Deploying the Application

This chapter covers the following topics:

- Components of a Natural for Ajax Application

- Unloading the Natural Modules

- Installing the Natural Modules

- Unloading the User Interface Components

- Installing the User Interface Components

- Packaging and Deployment as a Web Application

Components of a Natural for Ajax Application

A Natural for Ajax application consists of two parts that are usually installed on two different machines.

On one hand, there are Natural modules (adapters, programs, subprograms and other Natural objects) that are installed on a Natural server. On the other hand, there are page layouts of rich GUI pages and related files that are installed in a Natural for Ajax environment on an application server.

Unloading the Natural Modules

The Natural modules that belong to your application are contained in one or several Natural libraries in your Natural development environment. Unload them into a file, using the Object Handler.

Installing the Natural Modules

In order to install the Natural modules in the production environment, load them with the Object Handler.

Unloading the User Interface Components

The user interface components of your application are contained in one or several Application Designer projects in your Natural for Ajax development environment on your development application server.

All files in your Application Designer project are stored in one directory on the application server on which Natural for Ajax is installed. The name of the directory corresponds to the project name you have chosen. The location of the directory depends on the application server:

- **JBoss Application Server**
  <installdir>/server/default/deploy/njx<nnn>.ear/cisnatural.war

- **Sun Java System Application Server**
  <installdir>/domains/domain1/applications/j2ee-apps/njx<nnn>.ear/cisnatural_war

where *<installdir>* is the directory in which your application server is installed and *<nnn>* is the current Natural for Ajax version.

The project directory contains a number of subdirectories, only some of which need to be deployed to the production environment. *<projectdir>* in the table below stands for the name of your project directory. Pack the following files and subdirectories into an archive, using an archiving tool like WinZip or tar.

File	Description
<projectdir>/*.html	Generated HTML pages.
<projectdir>/xml/*.*	Page layouts.
<projectdir>/wsdl/*.*	Page data schemas.
<projectdir>/accesspath/*.*	Page data access definitions.
<projectdir>/multilanguage/*.*	Language-dependent strings.
<projectdir>/help/*.*	Language-dependent help texts.

Installing the User Interface Components

In order to install the user interface components, unpack the previously created archive into a corresponding project directory in your Natural for Ajax production environment on your production application server.

Packaging and Deployment as a Web Application

On Apache Tomcat and IBM WebSphere, Natural for Ajax is delivered as a web application (*.war* file), in contrast to a J2EE enterprise application (*.ear* file). This allows for packaging and deploying also your own applications (more exactly: the user interface components thereof) as self-contained web applications.

▶ **To package your application as a web application**

1. Invoke the Application Designer development workplace.

2. In the **Development Tools** node of the navigation frame (which is visible when the **Tools & Documentation** button has previously been chosen), choose **WAR Packager**.

3. In the resulting dialog, make sure that the **Deployment Scenario** tab is selected.

4. Define the generation type by selecting one of the following option buttons: **with file system reference** or **fully clusterable**. See the Application Designer documentation for detailed information on these generation types.

   Note:
   The option **fully clusterable** applies only for web applications written in Java, not for those written in Natural. This is because a Natural-written application runs on a Natural server and therefore needs to keep a TCP/IP connection to the server, while Java applications are executed on the web container itself.

5. If you selected with **file system reference**, enable the **Switch off Design Time** check box.

6. Select the **Project Selection** tab.

7. Select the project directories that you want to include in your web archive. These must be at least the following:

Directory	Description
cis	Application Designer configuration files.
cisnatural	Natural for Ajax logon page and related pages.
HTMLBasedGUI	HTML user interface.
images	Application Designer image files.
META-INF	Standard directory in a web application.
resources	Natural Web I/O Interface style sheets and related files.
scripts	Natural Web I/O Interface JavaScript files.
SWTBasedGUI	SWT user interface.
WEB-INF	Standard directory in a web application.

In addition, you have to select your own project directories.

8. In the text box **WAR File to be created**, specify a path and name for the web application to be created.

9. Choose the **Create WAR** button.

The web application (.*war* file) is created.

▶ **To deploy your application**

1. You deploy your web application in the same way as you deployed Natural for Ajax itself (see *Installation*).

2. After you have deployed your web application, you can use the configuration tool to specify the configuration for this specific application. For detailed information on this tool, see *Using the Configuration Tool* in the *Natural Web I/O Interface* documentation.

Start the configuration tool with the following URL:

```
http://<host>:<port>/<webcontext>/conf_index.jsp
```

The logon page of the application can be found here:

```
http:// <host>:<port>/<webcontext>/servlet/StartCISPage?PAGEURL=/cisnatural/NatLogon.html
```

Note:

<webcontext> denotes the web context of your application. On Apache Tomcat, this is the name of the *.war* file, without the extension *.war*. On IBM WebSphere, this is the value you specified as the web context during the deployment.