**bespire**

**ISO Registry of Geodetic Codes and Parameters**

Installation Procedures

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# Installing the Registry Software

This guide describes how to install an instance of the ISO Registry of Geodetic Codes and Parameters.

## Server hardware requirements

Server load is difficult to predict, therefore live testing remains the best way to determine what hardware the ISO Registry instance will require in production. The values given below refer to the minimum available hardware to run the ISO Registry instance with five concurrent users.

* 2 GHz+ CPU
* 2048 MB RAM
* 10 GB database space

## System Requirements

|  |  |
| --- | --- |
| Java version |  |
| Oracle JRE / JDK | **☑** 1.7 |
| IcedTea (OpenJDK) | **☑** 2.4 |
| Operating systems for server installations |  |
| Microsoft Windows | **☑** |
| Linux | **☑** |
| Application server |  |
| Apache Tomcat | **☑** 7.0.x |
| Database |  |
| PostgreSQL | **☑** 9.1, 9.2, 9.3 |
| Web browsers – desktop |  |
| Microsoft Internet Explorer (Windows) | **☑** 10, 11 |
| Mozilla Firefox (all platforms) | **☑** latest stable version |
| Google Chrome (Windows and Mac) | **☑** latest stable version |
| Web browsers – mobile |  |
| Android (Android) | **☑** the default Android browser |
| Chrome (Android and iOS) | **☑**  latest stable version |

## Nomenclature

The following <variables> are used in this document when referring to server-side paths or configuration parameters:

|  |  |
| --- | --- |
| Variable | Meaning |
| <Tomcat7> | Path to Apache Tomcat 7 (e. g. /var/lib/tomcat7) |
| <dbserver> | Host name or IP address of the PostgreSQL server |
| <dbport> | Port of the PostgreSQL server |
| <dbname> | Name of the PostgreSQL database |
| <dbuser> | PostgreSQL login role that has full rights on the <dbname> database |
| <dbpassword> | Password of <dbuser> |
| <host> | Host name or IP address of the installation server |
| <port> | Port where Apache Tomcat listens for HTTP requests (e. g. 8080) |

## Prerequisites

The following sections assume that

* you are familiar with administrating Linux systems
* you have root access to the server used for installation
* the following componets were already successfully installed on the server:
  + OpenJDK 7 or Oracle JDK/JRE 7
  + Apache Tomcat 7.0.x
* the server can connect to a PostgreSQL instance and
  + the database <dbname> for the ISO Registry was created
  + the database user <dbuser> with password <dbpassword> exists and has full rights on the <dbname> database
* the server can connect to an SMTP server that will deliver mails sent by the registry software

The commands shown work on servers running Ubuntu LTS 14.04 (and possibly later Ubuntu versions). In case your server runs a different distribution you must modify the commands to fit that platform.

## Installation

1. Load the database dump iso-gcp-minimal.backup into the isoreg database (e. g. using PgAdmin). The dump contains a minimal version of the ISO Registry of Geodetic Codes and Parameters, including example users. For further details, see section 1.6.
2. Copy the web archive iso-registry-client.war to <Tomcat7>/webapps, the directory that contains Tomcat’s webapps (e. g. /var/lib/tomcat7/webapps)
3. Apache Tomcat should unpack the web archive to the sub-directory iso-registry-client
4. Stop Apache Tomcat service tomcat7 stop
5. Change to the directory iso-registry-client/WEB-INF/classes and edit the configuration files registry.configuration.xml, client.configuration.xml, hibernate.connection.xml and hibernate.properties.xml. For a list of all configuration settings, see section 1.6.
6. Start Apache Tomcat service tomcat7 start
7. To access the ISO Registry of Geodetic Codes and Parameters, open a browser and navigate to http://<application server URL>/iso-registry-client. For example, with Tomcat running on port 8080 on localhost, the URL would be http://localhost:8080/iso-registry-client.

## Configuration

hibernate.connection.xml – Database connection

|  |  |
| --- | --- |
| hibernate.connection.username | <dbuser> |
| hibernate.connection.password | <dbpassword> |
| hibernate.connection.url | jdbc:postgresql://<dbhost>:<dbport>/isoreg |

hibernate.properties.xml – Database parameters

|  |  |
| --- | --- |
| hibernate.hbm2ddl.auto | validate – for standard production use  update – when performing a software update  create – when installing for the time |

registry.configuration.xml – Registry configuration

|  |  |
| --- | --- |
| mail.enabled | true – mail sending is enabled[[1]](#footnote-1)  false – mail sending is disabled |
| mail.from.name | Mail name used in From header |
| mail.from.address | E-mail address used in From header |
| mail.smtp.auth | Switch to activate SMTP authentication (true, false) |
| mail.smtp.starttls.enable | Switch to activate STARTTLS SMTP authentication (true, false) |
| mail.smtp.host | Host name or IP address of SMTP server |
| mail.smtp.port | Port number of SMTP server (TLS: 587, plain: 25) |
| mail.smtp.user | User name used for SMTP authentication |
| mail.smtp.password | Password used for SMTP authentication (plain text) |

client.configuration.xml – Registry client configuration

|  |  |
| --- | --- |
| basePath | If you run Apache Tomcat behind a reverse proxy this parameters must be set to the context path used by external clients, preceded by a tilde. If e. g. the registry is accessed from the outside via the URL http://registry.iso.org/gcp the parameter must be set to ~/gcp.  In environments without a reverse proxy this parameters must be left empty. |
| signup.sendConfirmationMails | Switch to enable/disable confirmation mail feature |
| signup.confirmationUrl | URL to be used by external clients to perform confirmation. The given URL is included in confirmation mails sent by the registry, e. g. https://registry.iso.org/gcp/signup/confirmation  (the URL must end with /signup/confirmation) |

## Default users

The minimal database in iso-gcp-minimal.backup contains the following users:

|  |  |  |
| --- | --- | --- |
| Login (e-mail) | Password | Roles |
| admin@example.org | a | Administrator |
| controlbody@example.org | c | Control Body |
| regman@example.org | r | Register Manager |
| owner@example.org | o | Register Owner |
| submitter@example.org | s | Submitter |
| poc@example.org | p | Point of Contact of “Example Organization” |

1. Mail sending requires correct configuration of the mail.\* parameters [↑](#footnote-ref-1)