



[Editor's Note] This is the first in a two-part series by v. Niranjan [niravasu@in.ibm.com](mailto:niravasu@in.ibm.com) on how to setup Tomcat for use with RBDe JavaGen applications and DB2. The conclusion will be published in the next EGL Newsletter

## Section 1. Introduction

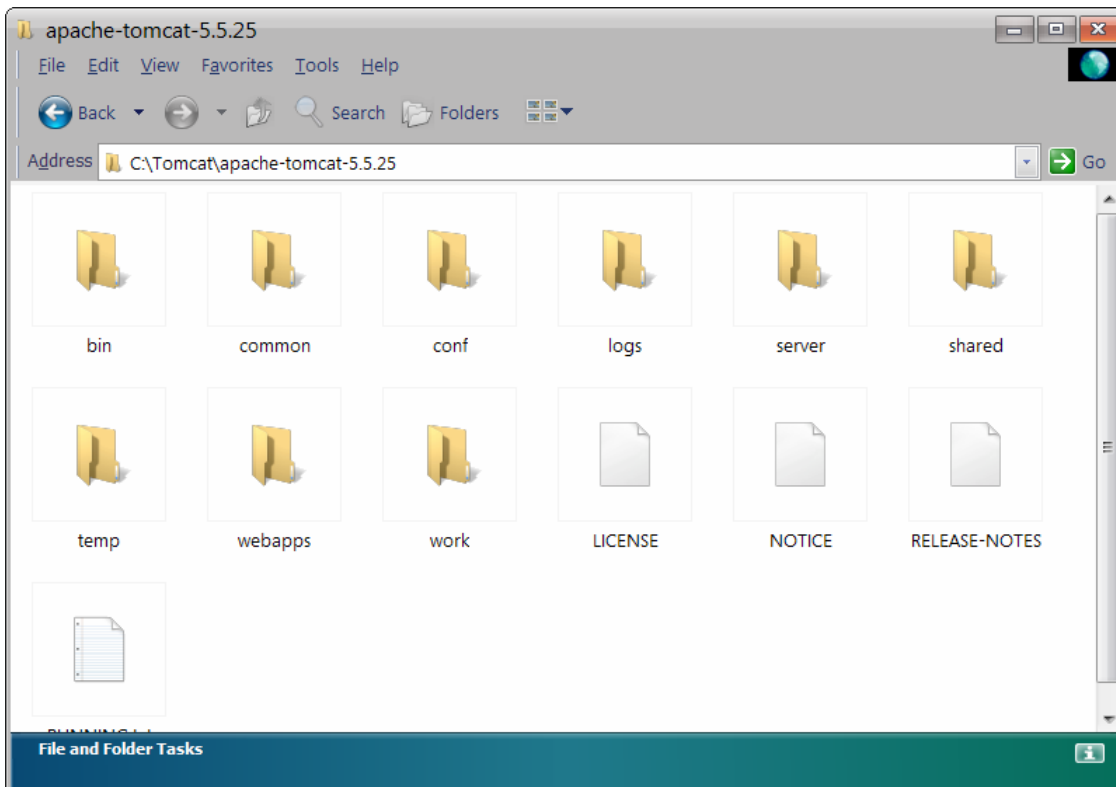
This article is written using IBM Rational Software Architect 7.0.0.2 (IBM Rational Application Developer could also be used), IBM Rational Business Developer plug-in 7.0, Apache Tomcat v5.5.25, Microsoft Windows XP professional SP2, and database used is IBM DB2 v8.2. In general, you may wish to install and configure Tomcat as your application server, in order to run (test) your development work using RBDe.

## Section 2. Installing and Configuring Tomcat

### Downloading Tomcat

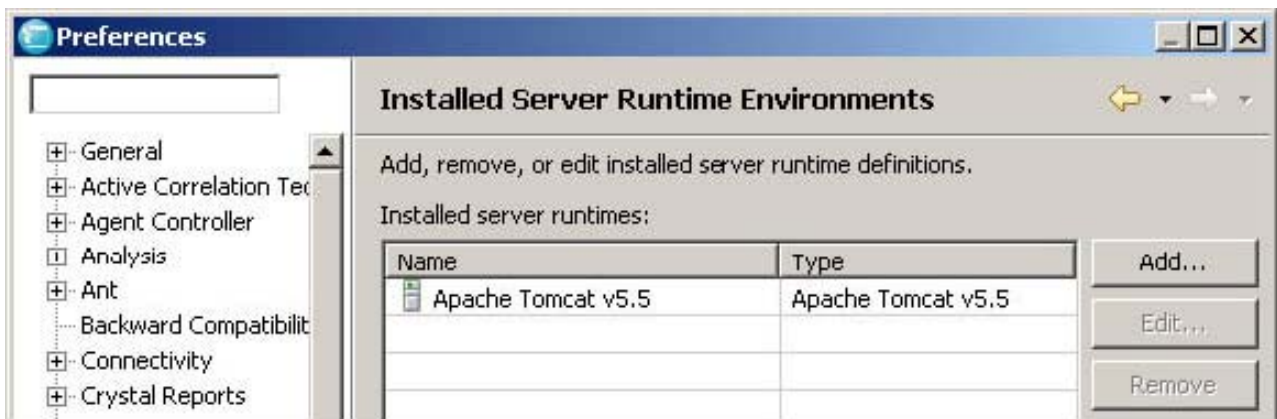
The default EGL Web project that you will create with Rational Business Developer will use Tomcat as the Application server to create a simple List Page with EMPLOYEE table of the SAMPLE DB2 database.

- a) In a Web browser, go to the Apache Tomcat Web page: <http://tomcat.apache.org>.
- b) Click the Download link for Tomcat 5.x.
- c) On the download page, find the most recent version of Tomcat with a version number like 5.5.x, such as 5.5.25. Several downloads are available for each version. Do not use versions marked as "alpha" or "beta."
- d) Under the 5.5.x version of Tomcat, look under Binary Distributions and then under Core.
- e) Download the Core version of Tomcat 5.5.x for your operating system. For Windows, select the ZIP file.
- f) Unzip the file you downloaded and place the server files in an appropriate location on your computer. This article uses the location **C:\Tomcat\apache-tomcat-5.5.25**



### Adding the Server Runtime Environment

- a) In Rational Software Architect select Windows→Preferences
- b) At the left side of the Preferences window, expand Server
- c) Under Server, click Installed Runtimes. The right side of the Preferences window now shows a list of all of the server runtimes installed in the workbench.
- d) Click Add. The New Server Runtime window opens.
- e) In the New Server Runtime window, expand Apache.
- f) Under Apache, click Tomcat v5.5.25. Click Next. Under Tomcat installation directory, click Browse. Locate the folder (**C:\Tomcat\apache-tomcat-5.5.25**) that contains the Tomcat installation files and then click OK.
- g) Click Finish. Tomcat is added to the list of installed runtimes. The Preferences window now looks like this. Click OK.



### Section 3: Creating an EGL Web Project Targeted for Tomcat

The EGL Web project contains the EGL code, Web pages, and sample database that make up the logic, data, and interface of the application.

Because the project will have a Web page interface, you need to create an EGL Web project, not an EGL project.

- a) Select File→New→Other. Select **EGL Web Project** and click **Next**.  
Name the project **EGLWeb7**
- b) Enter JNDI name for SQL connection as **jdbc/SAMPLE**
- c) Select **Apache Tomcat v5.5** in the target runtime. Click **Finish**

## Section 4. Import DB2 data into the EGL application using the Data Access Application wizard

Launch the EGL Data Access Application Wizard. To import the EGL definitions:

- a. Right click on the project **EGLWeb7**
- b. and select **New→Other**
- c. Expand **EGL** folder
- d. and select **EGL Data Access Application**
- e. Click **Next**

The next step is to specify which project to import the EGL definitions into.

- a. Select the combo-box and select **EGLWeb7**.
- b. Click **New** to create a **Database connection**

In order to retrieve your tables' schema, you will connect to your relational database. In this case

- a. Select **v8.2** under **DB2 UDB**.
- b. Make sure the database name is entered as **SAMPLE**.
- c. Click **Finish**

**New Connection**

**Connection Parameters**  
Select the database manager, JDBC driver, and required connection parameters.

Connection identification  
 Use default naming convention  
Connection Name:

Select a database manager:

- Cloudscape
  - 5.1
  - DB2 UDB
    - V8.1
    - V8.2**
    - V9.1
  - DB2 UDB iSeries
  - DB2 UDB zSeries
  - Derby
  - Informix
  - Oracle
  - SQL Server

JDBC driver:

Connection URL details  
 Database:   
 Host:   
 Port number:   
 Use c/jent authentication  
 JDBC driver class:   
 Class location:    
 Connection URL:

User information  
 User ID:   
 Password:

- d. Select the newly created connection and select the **EMPLOYEE** table only to import. Click **Next**
- e. Select the **EMPNO** as the key field and click **Next**
- f. Enter **demo** as the **Default Package name** and select the checkbox **Qualify table names with schema** to qualify the table name with the table's schema name (the schema name is usually the auth-id of the table "owner"). click **Finish**

The Data Access wizard created the following four sets of resources:

**Control Records** – used in the default Data Access Library SQL statements

**Data Access Libraries** – which contain EGL data access statements (basic data access design patterns), that generate to SQL statements and routines

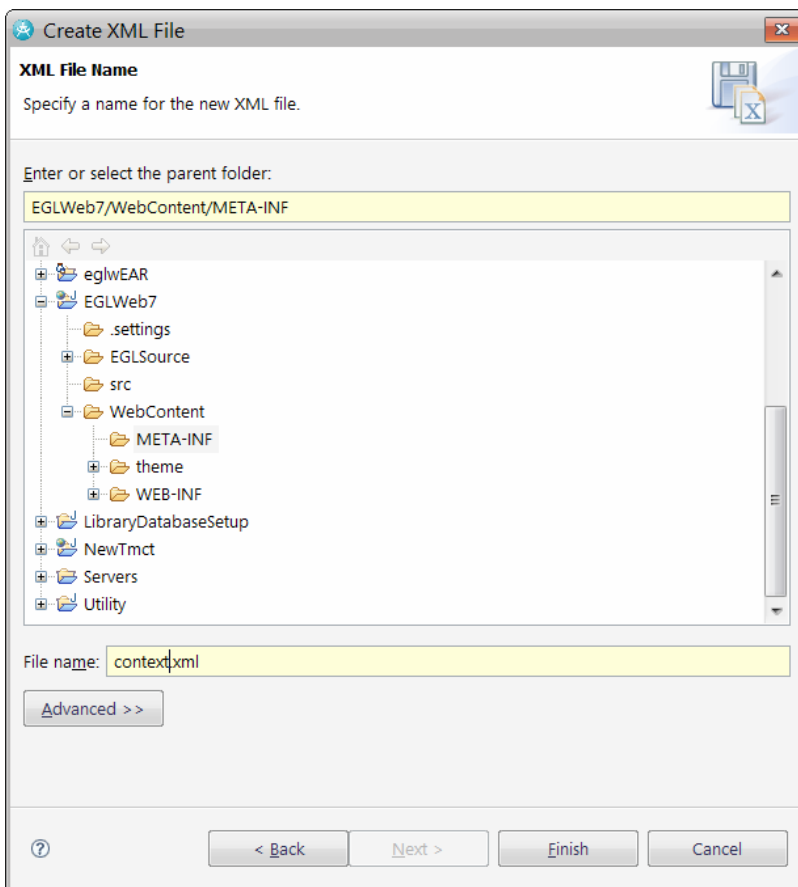
**Data Access Records** – EGL records of type sqlRecord, which participate in the Java and SQL generation, allowing you to code at a high-level of abstraction

**EGL Dataltems** – in DataDefinitions.egl. This file contains default type definitions for each column in each imported table.

## Section 5: Define JNDI Resources

Using the RAD tools (see below) create an XML file called **context.xml** and place it in the **META-INF** directory of the web application.

- a. Right click on the **META-INF** directory and select **New→Other**.
- b. Select the XML folder and click on **XML**.
- c. Click **Next** twice and name the file as **context.xml**.
- d. Click **Finish**



Open the file in Notepad and add the following content in to the XML file.



Once the **context.xml** file is defined, copy the driver jars into the `tomcat_home>/common/lib` directory. In this case, you would copy `<db2_home>/SQLLIB/java/db2java.zip` to the tomcat directory (when using this driver, change the extension name from .zip to .jar). If you're using the Universal driver, copy `db2jcc.jar` and `db2jcc_license_cu.jar` files

In your egl build file, make sure: **"jdbc/SAMPLE"** is specified as the value for **sqlJNDIName**.

[Editor's Note] - this completes the 1<sup>st</sup> part of the article on how to connect Tomcat and DB2 (and EGL/RBDe). In the next issue Niranjn will step us through the process of creating a page that runs under Tomcat to verify the configuration process.

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He is a Technology Evangelist supporting GSI's in India on all the Rational tools with emphasis on RSA,RAD and most latest on Rational Business Developer/EGL



How do I delete all EGL resources defined for a .JSP page – or all .JSP page(s) defined to an EGL Handler at once (including .Java and .Java class files)? Answer – from Window, Preferences... EGL, Page Designer – check the following options for your Workspace...

