



NitroX for JSP

NitroX for Struts

NitroX for JSF

NitroXTM

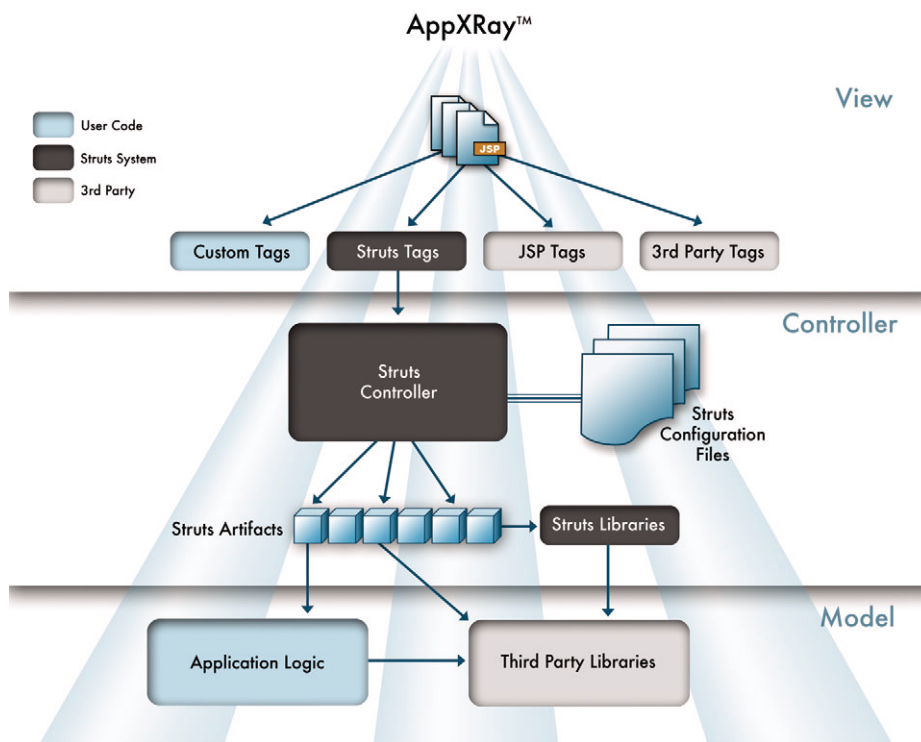
Web Applications Development Tools
Open Source & Standard Platforms

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AppXRay™

AppXRay's patent pending technology scans through all the layers and elements of your web application and makes them readily available throughout the NitroX environment. AppXRay maintains a hierarchy of relationships among these artifacts, including a map of all inter-dependencies among artifacts. AppXRay delivers the following benefits and maximum productivity during all phases of development:

- JSP code completion for custom tags, Struts tags, Struts actions and form beans, page variable names and their fields, etc.
- Smart Editors where you can select the desired element or property from another layer of the application
- Real-time automatic consistency and validation checking as you are developing
- Impact analysis of changes made to specific elements of the application

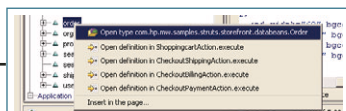


Source & Visual JSP Editing

Sophisticated Source and Visual JSP editor has the unique ability to let you develop your JSP file at either source or visual level – at the same time! Editing capabilities leverage the power of AppXRay.

Consistency Checking

Consistency errors can be caught before the program is executed, saving you time and effort in debugging your application. Leveraging AppXRay technology, the application's database is constantly kept up to date with the state of the application and common mistakes can be caught immediately.



Page Variables

Immediately see available variables. Click on any variable and immediately locate its declaration in the source code of the page. If the variable is external, no worries, leveraging AppXRay allows NitroX to navigate to the location in your Java code where this variable was made available to this page.

Advanced Source Editor

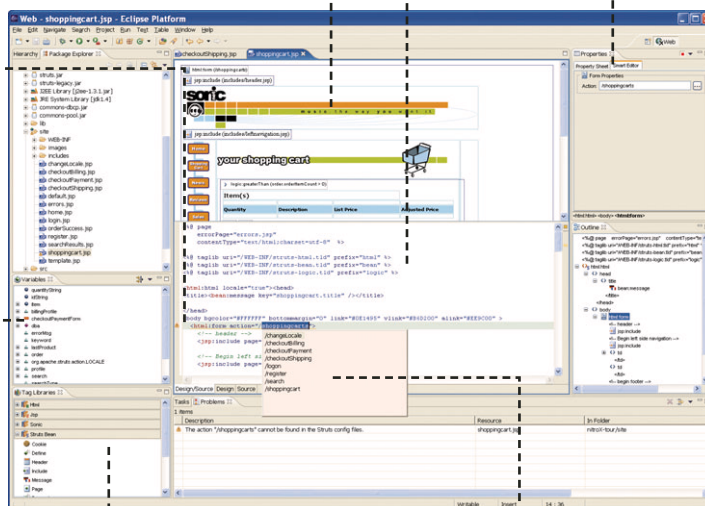
Powered by M7's AppXRay technology, the NitroX source editor is context aware of Java, Java tag libraries, html and Struts actions, all from one source editor.

Visual JSP

Synchronized editors provide WYSIWYG ease of use with the source level control and flexibility.

Smart Editor

Smart Editors are provided in addition to standard property sheets. Smart Editors show the most important attributes related as well as the inter-relationships inside your web application reducing the time that it takes to find the name of an artifact from another application layer.



Standard & Custom Tag Libraries

Standard and custom tag libraries are available or easily imported and are readily made available throughout the NitroX environment.

Context Sensitive Source Editor

The NitroX source editor leverages the prescient power of AppXRay and provides deep, context sensitive insight into standard and custom tag libraries, Java completion, Struts, etc.

Struts Editor

NitroX allows you to edit your Struts Configuration files in the way that works best for you: in a graphical, UML-like display; as a plain text file with NitroX's XML-based code completion; or both simultaneously, to track changes as you edit the source code. The graphical display gives you the ability to visualize a portion of your application, seeing how pages, actions, form beans and forwards combine to define the navigation of your application. No matter which view you use, NitroX's Struts outline allows you to view the content of your configuration files either as an XML file, or with the most important parts of your configuration file arranged by type of artifact.

Struts Configuration Source & Visual Editors

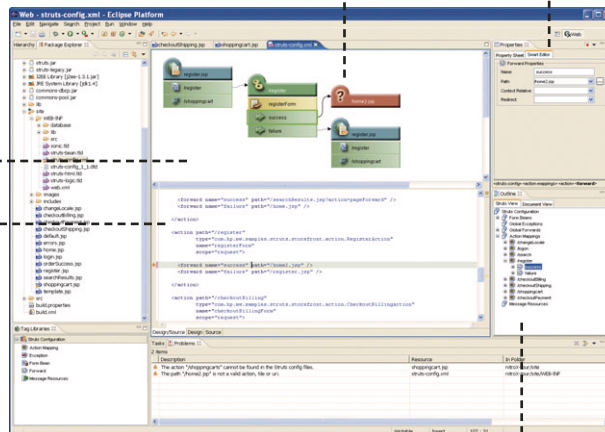
Visualize the flow of the Struts configuration. See how pages, actions, form beans and forwards combine to define the navigation of your application.

Consistency Checking

Using AppXRay technology, the Struts editor helps you determine configuration errors before they affect your application.

Smart Editor

NitroX's Smart Editors help you avoid configuration errors in the first place by showing you the relevant parts of your configuration files and allowing you to select the most appropriate content when developing your configuration files or your JSP pages.



Struts Configuration Outline View & Navigation

JSP & Struts Debugger

NitroX JSP and Struts Debugger offer the most sophisticated debugging capabilities available. Leveraging the power of AppXRay, the NitroX debugger reaches multiple levels of a web application.

Multi-level Debugging

Debug across multiple layers of a web application, from the JSP page to Java source and Struts artifacts.

JSP Line Stepping

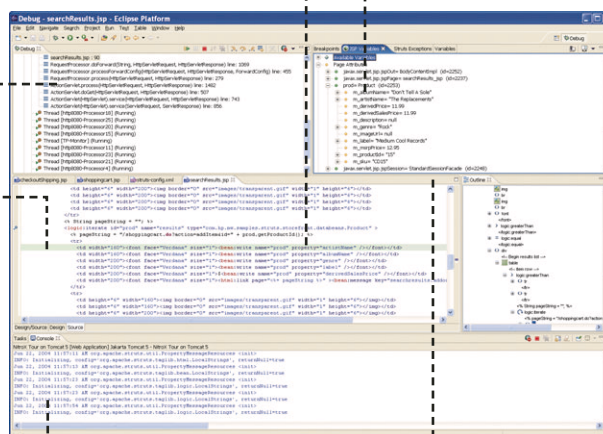
Open a JSP file, select the line to debug by setting a breakpoint, and execute the go command. NitroX will stop the execution when this line is hit at runtime, and will give you full stepping control, including stepping over JSP tags and scriptlets and stepping into and out of tags.

Debug Open Platforms

NitroX fully supports popular open source platforms such as Tomcat and JBoss, as well as open standard vendor platforms such as BEA WebLogic and IBM WebSphere.

Page & Variable Display

NitroX will update the various debugger views with the appropriate information, including call chain, threads, breakpoints, and variables accessible from the JSP page.



Insight to Struts Exceptions

NitroX debugger adds an additional Struts exceptions view to further assist debugging Struts based applications.

Consistency Checking

NitroX provides consistency checking that reaches all levels of a web application. JSP pages aren't compiled until runtime, and many errors are caused by configuration files, which are usually only read at runtime. Working with frameworks like Jakarta Struts can make error diagnosis more difficult, because the location of the actual error may be far from where the error was detected when running the application. NitroX, through the use of M7's AppXRay technology, helps you by detecting errors in your application before you even run it. Common errors that NitroX can detect at development time include:

- Pages linking to missing actions or pages
- Forms referencing missing form beans or form bean properties.
- Pages attempting to write out the value of a missing application resource or using a missing resource bundle.
- Pages referring to variables which aren't in the scope of a JSP page.
- Action mappings referring to Action classes which aren't in the application's classpath.
- Refactoring a java class will warn you of all the pages which use the class in embedded Java scriptlets.
- Changing the name of a form bean property will immediately warn you to change JSP pages which use that form bean.
- Changing the name of a JSP page will immediately warn you of all Struts Forwards which refer to that page.
- Changing the name of a session or request variable will immediately warn you of all locations where that variable was being used.
- Changing the name of an application resource will immediately warn you of all pages and Struts configuration artifacts which use that resource.

Through the use of these warnings, many common web application runtime errors can be detected and avoided during development, saving time and effort and increasing your productivity.



Web Applications Development Tools Open Source & Standard Platforms

Use of NitroX requires the following configuration:

- Microsoft Windows 2000/XP
- 512MB of RAM required
- Eclipse 2.1.x
- Intel x86 Linux (Expected support: Q2 2004)
- Eclipse 3 (Expected support: Q2 2004)

NitroX's support for debugging and deployment on servlet containers requires one of the following servers:

- Apache Jakarta Tomcat 5.0.x, 4.1.x and 4.0.x
- BEA WebLogic Server 8.1 and 7.0
- IBM WebSphere 5.x
- JBoss 3.2.x

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