v1.16_PCRF

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    - /etc/default/eltex-pcrf
    - /etc/eltex-pcrf/eltex-pcrf.json
    - /etc/eltex-pcrf/hazelcast-cluster-network.xml

:

- , Wi-Fi , BRAS (,).
- .
- Wi-Fi .
- Wi-Fi , WPA-enterprise BRAS.
- (90%) (90%) .

'http://<ip address pcrf>:7070/pcrf'.

	`service eltex-pcrf status`	`* eltex-pcrf process is running` `* eltex-pcrf process is not running`
	`service eltex-pcrf start`	`* Starting eltex-pcrf` `* eltex-pcrf is already running`

	`service eltex-pcrf stop`	`* Stopping eltex-pcr`
		
		`,..`
		`* eltex-pcrf is not running`

	`service eltex-pcrf restart`	`* Stopping eltex-pcrf`
		`* Starting eltex-pcrf`
		
		`* eltex-pcrf is not running`
		`* Starting eltex-pcrf`

/etc/default/eltex-pcrf

. :

```
# Eltex.PCRF Server daemon parameters

# Location of java binary
JAVA=/usr/bin/java

# Initial size of Java heap
JAVA_INIT_HEAP=256m
# Maximum size of Java heap
JAVA_MAX_HEAP=512m

# To monitor via JMX - jconsole to host:port
#JMX_OPTS="-Dcom.sun.management.jmxremote \
#-Dcom.sun.management.jmxremote.port=8085 \
#-Dcom.sun.management.jmxremote.authenticate=false \
#-Dcom.sun.management.jmxremote.ssl=false \
#-Djava.rmi.server.hostname=127.0.0.1"

# Options for Java Garbage Collector
GC_OPTS="-XX:+UseParallelGC \
-XX:+PrintGCDateStamps \
-XX:+PrintGCDetails \
-XX:+UseGCLogFileRotation \
-XX:NumberOfGCLogFiles=7 \
-XX:GCLogFileSize=5M \
-Xloggc:/var/log/eltex-pcrf/gc.log"
# Without log
#GC_OPTS="-XX:+UseParallelGC"

# Additional arguments to pass to java
HEAP_DUMP_OPTS="-XX:+HeapDumpOnOutOfMemoryError -XX:HeapDumpPath=/var/log/eltex-pcrf"

# Summary JAVA_OPTS used by daemon
JAVA_OPTS="$JMX_OPTS $GC_OPTS $HEAP_DUMP_OPTS"

# Send notification
#NOTIFICATION_ADDR="admin@mail.loc"
```

`# Location of java binary` `JAVA=/usr/bin/java`	Java
`JAVA_INIT_HEAP=256m` `JAVA_MAX_HEAP=512m`	’

/etc/eltex-pcrf/eltex-pcrf.json

```
{
  "auth.address" : "0.0.0.0",
  "auth.port" : 31812,
  "auth.mac.open.timeout.s" : 3600,
  "auth.mac.welcome.service" : "WELCOME",

  "acct.address" : "0.0.0.0",
  "acct.ports" : [1813, 31813],

  "lease.saver.address" : "0.0.0.0",
```

```
  "lease.saver.port" : 4381,

  "aaa.instances" : 5,
  "aaa.host" : "127.0.0.1",
  "aaa.secret" : "testing123",
  "aaa.auth.port" : 1812,
  "aaa.acct.port" : 1813,
  "aaa.rest.port" : 7080,
  "aaa.timeout" : 10,
  "aaa.attempts" : 1,

  "web.monitoring.port" : 7070,

  "cluster.enable" : false,
  "cluster.eventBusPort" : 5801,

  "radius" : {
    "url" : "jdbc:mysql://localhost/radius?
useUnicode=true&characterEncoding=utf8&relaxAutoCommit=true&connectTimeout=5000&autoReconnect=true",
    "user" : "javauser",
    "password" : "javapassword",
    "max_pool_size" : 16
  },

  "mongo.pcrf" : {
    "connection_string": "mongodb://localhost:27017/pcrf?
waitQueueMultiple=500&connectTimeoutMS=10000&socketTimeoutMS=0",
    "db_name": "pcrf"
  },

  "mongo.ott" : {
    "connection_string": "mongodb://localhost:27017/ott?
waitQueueMultiple=500&connectTimeoutMS=10000&socketTimeoutMS=0",
    "db_name": "ott"
  },

  "session.storage" : {
    "session.check.period.s" : 300,
    "unauth.store.time.s" : 600,
    "interval.number.expired" : 3,
    "min.interval.s" : 45,
    "default.interval.s" : 600
  },

  "bras.coa" : {
    "coa.timeout" : 10,
    "coa.attempts" : 1,
    "remote.coa.port" : 3799,
    "executor.size" : 100,
    "log.clean.period.s" : 600,
    "log.store.period" : {
      "period" : 14,
      "unit" : "D"
    }
  },

  "sql.ems" : {
    "url" : "jdbc:mysql://localhost/eltex_ems?
useUnicode=true&characterEncoding=utf8&relaxAutoCommit=true&connectTimeout=5000&autoReconnect=true",
    "user" : "javauser",
    "password" : "javapassword",
    "max_pool_size" : 16
  },

  "sql.wireless" : {
    "url" : "jdbc:mysql://localhost/wireless?
useUnicode=true&characterEncoding=utf8&relaxAutoCommit=true&connectTimeout=5000&autoReconnect=true",
    "user" : "javauser",
    "password" : "javapassword",
    "max_pool_size" : 16
  },
```

```
  "ngw" : {
    "host" : "localhost",
    "port" : 8040
  },

  "language" : "en",

  "radius.nbi" : {
    "wdsl.url" : "http://localhost:8080/axis2/services/RadiusNbiService?wsdl",
    "username" : "admin",
    "password" : "password",
    "connection.timeout.ms" : 30000,
    "request.timeout.ms" : 120000
  },

  "tariffs.update.interval" : {
    "interval" : 1,
    "unit" : "hours"
  }

}
```

auth.address	,
auth.port	,
auth.mac.open.timeout.s	"",,
auth.mac.welcome.service	,
acct.address	,
acct.port	,
Wi-Fi BRAS	
aaa.instances	
aaa.host	Eltex.RADIUS
aaa.secret	RADIUS key
aaa.auth.port	
aaa.acct.port	
aaa.rest.port	Eltex.RADIUS
aaa.timeout	
aaa.attempts	

web.monitoring.port	
cluster.enable	
cluster.eventBusPort	
MySQL ('radius', 'eltex_ems', 'wireless')	
url	Mysql
user	
password	
max_pool_size	,
Mongo, PCRF OTT	
connection_string	URI Mongo
db_name	, (, URI)
Mongo	
session.check.period.s	. , .
unauth.store.time.s	, BRAS, .
interval.number.expired	, "" .
min.interval.s	, .
default.interval.s	, .
CoA	
coa.timeout	
coa.attempts	
remote.coa.port	,
executor.size	
log.store.period	
log.store.period	
NGW	
host	Notification GW
port	,
language	, , "en". "ru", .

NBI	
wdsl.url	NBI
username	
password	
connection.timeout.ms	
request.timeout.ms	
(1.9)	
interval	
unit	("hours")

/etc/eltex-pcrf/hazelcast-cluster-network.xml

Hazelcast, PCRF.

group network (PCRF):

```
<hazelcast>

    <!-- You can separate your clusters in a simple way by specifying group names. -->
    <group>
        <name>dev</name>
    </group>

    <network>
        <!-- Write here public address of the node -->
        <public-address>192.168.0.1</public-address>
        <port auto-increment="false" port-count="100">5701</port>
        <outbound-ports>
            <ports>0</ports>
        </outbound-ports>
        <join>
            <multicast enabled="false"/>
            <tcp-ip enabled="true">
                <!-- Write here IP of all members of the cluster (including this) -->
                <member>192.168.0.1</member>
                <member>192.168.0.2</member>
            </tcp-ip>
            <discovery-strategies>
            </discovery-strategies>
        </join>
        <interfaces enabled="true">
            <!-- Write here IP of the interface to use for cluster -->
            <interface>192.168.0.1</interface>
        </interfaces>
        <ssl enabled="false"/>
        <socket-interceptor enabled="false"/>
        <symmetric-encryption enabled="false">
            <algorithm>PBEWithMD5AndDES</algorithm>
            <!-- salt value to use when generating the secret key -->
            <salt>thesalt</salt>
            <!-- pass phrase to use when generating the secret key -->
            <password>thepass</password>
            <!-- iteration count to use when generating the secret key -->
            <iteration-count>19</iteration-count>
        </symmetric-encryption>
    </network>
</hazelcast>
```

`<name>dev</name>`	, . , .
`<public-address>192.168.0.1</public-address>`	
`<member>192.168.0.1</member>` `<member>192.168.0.2</member>`	, (,)
`<interface>192.168.0.1</interface>`	(public-address)