



What's New & Cool in NetBeans IDE 7.x

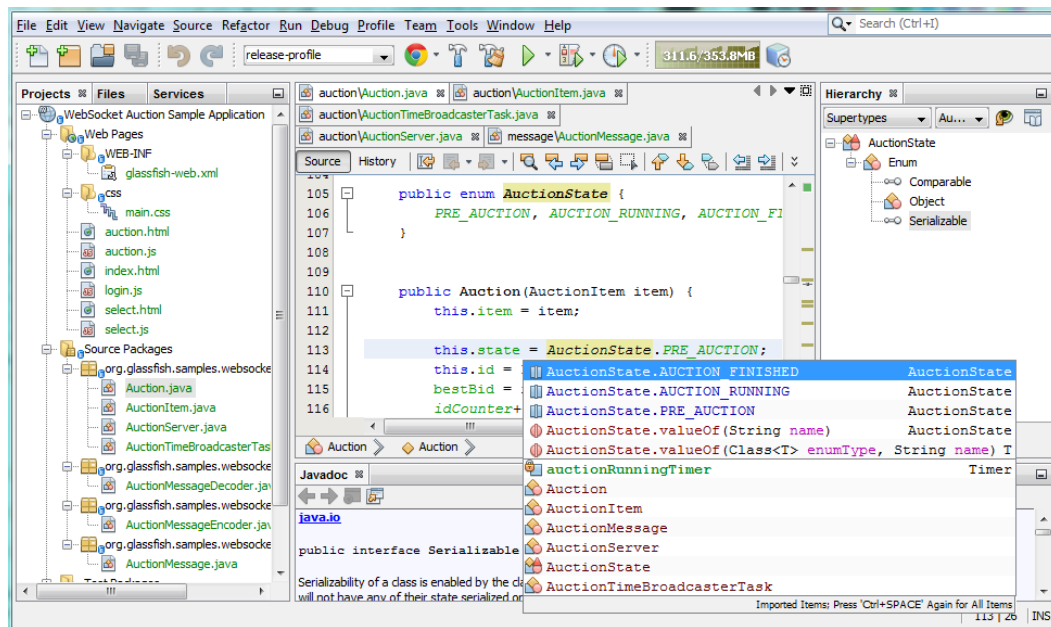
(Highlights of NetBeans IDE 7.0, 7.1, 7.2, 7.3, and 7.4)

What is NetBeans IDE?



A Comprehensive & Modular Development Environment

- Ready to use out of the box
- Support for latest Java specifications & standards
- Other platforms too (HTML5, PHP, C/C++)
- Intuitive workflow
- Debugger, Profiler, Refactoring, etc.
- Binaries and ZIPs for Mac OS, Linux, and Windows



Simply download and run on any operating system!

What is NetBeans IDE?

A Comprehensive & Modular Development Environment



* Community supported

What is NetBeans IDE?

A Comprehensive & Modular Development Environment



A Thriving Open Source Community



Growing list of 3rd party modules (plug-ins)

Over 20 Million Downloads



Active blogging community

Available in many languages



Why Use NetBeans IDE?

Increase Developer Productivity

- Works out of the box
- Freely available
- Open source
- Support for Java standards & other popular platforms, such as HTML5
- Deeply integrated Maven support
- Extensible Java desktop framework
- Powerful, award winning GUI Builder
- Profiling and debugging tools
- Customizable and extensible



What's New in NetBeans IDE 7.x

Overview of New Features and Enhanced Support



- Java Language
- Java EE Platform
- JavaFX Platform
- HTML5 Platform
- PHP and C/C++ Languages
- Miscellaneous IDE Tools

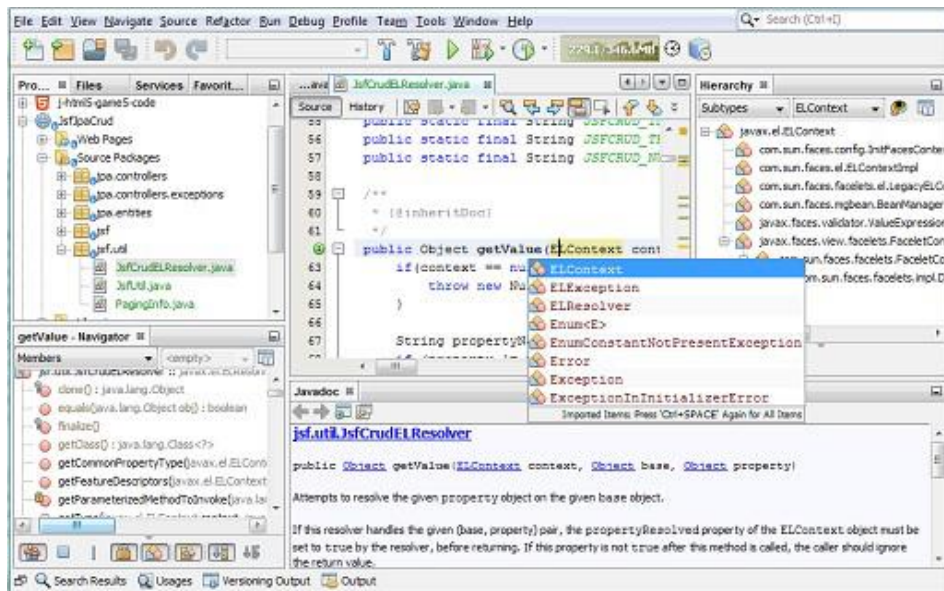
Java Language

Support for the Java Language

Out of the Box Java Language Support



- Java Editor is NetBeans IDE's central feature
- Developed in close co-operation with Oracle Java SE Team
- First editor to support Java technologies, e.g., JDK, Java EE, JavaFX
- “javac” is our parser, all language features are always in sync with Java



Java™

ORACLE®

Support for the Java Language

Feature Overview

- Much More Than Creating, Editing, Refactoring
- Building
 - Maven and Ant, community Gradle plugin
- Debugger and Profiler
- Versioning
 - Git, Mercurial, and Subversion
- Testing and Code Analysis
 - Junit and TestNG
 - Static code analysis, e.g., FindBugs
- Continuous Build Servers
- Bug Tracking
 - JIRA, Bugzilla



At Liquid Robotics, our use of NetBeans IDE is all about integration. There's the seamless integration of development tools and Java technologies within NetBeans IDE, but it's also very good at integrating external features, for example, Jenkins, which we use for our build server, Git (via GitBlit), which is our source code repository, JIRA for bug tracking, Maven for running builds, and Artifactory for maintaining the artifacts created from the builds.



"Father of Java"
James Gosling
CTO, Liquid Robotics



JDK 7 Support

Support for the Java Language



- Editor enhancements
- Intuitive new Java refactoring hints
 - Strings in switch
 - Diamond support
 - Support for try-with-resources
 - Multicatch support
 - New integer literal support
- Batch refactor multiple projects to JDK 7 simultaneously

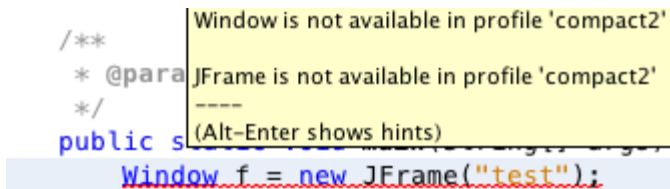
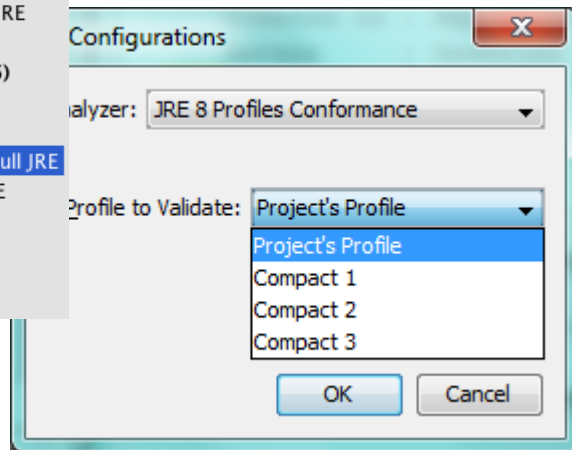
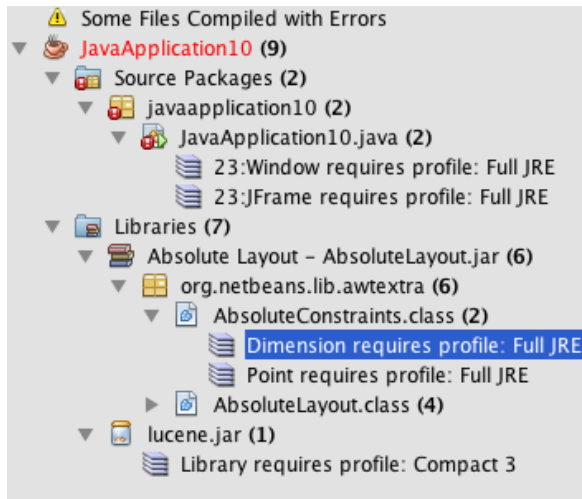
```
5 public static void main(String[] args) {  
6  
7     String color = "red";  
8     String colorRGB;  
9  
10    Convert to switch  
11    if (color.equals("black")) {  
12        Convert to switch over Strings  
13        colorRGB = "ff0000";  
14    } else if (color.equals("green")) {  
15        colorRGB = "008000";  
16    } else if (color.equals("blue")) {  
17        colorRGB = "0000ff";  
18    } else {  
19        colorRGB = "Invalid color";  
20    }  
21  
22    System.out.println(colorRGB);  
23 }  
24 }
```

JDK 8 Preview Support

Support for the Java Language



- Out of the box
JDK 8 Profiles Support
- Syntax and code completion
support for Lambda expressions
- Refactoring tools for changing
anonymous inner classes
to Lambda expressions
- Lambda expressions
are handled by debugger

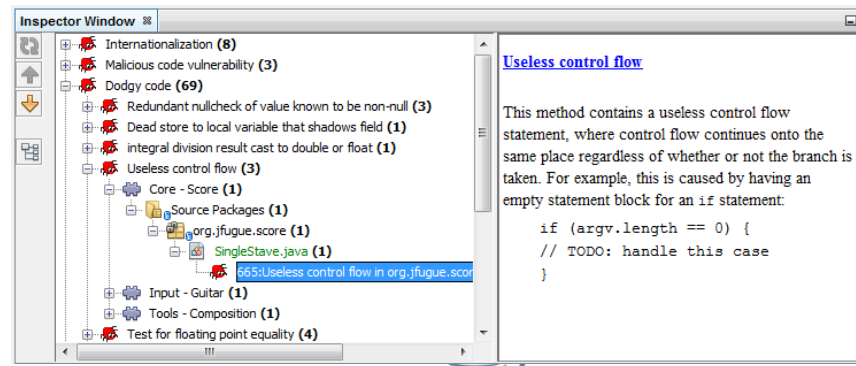
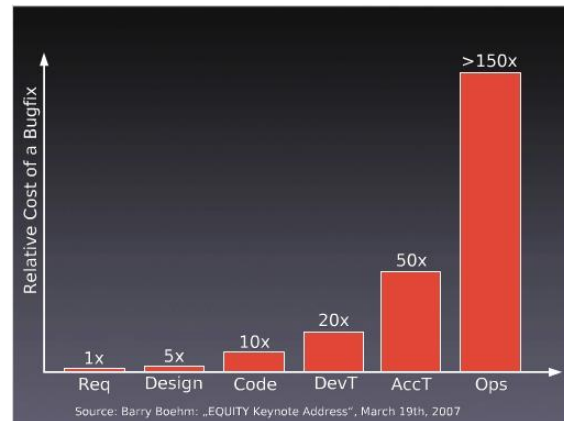


Smart Static Analysis via FindBugs



Support for the Java Language

- Earlier bugs are found, lower cost in fixing them
- FindBugs
 - Programming Style
 - Programming Techniques
 - “Dodgy code”, e.g., useless control flow
- Set scope of analysis on projects, packages, or files
- Examine results and jump into editor

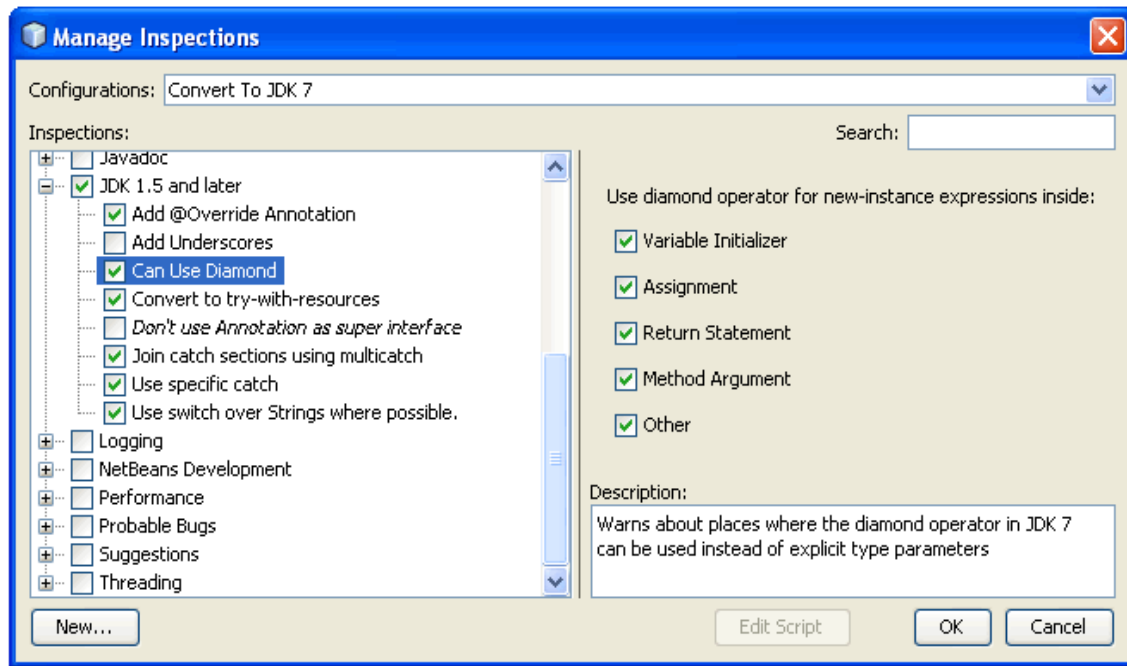


Smart Refactoring

Support for the Java Language



- Quickly fix problems across packages & projects
- Upgrade projects completely to JDK 7 or JDK 8 (preview)
- Define finetuned customized scopes
- Expression language for defining rules

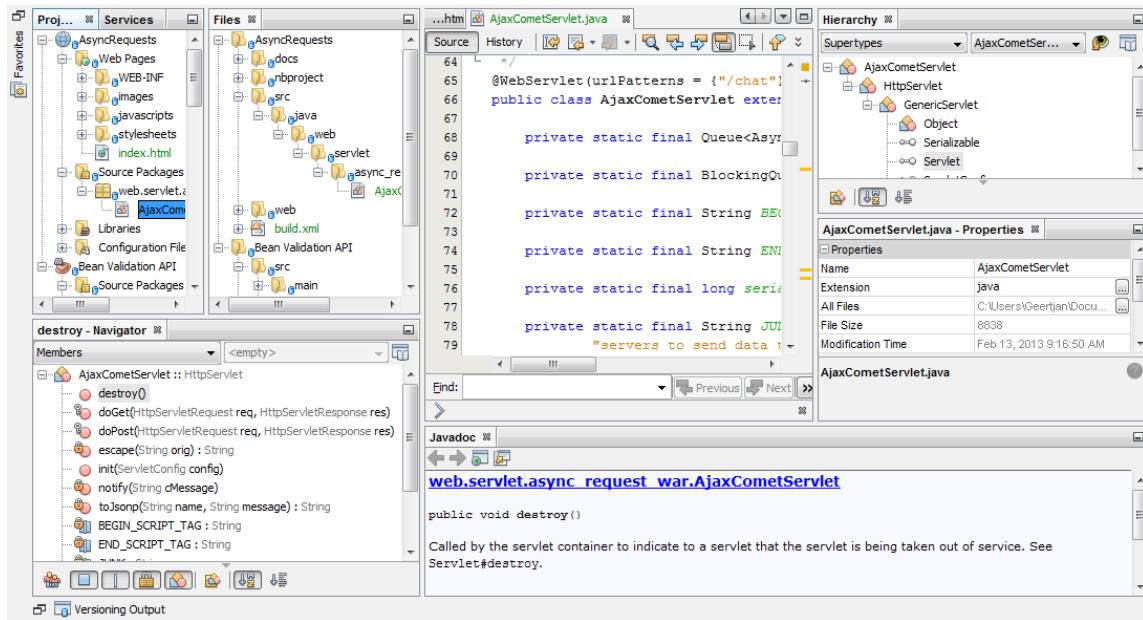


Smart Code Navigation

Support for the Java Language



- Rewritten Hierarchy window for supertypes and subtypes
- New Breadcrumb Toolbar beneath editor
- New Brace Matching Bar above editor



Smart Editing Tools

Support for the Java Language



- Java Code Metrics
- Distraction-free mode
- Remove surrounding code
- New hints, refactorings, and code completions
- Block selection

The screenshot displays the NetBeans IDE interface. On the left, a code editor shows a Java method with an auto-completion list. The code is as follows:

```
@Override
public void synced(Binding binding) {
    String bindName = 
    String msg = "
    System.out.println(msg);
    outputLabel.setText(msg);
}
```

The completion list for `outputLabel` includes:

- `binding.getName()`
- `binding.toString()`
- `clone().toString()`
- `getClass().getCanonicalName()`
- `getClass().getName()`
- `getClass().getSimpleName()`
- `getClass().toString()`
- `outputLabel.getName()`
- `outputLabel.getText()`
- `outputLabel.getToolTipText()`
- `outputLabel.getToolTipText(MouseEvent event)`
- `outputLabel.getUIClassID()`
- `outputLabel.toString()`
- `binding` (Binding)
- `outputLabel` (JLabel)
- `bindingBecameBound(Binding binding)` (void)

On the right, the 'Java Code Metrics' panel is visible, listing various metrics that can be checked or unchecked:

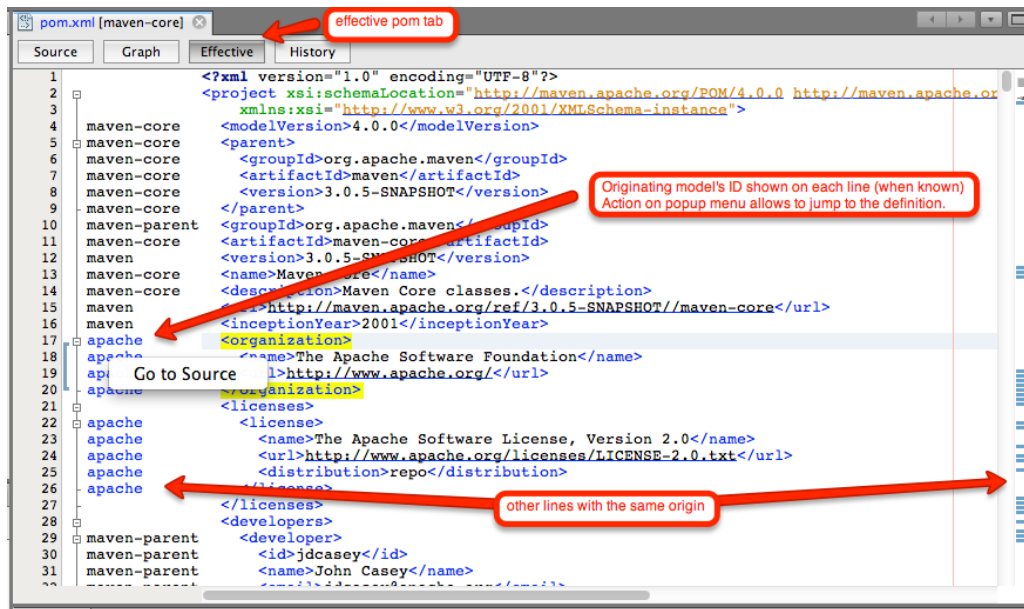
- ☐ Anonymous class has too many methods
- ☐ Anonymous class is too complex
- ☐ Arithmetic expression too complex
- ☐ Class has too many constructors
- ☐ Class has too many fields
- ☐ Class has too many methods
- ☐ Class is too complex
- ☐ Class is too coupled
- ☐ Constructor declares too many parameters
- ☐ Logical expression too complex
- ☐ Method body is too long
- ☐ Method declares too many parameters
- ☐ Method is too complex
- ☐ Method or constructor declares too many exceptions
- ☐ Method with multiple loops
- ☐ Method with multiple negations
- ☐ Method with multiple return points

Smart Maven Build Tools

Support for the Java Language



- Key feature:
POM is NetBeans project,
no NetBeans files added
- Less memory needed
for Maven projects
- Effective POM tab
shows origin of elements
- Code Generator
for POM files
to generate license headers

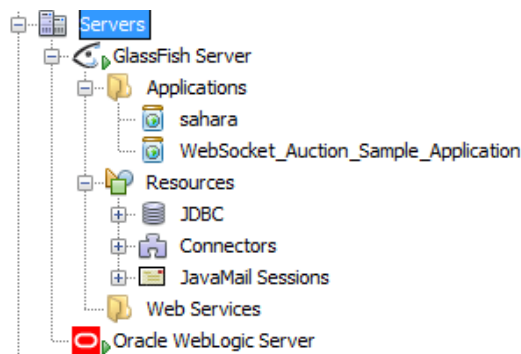
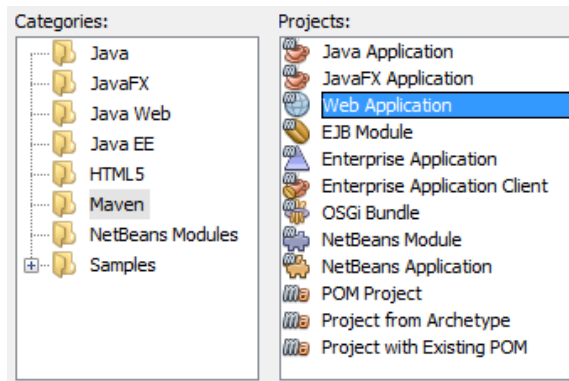


Java EE Platform

Support for Java EE

Out of the Box Java EE Support

- Developed in close co-operation with GlassFish and WebLogic teams
- Best in breed GlassFish integration, strong support for WebLogic and other servers
- First day support for standards, e.g., Java EE 6 and Java EE 7
- No plugins needed
Ready to use out of the box



Support for Java EE

Feature Overview

- Much More Than Creating, Editing, Refactoring
- Frameworks
 - bundled PrimeFaces
 - support for RichFaces and IceFaces
- Building
 - Maven, Ant, and Gradle plugin
- Debugging and Profiling
- Versioning
 - Git, Mercurial, and Subversion
- Testing and Code Analysis
 - Junit and TestNG
 - Static code analysis (e.g., FindBugs)



We have found that NetBeans IDE is fast at introducing new features that ease Java EE development and integrates perfectly with popular tools like Maven.

In fact, we consider NetBeans IDE to provide the best Maven integration of any IDE we have encountered.



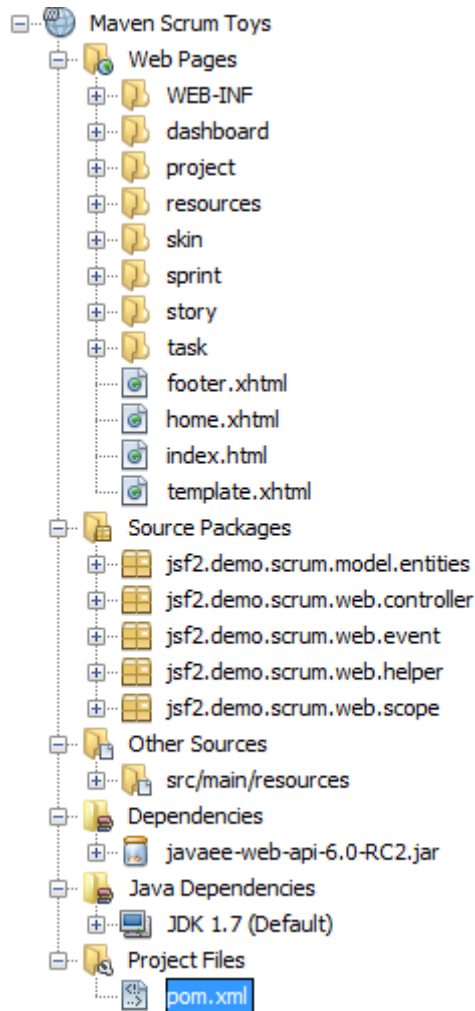
Çağatay Çivici
PrimeFaces Lead



Support for Maven

Feature Overview

- Maven defines the POM:
the POM is the project,
no NetBeans files needed at all
- All execution happens through Maven,
thus the IDE executes tests
exactly how CI does it, for example
- Since NetBeans IDE 7.4,
“compile on save” is supported,
in addition, ZeroTurnaround has
created NetBeans JRebel plugin
- All of this is available “out of the box”,
without installing any plugins of any kind

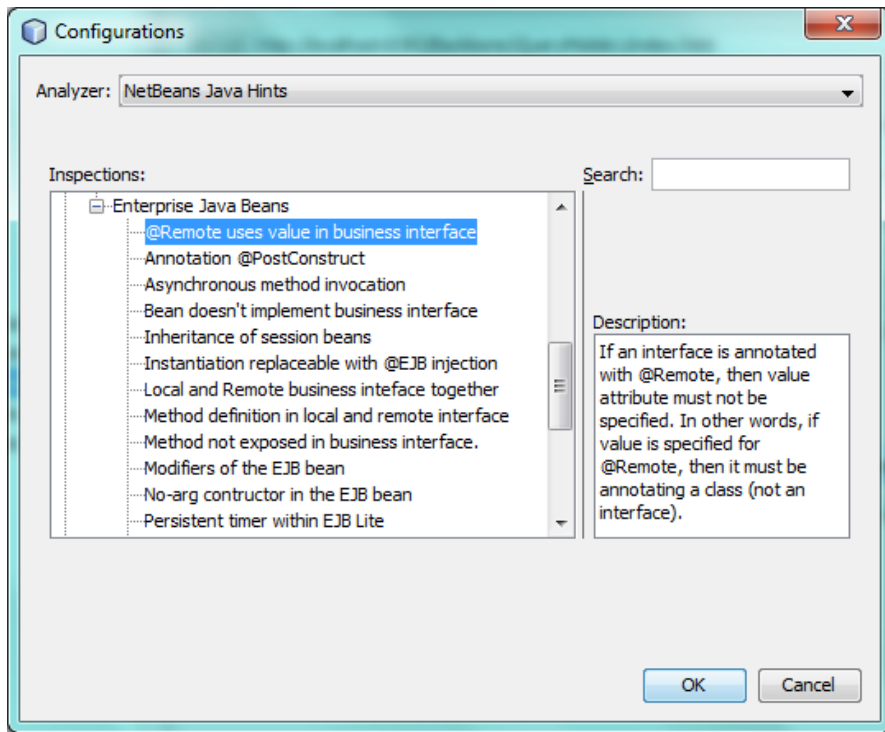


Java EE 7 Development Tools



Support for Java EE

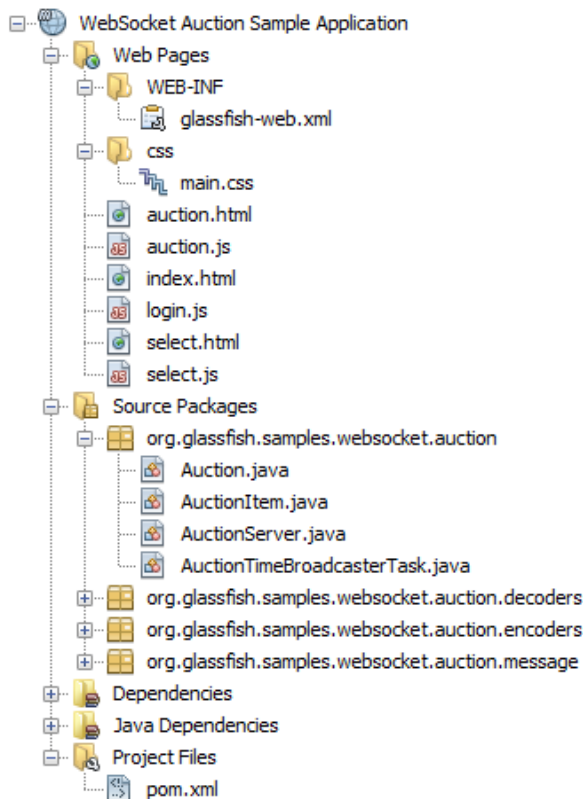
- Support for latest specifications
(JAX-RS 2.0, JMS 2.0, JSF 2.2, CDI 1.1, EJB 3.2, EL 3.0, WebSocket 1.0, JSP 2.1, and more)
- Support for latest JSF features
 - Pass-through attributes & elements
 - Resource library contracts
 - Page Flow support
 - Annotation-based component registration
 - @FlowScoped scope
 - JSF templates & tools for client creation
 - Facelets templates & client creation
 - Many new hints



HTML5 Development Tools

Support for Java EE

- Easy to use HTML5 features in Java EE applications
- Features:
 - JavaScript Library Manager
 - JavaScript Editor and Debugger
 - CSS preprocessors
 - Visual CSS Editor
 - Integration between IDE and Chrome browser
 - Deployment to mobile devices
 - Project samples
- (More details later in these slides.)



Community Feedback

The Smarter and Faster Way to Code



Maurizio Turatti @mkj6

#NetBeans 7.4 supports HTML5 and JavaScript development for mobile devices. wiki.netbeans.org/MobileBrowsers < works well with #Apache #Cordova



Bruno Borges @brunoborges

My wish has come true. "#HTML5 features available in #JavaEE projects" for @NetBeans 7.4 ! Thanks NB team!!



Dre'ank @StrictlyGeeky

OMG RT @netbeans: #NetBeans 7.4 Beta. HTML5 features for JavaEE, PHP development, support for Android, iOS platforms!



Markus Eisele @myfear

#HTML5 development in #JavaEE and #PHP projects (aka Project #Easel) will be in #NetBeans 7.4 !!

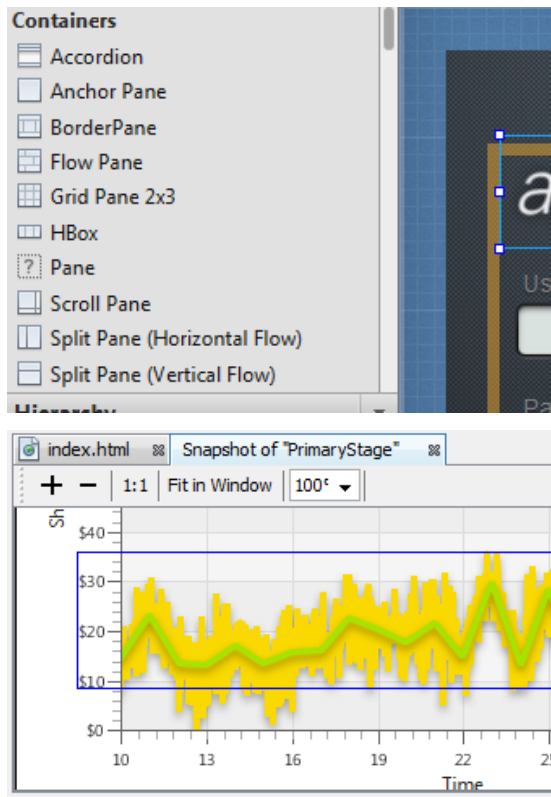
JavaFX Platform

NEW
7.1

Support for JavaFX

Out of the Box JavaFX Support

- First IDE to provide JavaFX tools
- Developed in close co-operation with the JavaFX team
- Supports full create/compile/debug cycle
- Integrated with Scene Builder
- Library of ready to use samples out of the box

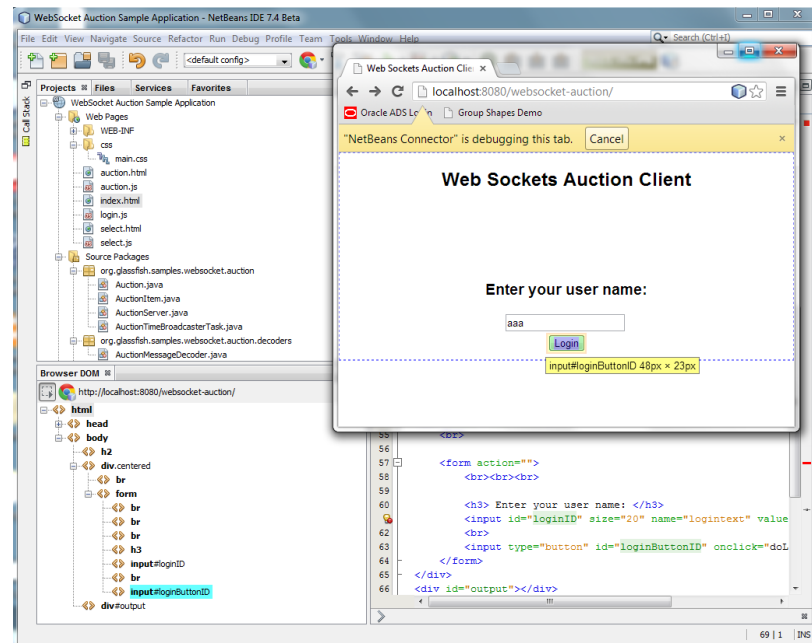


HTML5 Platform

Support for HTML5

Out of the Box HTML5 Support

- Features for HTML5, JavaScript, and CSS3 in HTML projects, Java EE (Maven and Ant) projects, and in PHP projects
- Integration between NetBeans IDE and Chrome browser
- Editors for HTML5, JavaScript, CSS3
- JavaScript debugger
- Visual CSS editing
- SASS and LESS CSS preprocessing
- Cordova mobile device development



Cutting Edge JavaScript Editor

Support for HTML5



- Early JDK 8 build Nashorn JavaScript Engine for parsing
- Out of the box support:
 - jQuery
 - JSON
 - Knockout
 - Ext Js
 - AngularJS
 - JsDoc
 - ExtDoc
 - ScriptDoc

```
var myViewModel = {  
    personName: ko.observable('Bob'),  
    personAge: ko.observable(123)  
};
```

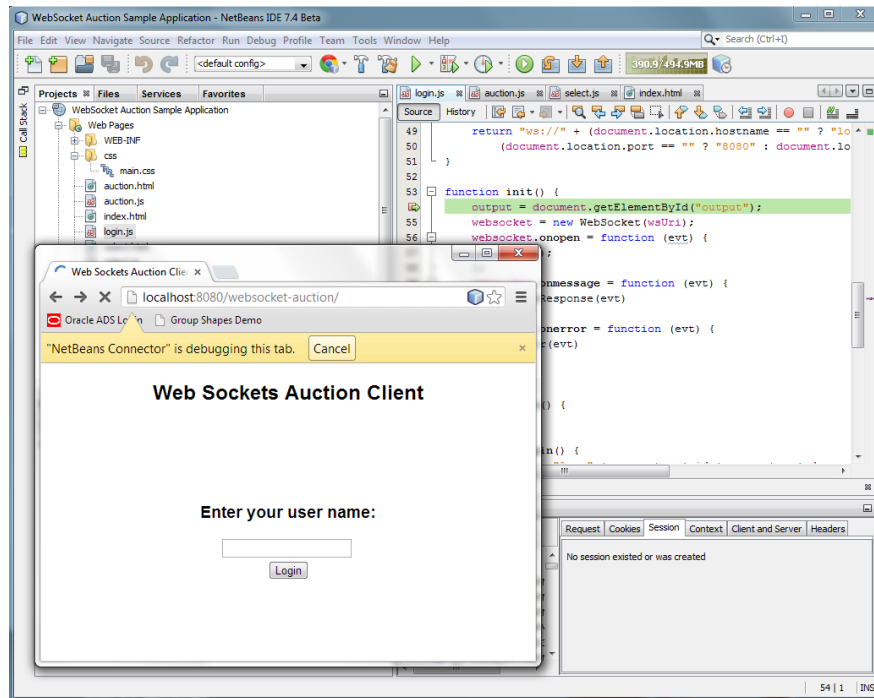
ko.a

○ applyBindings(viewModel, rootNode): undefined	Knockout
○ applyBindingsToDescendants(viewModel, rootNode): undefined	Knockout
○ applyBindingsToNode(node, bindings, viewModel)	Knockout

Quick JavaScript Debugger

Support for HTML5

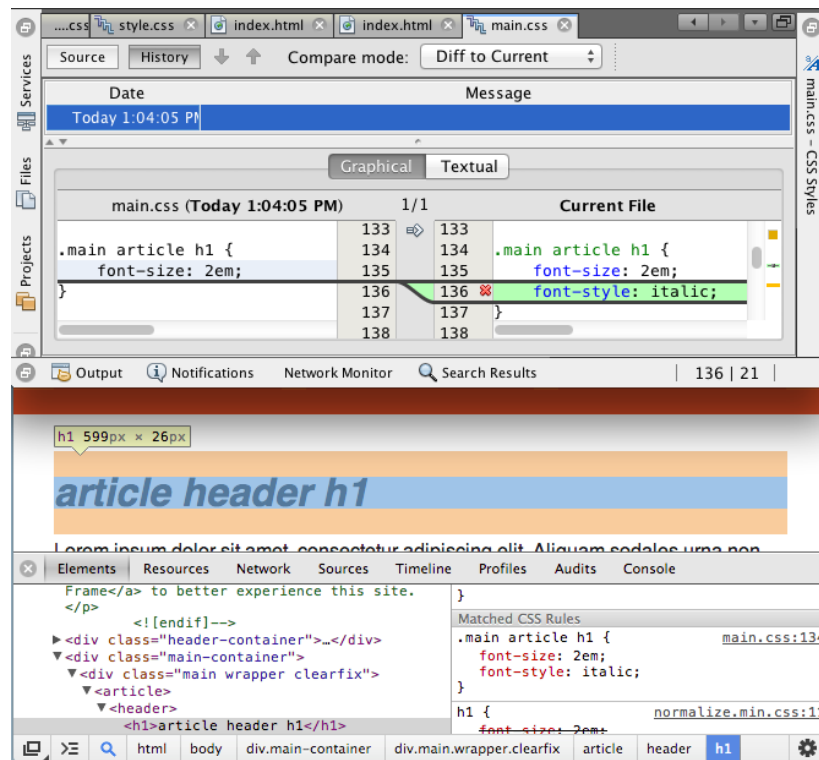
- HTML5 applications are automatically deployed in debug mode
- Set breakpoints in JavaScript file, on Line, DOM, Event, or XMLHttpRequest
- Refresh the browser and immediately step through code
- Use Debugger windows to monitor watches, threads, and breakpoints



Visual CSS Editing

Support for HTML5

- Click in browser and see CSS styles and rules in IDE
- Changes saved in Chrome Developer Tools are saved in files in IDE
- CSS styling: box model styling of hover-based effects
- Changes in CSS Editor immediately reflected in browser



- Syntax coloring, indentation, reformatting, code folding, file templates
- Go to declaration, mark occurrences, instant rename, code completion
- Live reload on change
- Debugging information is displayed

```

@if $base-gradient != null and $bg-color != transparent {

  // Color stops provided
  @if type-of($type) == "list" {
    @include background-image(linear-gradient(color-stop

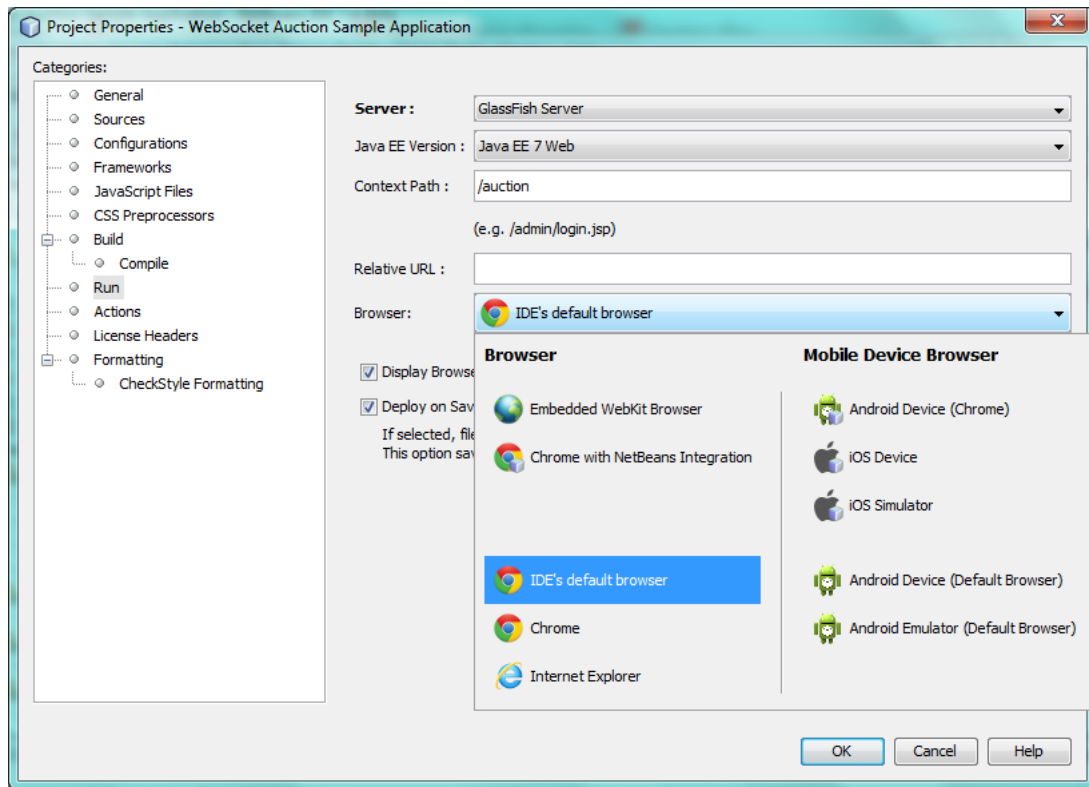
  // Default gradients
  @else if $type == bevel {
    @include background-image(linear-gradient($direction
      lighten($bg-color, 15%),
      lighten($bg-color, 8%) 30%,
      $bg-color
    ));
  } @else if $type == base-gradient {
    @include background-image(linear-gradient($direction
  } @else if $type == recessed {
    @include background-image(linear-gradient($direction
  } @else if $type == linear {
    @include background-image(linear-gradient($direction
  } @else if $type == matte {
    @include background-image(linear-gradient($direction
  }
}

```


Easy Mobile & Web Deployment

Support for HTML5

- Tight integration with
 - Chrome
 - Embedded WebKit Browser
 - iOS (Safari)
 - Android (Chrome)
- Also support for Internet Explorer, FireFox, Safari, Android default browser

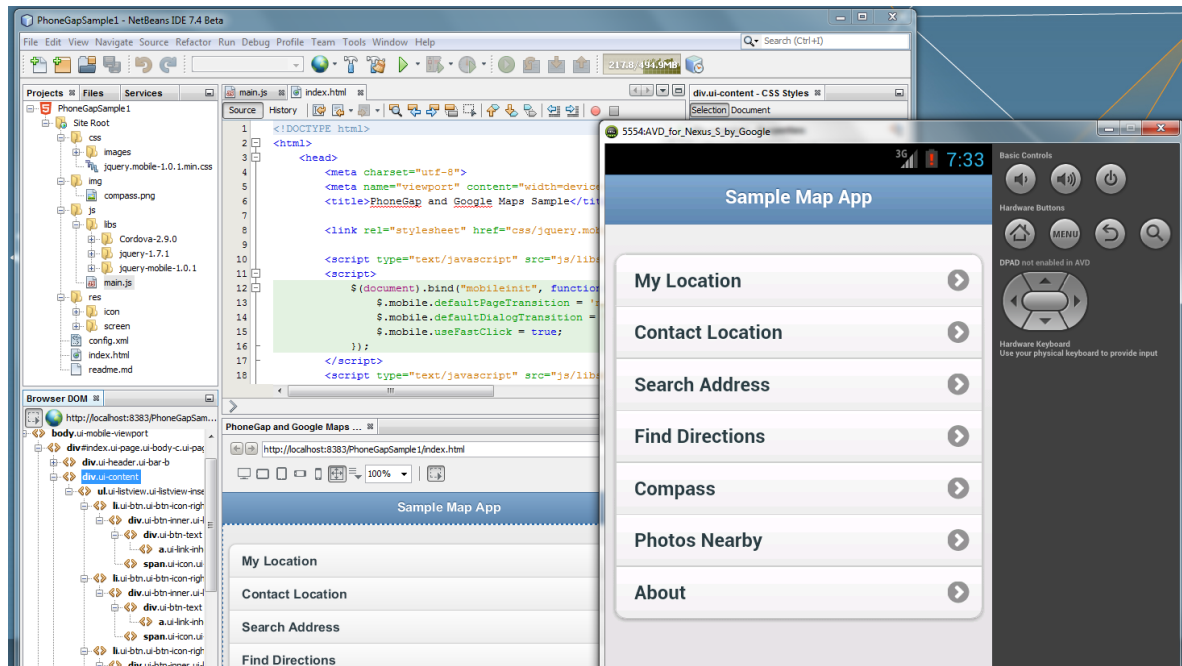


Cordova Mobile Device Support

Support for HTML5



- Cordova integration for hybrid development
- Build native Android and iOS packages
 - Register or generate required files for Android and iOS
 - Register Android SDK and iOS SDK
- Helpful samples and templates



Community Feedback

The Smarter and Faster Way to Code



Andrea Panisson @andypanix

Feb 11

The new support for HTML5 projects in NetBeans 7.3 is really cool!
bit.ly/14N8vzK



Shorty Dre 8) @StrictlyGeeky

Feb 16

I am already in love with **Netbeans** RC2. I cannot wait for the official release. #Web #Dev #Netbeans #HTML5



John Yeary @jyeary

Feb 1

@NetBeans 7.3 RC1 is smooth. Its new editor found some HTML/JS errors in existing files that were previously undetected. Very cool.



Bruno Borges @brunoborges

Jan 28

By the way #NetBeans 7.3 RC1 comes with Project #Easel! Debug HTML5 and **JavaScript** apps between NB and your browser!
netbeans.org/community/rele...



JavaScript News @javascript_news

NetBeans 7.3 will have first class support for HTML5/JavaScript/CSS3 bit.ly/Uj4x0g



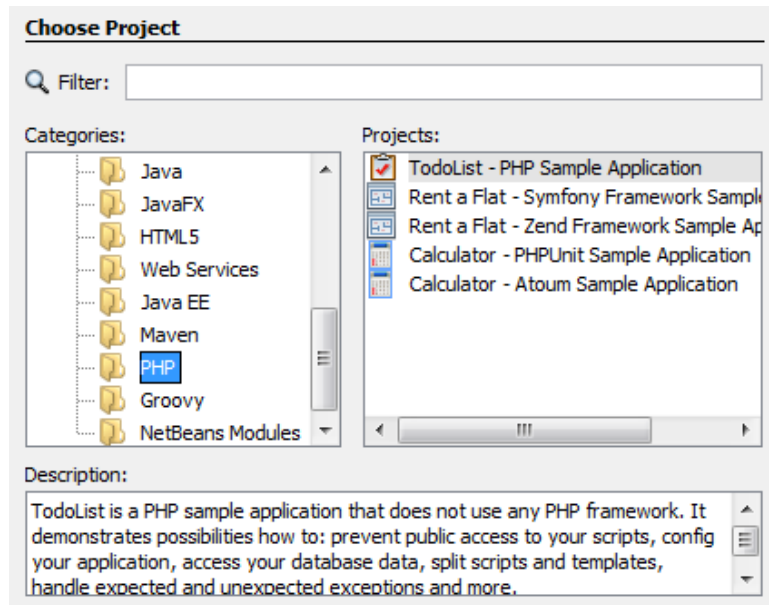
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PHP and C/C++

Support for PHP

Feature Overview

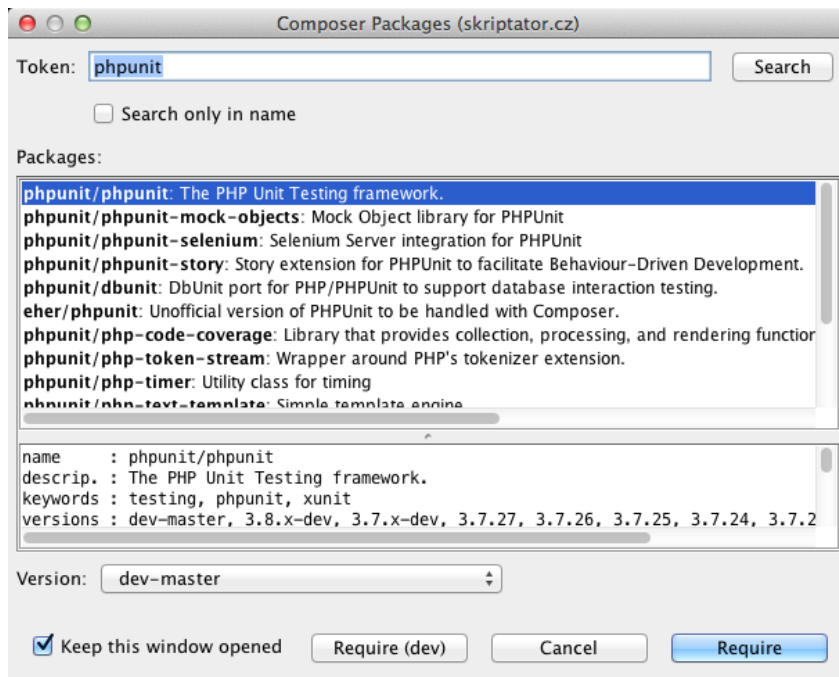
- Templates & samples for PHP projects and files
- Editor support (code completion, navigation, refactoring, hints, coloring, etc.)
- Integration with HTML, JavaScript, CSS
- Debugger (Xdebug)
- Unit testing (PHPUnit, atoum)
- PHP frameworks (Symfony 1 &2, Zend 1 and 2, Nette, Doctrine, Smarty)
- Dependency management (Composer)
- API documentation support (ApiGen, PhpDocumentor)
- Static code analysis (Code Sniffer, Mess Detector)
- Continuous integration (Hudson/Jenkins)



New in PHP

Out of the Box PHP Support

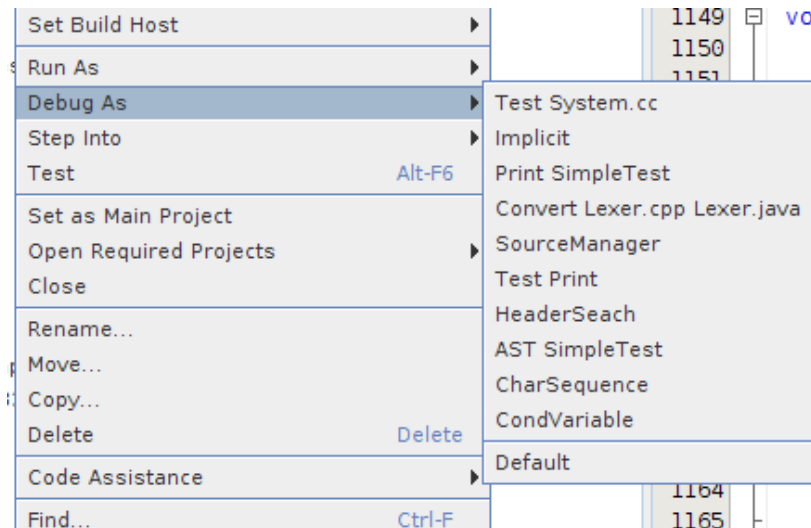
- HTML5 Development for PHP Projects
- Editor enhancements
- Enhanced frameworks:
 - Twig, Apache Conf, NEON, INI
- New frameworks:
 - Nette, Zend 2, atoum
- New static code analysis:
 - Code Sniffer, Mess Detector



Support for C/C++

Feature Overview

- Optimized for large applications
- Advanced language-aware code editor, e.g., syntax coloring, code completion, navigation, formatting, and hints
- Rich reverse engineering capabilities, e.g., Find Usages, Call Graph, Class Hierarchy, Macro View, and Include Hierarchy
- Visual Debugging
- Refactoring
- Unit tests support for CUnit/CppUnit
- Remote Development

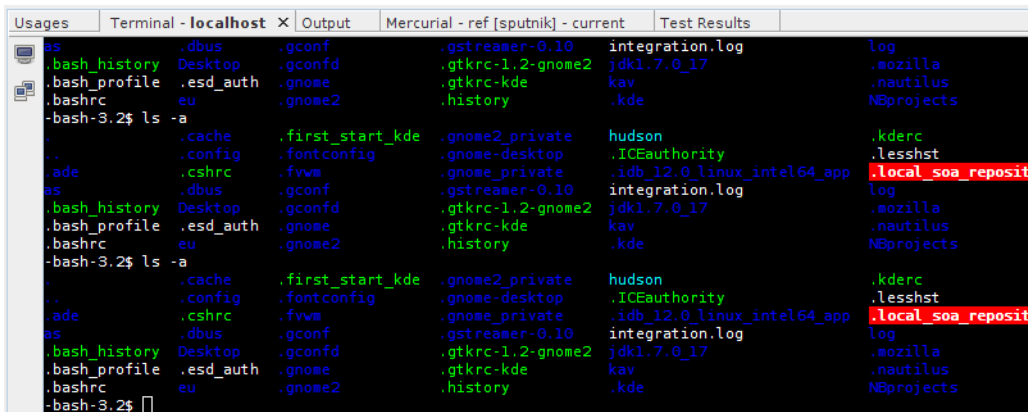


NEW

New in C/C++

Out of the Box C/C++ Support

- Create projects from binary file
- Templates & specialized navigation
- Browse remote file system
- Integrated terminal
- C++11 support
- Compile single file action
- C++ documentation view
- Memory usage improvements 2x
- QT5 support
- Run/debug launchers



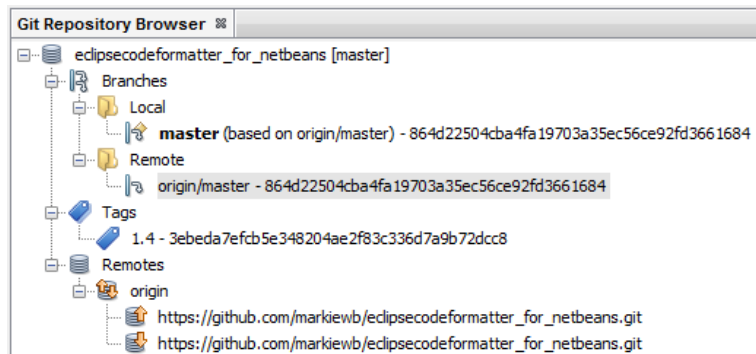
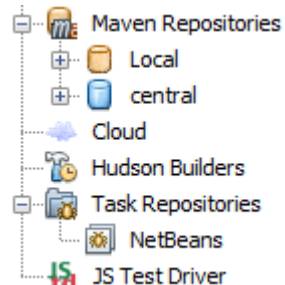
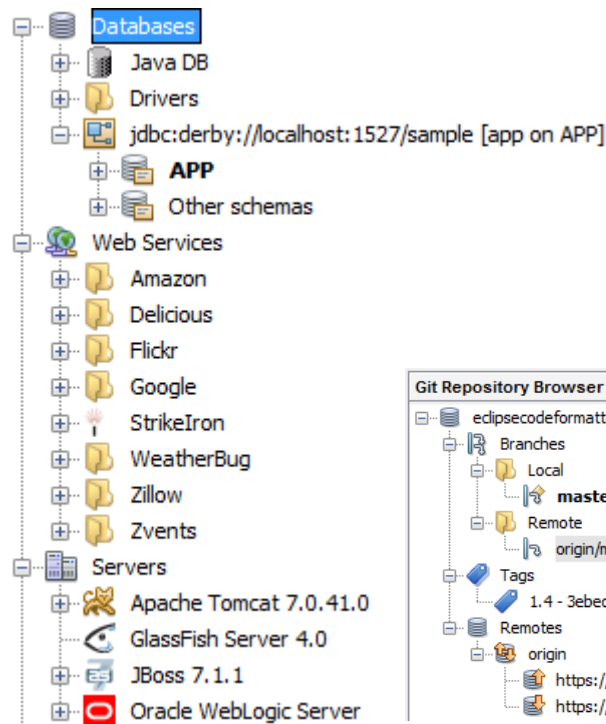
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Miscellaneous IDE Tools

Miscellaneous IDE Tools

Feature Overview

- Project Views
- Services Management
- Build Tools
 - Ant, Maven, Gradle plugin
- Versioning Tools
 - Git, Subversion, Mercurial
- Navigators
- Terminal Emulator
- Plugin Manager
- Action Items (Problem View)
- Bookmark Management

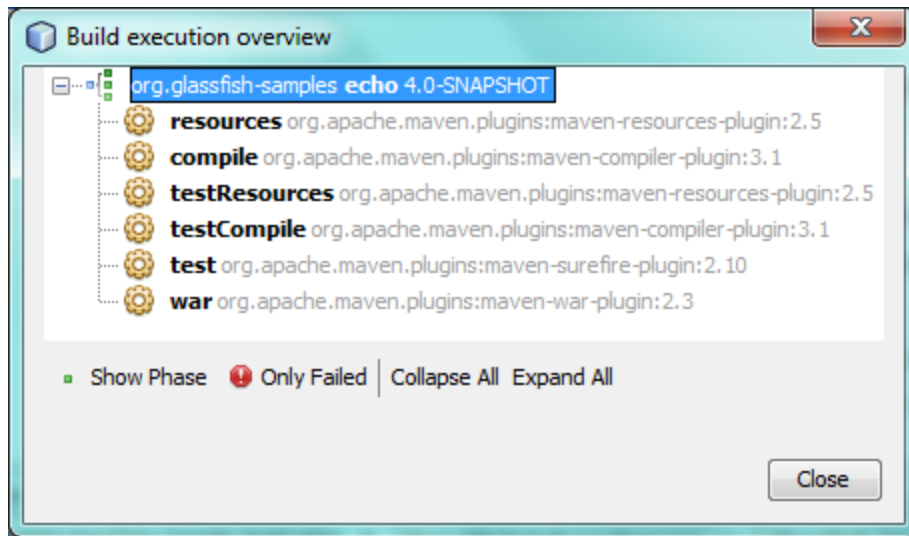


NEW
7.3
7.4

Maven

Out of the Box Maven

- Effective POM editor
- Reworked compile-on-save
- Build execution overview dialog
- Memory usage enhancements
- Performance enhancements

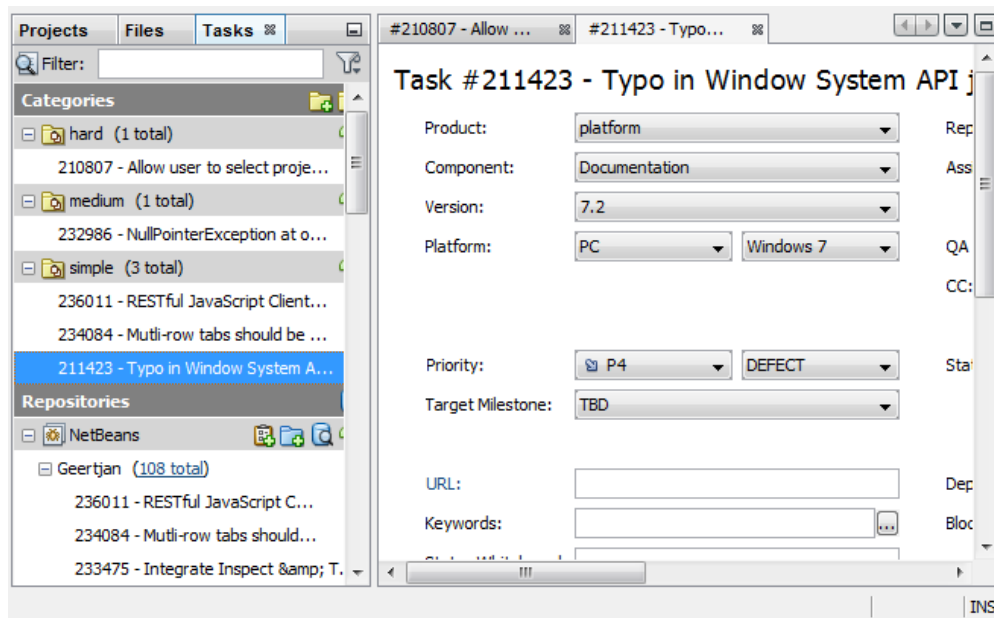


Task Management

Out of the Box Task Management



- New Tasks Window
- Manage issue trackers Bugzilla and JIRA
- Create and categorize queries, receive notifications on updates
- Create and categorize tasks
- Filter and search your tasks and queries

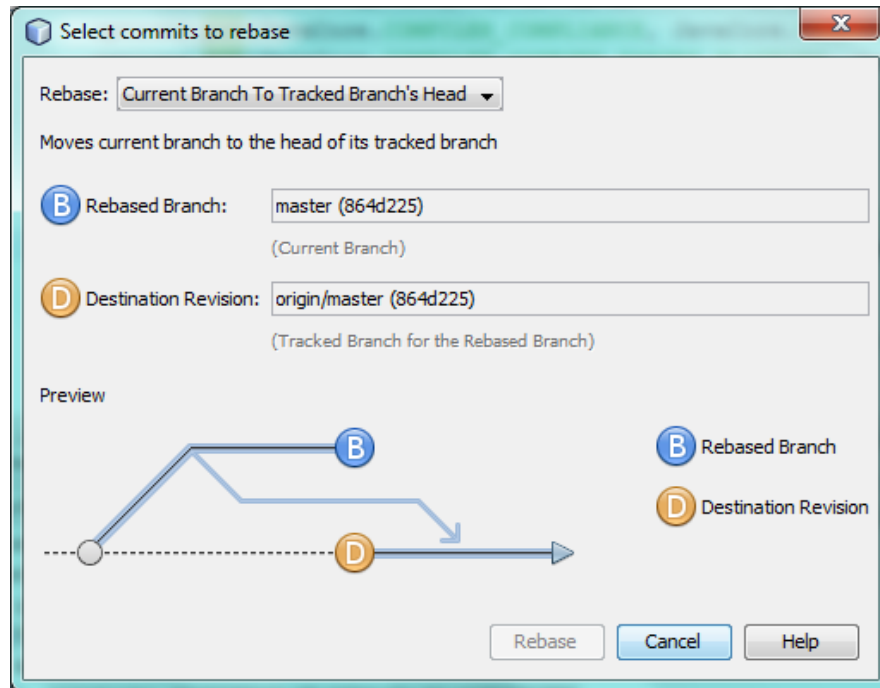


Versioning Tool Enhancements

Out of the Box Versioning Control Support



- Visual tools for
 - git --pull rebase
 - git --commit amend
- Mercurial, Git, Subversion diffing between branches
- Support for SSH agent
- Subversion 1.8



Summary

Major Features per Release

The Smarter and Faster Way to Code



- NetBeans IDE 7.0 – support for JDK 7
- NetBeans IDE 7.1 – support for JavaFX 2
- NetBeans IDE 7.2 – Static Java code analysis, e.g., FindBugs integration, together with smarter project scanning and performance enhancements
- NetBeans IDE 7.3 – HTML5 tools, such as HTML5 editor, JavaScript Editor, JavaScript debugger, CSS3 visual editor, and integration with Chrome browser, Java EE 7 support
- NetBeans IDE 7.4 – HTML5 tools for Java EE and PHP, Cordova mobile device development, preview support for JDK 8

Performance Enhancements



Mark Wilmoth @AreaOfThoughts

#NetBeans IDE 7.4 is much faster opening forms while scanning now. A simple form took 30s before, now only 10s during scanning.



Robert Basic @robertbasic

odd. #netbeans 7.2b feels much snappier/faster than 7.1.x
Expand



Romain N @romainneutron

@netbeans testing the 7.2 beta. Awesome work, no more freeze while "scanning", more responsive interface. Good job guys !



Skye Book @sbook

Definitely feeling the speed improvements in **NetBeans 7.2** today
Expand



Faissal Boutaounte @bfaissal

WOW #netbeans 7.2 open faster than #FireFox ;) . Great JOB @netbeans team, thank you !

Next Steps



1. Download Netbeans IDE



2. Create a user account



3. Participate in NetBeans community



4. Blog about NetBeans

Resources:

- NetBeans product site: <http://netbeans.org>
- NetBeans wiki: <http://wiki.netbeans.org>
- NetBeans blog aggregation: <http://planetnetbeans.org>

Oracle Technology Network

For Java Developers

Resources for You

- Technical Content on oracle.com/technetwork/java
- *Java Magazine* (100K subscribers)
- Java Developer Newsletter (700K subscribers)
- Free Developer Days events.oracle.com
- Project space on java.net (7K+ projects)
- [@java](#), [Facebook/IloveJava](#)

Path to Recognition

- Content by You!
- Send links to blogs, videos, and proposals for articles to otnfeedback_us@oracle.com



