

Beehive Sample: Petstore

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1. Introduction

The Petstore sample demonstrates how to integrate all three Beehive technologies (Page Flows, Controls and Web Services) in one application.

The Page Flows provide customers with web access to the Petstore. There are separate Page Flows for different customer activities: the 'shop' Page Flow (located at: `petstoreWeb/shop/`) lets users browse the catalog of pets, the 'checkout' Page Flow (`petstoreWeb/checkout`) lets users purchase selected items from a shopping cart, etc.

The Web Service provides employee access to the Petstore. Through the web service (located at `petstoreWeb/WEB-INF/src/PetstoreInventoryManager.jws`) employees can update the current inventory and prices displayed to customers through the web site. A Swing client for the web service is provided in the sample [Petstore Dashboard](http://incubator.apache.org/beehive/wsm/sample_Dashboard.html) (http://incubator.apache.org/beehive/wsm/sample_Dashboard.html).

Most of the Page Flows have associated Control files (located at: `petstoreWeb/WEB-INF/src/org/apache/beehive/samples/petstore/controls/`). The Controls handle the backend data traffic and encapsulate the operations of the web application, such as retrieving data from a database and handling user orders.

2. Petstore Directory Structure

The table below describes the functions of the most important files in the Petstore web application.

Directory	Description
<code>petstoreWeb</code>	
<code>account</code>	Page Flow (=Controller.jspf + JSP files) user interface for managing user accounts.
<code>auth</code>	Page Flow user interface for managing login and logout.
<code>checkout</code>	Page Flow user interface for managing the shopping cart.
<code>search</code>	Page Flow user interface for searching the Petstore.
<code>shop</code>	Page Flow user interface for browsing the catalogue of pets.
<code>site</code>	Contains the Petstore "skin", including the CSS

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	file, HTML frameset, and template file.
webappRoot	
WEB-INF	Contains configuration files for deployment, validation, and security (web.xml).
lib	JAR resources
lib/PetstoreInventoryManager.jws	Web service for employee access to the store
src/.../controls	Beehive Controls encapsulating different functionalities, including handling user account data, catalogue data, and order processing.
src/.../forms	Form Beans: each form bean is a server-side representation of an HTML form appearing in the user interface.
src/.../model	Java object classes used by the Controls.

3. Running the PetStore Sample on Tomcat 5

The following explains how to run the Petstore sample on Tomcat 5. The Petstore sample will run on other web containers, but we have chosen Tomcat 5 for convenience.

3.1. To Set up the Environment

Before proceeding, complete all of the necessary and optional steps in the following topic: [Beehive Installation and Setup](#) (setup.html)

Open a command shell and confirm that you have the following variables have been set:

- ANT_HOME
- JAVA_HOME
- CATALINA_HOME

Also ensure that the following elements are on your PATH:

- ANT_HOME/bin
- JAVA_HOME/bin

3.2. To Copy the Petstore Application to a Project Folder

To keep your Beehive distribution directory pristine, you should copy the `petstoreWeb` folder to another location before proceeding. The following instructions assume that you have copied the folder `petstoreWeb` into the directory `C:/beehive_projects`,

resulting in the following directory structure.

```
C:
  beehive_projects
    petstoreWeb
```

3.3. Edit the build.properties File

In this section you will edit the `build.properties` file--the file that sets the build-related properties for your web application.

Open the file

`C:/beehive_projects/petstoreWeb/WEB-INF/src/build.properties` in a text editor.

Edit the file so that the `beehive.home` property points to the top-level folder of your beehive installation. For example, if your beehive installation resides at `C:/apache/apache-beehive-1.0`, then your `build.properties` file would appear as follows.

```
beehive.home=C:/apache/apache-beehive-1.0

servlet-api.jar=${os.CATALINA_HOME}/common/lib/servlet-api.jar
jsp-api.jar=${os.CATALINA_HOME}/common/lib/jsp-api.jar

context.path=petstoreWeb
```

3.4. To Compile the Petstore Application

To compile the Petstore app, enter the following Ant command:

```
ant
-f C:\beehive_projects\petstoreWeb\WEB-INF\src\build.xml
clean
build
```

Copy and Paste version:

```
ant -f C:\beehive_projects\petstoreWeb\WEB-INF\src\build.xml clean build
```

3.5. To Start Tomcat

To start Tomcat, run the following command:

```
%CATALINA_HOME%\bin\startup.bat
```

3.6. To Deploy to Tomcat

To deploy the web application, click the following link. We recommend that you open the link in a new browser window. Each time you want to redeploy the application, simply refresh the browser.

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This method of application deployment assumes that you have added the manager role to your Tomcat installation. For instructions on adding the manager role, see [Beehive Installation and Setup](#) (setup.html#optional) .

<http://localhost:8080/manager/deploy?path=/petstoreWeb&war=file:C:/page>
(<http://localhost:8080/manager/deploy?path=/petstoreWeb&war=file:C:/bee>

If you are prompted for a username/password, enter: manager /manager

(For an explanation of this method of deploying an application to Tomcat, see the Tomcat 5 documentation: [Deploy A New Application from a Local Path](#) (<http://jakarta.apache.org/tomcat/tomcat-5.0-doc/manager-howto.html#Deploy%20A%20New%20Application>)

3.7. Running

<http://localhost:8080/petstoreWeb>

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