

# v1.20\_APB

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- 
- - /:
- - /etc/default/eltex-apb
  - /etc/eltex-apb/application.conf
  - /etc/eltex-apb/ehcache.xml
  - /etc/eltex-apb/hosts.json
  - /etc/eltex-apb/log4j2.xml
- 
- APB
- 




Eltex-APB .:

- , WEB-
- 

```
apt-get install eltex-apb
```

/:

	service eltex-apb status	<div><div>✔</div><div>eltex-apb is running with pid &lt;pid&gt;</div></div> <div><div>❗</div><div>eltex-apb is not running</div></div>
	service eltex-apb start	<div><div>✔</div><div>Starting eltex-apb ... eltex-apb started</div></div> <div><div>⚠</div><div>eltex-apb is already running</div></div>

	<code>service eltex-apb stop</code>	<div> Stopping eltex-apb ... eltex-apb stopped</div> <div> ... eltex-apb is not running rm: cannot remove '/var/run/eltex-apb.pid': No such file or directory</div>
	<code>service eltex-apb restart</code>	<div> Stopping eltex-apb ... eltex-apb stopped Starting eltex-apb ... eltex-apb started</div>

, :

`http://localhost:8090/apb/ap.jsp`

, :

`http://localhost:8090/apb/users.jsp`

, :

`http://localhost:8090/apb/users.jsp?short`

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`/etc/default/eltex-apb`

, :

## /etc/default/eltex-apb

```
# Port for use by Access Point Binder service
PORT=8090
# Number of connection requests that can be queued
ACCEPT_QUEUE_SIZE=0
# Max text message buffer size, in bytes
MAX_TEXT_MESSAGE_BUFFER_SIZE=524288

# Path to Java executable
JAVA=/usr/bin/java

# Memory
JAVA_INIT_HEAP=128m
JAVA_MAX_HEAP=2048m

JAVA_OPTS="-XX:+HeapDumpOnOutOfMemoryError -XX:HeapDumpPath=/var/log/eltex-apb"

# To enable remote JMX monitoring uncomment the following line
#JMX_OPTS="-Dcom.sun.management.jmxremote -Dcom.sun.management.jmxremote.port=8091 -Dcom.sun.management.jmxremote.ssl=false -Dcom.sun.management.jmxremote.authenticate=false -Dcom.sun.management.jmxremote.local.only=false -Djava.rmi.server.hostname=127.0.0.1"
```

- :

PORT=8090

- . , , ( ):

ACCEPT\_QUEUE\_SIZE=0

- , , :

MAX\_TEXT\_MESSAGE\_BUFFER\_SIZE=262144

- , ( , , [/etc/eltex-apb/ehcache.xml](#)):

JAVA\_INIT\_HEAP=128m  
JAVA\_MAX\_HEAP=2048m

## /etc/eltex-apb/application.conf



/etc/eltex-apb/application.conf   SoftWLC 1.20.   /etc/eltex-apb/apb.properties .

#### /etc/eltex-apb/application.conf

```
# maximum number of outgoing messages in queue for each session
sessionMessageQueueSize = 100

# cache config file path
cacheConfigFile = /etc/eltex-apb/ehcache.xml

# path to the file with permitted hosts
hostsFile = /etc/eltex-apb/hosts.json

pingJob {
    # ping job interval
    interval = 60s

    # timeout waiting for subscribe-request after connecting the access point to the server
    subscribeIdleTimeout = 60s
    # timeout during that the session will stay opened without receiving any message
    messageIdleTimeout = 90s
    # interval of ping to be sent to the websocket session
    pingIdleTimeout = 30s
}

# eltex-mercury connection properties
mercury {
    host = localhost
    port = 6565
    poolSize = 50
}
```

- [Mercury:](#)

```
mercury {
    host = localhost
    port = 6565
    poolSize = 50
}
```

- :

```
# cache config file path
cacheConfigFile = /etc/eltex-apb/ehcache.xml

# path to the file with permitted hosts
hostsFile = /etc/eltex-apb/hosts.json
```

- [websocket:](#)

```
# ping job interval
interval = 60s
```

- , ( , subscribe , websocket- ):

```
# timeout waiting for subscribe-request after connecting the access point to the server
subscribeIdleTimeout = 60s
```

- , :

```
# timeout during that the session will stay opened without receiving any message
messageIdleTimeout = 90s
```

- websocket- . , :

```
# interval of ping to be sent to the websocket session
pingIdleTimeout = 30s
```

- :

```
# maximum number of outgoing messages in queue for each session
sessionMessageQueueSize = 100
```

[/etc/eltex-apb/ehcache.xml](#)

Wi-Fi, . [/etc/eltex-apb/application.conf](#) .

## /etc/eltex-apb/ehcache.xml

```
<ehcache xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xsi:noNamespaceSchemaLocation="http://www.ehcache.org/ehcache.xsd" updateCheck="false" monitoring="
autodetect"
        dynamicConfig="true">

    <!--cacheManagerPeerProviderFactory
        class="net.sf.ehcache.distribution.RMICacheManagerPeerProviderFactory"
        properties="peerDiscovery=manual,rmiUrls="//192.168.26.179:40001/users"/-->

    <!--cacheManagerPeerListenerFactory
        class="net.sf.ehcache.distribution.RMICacheManagerPeerListenerFactory"
        properties="hostName=192.168.26.205, port=40001, socketTimeoutMillis=2000"/-->

    <defaultCache
        maxEntriesLocalHeap="10000"
        eternal="false"
        timeToLiveSeconds="8600"
        timeToIdleSeconds="120"
        maxEntriesLocalDisk="10000000"
        diskExpiryThreadIntervalSeconds="120"
        memoryStoreEvictionPolicy="LRU">
        <pinning store="inCache" />
        <persistence strategy="localTempSwap"/>
    </defaultCache>

    <cache name="users"
        maxBytesLocalHeap="1G"
        eternal="false"
        timeToLiveSeconds="43200"
        memoryStoreEvictionPolicy="LRU">
        <pinning store="inCache" />
        <persistence strategy="none"/>

        <!--cacheEventListenerFactory
            class="net.sf.ehcache.distribution.RMICacheReplicatorFactory"
            properties="replicateAsynchronously=true, replicatePuts=true, replicateUpdates=true,
replicateUpdatesViaCopy=false,
replicateRemovals=true "/-->
    </cache>

    <cache name="hosts" maxBytesLocalHeap="128M" eternal="true">
        <persistence strategy="none"/>
    </cache>

</ehcache>
```

- , "maxBytesLocalHeap" :

```
<cache name="users"
    maxBytesLocalHeap="1G"
    eternal="false"
    timeToLiveSeconds="43200"
    memoryStoreEvictionPolicy="LRU">
    . . .
</cache>
```

- , "maxBytesLocalHeap" :

```
<cache name="hosts" maxBytesLocalHeap="128M" eternal="true">
    <persistence strategy="none"/>
</cache>
```

## /etc/eltex-apb/hosts.json

C . (IP-, ). /etc/eltex-apb/application.conf. .

:

```
[
  {
    "mobility-domain-list": [
      {
        "mobility-domain": "eltex.root",
        "radius-domain": "root",
        "ssid": "Eltex-Local"
      }
    ],
    "permitted-ip-list": [
      "eltex-co.ru",
      "eltex.org"
    ]
  },
  {
    "permitted-ip-list": [
      "esia-portall.test.gosuslugi.ru",
      "esia.gosuslugi.ru",
    ]
  }
]
```

- , :

```
[{
  "permitted-ip-list": [
    "esia-portall.test.gosuslugi.ru",
    "esia.gosuslugi.ru",
  ]
}]
```

- , SSID , :

```
[{
  "mobility-domain-list": [
    {
      "mobility-domain": "eltex.root",
      "radius-domain": "root",
      "ssid": "Eltex-Local"
    }
  ],
  "permitted-ip-list": [
    "eltex-co.ru",
    "eltex.org"
  ]
}]
```

, , mobility-domain eltex.root, radius-domain root, ssid – Eltex-Local, , eltex-co.ru eltex.org. , , «permitted-ip-list», , , «mobility-domain-list».

, IP- .



"mobility-domain" "ap-location" , .

## /etc/eltex-apb/log4j2.xml

### /etc/eltex-apb/log4j2.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<Configuration status="OFF" monitorInterval="10">
  <Properties>
    <Property name="rootLevel">${env:LOG_LEVEL:-INFO}</Property>

    <Property name="baseDir">/var/log/eltex-apb</Property>
    <Property name="maxFileSize">20 MB</Property>
    <Property name="accumulatedFileSize">100 MB</Property>
    <Property name="lastModified">4d</Property>
    <Property name="maxCount">7</Property>
    <Property name="logPattern">%d{ISO8601} [%t] %-5p %logger{1} %C{1}.%M(line:%L). %m%n</Property>
    <Property name="dateSuffix">%d{yyyyMMdd}</Property>

    <Property name="consoleLevel">${env:CONSOLE_LEVEL:-OFF}</Property>

    <Property name="gelfLevel">${env:GELF_LEVEL:-OFF}</Property>
    <Property name="gelfHost">${env:GELF_HOST:-udp:lab3-test.eltex.loc}</Property>
    <Property name="gelfPort">${env:GELF_PORT:-12201}</Property>
  </Properties>

  <Appenders>
    <Console name="STDERR" target="System.err">
      <PatternLayout pattern="${logPattern}"/>
    </Console>

    <RollingFile name="RollingFile"
      filename="${baseDir}/apb.log"
      filepattern="${baseDir}/log/apb-${dateSuffix}-%i.log.gz">
      <PatternLayout pattern="${logPattern}"/>
      <Policies>
        <TimeBasedTriggeringPolicy interval="1" modulate="true"/>
        <SizeBasedTriggeringPolicy size="${maxFileSize}"/>
        <OnStartupTriggeringPolicy />
      </Policies>
      <DefaultRolloverStrategy max="${maxCount}">
        <Delete basePath="${baseDir}" maxDepth="1">
          <IfFileName glob="*/apb-*.log.gz">
            <IfAny>
              <IfAccumulatedFileSize exceeds="${accumulatedFileSize}"/>
              <IfLastModified age="${lastModified}"/>
            </IfAny>
          </IfFileName>
        </Delete>
      </DefaultRolloverStrategy>
    </RollingFile>

    <RollingFile name="CacheAppender"
      filename="${baseDir}/apb-cache.log"
      filepattern="${baseDir}/log/apb-cache-${dateSuffix}-%i.log.gz">
      <PatternLayout pattern="${logPattern}"/>
      <Policies>
        <TimeBasedTriggeringPolicy interval="1" modulate="true"/>
        <SizeBasedTriggeringPolicy size="${maxFileSize}"/>
        <OnStartupTriggeringPolicy />
      </Policies>
      <DefaultRolloverStrategy max="${maxCount}">
        <Delete basePath="${baseDir}" maxDepth="1">
          <IfFileName glob="*/apb-cache-*.log">
```



```

        <IfAny>
            <IfAccumulatedFileSize exceeds="\${accumulatedFileSize}"/>
                <IfLastModified age="\${lastModified}"/>
                    </IfAny>
                </IfFileName>
            </Delete>
        </DefaultRolloverStrategy>
    </RollingFile>

    <Gelf name="Gelf" host="\${gelfHost}" port="\${gelfPort}" version="1.1" facility="eltex-apb"
        extractStackTrace="true" originHost="%host{fqdn}" maximumMessageSize="8192">
        <Field name="thread" pattern="%t"/>
        <Field name="level" pattern="%level"/>
        <Field name="severity" pattern="%-5level"/>
        <Field name="logger" pattern="%logger{1}"/>
        <Field name="location" pattern="%C{1}.%M(line:%L)"/>
    </Gelf>
</Appenders>

<Loggers>
    <Root level="\${rootLevel}">
        <AppenderRef ref="RollingFile"/>
        <AppenderRef ref="STDERR" level="OFF"/>
        <AppenderRef ref="Gelf" level="\${gelfLevel}"/>
    </Root>

    <Logger name="org.springframework" level="ERROR"/>
    <Logger name="org.apache" level="ERROR"/>
    <Logger name="org.quartz" level="ERROR"/>
    <Logger name="io.netty" level="ERROR"/>
    <Logger name="io.grpc" level="ERROR"/>

    <Logger name="net.sf.ehcache" additivity="false">
        <AppenderRef ref="CacheAppender" level="DEBUG"/>
        <AppenderRef ref="RollingFile" level="ERROR"/>
    </Logger>

</Loggers>
</Configuration>

```

- :

```
<Configuration status="OFF" monitorInterval="10">
```

- :

```
<Property name="rootLevel">\${env:LOG_LEVEL:-INFO}</Property>
```

- :

```
<Property name="baseDir">/var/log/eltex-apb</Property>
```

- ( . ):

```
<Property name="maxFileSize">20 MB</Property>
```

- ( + ). :

```
<Property name="accumulatedFileSize">100 MB</Property>
```

- , :

```
<Property name="lastModified">4d</Property>
```

- , :

```
<Property name="maxCount">7</Property>
```

- Graylog(,,):

```
<Property name="gelfLevel">${env:GELF_LEVEL:-OFF}</Property>
<Property name="gelfHost">${env:GELF_HOST:-udp:lab3-test.eltex.loc}</Property>
<Property name="gelfPort">${env:GELF_PORT:-12201}</Property>
```

APB Prometheus. :

```
http://< APB>:<>/apb/api/metrics
```

Prometheus :

```
- job_name: 'apb'
  metrics_path: '/apb/api/metrics'
  static_configs:
    - targets: ['< APB>:<>']
```

APB, 8090.

, APB. :

```
http://< APB>:<>/apb/api/users
```

## APB

APB GUI EMS.

**Captive Portal.Global, Roaming Service URL** : «<IP-a\_apb>:8090». IP-a APB .

Description	Пользователи Wi-Fi	Мониторинг конкурентных ТД	Мониторинг	Конфигурация	RRD statistics	Access
Network						
Wireless settings	<div>Обновить Редактировать В XML</div>					
Access						
Radio interfaces	Captive Portal Mode <input type="text" value="On"/>					
Virtual access points	Authentication Timeout, sec <input type="text" value="300"/>					
Key holder data	Additional HTTP Port <input type="text" value="0"/>					
Global RADIUS	Additional HTTPS Port <input type="text" value="0"/>					
QoS. Main	White IP delay <input type="text" value="3"/>					
QoS. EDCA parameters	Debug Level <input type="text" value="0"/>					
Client QoS. Global	Roaming service address <input type="text" value="172.16.0.134:8090"/>					
Client QoS. Class Map	Roaming no action timeout, min <input type="text" value="720"/>					
Client QoS. Policy Map	AP IP alias <input type="text" value="redirect.loc"/>					
WDS	Disconnect before redirect <input type="text" value="Off"/>					
Captive Portal. Global						
Captive Portal. Instance						
Cluster. Main						
AirTune service						
System time						
System events						
SNMP						
SNMP trap						
CLI/telnet						
CLI/ssh						

«Roaming no action timeout» (, / ). «Roaming no action timeout» .

EMS Wireless . :

Тип устройства	★ Universal
Имя шаблона	★ apb
Домен	★ root
Выберите вкладки	
<input type="checkbox"/> Выбрать все	
<input type="checkbox"/> Сеть	
<input type="checkbox"/> Доступ	
<input type="checkbox"/> WIDS/WIPS	
<input type="checkbox"/> Mesh	
<input type="checkbox"/> Z-Wave	
<input type="checkbox"/> Global RADIUS	
<input type="checkbox"/> QoS. Main	
<input type="checkbox"/> QoS. EDCA parameters	
<input type="checkbox"/> Client QoS. Global	
<input checked="" type="checkbox"/> Captive Portal. Global	
<input type="checkbox"/> Cluster. Main	
<input type="checkbox"/> AirTune сервис	
<input type="checkbox"/> Системное время	
<input type="checkbox"/> Системные события	
<input type="checkbox"/> SNMP	
<input type="checkbox"/> SNMP trap	
<div>Принять Отменить</div>	

- « » - «Universal»
- « » - «apb» ( )
- « » - «root»
- «Captive Portal. Global» -



Captive Portal Mode	On ▼
Authentication Timeout, sec	300
Additional HTTP Port	0
Additional HTTPS Port	0
White IP delay	3
Debug Level	0
Адрес service роуминга	172.16.0.134:8090
Roaming no action timeout, min	720
AP IP alias	redirect.loc
Disconnect before redirect	Off ▼

- «service» - APB «<IP-a\_apb>:8090»
- «Roaming no action timeout, min» -
- «AP IP alias» - «redirect.loc»

.

:

Главное	
Тип устройства	★ WEP-12ac ▼
Имя правила	★ WEP-12ac
Домен правила	★ root
Описание	
RADIUS	
Добавить ТД в RADIUS	<input checked="" type="checkbox"/>
Ключ	★ eltex
Обновление ПО	
Обновить на актуальный файл ПО	<input type="checkbox"/>
Протокол загрузки ПО	HTTP ▼
Конфигурация	
Восстановить конфигурацию по умолчанию	<input type="checkbox"/>
Использовать индивидуальный шаблон	<input checked="" type="checkbox"/>
Шаблон конфигурации	apb_root ▼
Доступ	
SNMP транспорт	TCP ▼
SNMP Community (только чтение)	★ public
SNMP Community (чтение/запись)	★ private

/ « » «apb\_root», «\_». , APB .

Описание Пользователи Wi-Fi Мониторинг конкурентных ТД Мониторинг Конфигурация Статистика RRD Доступ

Сеть Беспроводной доступ Доступ Радио интерфейсы Виртуальные точки доступа Key holder data Global RADIUS QoS. Main QoS. EDCA parameters Client QoS. Global Client QoS. Class Map Client QoS. Policy Map WDS Captive Portal. Global Captive Portal. Instance Cluster. Main AirTune сервис Системное время Системные события SNMP SNMP trap CLI/ssh CLI/telnet

Обновить Редактировать В XML

Сетевое имя WEP-12ac

AP location, domain ap.hotspot.service.root

Management VLAN ID 1

Untagged VLAN On

Untagged VLAN ID 1

Management MTU 1500

Получение сетевых параметров по DHCP On

IP-адрес основного DNS-сервера

IP-адрес резервного DNS-сервера

Местоположение Default

Сетевое имя WEP-12ac

AP location, domain ap.hotspot.service.root

Management VLAN ID 1

Untagged VLAN On

Untagged VLAN ID 1

Management MTU 1500

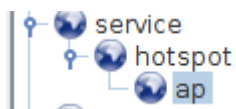
Получение сетевых параметров по DHCP On

IP-адрес основного DNS-сервера

IP-адрес резервного DNS-сервера

Местоположение Default

«AP location, domain», :



Сохранить

« » SSID Captive Portal «User Mobility Domain» ( , ).

RADIUS порт	1812
----- Minimal signal -----	
Enabled	<input type="checkbox"/>
----- Captive portal -----	
Enabled	<input checked="" type="checkbox"/>
Virtual portal name	working
Протокол	HTTP
Verification	CaptivePortal
Redirect	<input type="checkbox"/>
External	<input checked="" type="checkbox"/>
External URL	http://softwlc.eltex.loc:8080/eltex_portal/
Away Time, min	0
Session Timeout, min	0
User mobility domain (FW 1.9.0)	ap.hotspot.service.root

docker-. docker-compose.yml.  
, deb-.

#### docker-compose.yml

```
version: "2.4"

volumes:
  softwlc_logs:
    driver: local

services:
  apb:
    container_name: apb
    image: hub.eltex-co.ru/softwlc/eltex-apb:1.20-<tag>
    ports:
      - 8090:8090
      - 8092:8092
    volumes:
      - "/etc/eltex-apb:/etc/eltex-apb"
      - "softwlc_logs:/var/log"
    environment:
      - "JAVA_OPTS=-Dcom.sun.management.jmxremote -Dcom.sun.management.jmxremote.port=8092 -Dcom.sun.management.jmxremote.rmi.port=8092 -Dcom.sun.management.jmxremote.ssl=false -Dcom.sun.management.jmxremote.authenticate=false -Dcom.sun.management.jmxremote.local.only=false -Djava.rmi.server.hostname=<IP-address>"
```

✓ <tag> , .

"-Djava.rmi.server.hostname=<IP-address>" <IP-address> ip- , .

, :

- **PORT** - , ,
- **JAVA\_INIT\_HEAP** - a.k.a. -Xms JVM ,
- **JAVA\_MAX\_HEAP** - a.k.a. -Xmx JVM ,
- **DEBUG\_PORT** - JMX,
- **JAVA\_OPTS** - JVM ( ).

, .env, , :

#### .env

```
PORT=8090
JAVA_INIT_HEAP=128m
JAVA_MAX_HEAP=2048m
DEBUG_PORT=8092
JAVA_OPTS=-Dcom.sun.management.jmxremote -Dcom.sun.management.jmxremote.ssl=false -Dcom.sun.management.jmxremote.authenticate=false -Dcom.sun.management.jmxremote.local.only=false -Djava.rmi.server.hostname=<IP-address>
```

"environment" :

```
environment:
  - JAVA_OPTS=${JAVA_OPTS}
  - PORT=${PORT}
  - JAVA_INIT_HEAP=${JAVA_INIT_HEAP}
  - JAVA_MAX_HEAP=${JAVA_MAX_HEAP}
  - DEBUG_PORT=${DEBUG_PORT}
```

.env     docker-compose.yml

---