

v1.18_PCRF

-
-
-
- /
-
- /etc/default/eltex-pcrf
- /etc/eltex-pcrf/eltex-pcrf.json
- /etc/eltex-pcrf/hazelcast-cluster-network.xml
- /etc/eltex-pcrf/log4j.xml



```
<div class="aui-message error aui-message-error">
<p class="title">
<span class="aui-icon icon-error"></span>
<strong>Comala Metadata License Details</strong>
</p>
<p>Invalid commercial evaluation license with a expired error. Please click <a href="https://marketplace.atlassian.com/plugins/org.andya.confluence.plugins.metadata" target="_blank">here</a> to purchase a commercial license.</p>
</div>
```

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

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

```
apt-get install eltex-pcrf
```

/

| | service eltex-pcrf status | <div><div> * eltex-pcrf process is running</div><div> * eltex-pcrf process is not running</div></div> |
|--|---------------------------|---|

| | | |
|--|---|---|
| | <code>service eltex-pcrf start</code> | <div><div> * Starting eltex-pcrf</div><div> * eltex-pcrf is already running</div></div> |
| | <code>service eltex-pcrf stop</code> | <div><div> * Stopping eltex-pcr</div><div> , .. * eltex-pcrf is not running</div></div> |
| | <code>service eltex-pcrf restart</code> | <div><div> * Stopping eltex-pcrf * Starting eltex-pcrf * eltex-pcrf is not running * Starting eltex-pcrf</div></div> |

/etc/default/eltex-pcrf

. :

/etc/default/eltex-pcrf

```
# Eltex.PCRF Server daemon parameters
NAME="eltex-pcrf"

# 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

# Options for Java Garbage Collector
GC_OPTS="-XX:+UseG1GC \
-XX:+PrintGCDateStamps \
-XX:+PrintGCDetails \
-XX:+UseGCLogFileRotation \
-XX:NumberOfGCLogFiles=7 \
-XX:GCLogFileSize=5M \
-XX:+UseStringDeduplication \
-XX:+PrintGCTimeStamps \
-XX:+PrintTenuringDistribution \
-Xloggc:/var/log/eltex-pcrf/gc.log"

# 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"

HEAP_DUMP_OPTS="-XX:+HeapDumpOnOutOfMemoryError -XX:HeapDumpPath=/var/log/eltex-pcrf"
VERTX_CACHE_DIR_OPT="-Dvertx.cacheDirBase=/var/lib/$NAME"

JVM_OPTS="$JMX_OPTS $GC_OPTS $HEAP_DUMP_OPTS -Xms$JAVA_INIT_HEAP -Xmx$JAVA_MAX_HEAP $VERTX_CACHE_DIR_OPT"
JAR="/usr/lib/$NAME/$NAME.jar"

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

| | |
|--|--------------------|
| | |
| JAVA=/usr/bin/java | Java. |
| JAVA_INIT_HEAP | , . JAVA_MAX_HEAP. |
| JAVA_MAX_HEAP | , . |
| GC_OPTS="-XX:+UseG1GC \ | . |
| ... | |
| # To monitor via JMX - jconsole to host:port | JMX. |
| ... | |
| HEAP_DUMP_OPTS | . |
| VERTX_CACHE_DIR_OPT | . |
| JVM_OPTS | jvm. |
| NOTIFICATION_ADDR | . |

/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&connectTimeout=5000&socketTimeout=5000&autoReconnect=true&useSSL=false",
    "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,
    "coa.secret" : "testing123",
    "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&connectTimeout=5000&socketTimeout=5000&autoReconnect=true&useSSL=false",
    "user": "javauser",
    "password": "javapassword",
    "max_pool_size": 16
},

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

"sql.auth.service" : {
    "url": "jdbc:mysql://localhost/eltex_auth_service?
zeroDateTimeBehavior=convertToNull&useUnicode=true&characterEncoding=utf8&connectTimeout=5000&socketTimeout=5000
&useSSL=false",
    "user": "javauser",
    "password": "javapassword",
    "max_pool_size": 4
},

"language" : "en",

"radius.nbi" : {
    "wds1.url" : "http://localhost:8080/axis2/services/RadiusNbiService?wsdl",
    "username" : "softwlc_service",
    "password" : "softwlc",
    "connection.timeout.ms" : 30000,
    "request.timeout.ms" : 120000
},

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

"bras.cron.update.interval": {
    "interval" : 1,
    "unit": "hours"
},

"filters.cache.dir" : "/var/lib/eltex-pcrf/filters/",

"clickhouse": {
    "url": "jdbc:clickhouse://localhost:8123/radius",
    "user_name": "javauser",
    "user_password": "javapassword",
    "actualization_period_ms": 15000
},

"accounting.options": {
    "use_clickhouse": false,
    "use_mysql": true,
    "batch_interval_ms": 300000,
    "max_queue_load": 100
},

"generic.ap.registrar": {
    "max_aps_in_queue": 30,
    "ap_register_interval_ms": 600000,
    "added_ap_cache_ttl_ms": 600000,
    "host": "localhost",
    "port": 8080,
    "worker_pool_size": 8
}

```

```
}
```

| | |
|--|---------------|
| | |
| | |
| auth.address | , . |
| auth.port | , . |
| auth.mac.open.timeout.s | "", . |
| auth.mac.welcome.service | , . |
| | |
| acct.address | , . |
| acct.port | , . |
| Wi-Fi BRAS | |
| 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', 'auth.service') | |
| url | Mysql. |
| user | . |
| password | . |
| max_pool_size | , . |

| Mongo('pcrf', 'ott') | |
|-------------------------|---------------------|
| connection_string | URI Mongo. |
| db_name | , . |
| Mongo | |
| session.check.period.s | . , . |
| unauth.store.time.s | , BRAS, . |
| interval.number.expired | , "" . |
| min.interval.s | , . |
| default.interval.s | , . |
| CoA | |
| coa.timeout | . |
| coa.attempts | . |
| coa.secret | . |
| remote.coa.port | , . |
| executor.size | . |
| log.clean.period | . |
| log.store.period | . |
| period | . |
| unit | (- "D"). |
| | |
| language | , , "en". "ru", . |
| NBI | |
| wdsl.url | NBI. |
| username | . |
| password | . |
| connection.timeout.ms | . |
| request.timeout.ms | . |
| | |
| interval | . |
| unit | ("hours"). |
| URL | |

| | |
|------------------------------|-----------------------|
| filters.cache.dir | . |
| Yandex ClickHouse | |
| url | Yandex ClickHouse. |
| user_name | . |
| user_password | . |
| actualization_period_ms | . |
| | |
| use_clickhouse | Yandex ClickHouse. |
| use_mysql | MySQL. |
| batch_interval_ms | . |
| max_queue_load | . |
| generic AP, option 82 | |
| max_aps_in_queue | generic AP , EMS. |
| ap_register_interval_ms | (), generic AP EMS, . |
| added_ap_cache_ttl_ms | (), generic AP EMS. |
| host | IP-, EMS-NBI. |
| port | , EMS-NBI. |
| worker_pool_size | , GenericAP. |

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

Hazelcast, PCRF.

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

```
<hazelcast xsi:schemaLocation="http://www.hazelcast.com/schema/config http://www.hazelcast.com/schema/config
/hazelcast-config-3.6.xsd"
    xmlns="http://www.hazelcast.com/schema/config"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">

    <!-- 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>PBESWithMD5AndDES</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). |

/etc/eltex-pcrf/log4j.xml

.

/etc/eltex-pcrf/log4j.xml

```
<?xml version="1.0" encoding="UTF-8"?>

<Configuration packages="biz.paluch.logging.gelf.log4j2">
  <Properties>
    <Property name="maxSize" value="5MB"/>
    <Property name="maxCount" value="7"/>
    <Property name="logDir" value="/var/log/eltex-pcrf"/>
    <Property name="defaultPattern" value="%d{ISO8601} [%t] %-5p %logger{1} %C{1}.%M(line:%L). %m%n"/>
    <Property name="gelfHost" value="udp:lab3-test.eltex.loc"/>
    <Property name="gelfPort" value="12201"/>
    <Property name="gelfLevel" value="OFF"/>
    <Property name="filenamePrefix" value="eltex-pcrf-"/>
  </Properties>

  <Appenders>
    <Console name="STDOUT" target="SYSTEM_OUT">
      <PatternLayout>
        <Pattern>${defaultPattern}</Pattern>
      </PatternLayout>
    </Console>

    <RollingFile name="SERVICE"
      fileName="${logDir}/${filenamePrefix}service.log"
      filePattern="${logDir}/service/%d{yyyyMMdd}.%i.log">
      <ThresholdFilter level="INFO" onMatch="ACCEPT" onMismatch="DENY"/>
      <PatternLayout>
        <pattern>${defaultPattern}</pattern>
      </PatternLayout>
      <Policies>
        <TimeBasedTriggeringPolicy interval="1" modulate="true"/>
        <SizeBasedTriggeringPolicy size="${maxSize}"/>
      </Policies>
      <DefaultRolloverStrategy max="${maxCount}"/>
    </RollingFile>

    <RollingFile name="DEFAULT"
      fileName="${logDir}/${filenamePrefix}default.log"
      filePattern="${logDir}/default/%d{yyyyMMdd}.%i.log">
      <ThresholdFilter level="INFO" onMatch="ACCEPT" onMismatch="DENY"/>
      <PatternLayout>
        <pattern>${defaultPattern}</pattern>
      </PatternLayout>
      <Policies>
        <TimeBasedTriggeringPolicy interval="1" modulate="true"/>
        <SizeBasedTriggeringPolicy size="${maxSize}"/>
      </Policies>
      <DefaultRolloverStrategy max="${maxCount}"/>
    </RollingFile>

    <RollingFile name="RADIUS"
      fileName="${logDir}/${filenamePrefix}radius.log"
      filePattern="${logDir}/radius/%d{yyyyMMdd}.%i.log">
      <ThresholdFilter level="DEBUG" onMatch="ACCEPT" onMismatch="DENY"/>
      <PatternLayout>
        <pattern>${defaultPattern}</pattern>
      </PatternLayout>
      <Policies>
        <TimeBasedTriggeringPolicy interval="1" modulate="true"/>
        <SizeBasedTriggeringPolicy size="${maxSize}"/>
      </Policies>
      <DefaultRolloverStrategy max="${maxCount}"/>
    </RollingFile>

    <RollingFile name="GENERIC_AP"
      fileName="${logDir}/${filenamePrefix}generic-ap.log"
      filePattern="${logDir}/generic-ap/%d{yyyyMMdd}.%i.log">
      <ThresholdFilter level="INFO" onMatch="ACCEPT" onMismatch="DENY"/>
      <PatternLayout>
```

```

        <pattern>${defaultPattern}</pattern>
    </PatternLayout>
</Policies>
    <TimeBasedTriggeringPolicy interval="1" modulate="true"/>
    <SizeBasedTriggeringPolicy size="${maxSize}"/>
</Policies>
<DefaultRolloverStrategy max="${maxCount}"/>
</RollingFile>

<RollingFile name="LEASE_SAVER"
    fileName="${logDir}/${filenamePrefix}lease_saver.log"
    filePattern="${logDir}/lease_saver/%d{yyyyMMdd}.%i.log">
    <ThresholdFilter level="INFO" onMatch="ACCEPT" onMismatch="DENY"/>
    <PatternLayout>
        <pattern>${defaultPattern}</pattern>
    </PatternLayout>
    <Policies>
        <TimeBasedTriggeringPolicy interval="1" modulate="true"/>
        <SizeBasedTriggeringPolicy size="${maxSize}"/>
    </Policies>
    <DefaultRolloverStrategy max="${maxCount}"/>
</RollingFile>

<RollingFile name="SHAPER"
    fileName="${logDir}/${filenamePrefix}shaper.log"
    filePattern="${logDir}/shaper/%d{yyyyMMdd}.%i.log">
    <ThresholdFilter level="INFO" onMatch="ACCEPT" onMismatch="DENY"/>
    <PatternLayout>
        <pattern>${defaultPattern}</pattern>
    </PatternLayout>
    <Policies>
        <TimeBasedTriggeringPolicy interval="1" modulate="true"/>
        <SizeBasedTriggeringPolicy size="${maxSize}"/>
    </Policies>
    <DefaultRolloverStrategy max="${maxCount}"/>
</RollingFile>

<RollingFile name="I18N"
    fileName="${logDir}/${filenamePrefix}i18n.log"
    filePattern="${logDir}/i18n/%d{yyyyMMdd}.%i.log">
    <ThresholdFilter level="INFO" onMatch="ACCEPT" onMismatch="DENY"/>
    <PatternLayout>
        <pattern>${defaultPattern}</pattern>
    </PatternLayout>
    <Policies>
        <TimeBasedTriggeringPolicy interval="1" modulate="true"/>
        <SizeBasedTriggeringPolicy size="${maxSize}"/>
    </Policies>
    <DefaultRolloverStrategy max="${maxCount}"/>
</RollingFile>

<RollingFile name="HAZELCAST"
    fileName="${logDir}/${filenamePrefix}hazelcast.log"
    filePattern="${logDir}/hazelcast/%d{yyyyMMdd}.%i.log">
    <ThresholdFilter level="INFO" onMatch="ACCEPT" onMismatch="DENY"/>
    <PatternLayout>
        <pattern>${defaultPattern}</pattern>
    </PatternLayout>
    <Policies>
        <TimeBasedTriggeringPolicy interval="1" modulate="true"/>
        <SizeBasedTriggeringPolicy size="${maxSize}"/>
    </Policies>
    <DefaultRolloverStrategy max="${maxCount}"/>
</RollingFile>

<!--          leakDetectionThreshold      hikari-->

<!--          <RollingFile name="HIKARI" fileName="${logDir}/${filenamePrefix}hikariCP.log"-->
<!--          filePattern="${logDir}/hazelcast/%d{yyyyMMdd}.%i.log"-->
<!--          <ThresholdFilter level="WARN" onMatch="ACCEPT" onMismatch="DENY"/>-->
<!--          <PatternLayout>-->

```

```

<!--      <pattern>${defaultPattern}</pattern>-->
<!--      </PatternLayout>-->
<!--      <Policies>-->
<!--          <SizeBasedTriggeringPolicy size="${maxSize}"/>-->
<!--      </Policies>-->
<!--      <DefaultRolloverStrategy max="${maxCount}"/>-->
<!--      </RollingFile>-->

<Gelf name="Gelf"
    host="${gelfHost}"
    port="${gelfPort}"
    version="1.1"
    facility="eltex-pcrf"
    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>
<!--      Hikari logger      -->
<!--      <Logger name="com.zaxxer.hikari" level="WARN" additivity="false">-->
<!--          <appender-ref ref="HIKARI"/>-->
<!--      </Logger>-->

    <Logger name="org.eltex.softwlc.pcrf">
        <AppenderRef ref="SERVICE"/>
    </Logger>
    <Logger name="org.eltex.softwlc.pcrf">
        <AppenderRef ref="SERVICE"/>
    </Logger>
    <Logger name="io.vertx">
        <AppenderRef ref="SERVICE"/>
    </Logger>
    <Logger name="com.hazelcast"
        additivity="false">
        <AppenderRef ref="HAZELCAST"/>
    </Logger>

    <!-- Turn off debug messages about cluster from MongoDB driver -->
    <Logger name="org.mongodb.driver.cluster"
        level="INFO"/>

    <!-- This Logger writes only to radius.log -->
    <Logger name="org.eltex.softwlc.pcrf.vertx.radius"
        additivity="false">
        <AppenderRef ref="RADIUS"/>
    </Logger>
    <!-- This Logger also writes to radius.log -->
    <Logger name="net.jradius">
        <AppenderRef ref="RADIUS"/>
    </Logger>

    <!-- GenericAP Registrar logging -->
    <Logger name="org.eltex.softwlc.pcrf.vertx.radius.verticle.option82"
        additivity="false">
        <AppenderRef ref="GENERIC_AP"/>
    </Logger>

    <!-- This Logger writes only to lease_saver.log -->
    <Logger name="org.eltex.softwlc.pcrf.vertx.dhcp"
        additivity="false">
        <AppenderRef ref="LEASE_SAVER"/>
    </Logger>

    <!-- This Logger writes only to shaper.log -->

```

```

    <Logger name="org.eltex.softwlc.pcrf.vertx.shaper"
      additivity="false">
      <AppenderRef ref="SHAPER"/>
    </Logger>

    <Logger name="org.eltex.softwlc.pcrf.language"
      additivity="false">
      <AppenderRef ref="I18N"/>
    </Logger>

    <Root level="DEBUG">
      <AppenderRef ref="Gelf" level="${gelfLevel}"/>
    </Root>
  </Loggers>
</Configuration>

```

- (.):

```
<Property name="maxSize" value="5MB"/>
```

- , :

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

- :

```
<Property name="logDir" value="/var/log/eltex-pcrf"/>
```

- Graylog (, ,):

```

<Property name="gelfHost" value="udp:lab3-test.eltex.loc"/>
<Property name="gelfPort" value="12201"/>
<Property name="gelfLevel" value="OFF"/

```

- :

```
<Root level="DEBUG">
```