



EMC® Watch4net®

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Localization and International Usage Guide

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EMC²

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Preface

The purpose of this guide is to clarify the configuration settings needed to get international support in *APG*.

This guide is intended to be read by any administrator of *APG* who will be able to setup backend and portal configuration files. It assumes that the *APG* application has already been installed and configured.

Where to get help

EMC support, product, and licensing information can be obtained as follows:

PRODUCT INFORMATION - For documentation, release notes, software updates, or information about EMC products, go to EMC Online Support at:

<https://support.emc.com>

TECHNICAL SUPPORT - Go to EMC Online Support and click Service Center. You will see several options for contacting EMC Technical Support. Note that to open a service request, you must have a valid support agreement. Contact your EMC sales representative for details about obtaining a valid support agreement or with questions about your account.

Backend

To support foreign languages, *APG* must support any character encoding. The easiest way to achieve it is to provide full *Unicode* compatibility. Since most *APG* components are *Java based*, *Unicode* is supported by default.

However, several of these components have to communicate with each other, involving complex transformation operations that must be configured to support *Unicode*.

The figure [1](#) on page [2](#) describes the several transformation that may occurs in the *APG* backend. Each of them will be described in this section.

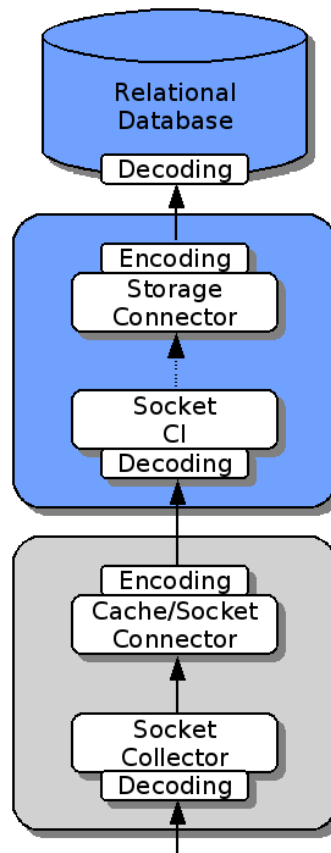


Figure 1: Backend Charset Transformations

1 Socket Collector

The *Socket Collector* will decode the listened bytes using the encoding specified in its configuration file. The encoding attribute is optional. The default encoding is *UTF-8*.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE config SYSTEM "server.dtd">
<config>
  <listen encoding="UTF-8">2003</listen>
</config>
```

Obviously, the client application writing to the socket must send correctly encoded data.

2 Socket/Cache Connector

The *Cache Connector* will encode strings using the encoding specified in its configuration file. The encoding element is optional. The default encoding is also *UTF-8*.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE config SYSTEM "cacheconnector.dtd">
<config>
  <host>localhost</host>
  <port>2000</port>
  <buffer-size>32768</buffer-size>
  <encoding>UTF-8</encoding>
</config>
```

The *Socket Connector* works exactly the same. The encoding element is optional. The default encoding is also *UTF-8*.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE config SYSTEM "socketconnector.dtd">
<config>
  <host>localhost</host>
  <port>2000</port>
  <buffer-size>32768</buffer-size>
  <retry-count>10</retry-count>
  <retry-timeout>500</retry-timeout>
  <connect-timeout>5000</connect-timeout>
  <write-timeout>5000</write-timeout>
  <encoding>UTF-8</encoding>
</config>
```

The targeted component must be configured to handle specified encoding correctly.

3 Socket Control Interface

The *Socket Control Interface* will encode strings using the encoding specified in its configuration file. The `encoding` element is optional. The default encoding is also *UTF-8*.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE config SYSTEM "server.dtd">
<config>
  <listen encoding="UTF-8">2000</listen>
</config>
```

4 Storage Connector

There are several storage connector for each supported database. All of them accept a database-encoding element in their configuration to specify which charset should be used to write temporary files. This element is optional. The default encoding is *ASCII* but *MySQL* default configuration file set it up to *UTF-8*.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE config SYSTEM "mysql.dtd">
<config>
  <connection>
    <url>jdbc:mysql://localhost:53306/apg?autoReconnect=true</url>
    <database-encoding>UTF-8</database-encoding>
    <username>apg</username>
    <password>watch4net</password>
  </connection>

  <!-- ... -->
</config>
```

The database must be configured to accept the specified encoding used by the temporary file.

5 Database

5.1 MySql

Depending on your software version, *MySql* default encoding is either *latin1* or *utf8*. You can check with the following command in the *MySql* prompt:

```
mysql> SHOW VARIABLES LIKE 'character_set_%';
```

Variable_name	Value
character_set_client	utf8
character_set_connection	utf8
character_set_database	utf8
character_set_filesystem	binary
character_set_results	utf8
character_set_server	utf8
character_set_system	utf8
character_sets_dir	/usr/share/mysql/charsets/

```
8 rows in set (0.00 sec)
```

The `character_set_database` settings means that the default encoding for the selected database is *utf8* and `character_set_server` means that the server default encoding is *utf8*. To fully support *utf8*, please set the following variables in configuration:

```
[mysqld]
character-set-server      = utf8
default-character-set     = utf8
```

The database encoding is very important since it will be used to decode temporary files generated by the *Storage Connector*. To change your database default encoding, just type:

```
mysql> ALTER DATABASE apg DEFAULT CHARACTER SET utf8;
Query OK, 1 row affected (0.00 sec)
```

You may also check table character set and eventually column character set. The same kind of command are available to modify them. *APG* will not set any of them when creating tables so it should simply use database defaults. If your database was previously using another encoding, you will have to convert your tables. Please refer to <http://dev.mysql.com/doc/refman/5.0/en/charset.html> for more information.

5.2 Oracle and Sql Server

We don't provide support for these database, please contact your database administrator.

2

Portal

The figure 2 on page 8 describes the several transformation that may occurs in the *APG* backend. Each of them will be described in this section.

1 Database connection

The conversion job between the database and the *Web Portal* is handled automatically by the *JDBC* driver. Depending on your database settings, you may have to configure the connection accordingly. Nothing is required for *MySQL*, please contact your database administrator for *Oracle* or *Sql Server*.

2 Web Portal

Data sent to the final user is always *UTF-8* encoded. Most Web browser support it and it is often set as the default.

Data sent by the final user is encoded using the charset specified in the requests. However, standards are mostly broken in common browsers. Most of the time, they will send back data using the

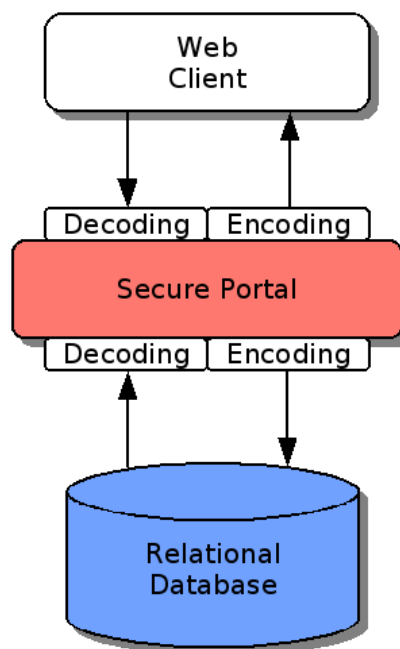


Figure 2: Portal Charset Transformations

encoding of the page, which is *UTF-8*. Then we have to force *Tomcat* to use *UTF-8* encoding whatever the client declares.

1. Make sure than *URL* are decoded using *UTF-8*. This is specified in `server.xml` (int *Tomcat* conf directory) for each relevant `Connector` elements.

```
<Connector port="58080" maxHttpHeaderSize="8192" maxThreads="150"
  minSpareThreads="25" maxSpareThreads="75" enableLookups="false"
  redirectport="58443" acceptCount="100" connectionTimeout="20000"
  disableUploadTimeout="true" URIEncoding="UTF-8" />
```

2. Force form parameter encoding using a specific filter. This is configured in *APG Portal* configuration file (conf/Catalina/localhost/APG.xml)

```
<Context>
  <!-- ... -->
  <!-- This valve MUST be the first one to fix encoding -->
  <Valve className="com.watch4net.apg.v2.gui.tomcat.EncodingFixValve"/>
</Context>
```

To use this *Valve*, you must add `w4n-tomcat-utils-r*.jar` in *Tomcat* server library directory (server/lib).

3 Regional settings

APG Web Portal will use the server default locale. If a translation file is available for this locale, the whole portal will be translated. The default locale can be overridden with the *Java* `user.language` system property.