

**CS 683 Emerging Technologies  
Fall Semester, 2004  
Doc 7 Installing Seaside & Cocoon  
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## Reading

Seaside – A Multiple Control Flow Web Application Framework, Ducasse, Lienhard, Renggli, ESUG, Sept 6-10, 2004

<http://www.iam.unibe.ch/~scg/Archive/Papers/Duca04eSeaside.pdf>

## Seaside & Cocoon

The course will be covering Seaside & Cocoon. Seaside is written in Smalltalk. Cocoon uses Java, XSLT, XML and Javascript. You decide which one you wish to work with.

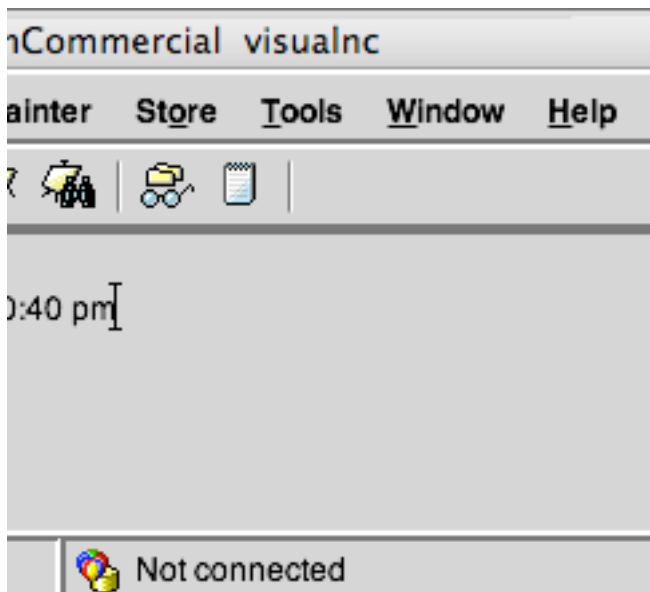
Seaside runs in Squeak and VisualWorks. You may use either, but in this class I will only talk about the VisualWorks version.

Cocoon runs in a servlet container. There are a number of such servlet containers. Tomcat is a free servlet container. In this course I will use Tomcat 4.1.30 and Cocoon 2.0.4. There are more recent versions of both. Cocoon 2.0.4 is the last version of Cocoon with a binary distribution and it is nearly identical to the version covered in the text. It works with Tomcat 4.1.30. You can use other versions of Cocoon and Tomcat, but I will only talk about the versions listed above.

## Installing Seaside

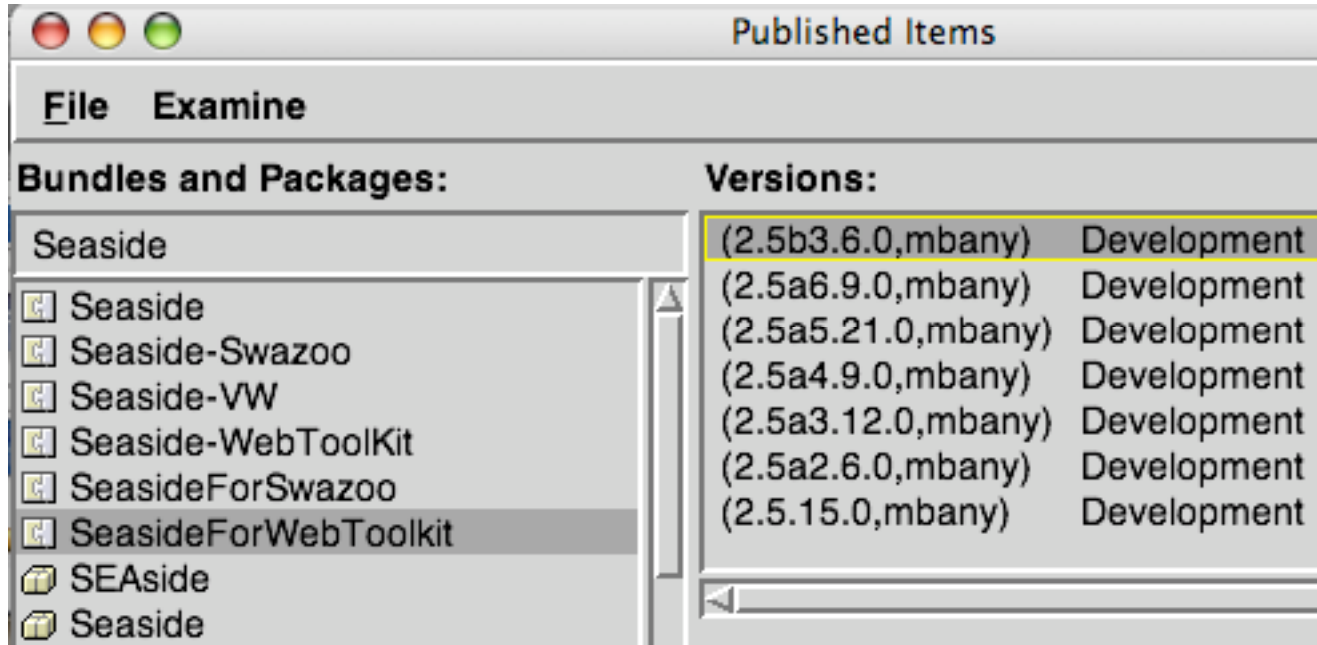
If you are installing Seaside on a Unix machine in the directory containing your image create a directory called "psql\_public\_cst". In that directory create a subdirectory called "Seaside". You do not need to do this on a Windows machine.

In VisualWorks 7.2 or 7.2.1 left click (keep the mouse button down) on the lower right pane labeled "Not connected" on the Launcher. You will get a popup menu. Select "Connect to Cincom Public Repository" in the pop up menu.

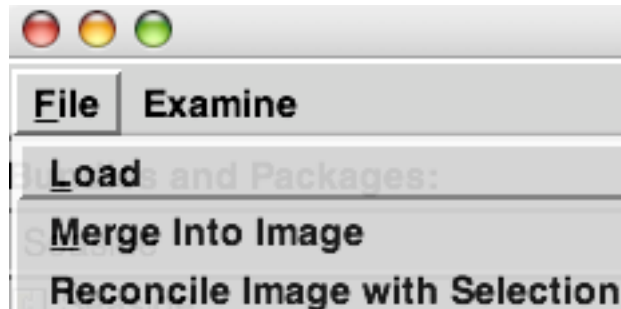


Once you have connected to the repository, the text in the lower right pane will change to something like: "Cincom Public Repository". Once this happens right click (and hold the button down) to get another popup menu. In this menu select the item "Published Items". After a short wait you will get a new window labeled "Published Items".

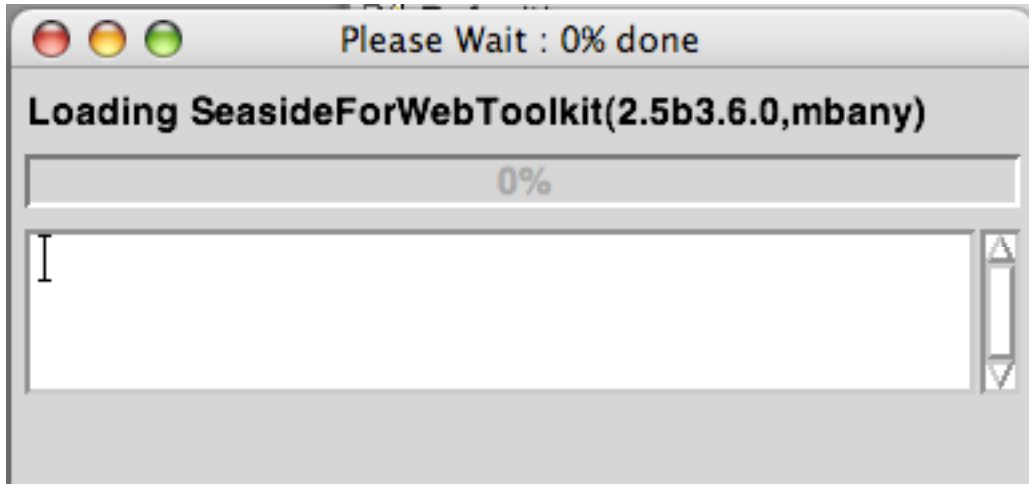
In this window type “Seaside” in the upper left pane as has shown below. Next select “SeasideForWebToolkit” in the second pane on the right. Once you have done this you will see a list of the Seaside versions in the pane labeled “Versions”. Select the latest version, which currently is 2.5b3.6.0.mbany.



Now select the “Load” item in the “File” menu on the window. A dialog window will ask you if you want load that version of Seaside. Click on yes.



Once you have done this, a progress window will appear. It will take 2-5 minutes for Seaside to completely to load. (Sometimes there are problems loading such a large application and you may need to restart the process.)



During the load process you will be asked to enter in an administrator name and password for the config site. Enter one and remember it. You will also be asked if you want to start a sample http server and a sample Seaside site. Answer yes to both. When the seaside is loaded, you can test the installation by accessing the following Url in a web browser on the same machine:

<http://localhost:8008/seaside/go/counter>

## Installing Cocoon

### Installing Cocoon on rohan

#### Step One Install Tomcat

Note that you will need to have about 100 Meg of disk space to install Cocoon.

The instructions for installing Tomcat and other Tomcat documentation is at:

<http://jakarta.apache.org/tomcat/tomcat-4.1-doc/index.html>

Go to <http://apache.roweboat.net/jakarta/tomcat-4/v4.1.30/bin/> and download

`jakarta-tomcat-4.1.30.tar.gz`

Unzip the file using:

```
gunzip jakarta-tomcat-4.1.30.tar.gz
```

This creates the file `jakarta-tomcat-4.1.30.tar`. Untar the resulting file with the command:

```
tar -xf jakarta-tomcat-4.1.30.tar
```

This creates the directory `jakarta-tomcat-4.1.30`

Before running tomcat you need to set the environment variable `JAVA_HOME`. To do this I put the following line in my `.cshrc` file

```
setenv JAVA_HOME /opt/j2sdk1.4.0
```

## Testing Tomcat

Now to start Tomcat. Go to the directory

```
jakarta-tomcat-4.1.30/bin
```

Now run the command startup.sh. I do this with:

```
./startup.sh
```

Here is a sample of starting tomcat

```
rohan 226-> ./startup.sh
Using CATALINA_BASE: /home/ma/whitney/tomcat/jakarta-tomcat-4.1.30
Using CATALINA_HOME: /home/ma/whitney/tomcat/jakarta-tomcat-4.1.30
Using CATALINA_TMPDIR: /home/ma/whitney/tomcat/jakarta-tomcat-4.1.30/temp
Using JAVA_HOME: /opt/j2sdk1.4.0
```

It will take about a minute or so before tomcat is ready. At that point you can view the default tomcat web page. In a web browser go to the url:

<http://rohan.sdsu.edu:8080/index.jsp>

## Stopping Tomcat

Go to the directory:

```
jakarta-tomcat-4.1.30/bin
```

Run the command

```
./shutdown.sh
```

Note that when you log off rohan your Tomcat server will still be running. If it runs too long it will be killed automatically.

### Other Rohan users running Tomcat

One of the problems with running tomcat on rohan is that other people may be running tomcat on rohan. So how do we know when we connect to the url above you are seeing a page from your tomcat?

To insure you are using your version of tomcat modify the index.jsp page. Go to the directory:

Edit the file:

On line 143 you will find:

```
<p><center><b>If you're seeing this page via a web browse
```

Edit the line so it contains your name like:

```
<p><center><b>From Roger Whitney. If you're seeing this page via a web browse
```

You need add your name or something that no other users would put in their page. Save the file and reload the page in your browser. If you don't see the changed text you are not accessing your tomcat!

### Avoiding Tomcat Conflicts

If two or more tomcats are running on rohan at the same time they need to use different ports. The default configuration of tomcat uses three ports. You need to change these ports so they are different than the default values. To do this you need to edit the configuration file. Go to the directory

```
jakarta-tomcat-4.1.30/conf
```

and make a copy of the file server.xml. Before you edit the file you must stop tomcat if it is running. If you edit the file while tomcat is running you will not be able to stop tomcat. Stop tomcat by running the command

```
shutdown.sh
```

located in the directory

```
jakarta-tomcat-4.1.30/bin
```

After you make sure that tomcat is not running edit the file server.xml. On about line 13 you will find a line that looks like:

```
<Server port="8005" shutdown="SHUTDOWN" debug="0">
```

You need to change the value of the port. This port is used to shut down the server. It is used by the shell script shutdown.sh. We will talk about an algorithm in class to set this value. Then about line 93 you will find a line like:

```
port="8080" minProcessors="5" maxProcessors="75"
```

This follows the line that looks like:

```
<!-- Define a non-SSL Coyote HTTP/1.1 Connector on port 8080 -->
```

This is the port that you use in the web browser to connect to the tomcat server. Change the value and remember the new value.

Once you have done this on about line 114 after the line:

```
<!-- Define a Coyote/JK2 AJP 1.3 Connector on port 8009 -->
```

you will see a line like:

```
port="8009" minProcessors="5" maxProcessors="75"
```

Again change the value of the port.

Once you have done all this save the file and start tomcat. With a web browser connect to you tomcat. Do this will the url:

<http://rohan.sdsu.edu:XXXX/index.jsp>

where XXXX is the new port number you just gave the non-SSL Coyote HTTP/1.1 Connector.

## Step Two Install Cocoon

The main Cocoon web site is at:

<http://cocoon.apache.org/>

We will deal with Cocoon 2.0.4, whose main web site is at:

<http://cocoon.apache.org/2.0/>

Before installing Cocoon make sure that your tomcat is not running. To download Cocoon go to:

<http://www.ibiblio.org/pub/mirrors/apache/cocoon/BINARIES/>

and select the file:

cocoon-2.0.4-vm14-bin.tar.gz

uncompress the file using the command:

```
gunzip cocoon-2.0.4-vm14-bin.tar.gz
```

This produces the file cocoon-2.0.4-vm14-bin.tar. Untar the file using the command:

```
tar -xf cocoon-2.0.4-vm14-bin.tar
```

This produces the directory cocoon-2.0.4. In this directory you will find a file called:

cocoon.war

move this file to the directory:

`jakarta-tomcat-4.1.30/webapps/`

If you have not done so turn off tomcat. Now start tomcat. After a minute or two you can access tomcat using a url like:

<http://rohan.sdsu.edu:XXXX/index.jsp>

where XXXX is the new port number you just gave the non-SSL Coyote HTTP/1.1 Connector, when you edited the file server.xml. Once you have know that tomcat is running again access:

<http://rohan.sdsu.edu:XXXX/cocoon/>

The first time you do this it will take several minutes for the server to respond. Be patient. If all goes we you will see a page welcoming you to Cocoon.

## Installing Cocoon on a PC

### Step One JDK 1.4 installed & JAVA\_HOME

Make sure that you have JDK 1.4 installed on your PC.

If you do not have JKD 1.4 go to:

<http://java.sun.com/j2se/>

and install it.

Once you know you have jkd 1.4 installed set the environment variable  
JAVA\_HOME

to the JDK home directory. I believe that this can be done using the command:

```
set JAVA_HOME =PathToJKDHome
```

### Step Two Install Tomcat

The instructions for installing Tomcat and other Tomcat documentation is at:

<http://jakarta.apache.org/tomcat/tomcat-4.1-doc/index.html>

Go to <http://apache.roweboat.net/jakarta/tomcat-4/v4.1.30/bin/>  
and download

jakarta-tomcat-4.1.30.exe

Run the file. This creates the directory jakarta-tomcat-4.1.30

Before running tomcat you need to set the environment variable JAVA\_HOME. See step one about this.

### Testing Tomcat

Now to start Tomcat. Go to the directory

```
jakarta-tomcat-4.1.30\bin
```

Now run the command

```
startup
```

It will take about a minute or so before tomcat is ready. At that point you can view the default tomcat web page. In a web browser go the url:

<http://localhost:8080/index.jsp>

The following should also work:

<http://127.0.0.1:8080/index.jsp>

### Stopping Tomcat

Go to the directory:

```
jakarta-tomcat-4.1.30\bin
```

Run the command

```
shutdown
```

### Step Three Install Cocoon

The main Cocoon web site is at:

<http://cocoon.apache.org/>

We will deal with Cocoon 2.0.4, whose main web site is at:

<http://cocoon.apache.org/2.0/>

Before installing Cocoon make sure that your tomcat is not running. To download Cocoon go to:

<http://www.ibiblio.org/pub/mirrors/apache/cocoon/BINARIES/>

and select the file:

[cocoon-2.0.4-vm14-bin.zip](#)

Uncompress the file using your Windows zip program.

This produces the directory cocoon-2.0.4. In this directory you will find a file called:

cocoon.war

move this file to the directory:

jakarta-tomcat-4.1.30\webapps\

If you have not done so turn off tomcat. Now start tomcat. After a minute or two you can access tomcat using a url like:

<http://localhost:8080/index.jsp>

Once you have know that tomcat is running again access:

<http://localhost:8080/cocoon/>

The first time you do this it will take several minutes for the server to respond. Be patient. If all goes we you will see a page welcoming you to Cocoon.