
Installing Cocoon 1.8.2 under FreeBSD

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This document describes how to set up **Cocoon 1.8.2** with **Apache JServ 1.1.2** and **Apache 1.3.20** on a **FreeBSD 4.4-R** system. **Cocoon 1.8.2** remains the latest distribution of the **Cocoon 1** system from the **Apache XML Project**, despite being reasonably old now. **Apache JServ 1.1.2** is a servlet engine from the **Java Apache Project** that predates **Tomcat** and is no longer in active development. **Apache 1.3.20** is one of the latest releases of Apache's HTTP server, though **Cocoon** is known to work with other versions of **Apache** in the 1.3 branch. This is not a general How-To for **Cocoon**, or even XML publishing, but is specifically designed to merely get **Cocoon 1.8.2** running on a **FreeBSD** system. By the end of this document, you will be able to view the output of **lynx http://localhost/Cocoon.xml** and possibly nothing more. Some familiarity with **FreeBSD's ports system** is required.

1. Introduction

Cocoon should be installed from the ports system, as trying to piece it together using incompatible releases of the Apache XML Project's tools will almost certainly fail.

It is certainly preferable to be able to test the installation as it proceeds from the machine onto which you are installing. The default configuration of **Apache** will not allow the server information and status pages to be viewed outside the localhost. **JServ's** default configuration similarly disallows access to its status page outside of the localhost. (Interestingly, **Cocoon** *does* allow its status page to be world-viewable by default.) **X-Windows**, or even console facilities like a monitor and keyboard, however, are not required. Even **lynx** will be sufficient to demonstrate that installation is proceeding. The default configurations can be changed later to allow the appropriate outside access.

2. Install Apache

Installation of **Apache** from the ports is relatively unproblematic. The latest version of **Apache** will probably work, though this document was written when the current version was **Apache 1.3.20**. As `root`, execute the following:

```
# cd /usr/ports/www/apache13/  
# make  
# make install
```

Some customisation of the configuration file `/usr/local/etc/apache/httpd.conf` will be required. Getting **Apache** running is beyond the scope of this article, and is well covered [elsewhere](#).

At the end of installation, and after modification of `httpd.conf`, start **Apache** as `root`:

```
# /usr/local/sbin/apachectl start
```

The parent **Apache** process will run as `root`, and all its children will run as the user and group specified in the `User` and `Group` directives in `httpd.conf`. Test **Apache** by pointing a browser at the `localhost`:

```
# lynx http://localhost/
```

A default **Apache** page should be displayed at this point.

3. Install Apache JServ

Installation of **Apache JServ** from the ports is relatively unproblematic. As `root`, execute the following:

```
# cd /usr/ports/www/apache-jserv/  
# make  
# make install
```

JServ's dependencies include the **Java 1.1.8 JVM**, so the installation may take some time if Java is not yet installed on your machine. At the end of `make install`, the following advice is given:

```
o Touch /var/log/jserv.log with write permission for owner of httpd.  
o Add "Include etc/apache/jserv/jserv.conf" into httpd.conf to  
activate mod_jserv.
```

To do this, execute the following as `root`:

```
# touch /var/log/jserv.log  
# chown nobody.nobody /var/log/jserv.log
```

This assumes that **httpd** will run as user `nobody`, group `nobody` which is the default. If you have chosen to run **httpd** as another user or group, adjust the **chown** command accordingly. Restart **Apache** as `root`:

```
# /usr/local/sbin/apachectl restart
```

Test that **JServ** is working:

```
# lynx http://localhost/jserv/
```

4. Install Cocoon

There are a few additional traps in installing **Cocoon**, however it is predominantly a matter of making the port and following the additional instructions. As `root`:

```
# cd /usr/ports/textproc/cocoon/  
# make  
# make install
```

The instructions given by the `Makefile` at the end of **make install** should be followed (additional comments are *below* each of the `Makefile`'s instructions):

```
(1) Add following line into jserv.conf.
```

```
"ApJServAction .xml /servlets/org.apache.cocoon.Cocoon"
```

This line is commented out in the default `/usr/local/etc/apache/jserv/jserv.conf`, and the '#' comment character simply needs to be removed from the front of the line.

```
(2) Add following lines into jserv.properties.
```

```
"wrapper.classpath=/usr/local/share/java/classes/cocoon.jar"  
"wrapper.classpath=/usr/local/share/java/classes/xerces_1_2.jar"  
"wrapper.classpath=/usr/local/share/java/classes/xalan_1_2_D02.jar"  
"wrapper.classpath=/usr/local/share/java/classes/fop_0_15_0.jar"
```

Unfortunately, `cocoon.jar` is mis-spelled in the default installation of `/usr/local/etc/apache/jserv/jserv.properties` as `Co`
`coon.jar`, so don't simply uncomment the line—you must correct the spelling. The entries for `xerces_1_2.jar`, `xalan_1_2_D02.jar` and `fop_0_15_0.jar` are not in the default version of `jserv.properties` and should be added as instructed above, though *without* quotation marks. Additionally, although this does not appear to be documented anywhere, **Cocoon** requires the following additional `.jar` files in its classpath:

```
wrapper.classpath=/usr/local/share/java/classes/w3c.jar  
wrapper.classpath=\  
/usr/local/share/java/classes/turbine-pool.jar
```

Those lines should also be added to `jserv.properties`.

```
(3) Add following line into zone.properties.  
"repositories=/usr/local/share/java/classes/cocoon.jar"  
"servlet.org.apache.cocoon.Cocoon.initArgs=properties= \  
/usr/local/etc/apache/cocoon/cocoon.properties"
```

Again, `cocoon.jar` is mis-spelled as `Cocoon.jar` in the default installation of `/usr/local/etc/apache/jserv/zone.properties`. The line should be uncommented, and the spelling corrected. Additionally, the full path of `cocoon.properties` is wrong in that file. By default, `cocoon.properties` is installed into `/usr/local/etc/apache/cocoon/`, so when uncommenting the line in `zone.properties`, be sure to insert the additional `cocoon/` subdirectory into the path. Note that despite the instruction above, there are *two* lines to be added, and neither should be delimited by quotation marks.

```
(4) Make directory "/var/tmp/cocoon-repository".
```

The ownership of this directory should also reflect the user and group under which **httpd** will be running, which is `nobody` by default. As `root`, execute:

```
# mkdir /var/tmp/cocoon-repository  
# chown nobody.nobody /var/tmp/cocoon-repository
```

Finally, restart **Apache** and test **Cocoon**:

```
# /usr/local/sbin/apachectl restart  
# lynx http://localhost/Cocoon.xml
```

Contacting the Author

The author of this document is **Paul Hoadley**. This document only describes what I did to get **Cocoon** functioning on my **FreeBSD** machine. Your mileage may vary. If you notice any errors in this document, or your experience with **Cocoon** was vastly different, please **let me know**.