset NAT
to interface gigabitethernet 1/0/1
rule 10
match source-address natpool
action source-nat interface
enable
exit
exit
exit

ip dhcp-server
ip dhcp-server pool lan
network 192.168.1.0/24
max-lease-time 000:00:20
default-lease-time 000:00:10
address-range 192.168.1.2-192.168.1.254
default-router 192.168.1.1
dns-server 192.168.1.1
exit

ip ssh server

clock timezone gmt +7

ntp enable
ntp server 100.123.0.2
exit

```

'''

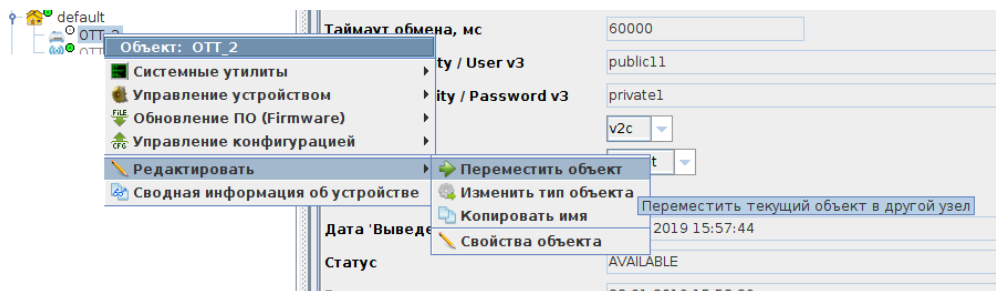
ESR-10 OTT

, OTT ESR . :

1) OTT ESR-10

MAC- ESR-10 .

1. OTT, :



OTT.

2. "Wireless" " " " " :

Менеджер правил инициализации ТД

Правила
Привязки
ОТТ профили
ОТТ привязки
Черный список ОТТ
ОТТ индивидуальная конф.

Страница: 1 / 1 на странице: 20 Фильтр: a8:f9:4b:ab:81:20

Изменить поля Обновить Добавить Редактировать Удалить Логи

ID привязки	Имя устрой...	Ключ	Имя правила	Домен прав...	Домен узла	ОТТ (Over-t...	ОТТ ин...
24	ОТТ	a8:f9:4b:ab:81:20	default_OTT	OTT.root	office01.OTT.r...	Connected	default

Закреть

3. "" :

Редактирование объекта

Имя устройства: OTT

Ключ: ★ a8:f9:4b:ab:81:20 ?

Имя правила: ★ default_OTT ←

Домен правила: OTT.root

Домен узла: ★ office01.OTT.root

ОТТ (Over-the-top): ☒

ОТТ индивидуальная конф.: default ←

Принять Отменить

4. "ОТТ ." ESR-10 :

Выбрать

Страница: 1 / 1

на странице: 20

Изменить поля

Обновить

Просмотр

Добавить

Редактировать

Клонировать

ID	Name	Domain	Device type	Content	Length, b	Upload date	MD5
5c499ce998a3e...	default	OTT.root	ESR-10	CLI	4967	Thu Jan 24 18:0...	aa09bac2d6d1a...
5c4e67b398a3e...	клиент офис 1	office01.OTT.root	ESR-10	CLI	8231	Mon Jan 28 09:2...	1b204a949f0a4...

Принять

Очистить

Отменить

5. , "OTT ." :

Редактирование объекта

Имя устройства

OTT

Ключ

★ a8:f9:4b:ab:81:20

?

Имя правила

★ default_OTT

←

Домен правила

OTT.root

↻

Домен узла

★ office01.OTT.root

🌐

OTT (Over-the-top)

☒

OTT индивидуальная конф.

клиент офис 1

←

Принять

Отменить

5. ESR-10 " " ".

office01

OTT

OTT-170

Объект: OTT_2

Системные утилиты

Управление устройством

Обновление ПО (Firmware)

Управление конфигурацией

Редактировать

Сводная информация об устройстве

Выполнить синхронизацию

Сбросить конфигурацию к заводским настройкам и перезагрузить устройство

Перезагрузить устройство

Перезагрузить устройство

Количество ETP портов

В-2 портов 2

6. , SA .

Апплет Устройства Управление OLT ONT RADIUS Wireless Netconf События Утилиты Администрирование Информация Справка

Синхронизация Поиск ONT Сохранить Применить События: 0 0 1 0

Поиск

Активные аварии Список ONT Список устройств Каналы PON VoIP порты Пользователи Wi-Fi Мониторинг конкурентных ТД Доступ

групповые операции

- Синхронизация времени
- Трап приемники
- Syslog приемники
- Обновление ПО
- Добавить пользователя
- Редактировать пользователя
- Изменить пароль пользователя
- Удалить пользователя
- SNMP-сценарий
- Добавить ТД на RADIUS
- Создать data-tunnel на ESR
- Установить домен ТД
- Получить конфигурацию ТД
- Конфигурирование ТД
- Переинициализация ТД по привязке
- Перезагрузить устройство
- Добавить правило автообновления ONT
- Редактировать правило автообновления ONT
- Удалить правило автообновления ONT
- Сменить режим обновления ONT
- Загрузка ПО ONT на OLT
- Экспорт сводной информации об устройстве
- Автоматическая смена ONT ID
- Смена параметров Доступа

Выполнить

Имя	Адрес	Домен	MAC	Тип	Под...	Серий...	В раб...	Версия ПО	Состояние	Дата ин...	Макс. по...
OTT_4	172.16.27...	office01.OTT.root	A8:F9:4B:A...	ESR	-10	00:00:2...	1.6.0.9	Данные н...	01.02.201...		

Задачи

ID задачи	Название задачи	Пользователь	IP пользователя	Дата старта	Дата заверше...	Статус	Прогресс	Сообщение	Прервать
43	Инициализация ...	Wireless AP initiati...	127.0.0.1	2019-02-01 18:51...	2019-02-01 18:51...	Завершено успе...	100 %	Инициализация ...	

!!! :

Сообщение

01.02.2019 19:09:36 Переинициализация ТД 'OTT_4' (172.16.27.80)
 01.02.2019 19:09:36 Переконфигурирование беспроводной точки доступа
 Запущено для переинициализации 'OTT_4'
 Правило инициализации (найдено по 'MAC a8:f9:4b:ab:81:20')
 BrasService = true;
 EsrMode = StationCE;
 FirmwareUpdateEnabled = false;
 FirmwareUpdateProtocol = FTP;
 RadiusApSecret = testing123;
 SnmpReadOnlyCommunity = public11;
 SnmpReadWriteCommunity = private1;
 SnmpTransportType = UDP;
 TreeNodeDomain = office01.OTT.root;
 DeviceName = OTT;
 KeyType = MAC;
 KEY = a8:f9:4b:ab:81:20;
 OttMode = Connected;
 CustomCfg = клиент офис 1

01.02.2019 19:09:36 Шаг 1: Обновление параметров доступа
 На OTT ТД должен использоваться TCP SNMP транспорт.
 01.02.2019 19:09:36 Шаг 2: Проверка объекта RADIUS NAS
 01.02.2019 19:09:36 Шаг 3: Notify PCRF about IP changed for MAC-based subnets
 Завершено
 01.02.2019 19:09:36 Переконфигурирование ТД завершено

Закреть

7. - .

2) EMS OTT, , MAC- ,

1. ESR-10 OTT. "Wireless" " " "" "":

✖

⏏

Правило инициализации ТД

Главное

Тип устройства

★ ESR-10

Имя правила

★ ESR-10-OTT

Домен правила

★ OTT.root

Описание

RADIUS

Добавить ТД в RADIUS

☒

Ключ

★ testing123

Обновление ПО

Протокол загрузки ПО

FTP

Доступ

SNMP транспорт

UDP

SNMP Community (только чтение)

★ public11

SNMP Community (чтение/запись)

★ private1

Режим ESR

StationCE

Сервис BRAS

☒

✔

Принять

✖

Отменить

:

- 1) " " - "ESR-10";
- 2) " " - "ESR-10-OTT" ();
- 3) " RADIUS" - ;
- 4) "" - "testing123";
- 5) " " - "FTP";
- 6) "SNMP " - "UDP";
- 7) "SNMP Community ()" - "public11" (ESR - 8);
- 8) "SNMP Community (/)" - "private1";
- 9) ESR - "StationCE" (, , PCRF /);
- 10) " BRAS" - (ESR10 OTT , , OTT).
- "".

2. "Wireless" " " "" "":

✖

□

Добавление нового объекта

Имя устройства

ESR10-OTT

Ключ

★ a8:f9:4b:ab:81:20

?

Имя правила

★ ESR-10-OTT

←

Домен правила

OTT.root

⌕

Домен узла

★ office01.OTT.root

🌐

OTT (Over-the-top)

☒

OTT индивидуальная конф.

клиент офис 1

←

✓ Принять

✖ Отменить

- :
- 1) "" - , EMS;
 - 2) "" - MAC- ESR-10;
 - 3) "" - ;
 - 4) "" - , ;
 - 5) OTT (Over-the-top) - ;
 - 6) OTT . - , .
- "";

✖

□

Менеджер правил инициализации ТД

Правила

Привязки

OTT профили

OTT привязки

Черный список OTT

OTT индивидуальная конф.

Страница: 1 / 1

на странице: 20

Фильтр: a8:f9:4b:ab:81:20

Изменить поля

Обновить

Добавить

Редактировать

Удалить

Логи

ID привязки	Имя устройст...	Ключ	Имя правила	Домен прав...	Домен узла	OTT (Over-th...	...
25	ESR-10-OTT	a8:f9:4b:ab:81:20	default_OTT	OTT.root	office01.OTT.root	Connected	...

✖ Закрыть

, .

ESR-10 .

OTT , -

, ESR-10 - (SA) - IPsec, update-timer wait-timer, (admin) JSON, c - CLI CLI . .

ESR-10 SA: OTT , -

CLI SA - , , SA , wait-timer ESR-10 SA .

- , SA , wait-timer ESR-10 SA .

, - , .

, - IPsec - . .

, ESR-10 CLI SA "OTT ." . , uplink, IPsec, GRE , .. (wait-timer ESR-10 factory-config SA).
OTT 43 15 (bridge 1). wait-timer, - . factory-config, - . wait-timer -.
SSID .
- . , -- L2 (location, ; location , gi1/0/2 gi1/0/2.100).

default OTT

default, IPsec, . . ESR-10 , EMS, . , , MAC ESR10 . ESR-10 , , .
, ESR-10, SA. , "OTT ." .

hostname ESR10-OTT

*object-group network SoftWLC
ip address-range 192.168.42.178
exit*

line console # ESR10

aaa disable

exit

*security zone trusted
exit
security zone untrusted
exit*

*snmp-server
snmp-server system-shutdown
snmp-server community "public11" ro
snmp-server community "private1" rw*

*snmp-server host 192.168.42.178
source-interface bridge 1
exit*

*snmp-server enable traps
snmp-server enable traps config
snmp-server enable traps config commit
snmp-server enable traps config confirm
snmp-server enable traps environment
snmp-server enable traps environment memory-flash-critical-low
snmp-server enable traps environment memory-flash-low
snmp-server enable traps environment memory-ram-critical-low
snmp-server enable traps environment memory-ram-low
snmp-server enable traps environment cpu-load
snmp-server enable traps environment cpu-critical-temp
snmp-server enable traps environment cpu-overheat-temp
snmp-server enable traps environment cpu-supercooling-temp
snmp-server enable traps file-operations
snmp-server enable traps file-operations successful
snmp-server enable traps file-operations failed
snmp-server enable traps file-operations canceled
snmp-server enable traps interfaces
snmp-server enable traps interfaces rx-utilization-high
snmp-server enable traps interfaces tx-utilization-high
snmp-server enable traps interfaces number-high
snmp-server enable traps screen
snmp-server enable traps screen dest-limit
snmp-server enable traps screen source-limit
snmp-server enable traps screen icmp-threshold
snmp-server enable traps screen udp-threshold
snmp-server enable traps screen syn-flood
snmp-server enable traps screen land
snmp-server enable traps screen winnuke
snmp-server enable traps screen icmp-frag
snmp-server enable traps screen udp-frag
snmp-server enable traps screen icmp-large
snmp-server enable traps screen syn-frag*


```

snmp-server enable traps screen unknown-proto
snmp-server enable traps screen ip-frag
snmp-server enable traps screen port-scan
snmp-server enable traps screen ip-sweep
snmp-server enable traps screen syn-fin
snmp-server enable traps screen fin-no-ack
snmp-server enable traps screen no-flag
snmp-server enable traps screen spoofing
snmp-server enable traps screen reserved
snmp-server enable traps screen quench
snmp-server enable traps screen echo-request
snmp-server enable traps screen time-exceeded
snmp-server enable traps screen unreachable
snmp-server enable traps screen tcp-all-flags
snmp-server enable traps entity
snmp-server enable traps entity config-change
snmp-server enable traps entity-sensor
snmp-server enable traps entity-sensor threshold
snmp-server enable traps envmon
snmp-server enable traps envmon shutdown
snmp-server enable traps envmon temperature
snmp-server enable traps flash
snmp-server enable traps flash insertion
snmp-server enable traps flash removal
snmp-server enable traps snmp
snmp-server enable traps snmp authentication
snmp-server enable traps snmp coldstart
snmp-server enable traps snmp linkdown
snmp-server enable traps snmp linkup
snmp-server enable traps syslog

```

```

bridge 1 #bridge 1 ,
security-zone trusted
ip address dhcp
ip dhcp client ignore router
enable
exit

```

```

interface gigabitethernet 1/0/1 # gi1/0/1 ,
description "UPLink"
ip address dhcp
security-zone untrusted
exit

```

```

interface gigabitethernet 1/0/2
shutdown
exit

```

```

interface gigabitethernet 1/0/3
shutdown
exit

```

```

interface gigabitethernet 1/0/4
shutdown
exit

```

```

interface gigabitethernet 1/0/5
shutdown
exit

```

```

interface gigabitethernet 1/0/6
shutdown
exit

```

```

interface loopback 1
exit

```

```

tunnel gre 1 # GRE -
mtu 1356 # - SA (ipsec gre-mtu-offset)
keepalive retries 3 # - SA (ipsec gre-ping-counter)
keepalive dst-address 10.2.0.1 # - DHCP 43 15
keepalive dhcp dependent-interface bridge 1
keepalive dhcp dependent-interface gi1/0/1
keepalive enable # - GRE keepalive . DHCP 43 15
mode ethernet
local address xauth ipsec_vpn # mode-cfg IPsec , IPsec VPN
remote address xauth ipsec_vpn management-ip # mode-cfg IPsec , IPsec VPN
enable
exit
tunnel gre 1.1 # sub-GRE -
bridge-group 1
mtu 1352 # - SA (ipsec gre-mtu-offset)
snmp init-trap
enable
exit

```

security zone-pair untrusted self

rule 1
action permit
match protocol icmp
enable
exit

exit
security zone-pair trusted self
rule 1

action permit
match source-address SoftWLC
enable
exit
exit

access profile acc_p # ,

user a8:f9:4b:ab:81:20 # - SA (ipsec xauth-user)
password ascii-text encrypted 9FB30B49E43D47FAC32E0994C89C75B81313F0F038CC02FC # - SA (ipsec xauth-password)
exit
exit

security ike proposal ike_prop # ,

authentication algorithm md5 # - SA (ipsec auth-alg)
encryption algorithm aes128 # - SA (ipsec encrypt-alg)
dh-group 1 # - SA (ipsec dh-group)
exit

security ike policy ike_pol # ,

lifetime seconds 86400 # - SA (ipsec lifetime)
pre-shared-key ascii-text testing123 # - SA (ipsec password)
authentication method xauth-psk-key
authentication mode client
proposal ike_prop
exit

security ike gateway ike_gw # ,

ike-policy ike_pol
assign-interface loopback 1
local interface gigabitethernet 1/0/1
remote address 100.64.0.1 # - SA (ipsec remote-gateway)
remote network dynamic client
mode policy-based
dead-peer-detection action restart
dead-peer-detection interval 10
dead-peer-detection timeout 60 # - SA (ipsec dpd-delay)
xauth access-profile acc_p client a8:f9:4b:ab:81:20 # - SA xauth-user
exit

security ipsec proposal ipsec_prop # ,

authentication algorithm md5 # - SA (ipsec sa-auth-alg)
encryption algorithm aes128 # - SA (ipsec sa-encrypt-alg)
exit

security ipsec policy ipsec_pol # ,

lifetime seconds 3600 # - SA (ipsec sa-lifetime)
proposal ipsec_prop
exit

security ipsec vpn ipsec_vpn # ,

mode ike
ike establish-tunnel immediate
ike gateway ike_gw
ike ipsec-policy ipsec_pol
enable
exit

ip ssh server

, custom-config

hostname ESR10-OTT

*object-group network SoftWLC
ip address-range 100.123.0.2
exit*

*syslog console debug
syslog monitor info*

line console

aaa disable

exit

*security zone trusted
exit
security zone untrusted
exit*

*snmp-server
snmp-server system-shutdown
snmp-server community "public11" ro
snmp-server community "private1" rw*

snmp-server host 100.123.0.2

*source-interface bridge 1
exit*

*snmp-server enable traps
snmp-server enable traps config
snmp-server enable traps config commit
snmp-server enable traps config confirm
snmp-server enable traps environment
snmp-server enable traps environment memory-flash-critical-low
snmp-server enable traps environment memory-flash-low
snmp-server enable traps environment memory-ram-critical-low
snmp-server enable traps environment memory-ram-low
snmp-server enable traps environment cpu-load
snmp-server enable traps environment cpu-critical-temp
snmp-server enable traps environment cpu-overheat-temp
snmp-server enable traps environment cpu-supercooling-temp
snmp-server enable traps file-operations
snmp-server enable traps file-operations successful
snmp-server enable traps file-operations failed
snmp-server enable traps file-operations canceled
snmp-server enable traps interfaces
snmp-server enable traps interfaces rx-utilization-high
snmp-server enable traps interfaces tx-utilization-high
snmp-server enable traps interfaces number-high
snmp-server enable traps bras
snmp-server enable traps bras sessions-number-high
snmp-server enable traps screen
snmp-server enable traps screen dest-limit
snmp-server enable traps screen source-limit
snmp-server enable traps screen icmp-threshold
snmp-server enable traps screen udp-threshold
snmp-server enable traps screen syn-flood
snmp-server enable traps screen land
snmp-server enable traps screen winnuke
snmp-server enable traps screen icmp-frag
snmp-server enable traps screen udp-frag
snmp-server enable traps screen icmp-large
snmp-server enable traps screen syn-frag
snmp-server enable traps screen unknown-proto
snmp-server enable traps screen ip-frag
snmp-server enable traps screen port-scan
snmp-server enable traps screen ip-sweep
snmp-server enable traps screen syn-fin
snmp-server enable traps screen fin-no-ack
snmp-server enable traps screen no-flag
snmp-server enable traps screen spoofing
snmp-server enable traps screen reserved
snmp-server enable traps screen quench
snmp-server enable traps screen echo-request
snmp-server enable traps screen time-exceeded*

snmp-server enable traps screen unreachable
snmp-server enable traps screen tcp-all-flags
snmp-server enable traps entity
snmp-server enable traps entity config-change
snmp-server enable traps entity-sensor
snmp-server enable traps entity-sensor threshold
snmp-server enable traps envmon
snmp-server enable traps envmon shutdown
snmp-server enable traps envmon temperature
snmp-server enable traps flash
snmp-server enable traps flash insertion
snmp-server enable traps flash removal
snmp-server enable traps snmp
snmp-server enable traps snmp authentication
snmp-server enable traps snmp coldstart
snmp-server enable traps snmp linkdown
snmp-server enable traps snmp linkup
snmp-server enable traps syslog

bridge 1
security-zone trusted
ip address dhcp
ip dhcp client ignore router
enable
exit

interface gigabitethernet 1/0/1
description "UPLink"
ip address dhcp
security-zone untrusted
service-policy dynamic all
exit

interface gigabitethernet 1/0/2
shutdown
exit

interface gigabitethernet 1/0/3
shutdown
exit

interface gigabitethernet 1/0/4
shutdown
exit

interface gigabitethernet 1/0/5
shutdown
exit

interface gigabitethernet 1/0/6
shutdown
exit

interface loopback 1
exit
tunnel gre 1
keepalive dhcp dependent-interface bridge 1
keepalive dhcp dependent-interface gi1/0/1
mode ethernet
local address xauth ipsec_vpn
remote address xauth ipsec_vpn management-ip
enable
exit

tunnel gre 1.1
bridge-group 1
snmp init-trap
enable
exit

security zone-pair untrusted self
rule 1
action permit
match protocol icmp
enable
exit

security zone-pair trusted self
rule 1
action permit
match source-address SoftWLC
enable
exit
exit

access profile acc_p

exit

security ike proposal ike_prop
exit

security ike policy ike_pol
authentication method xauth-psk-key
authentication mode client
proposal ike_prop
exit

security ike gateway ike_gw
ike-policy ike_pol
assign-interface loopback 1
local interface gigabitethernet 1/0/1
remote network dynamic client
mode policy-based
dead-peer-detection action restart
dead-peer-detection interval 10
exit

security ipsec proposal ipsec_prop
exit

security ipsec policy ipsec_pol
proposal ipsec_prop
exit

security ipsec vpn ipsec_vpn
mode ike
ike establish-tunnel immediate
ike gateway ike_gw
ike ipsec-policy ipsec_pol
enable
exit

ip ssh server

, OTT . () , . SSID -, - , .. . SSID gi1/0/2-6 (gi1/0/1) mode access , . NAT .
, gi1/0/1, SSID1 2314, SSID2 2315. - bridge 11. NAT gi1/0/1.

hostname ESR10-OTT-BR-1

ip firewall sessions classification enable
object-group service dns
port-range 53
exit
object-group service dhcp_server
port-range 67
exit
object-group service dhcp_client
port-range 68
exit
object-group service redirect
port-range 3128-3129
port-range 3130-3131
exit

object-group network natpool
ip prefix 198.19.253.0/24
exit
object-group network SoftWLC
ip address-range 192.168.42.178
exit

```
radius-server timeout 10
radius-server retransmit 5
radius-server host 192.168.42.178
key ascii-text encrypted 88B11079B9014FAAF7B9
timeout 11
priority 20
source-interface bridge 1
auth-port 31812
acct-port 31813
retransmit 10
dead-interval 10
exit
aaa radius-profile PCRF
radius-server host 192.168.42.178
exit
das-server COA
key ascii-text encrypted 88B11079B9014FAAF7B9
port 3799
clients object-group SoftWLC
exit
aaa das-profile COA
das-server COA
exit

line console
aaa disable
exit

domain lookup enable

security zone trusted
exit
security zone untrusted
exit
security zone user
exit

ip access-list extended WELCOME
rule 1
action permit
match protocol tcp
match destination-port 443
enable
exit
rule 2
action permit
match protocol tcp
match destination-port 8443
enable
exit
rule 3
action permit
match protocol tcp
match destination-port 80
enable
exit
rule 4
action permit
match protocol tcp
match destination-port 8080
enable
exit
exit

ip access-list extended INTERNET
rule 1
action permit
enable
exit
exit
```

ip access-list extended unauthUSER

rule 1

action permit

match protocol udp

match source-port 68

match destination-port 67

enable

exit

rule 2

action permit

match protocol udp

match destination-port 53

enable

exit

exit

subscriber-control filters-server-url http://192.168.42.178:7070/filters/file

subscriber-control

aaa das-profile COA

aaa sessions-radius-profile PCRF

aaa services-radius-profile PCRF

nas-interface bridge 1

session mac-authentication

bypass-traffic-acl unauthUSER

default-service

class-map unauthUSER

filter-name remote gosuslugi

filter-action permit

default-action redirect http://192.168.42.178:8080/eltex_portal/

session-timeout 600

exit

enable

exit

snmp-server

snmp-server system-shutdown

snmp-server community "public11" ro

snmp-server community "private1" rw

snmp-server host 192.168.42.178

source-interface bridge 1

exit

snmp-server enable traps
snmp-server enable traps config
snmp-server enable traps config commit
snmp-server enable traps config confirm
snmp-server enable traps environment
snmp-server enable traps environment memory-flash-critical-low
snmp-server enable traps environment memory-flash-low
snmp-server enable traps environment memory-ram-critical-low
snmp-server enable traps environment memory-ram-low
snmp-server enable traps environment cpu-load
snmp-server enable traps environment cpu-critical-temp
snmp-server enable traps environment cpu-overheat-temp
snmp-server enable traps environment cpu-supercooling-temp
snmp-server enable traps file-operations
snmp-server enable traps file-operations successful
snmp-server enable traps file-operations failed
snmp-server enable traps file-operations canceled
snmp-server enable traps interfaces
snmp-server enable traps interfaces rx-utilization-high
snmp-server enable traps interfaces tx-utilization-high
snmp-server enable traps interfaces number-high
snmp-server enable traps bras
snmp-server enable traps bras sessions-number-high
snmp-server enable traps screen
snmp-server enable traps screen dest-limit
snmp-server enable traps screen source-limit
snmp-server enable traps screen icmp-threshold
snmp-server enable traps screen udp-threshold
snmp-server enable traps screen syn-flood
snmp-server enable traps screen land
snmp-server enable traps screen winnuke
snmp-server enable traps screen icmp-frag
snmp-server enable traps screen udp-frag
snmp-server enable traps screen icmp-large
snmp-server enable traps screen syn-frag
snmp-server enable traps screen unknown-proto
snmp-server enable traps screen ip-frag
snmp-server enable traps screen port-scan
snmp-server enable traps screen ip-sweep
snmp-server enable traps screen syn-fin
snmp-server enable traps screen fin-no-ack
snmp-server enable traps screen no-flag
snmp-server enable traps screen spoofing
snmp-server enable traps screen reserved
snmp-server enable traps screen quench
snmp-server enable traps screen echo-request
snmp-server enable traps screen time-exceeded
snmp-server enable traps screen unreachable
snmp-server enable traps screen tcp-all-flags
snmp-server enable traps entity
snmp-server enable traps entity config-change
snmp-server enable traps entity-sensor
snmp-server enable traps entity-sensor threshold
snmp-server enable traps envmon
snmp-server enable traps envmon shutdown
snmp-server enable traps envmon temperature
snmp-server enable traps flash
snmp-server enable traps flash insertion
snmp-server enable traps flash removal
snmp-server enable traps snmp
snmp-server enable traps snmp authentication
snmp-server enable traps snmp coldstart

bridge 1

security-zone trusted
ip address dhcp
ip dhcp client ignore dns-nameserver
ip dhcp client ignore router
enable

exit

bridge 11

security-zone user
ip address 198.19.253.1/24
service-subscriber-control any
location SSID12
enable

exit


```
interface gigabitethernet 1/0/1
  description "UPLink"
  ip address dhcp
  security-zone untrusted
  service-policy dynamic all
exit
interface gigabitethernet 1/0/1.2314
  bridge-group 11
exit
interface gigabitethernet 1/0/1.2315
  bridge-group 11
exit
interface gigabitethernet 1/0/2
  shutdown
exit
interface gigabitethernet 1/0/3
  shutdown
exit
interface gigabitethernet 1/0/4
  shutdown
exit
interface gigabitethernet 1/0/5
  shutdown
exit
interface gigabitethernet 1/0/6
  shutdown
exit
interface loopback 1
exit
tunnel gre 1
  keepalive retries 3
  keepalive dhcp dependent-interface bridge 1
  keepalive dhcp dependent-interface gi1/0/1
  mode ethernet
  local address xauth ipsec_vpn
  remote address xauth ipsec_vpn management-ip
  enable
exit
tunnel gre 1.1
  bridge-group 1
  snmp init-trap
  enable
exit
```

```
security zone-pair untrusted self
rule 1
    action permit
    match protocol icmp
    enable
exit
security zone-pair trusted self
rule 1
    action permit
    enable
exit
security zone-pair user untrusted
rule 10
    action permit
    enable
exit
security zone-pair user self
rule 10
    action permit
    match protocol udp
    match source-port dhcp_client
    match destination-port dhcp_server
    enable
exit
rule 20
    action permit
    match protocol tcp
    match destination-port redirect
    enable
exit
rule 30
    action permit
    match protocol udp
    match destination-port dns
    enable
exit
exit

access profile acc_p
exit

security ike proposal ike_prop
exit

security ike policy ike_pol
    authentication method xauth-psk-key
    authentication mode client
    proposal ike_prop
exit

security ike gateway ike_gw
    ike-policy ike_pol
    assign-interface loopback 1
    local interface gigabitethernet 1/0/1
    remote network dynamic client
    mode policy-based
    dead-peer-detection action restart
    dead-peer-detection interval 10
exit

security ipsec proposal ipsec_prop
exit

security ipsec policy ipsec_pol
    proposal ipsec_prop
exit

security ipsec vpn ipsec_vpn
    mode ike
    ike establish-tunnel immediate
    ike gateway ike_gw
    ike ipsec-policy ipsec_pol
    enable
exit
```

```
nat source
ruleset NAT
to interface gigabitethernet 1/0/1
rule 10
match source-address natpool
action source-nat interface

enable
exit
exit
exit

ip dhcp-server
ip dhcp-server pool lan
network 198.19.253.0/24
max-lease-time 000:00:20
default-lease-time 000:00:10
address-range 198.19.253.2-198.19.253.254
default-router 198.19.253.1
dns-server 198.19.253.1
exit

ip ssh server

clock timezone gmt +7

ntp enable
ntp server 192.168.42.178
exit
```

, gi1/0/1, gi1/0/2 - 701; gi1/0/3 - , 701.

```
hostname ESR10-OTT-BR

ip firewall sessions classification enable
root login enable
tech-support login enable
object-group service dns
port-range 53
exit
object-group service dhcp_server
port-range 67
exit
object-group service dhcp_client
port-range 68
exit
object-group service redirect
port-range 3128-3129
port-range 3130-3131
exit

object-group network natpool
ip prefix 198.19.253.0/24
exit
object-group network SoftWLC
ip address-range 192.168.42.178
exit

vlan 701
exit

radius-server timeout 10
radius-server retransmit 5
radius-server host 192.168.42.178
key ascii-text encrypted 88B11079B9014FAAF7B9
timeout 11
priority 20
source-interface bridge 1
auth-port 31812
acct-port 31813
retransmit 10
dead-interval 10
exit
aaa radius-profile PCRF
radius-server host 192.168.42.178
exit
das-server COA
```

key ascii-text encrypted 88B11079B9014FAAF7B9
port 3799
clients object-group SoftWLC
exit
aaa das-profile COA
das-server COA
exit

line console
aaa disable
exit

domain lookup enable

security zone trusted
exit
security zone untrusted
exit
security zone user
exit

ip access-list extended WELCOME
rule 1

action permit
match protocol tcp
match destination-port 443
enable
exit

rule 2

action permit
match protocol tcp
match destination-port 8443
enable
exit

rule 3

action permit
match protocol tcp
match destination-port 80
enable
exit

rule 4

action permit
match protocol tcp
match destination-port 8080
enable
exit

exit

ip access-list extended INTERNET

rule 1

action permit
enable
exit

exit

ip access-list extended unauthUSER

rule 1

action permit
match protocol udp
match source-port 68
match destination-port 67
enable
exit

rule 2

action permit
match protocol udp
match destination-port 53
enable
exit

exit

subscriber-control filters-server-url <http://192.168.42.178:7070/filters/file>

subscriber-control

aaa das-profile COA

aaa sessions-radius-profile PCRF

aaa services-radius-profile PCRF

nas-interface bridge 1

session mac-authentication

bypass-traffic-acl unauthUSER

default-service

```
class-map unauthUSER
filter-name remote gosuslugi
filter-action permit
default-action redirect http://192.168.42.178:8080/eltex_portal/
session-timeout 600
exit
enable
exit
snmp-server
snmp-server system-shutdown
snmp-server community "public11" ro
snmp-server community "private1" rw

snmp-server host 192.168.42.178
source-interface bridge 1
exit
```

```
snmp-server enable traps
snmp-server enable traps config
snmp-server enable traps config commit
snmp-server enable traps config confirm
snmp-server enable traps environment
snmp-server enable traps environment memory-flash-critical-low
snmp-server enable traps environment memory-flash-low
snmp-server enable traps environment memory-ram-critical-low
snmp-server enable traps environment memory-ram-low
snmp-server enable traps environment cpu-load
snmp-server enable traps environment cpu-critical-temp
snmp-server enable traps environment cpu-overheat-temp
snmp-server enable traps environment cpu-supercooling-temp
snmp-server enable traps file-operations
snmp-server enable traps file-operations successful
snmp-server enable traps file-operations failed
snmp-server enable traps file-operations canceled
snmp-server enable traps interfaces
snmp-server enable traps interfaces rx-utilization-high
snmp-server enable traps interfaces tx-utilization-high
snmp-server enable traps interfaces number-high
snmp-server enable traps bras
snmp-server enable traps bras sessions-number-high
snmp-server enable traps screen
snmp-server enable traps screen dest-limit
snmp-server enable traps screen source-limit
snmp-server enable traps screen icmp-threshold
snmp-server enable traps screen udp-threshold
snmp-server enable traps screen syn-flood
snmp-server enable traps screen land
snmp-server enable traps screen winnuke
snmp-server enable traps screen icmp-frag
snmp-server enable traps screen udp-frag
snmp-server enable traps screen icmp-large
snmp-server enable traps screen syn-frag
snmp-server enable traps screen unknown-proto
snmp-server enable traps screen ip-frag
snmp-server enable traps screen port-scan
snmp-server enable traps screen ip-sweep
snmp-server enable traps screen syn-fin
snmp-server enable traps screen fin-no-ack
snmp-server enable traps screen no-flag
snmp-server enable traps screen spoofing
snmp-server enable traps screen reserved
snmp-server enable traps screen quench
snmp-server enable traps screen echo-request
snmp-server enable traps screen time-exceeded
snmp-server enable traps screen unreachable
snmp-server enable traps screen tcp-all-flags
snmp-server enable traps entity
snmp-server enable traps entity config-change
snmp-server enable traps entity-sensor
snmp-server enable traps entity-sensor threshold
snmp-server enable traps envmon
snmp-server enable traps envmon shutdown
snmp-server enable traps envmon temperature
snmp-server enable traps flash
snmp-server enable traps flash insertion
snmp-server enable traps flash removal
snmp-server enable traps snmp
snmp-server enable traps snmp authentication
snmp-server enable traps snmp coldstart
```

```

bridge 1
security-zone trusted
ip address dhcp
ip dhcp client ignore dns-nameserver
ip dhcp client ignore router
enable
exit
bridge 2
vlan 701
security-zone user
ip address 198.19.253.1/24
service-subscriber-control any
location SSID12
enable
exit

interface gigabitethernet 1/0/1
description "UPLink"
ip address dhcp
security-zone untrusted
service-policy dynamic all
exit
interface gigabitethernet 1/0/2.702
bridge-group 2
exit
interface gigabitethernet 1/0/3
mode switchport
switchport access vlan 701
exit
interface gigabitethernet 1/0/4
shutdown
exit
interface gigabitethernet 1/0/5
shutdown
exit
interface gigabitethernet 1/0/6
shutdown
exit
interface loopback 1
exit
tunnel gre 1
keepalive retries 3
keepalive dhcp dependent-interface bridge 1
keepalive dhcp dependent-interface gi1/0/1
mode ethernet
local address xauth ipsec_vpn
remote address xauth ipsec_vpn management-ip
enable
exit
tunnel gre 1.1
bridge-group 1
snmp init-trap
enable
exit

security zone-pair untrusted self
rule 1
action permit
match protocol icmp
enable
exit
security zone-pair trusted self
rule 1
action permit
enable
exit
security zone-pair user untrusted
rule 10
action permit
enable
exit
security zone-pair user self
rule 10
action permit
match protocol udp

```

```
match source-port dhcp_client
match destination-port dhcp_server
enable
exit
rule 20
action permit
match protocol tcp
match destination-port redirect
enable
exit
rule 30
action permit
match protocol udp
match destination-port dns
enable
exit
exit
```

```
access profile acc_p
exit
```

```
security ike proposal ike_prop
exit
```

```
security ike policy ike_pol
authentication method xauth-psk-key
authentication mode client
proposal ike_prop
exit
```

```
security ike gateway ike_gw
ike-policy ike_pol
assign-interface loopback 1
local interface gigabitethernet 1/0/1
remote network dynamic client
mode policy-based
dead-peer-detection action restart
dead-peer-detection interval 10
dead-peer-detection timeout 60
exit
```

```
security ipsec proposal ipsec_prop
exit
```

```
security ipsec policy ipsec_pol
proposal ipsec_prop
exit
```

```
security ipsec vpn ipsec_vpn
mode ike
ike establish-tunnel immediate
ike gateway ike_gw
ike ipsec-policy ipsec_pol
enable
exit
```

```
nat source
ruleset NAT
to interface gigabitethernet 1/0/1
rule 10
match source-address natpool
action source-nat interface
enable
exit
exit
exit
```

```
ip dhcp-server
ip dhcp-server pool lan
network 198.19.253.0/24
max-lease-time 000:00:20
default-lease-time 000:00:10
address-range 198.19.253.2-198.19.253.254
default-router 198.19.253.1
dns-server 198.19.253.1
exit
```

```
ip telnet server
ip ssh server
```

```
clock timezone gmt +7
ntp enable
ntp server 192.168.42.178
exit
```

, ESR-10 -

OTT ESR-10 SA. 5, wait-timer. , SA.

0	, SA
3	IPsec, , - IPsec SA
16	wait-timer, 43 15 , GRE keepalive dst-address
17	"OTT " , SA