

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 -

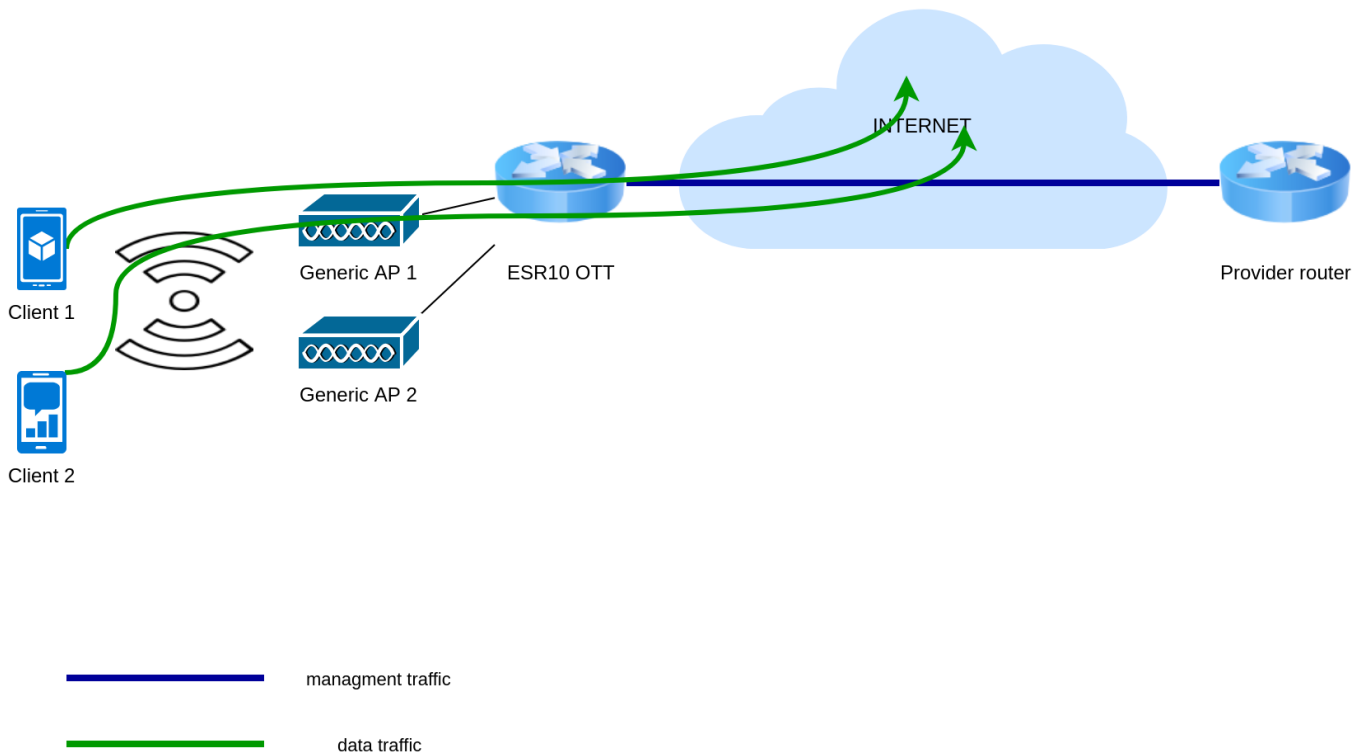
, SoftWLC OTT BRAS (,) .

GRE over IPsec ESR, OTT. .

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

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

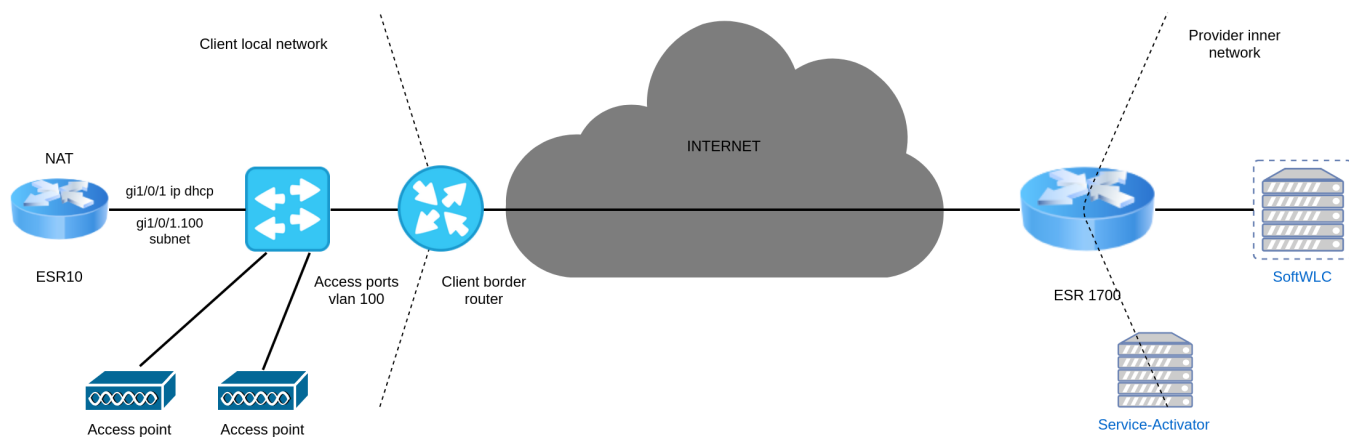
Общая схема подключения



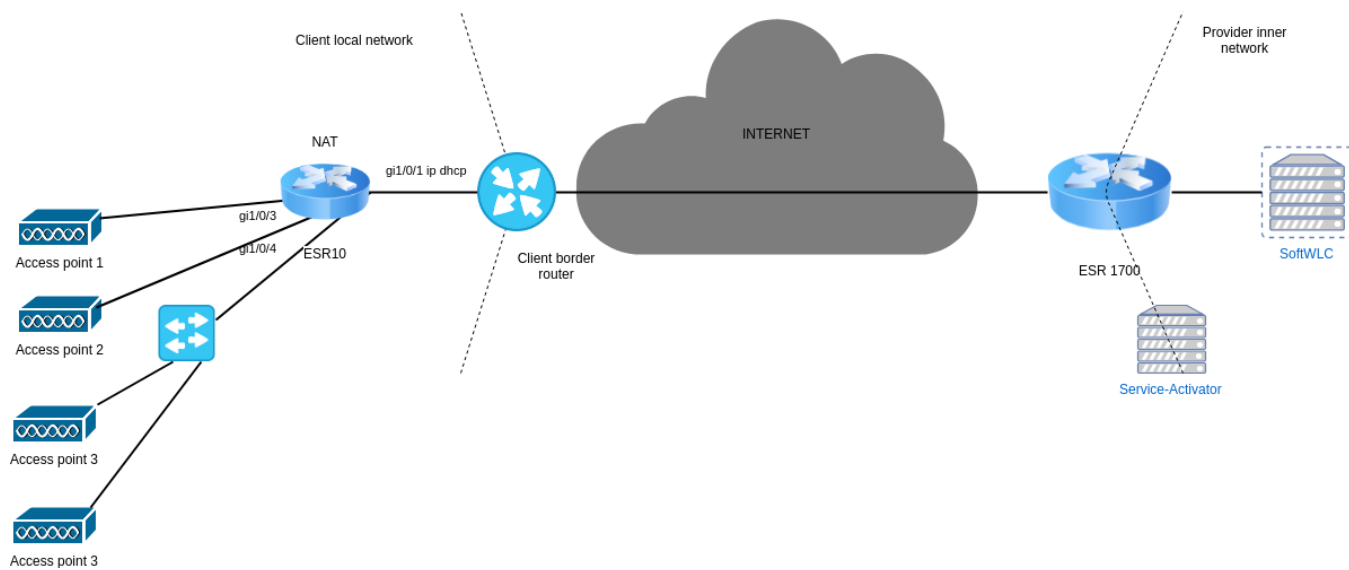
- 1) gi1/0/1 ESR10;
- 2) DHCP, default gateway DNS ;
- 3) ESR10 .

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

✓ Принять
✗ Отменить

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

```

✓ Принять
✗ Отменить

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" "".

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
5c48398998a3e...	default	OTT.root	ESR-10	CLI	4955	Wed Jan 23 16:5...	ff13a32225511d...

Принять

Очистить

Отменить

9. :

Редактирование объекта

Имя устройства

OTT

Ключ

★ ott_default

?

Имя правила

★ default_OTT

←

Домен правила

OTT.root

●

Домен узла

★ default.OTT.root

🌐

OTT (Over-the-top)

☒

OTT индивидуальная конф.

default

←

Принять

Отменить

"".

10. " ". . ESR-10 , , ,

- , :
- 1) (gi1/0/1) ESR10;
 - 2) - gi1/0/2 - gi1/0/6;
 - 3) , () gi1/0/2-gi1/0/6 ESR-10.
- , MAC ESR-10, . , , ESR-10, , , , .
- , ESR-10 , SSID, - SSID1 VID 701 SSID2 VID 702, location SSID12.

BRAS

- BRAS. . , c OTT, WELCOME .
1. , " " " PCRF" "";

Тарифы
Сервисы PCRF
Сценарии сервисов PCRF

Фильтр:
Имя сервиса
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

Выбранные фильтры

Имя фильтра	Действие	URL

Добавить

Удалить

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

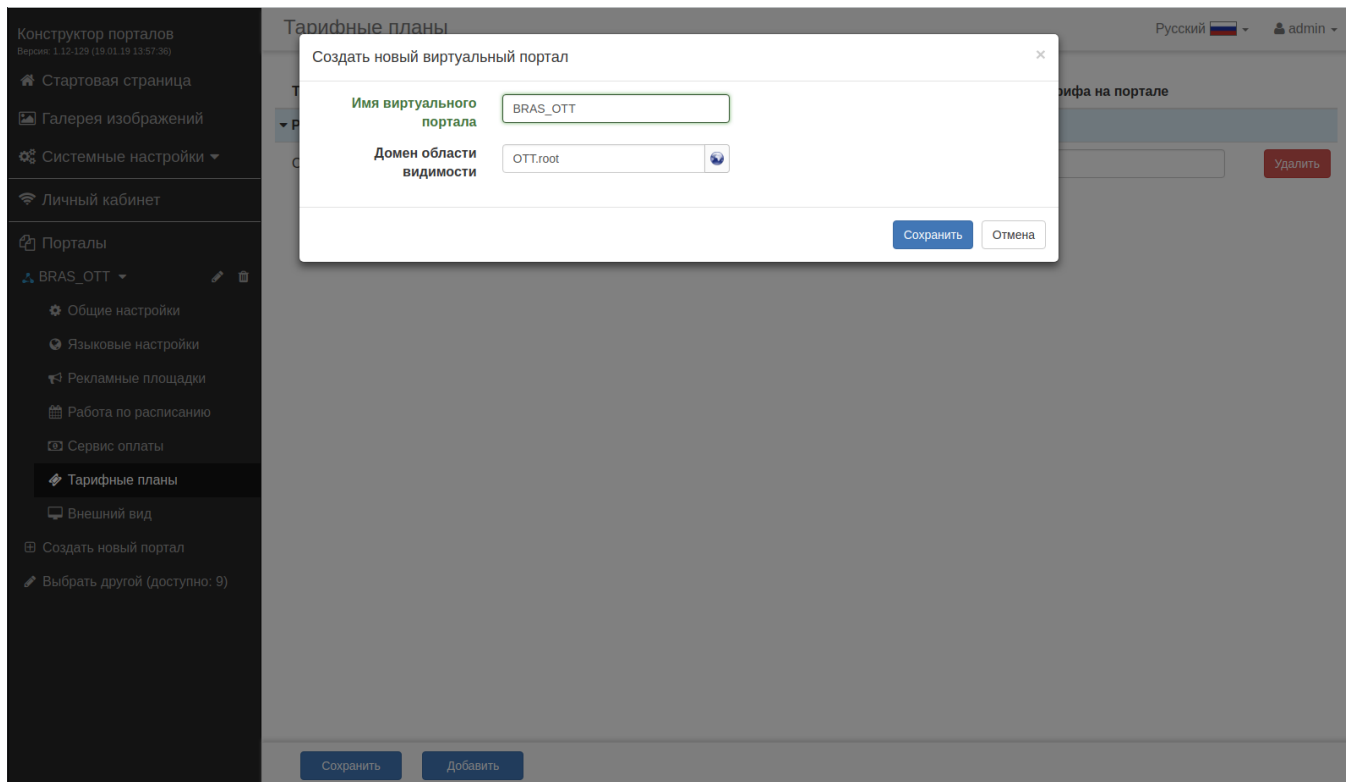
Сохранить

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 fields in the modal are as follows:

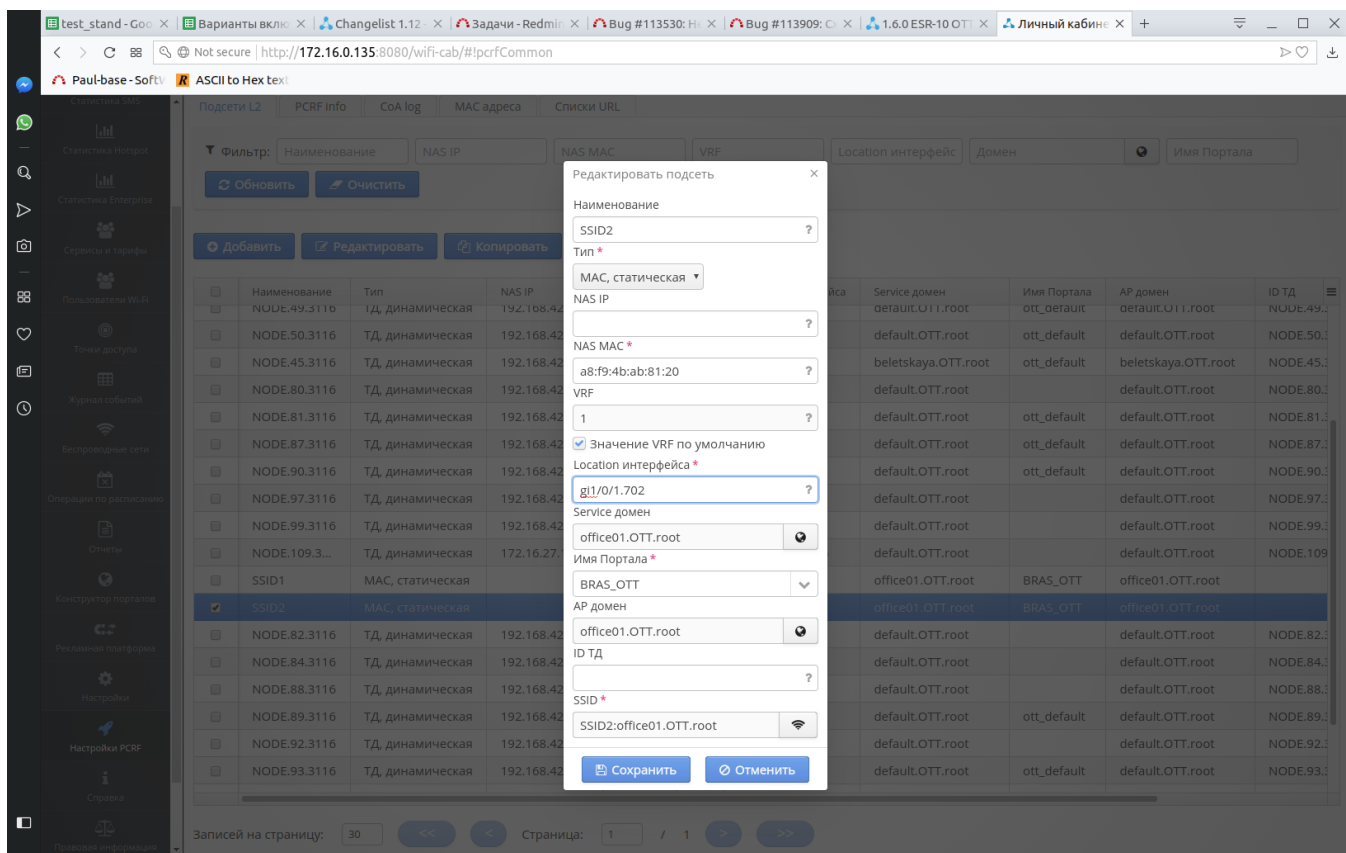
- Наименование: SSID1
- Тип: MAC, статическая
- NAS IP: (empty)
- NAS MAC: a8:f9:4b:ab:81:20
- VRF: 1
- Location интерфейс: gi1/0/1.701
- Service домен: office01.OTT.root
- Имя Портала: BRAS_OTT
- AP домен: office01.OTT.root
- ID ТД: (empty)
- SSID: SSID1:office01.OTT.root

The background interface shows a table of subnets with columns: Наименование, Тип, NAS IP, and Location интерфейс. The table lists various nodes (NODE.45.3116 to NODE.94.3116) and their configurations. The sidebar on the left contains navigation options like "Статистика SMS", "Статистика Интернет", "Сервисы и тарифы", "Пользователи VoIP", "Точки доступа", "Журнал событий", "Безопасность сети", "Операции по радиосети", "Отчеты", "Конструктор программ", "Ресурсы платформы", "Настройки", "Настройки PCRF", and "Справка".

- "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:



OTT

1. " ", "OTT ." :

✖

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

```

"".

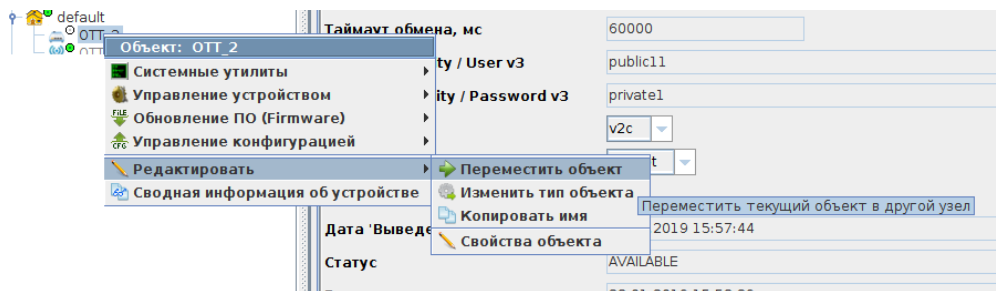
ESR-10 OTT

, 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

В-2 портов 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

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 initi...	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

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	Страница: 1 / 1 на странице: 20 Фильтр: a8:f9:4b:ab:81:20						
Привязки	Изменить поля Обновить Добавить Редактировать Удалить Логи						
OTT профили							
OTT привязки							
Черный список OTT							
OTT индивидуальная конф.							

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
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