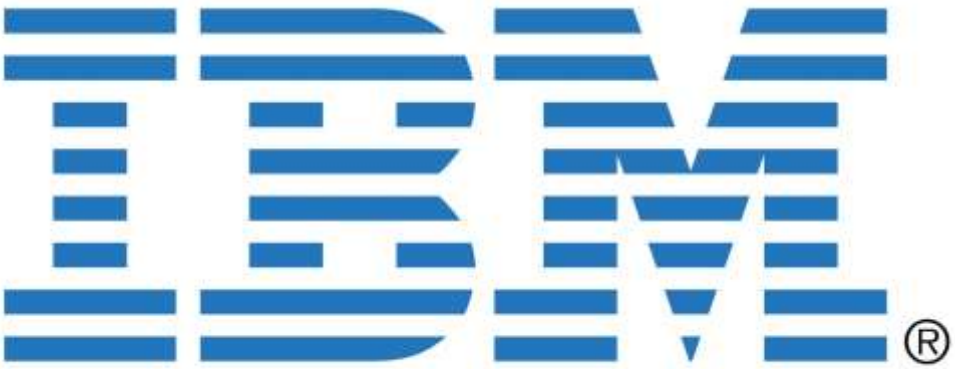
WebEst Administration Guide

Detailed Information for Administrators



Contact person:

Andre Munzinger (a.munzinger@stud.tu-darmstadt.de)
Florian Friedrichs (friedrichsflorian@googlemail.com)
Dr. Holger Kremmin (holger.kremmin@de.ibm.com)

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1 Server Requirements

WebEst runs on the IBM WebSphere Application Server Community Edition Version 2.1. This server includes Apache Geromino (Java EE 5 application server) as a foundation, provides Apache Derby as a database and Tomcat as servlet container.

The WebSphere Application Server is available for a variety of platforms (AIX, Linux, Solaris, and Windows). WebEst should run on nearly every platform but only following operating systems were tested:

- Windows XP (32 Bit)
- Windows 7 (32/64 Bit)
- Windows Server 2008 R2 (32/64 Bit)
- Debian GNU Linux v5 (32/64 Bit)
- Redhat Linux v5
- Novell SUSE Linux 11

Hardware requirements for the server are the following:
Memory: Minimum 140 MB physical memory
(256 MB or more recommended, depending on deployed applications)

Further requirement for the server is an installed IBM or Oracle JDK.

Please visit
http://www-01.ibm.com/software/webservers/appserv/community/sysreq/?S_CMP=rnav
for further information regarding server hardware requirements.

2 Installation Guide

2.1 Setting up the WebSphere Application Community Server

Please refer to the IBM page for support regarding the installation:
http://publib.boulder.ibm.com/wasce/Front_en.html

2.2 Setting up WebEst

To deploy WebEst application to the server, copy the `webest.ear` file to the servers `deploy` directory and start up the server.

The database is automatically created on the first deployment. Administrative data has to be inserted to the database directly. Please refer to the following section on how to insert users, organizations, application types etc.

2.3 Database Configuration

By default WebEst connects to the local server's Derby database using username (=schema name) and password `webest`. If you want to specify other settings for the database connection you have to modify the following files in your `webest.ear`:

In `derby-WebEstLocal-plan.xml` and `derby-WebEstXA-plan.xml` change the values of the following lines to the appropriate settings:

```
<config-property-setting name="DatabaseName">webest</config-
property-setting>
<config-property-setting name="Password">webest</config-property-
setting>
<config-property-setting name="UserName">webest</config-property-
setting>
```

3 Inserting Data into the Database

Default entities like users, roles, application types, industry sectors, PI history, organizations and divisions cannot be managed by the web interface. Those had to be inserted via SQL statements directly to the underlying database.

For a detailed layout of the database see technical documentation (ERM).

Log in to your database and execute the following statements in the specified schema → 2.3 Database Configuration.

Note: Numeric IDs are generated automatically, so you can omit them in the SQL statement. But if you specify an ID then you have to adjust the auto increment value of the table with a statement like:

```
ALTER TABLE APPLICATIONTYPE ALTER COLUMN ID RESTART WITH 7;
```

3.1 Organizations and Divisions

Divisions belong to organizations. Therefore you have to insert organizations first. You can use the following template for the insert command:

```
INSERT INTO ORGANIZATION (NAME) VALUES ('IBM GBS');
```

To insert the corresponding divisions use the following command:

```
INSERT INTO DIVISION (NAME, ORGANIZATION) VALUES ('AIS Financials',
1);
```

The value for ORGANIZATION is the ID of the corresponding organization. An organization with the given ID must already exist in the database.

3.2 Users

To login into WebEst users are required to be inserted into the database. Users belong to one of the three basic roles `admin`, `estimator` or `manager` and to a division. The roles are automatically inserted into the database at first deployment of the application. The following command inserts a user with the role `estimator` and the password `1234`:

```
INSERT INTO "USER" (ID, PASSWORD, FIRSTNAME, LASTNAME, ROLE,
DIVISION) VALUES ('j_doe', '81dc9bdb52d04dc20036dbd8313ed055',
'John', 'Doe', 'estimator', 1);
```

The password has to be inserted as a hexadecimal representation of the MD5 hash of the clear text password. The specified division must already exist in database.

3.3 Application Types

Application types are grouped into categories, internally called application type groups. Before you can insert application types you have to insert the groups as follows:

```
INSERT INTO APPLICATIONTYPEGROUP (NAME) VALUES ('Business');
```

The corresponding application types can be inserted with the following command:

```
INSERT INTO APPLICATIONTYPE (NAME, "GROUP") VALUES ('Inventory
Control', 1);
```

The value for `GROUP` points to an existing `ID` of an application type group.

3.4 Industry Sectors

Industry sectors are grouped into categories, internally called industry sector groups. Before you can insert industry sectors you have to insert the groups as follows:

```
INSERT INTO INDUSTRYSECTORGROUP (NAME) VALUES ('Retail');
```

The corresponding industry sectors can be inserted with the following command:

```
INSERT INTO INDUSTRYSECTORGROUP (NAME, "GROUP") VALUES ('Food', 1);
```

The value for `GROUP` points to an existing `ID` of an industry sector group.

3.5 PI-PP Lookup Table

The PI-PP lookup table is used to find the PP (which is used in the calculation process) for a given PI. Some values are predefined, but if you want to add more you can change the contents of the table `PIPPLOOKUP`. To insert more values for example use the following statement:

```
INSERT INTO PIPPLOOKUP (pi, pp) VALUES (24, 196418);
```

3.6 PI History

PI history entries (the projects) are grouped into categories. Before you can insert history entries you have to insert the groups as follows:

```
INSERT INTO PIHISTORYCATEGORY (NAME) VALUES ('ERM Systems');
```

The corresponding projects can be inserted with the following command:

```
INSERT INTO PIHISTORYENTRY (PROJECTNAME, CATEGORY, PI, EFFORT)
VALUES ('Small ERM project', 1, 3, 2.5);
```

The value for `CATEGORY` points to an existing `ID` of a PI history category. Please make sure that the given PI is contained in the PI-PP lookup table (see 3.6 PI-PP Lookup Table).

4 Logging

WebEst uses the popular Apache log4j logging framework to log all user actions and errors.

Activity information like "Estimate created" or "Estimate deleted" are logged with the username and role of currently signed on user at the `INFO` error level. Errors are logged at the `ERROR` level.

If no specific settings are configured, WebEst logs into the servers default log file. If you want to specify other settings for log level or if you want to log all WebEst messages to a separate log file, you have to edit the server's global log4j properties file at `var/log/server-log4j.properties`, by adding special options for the package `com.ibm.webest`.

Please see log4j documentation for further details of the configuration (http://logging.apache.org/log4j/1.2/manual.html).

5 Web Service

The WebEst Application also provides a SOAP web service interface. The WSDL file is available on your server at the following context path:

```
/WebEstWebService/EstimationService?wsdl
```

To use the web service, authentication is required. Use the same users and roles as in the web frontend. The used authentication mechanism is HTTP Basic Authentication (RFC 2617).