

# Developing Geronimo in Eclipse

The following instructions will enable you to get Geronimo into the [Eclipse 3.2](#) workspace as an eclipse project. You will be able use eclipse to make code changes and run Unit tests. For purposes of this discussion the development OS is Windows. Please adjust these instructions for your environment.

## Prerequisites

Install the software required for [Building Apache Geronimo](#) and follow the instructions to build Geronimo.

## Creating Eclipse Projects

You could import all the geronimo projects or subprojects in the workspace. But a more efficient way is to import only the modules that you want to work on.

## Working with a single module

If you are planning to modify a single geronimo module, you can import only that module in the workspace by running the following commands:

```
cd modules\a_module    or   cd maven-plugins\a_plugin
mvn -o eclipse:eclipse
```

## Working with multiple modules

It is advised that the first time users import all the modules.

Generate the Eclipse projects for geronimo sub-projects by invoking the following command from the **top** directory:

```
mvn -o eclipse:eclipse
```



### Note:

The very first time you must omit the "-o" parameter so that it will download the maven-eclipse-plugin.

```
mvn eclipse:eclipse
```

It is possible to import only a few modules in the workspace by running the above command from each of the modules directory. In this case the changes made in one module will not be visible to other modules without rebuilding the modified module with mvn.



### Useful Information

It is possible edit .classpath files so that the changes made in one module are visible to all other modules in the workspace instantly. This is meant only for advanced users.

## Firing up Eclipse

- Import the project(s) to eclipse workspace using:

```
File --> Import --> +General --> Existing Projects into Workspace
```

Select project or projects depending on how you created the project in the [#Creating Eclipse Projects](#) step.

- Set the Maven Classpath variable M2\_REPO to tell Eclipse where the Maven repository is by clicking the "New" button in

```
Window --> Preferences --> Java --> Build Path --> Classpath Variables
```

Enter M2\_REPO and set it to your maven2 repository directory. On linux this directory is usually located at

```
~/m2/repository
```

and on windows its usually at

```
"%USERPROFILE%\m2\repository"
```

- If you are working on a builder module, i.e. geronimo-tomcat6-builder, you must add xmlbeans classes to the build path. Right click on the builder project and Select "Add Class Folder" by doing the following:

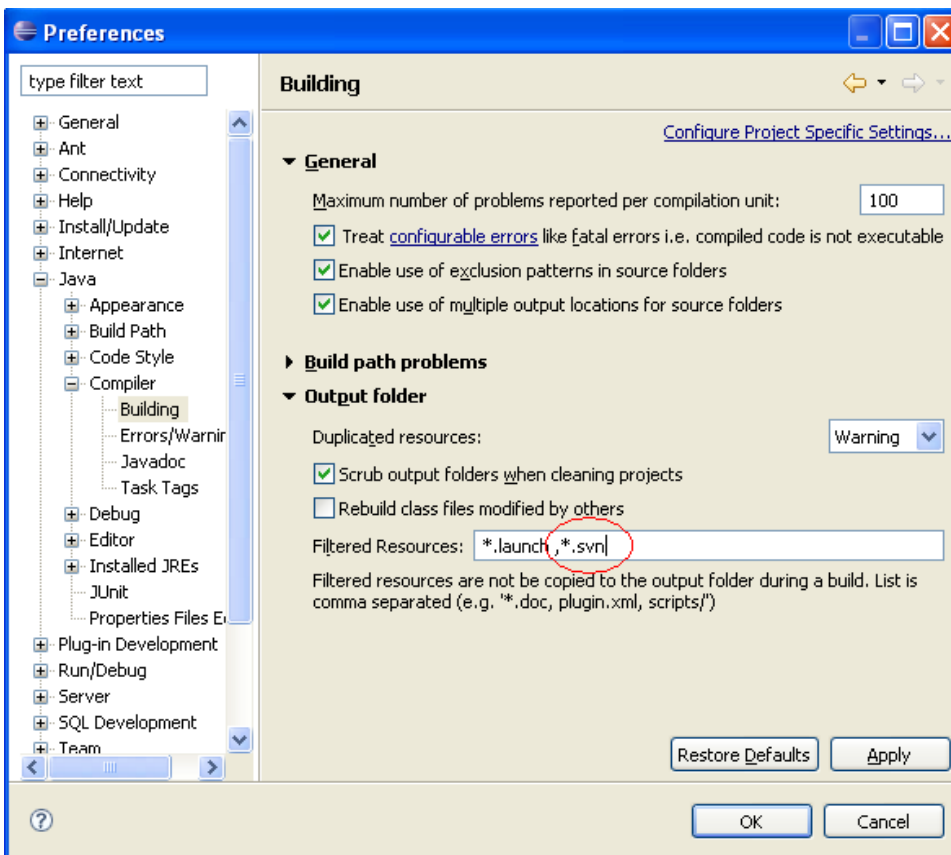
```
<Project> --> Build Path --> Configure Build Path --> Java Build Path --> Add Class Folder
```

Check target/clover/classes folder from the selection.

- To prevent Eclipse from copying the .svn directories to the output folder of projects, do the following:  
Expand 'Output folder' setting using

```
Window --> Preferences --> Java --> Compiler --> Building --> Output folder
```

Append `*,.svn` to the "Filtered Resources" field.



## Code Formatting

- If you plan on contributing code or patches to the project, configure eclipse to not use tabs by doing the following:

```
Window --> Preferences --> Java --> Code Style --> Formatter --> Java Conventions [built-in]
```

Click on "Edit". Under Indentation select Tab policy as "space only". Enter a new name for this profile and click "OK".

## Eclipse IDE configuration files

You may want to import the following files and have the environment configured in a couple of clicks.

```
Window --> Preferences --> Java --> Code Style --> Formatter --> Import
```

## Eclipse Code Style Formatter Profile for Geronimo

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<profiles version="10">
<profile kind="CodeFormatterProfile" name="Geronimo" version="10">
<setting id="org.eclipse.jdt.core.formatter.comment.insert_new_line_before_root_tags" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_annotation" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_comma_in_type_parameters" value="do not insert"
/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_brace_in_type_declaration" value="
insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_type_arguments" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.brace_position_for_anonymous_type_declaration" value="end_of_line"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_colon_in_case" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_opening_brace_in_array_initializer" value="
insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_opening_paren_in_annotation" value="do not
insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_new_line_before_closing_brace_in_array_initializer" value="
do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_new_line_in_empty_annotation_declaration" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.blank_lines_before_field" value="0"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_opening_paren_in_while" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_between_empty_parens_in_annotation_type_member_declaration" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_prefix_operator" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_new_line_before_else_in_if_statement" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.keep_else_statement_on_same_line" value="false"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_ellipsis" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.comment.insert_new_line_for_parameter" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.indent_breaks_compare_to_cases" value="true"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_brace_in_annotation_type_declaration"
value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_at_in_annotation" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.alignment_for_multiple_fields" value="16"/>
<setting id="org.eclipse.jdt.core.formatter.comment.format_comments" value="true"/>
<setting id="org.eclipse.jdt.core.formatter.alignment_for_expressions_in_array_initializer" value="16"/>
<setting id="org.eclipse.jdt.core.formatter.alignment_for_conditional_expression" value="80"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_paren_in_for" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_binary_operator" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_question_in_wildcard" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.brace_position_for_array_initializer" value="end_of_line"/>
<setting id="org.eclipse.jdt.core.formatter.insert_new_line_before_finally_in_try_statement" value="do not
insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_between_empty_parens_in_enum_constant" value="do not
insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_new_line_before_catch_in_try_statement" value="do not insert"
/>
<setting id="org.eclipse.jdt.core.formatter.blank_lines_after_package" value="1"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_paren_in_while" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_type_parameters" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.continuation_indentation" value="2"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_postfix_operator" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.alignment_for_arguments_in_method_invocation" value="16"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_closing_angle_bracket_in_type_arguments" value="
do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_comma_in_superinterfaces" value="do not insert"
/>
<setting id="org.eclipse.jdt.core.formatter.blank_lines_before_new_chunk" value="1"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_binary_operator" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.blank_lines_before_package" value="0"/>
<setting id="org.eclipse.jdt.core.compiler.source" value="1.5"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_opening_paren_in_constructor_declaration" value="
do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_enum_constant_arguments" value="insert"
/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_closing_angle_bracket_in_type_arguments" value="
insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_enum_declarations" value="insert"/>
```

```
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_brace_in_block" value="insert"/>
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<setting id="org.eclipse.jdt.core.formatter.insert_space_before_comma_in_method_invocation_arguments" value="do
not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_opening_paren_in_enum_constant" value="do not
insert"/>
<setting id="org.eclipse.jdt.core.formatter.align_type_members_on_columns" value="false"/>
<setting id="org.eclipse.jdt.core.formatter.blank_lines_before_member_type" value="1"/>
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<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_brace_in_method_declaration" value="
insert"/>
<setting id="org.eclipse.jdt.core.formatter.alignment_for_selector_in_method_invocation" value="16"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_opening_paren_in_switch" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_unary_operator" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_colon_in_case" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.comment.indent_parameter_description" value="true"/>
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<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_brace_in_enum_declaration" value="
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<setting id="org.eclipse.jdt.core.formatter.insert_new_line_after_annotation" value="insert"/>
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value="do not insert"/>
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value="do not insert"/>
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value="do not insert"/>
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not insert"/>
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insert"/>
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<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_constructor_declaration_parameters"
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<setting id="org.eclipse.jdt.core.formatter.insert_space_before_closing_paren_in_cast" value="do not insert"/>
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/>
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not insert"/>
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```

```
insert"/>
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insert"/>
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insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_question_in_wildcard" value="do not insert"/>
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<setting id="org.eclipse.jdt.core.formatter.insert_space_before_ellipsis" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.brace_position_for_block" value="end_of_line"/>
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<setting id="org.eclipse.jdt.core.formatter.compact_else_if" value="true"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_comma_in_array_initializer" value="do not
insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_for_increments" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_closing_bracket_in_array_reference" value="do
not insert"/>
<setting id="org.eclipse.jdt.core.formatter.comment.indent_root_tags" value="true"/>
<setting id="org.eclipse.jdt.core.formatter.brace_position_for_enum_constant" value="end_of_line"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_comma_in_enum_declarations" value="do not
insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_explicit_constructor_call_arguments"
value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_comma_in_method_declaration_parameters" value="
do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_superinterfaces" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_brace_in_switch" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_comma_in_allocation_expression" value="do not
insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_bracket_in_array_type_reference" value="
do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.tabulation.size" value="4"/>
<setting id="org.eclipse.jdt.core.formatter.insert_new_line_after_opening_brace_in_array_initializer" value="do
not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_closing_brace_in_block" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_new_line_in_empty_enum_constant" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_bracket_in_array_reference" value="do
not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_opening_angle_bracket_in_type_arguments" value="
do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_paren_in_constructor_declaration"
value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_comma_in_constructor_declaration_throws" value="
do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_opening_paren_in_if" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.alignment_for_throws_clause_in_constructor_declaration" value="16"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_assignment_operator" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_assignment_operator" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.indent_empty_lines" value="false"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_opening_paren_in_synchronized" value="do not
insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_closing_paren_in_cast" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_method_declaration_parameters" value="
insert"/>
<setting id="org.eclipse.jdt.core.formatter.brace_position_for_block_in_case" value="end_of_line"/>
<setting id="org.eclipse.jdt.core.formatter.number_of_empty_lines_to_preserve" value="1"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_paren_in_method_declaration" value="do
not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_opening_paren_in_catch" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_closing_paren_in_constructor_declaration"
value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_paren_in_method_invocation" value="do
not insert"/>
```

```
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_opening_bracket_in_array_reference" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.alignment_for_arguments_in_qualified_allocation_expression" value="16"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_and_in_type_parameter" value="insert"/>
<setting id="org.eclipse.jdt.core.compiler.compliance" value="1.5"/>
<setting id="org.eclipse.jdt.core.formatter.continuation_indentation_for_array_initializer" value="2"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_at_in_annotation_type_declaration" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_between_empty_brackets_in_array_allocation_expression" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_opening_paren_in_cast" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.alignment_for_arguments_in_allocation_expression" value="16"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_unary_operator" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_closing_angle_bracket_in_parameterized_type_reference" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_brace_in_anonymous_type_declaration" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.keep_empty_array_initializer_on_one_line" value="false"/>
<setting id="org.eclipse.jdt.core.formatter.insert_new_line_in_empty_enum_declaration" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_comma_in_constructor_declaration_parameters" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.keep_impl_if_on_one_line" value="false"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_closing_angle_bracket_in_type_parameters" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_colon_in_labeled_statement" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_new_line_at_end_of_file_if_missing" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_colon_in_for" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_comma_in_parameterized_type_reference" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.alignment_for_superinterfaces_in_type_declaration" value="16"/>
<setting id="org.eclipse.jdt.core.formatter.brace_position_for_enum_declaration" value="end_of_line"/>
<setting id="org.eclipse.jdt.core.formatter.alignment_for_binary_expression" value="16"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_closing_paren_in_while" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.put_empty_statement_on_new_line" value="true"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_opening_angle_bracket_in_type_parameters" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_between_empty_parens_in_method_invocation" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.alignment_for_arguments_in_enum_constant" value="16"/>
<setting id="org.eclipse.jdt.core.formatter.insert_new_line_before_while_in_do_statement" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.comment.line_length" value="120"/>
<setting id="org.eclipse.jdt.core.formatter.blank_lines_between_import_groups" value="1"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_comma_in_enum_constant_arguments" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.brace_position_for_constructor_declaration" value="end_of_line"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_semicolon" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.number_of_blank_lines_at_beginning_of_method_body" value="0"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_colon_in_conditional" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.indent_body_declarations_compare_to_type_header" value="true"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_paren_in_annotation_type_member_declaration" value="do not insert"/>
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<setting id="org.eclipse.jdt.core.formatter.indent_body_declarations_compare_to_enum_declaration_header" value="true"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_closing_paren_in_synchronized" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.alignment_for_superinterfaces_in_enum_declaration" value="16"/>
<setting id="org.eclipse.jdt.core.formatter.indent_statements_compare_to_block" value="true"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_question_in_conditional" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_comma_in_multiple_field_declarations" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_for_inits" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.alignment_for_compact_if" value="16"/>
<setting id="org.eclipse.jdt.core.formatter.indent_switchstatements_compare_to_cases" value="true"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_array_initializer" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_colon_in_default" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_and_in_type_parameter" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_between_empty_parens_in_constructor_declaration"
```

```
value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.blank_lines_before_imports" value="1"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_colon_in_assert" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.comment.format_html" value="true"/>
<setting id="org.eclipse.jdt.core.formatter.alignment_for_throws_clause_in_method_declaration" value="16"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_closing_angle_bracket_in_type_parameters" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_bracket_in_array_allocation_expression" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_new_line_in_empty_anonymous_type_declaration" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_opening_angle_bracket_in_parameterized_type_reference" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_colon_in_conditional" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_closing_paren_in_for" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_postfix_operator" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.comment.format_source_code" value="true"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_allocation_expression" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_paren_in_synchronized" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_constructor_declaration_throws" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.alignment_for_parameters_in_method_declaration" value="16"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_closing_brace_in_array_initializer" value="insert"/>
<setting id="org.eclipse.jdt.core.compiler.codegen.targetPlatform" value="1.5"/>
<setting id="org.eclipse.jdt.core.formatter.use_tabs_only_for_leading_indentations" value="false"/>
<setting id="org.eclipse.jdt.core.formatter.comment.format_header" value="false"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_closing_paren_in_enum_constant" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.alignment_for_enum_constants" value="0"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_closing_paren_in_parenthesized_expression" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.indent_body_declarations_compare_to_annotation_declaration_header" value="true"/>
<setting id="org.eclipse.jdt.core.formatter.insert_new_line_in_empty_block" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_closing_paren_in_catch" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_paren_in_parenthesized_expression" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_comma_in_multiple_local_declarations" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_comma_in_for_increments" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_paren_in_switch" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_opening_paren_in_method_invocation" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_colon_in_assert" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.brace_position_for_type_declaration" value="end_of_line"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_brace_in_array_initializer" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_between_empty_braces_in_array_initializer" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_opening_paren_in_method_declaration" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_semicolon_in_for" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_paren_in_catch" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_angle_bracket_in_parameterized_type_reference" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_multiple_field_declarations" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_closing_paren_in_annotation" value="do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_parameterized_type_reference" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_method_invocation_arguments" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.blank_lines_after_imports" value="1"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_comma_in_multiple_local_declarations" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.indent_body_declarations_compare_to_enum_constant_header" value="true"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_after_semicolon_in_for" value="insert"/>
<setting id="org.eclipse.jdt.core.formatter.insert_space_before_opening_angle_bracket_in_type_arguments" value="
```

```
do not insert"/>
<setting id="org.eclipse.jdt.core.formatter.keep_then_statement_on_same_line" value="false"/>
</profile>
</profiles>
```

Window --> Preferences --> Java --> Code Style --> Code Templates --> Import

### Eclipse Code Style Code Template for Geronimo

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<templates>
<template autoinsert="true" context="gettercomment_context" deleted="false" description="Comment for getter
method" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.gettercomment" name="gettercomment">/**
 * @return the ${bare_field_name}
 */</template><template autoinsert="true" context="settercomment_context" deleted="false" description="Comment
for setter method" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.settercomment" name="settercomment">
/**
 * @param ${param} the ${bare_field_name} to set
 */</template><template autoinsert="true" context="constructorcomment_context" deleted="false" description="
Comment for created constructors" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.constructorcomment"
name="constructorcomment">/**
 * ${tags}
 */</template><template autoinsert="false" context="filecomment_context" deleted="false" description="Comment
for created Java files" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.filecomment" name="filecomment"
>/**&#13;
 * Licensed to the Apache Software Foundation (ASF) under one or more&#13;
 * contributor license agreements. See the NOTICE file distributed with&#13;
 * this work for additional information regarding copyright ownership.&#13;
 * The ASF licenses this file to You under the Apache License, Version 2.0&#13;
 * (the "License"); you may not use this file except in compliance with&#13;
 * the License. You may obtain a copy of the License at&#13;
 *&#13;
 * http://www.apache.org/licenses/LICENSE-2.0&#13;
 *&#13;
 * Unless required by applicable law or agreed to in writing, software&#13;
 * distributed under the License is distributed on an "AS IS" BASIS,&#13;
 * WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.&#13;
 * See the License for the specific language governing permissions and&#13;
 * limitations under the License.&#13;
 */</template><template autoinsert="false" context="typecomment_context" deleted="false" description="Comment
for created types" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.typecomment" name="typecomment">/**
 * ${tags}
 *
 * @version $$Rev$$ $$Date$$
 */</template><template autoinsert="false" context="fieldcomment_context" deleted="false" description="Comment
for fields" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.fieldcomment" name="fieldcomment"
/><template autoinsert="true" context="methodcomment_context" deleted="false" description="Comment for non-
overriding methods" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.methodcomment" name="methodcomment"
>/**
 * ${tags}
 */</template><template autoinsert="true" context="overridecomment_context" deleted="false" description="
Comment for overriding methods" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.overridecomment" name="
overridecomment">/** (non-Javadoc)
 * ${see_to_overridden}
 */</template><template autoinsert="true" context="delegatecomment_context" deleted="false" description="
Comment for delegate methods" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.delegatecomment" name="
delegatecomment">/**
 * ${tags}
 * ${see_to_target}
 */</template><template autoinsert="true" context="newtype_context" deleted="false" description="Newly created
files" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.newtype" name="newtype">${filecomment}
${package_declaration}

${typecomment}
${type_declaration}</template><template autoinsert="true" context="classbody_context" deleted="false"
```



```

description="Code in new class type bodies" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.classbody"
name="classbody">
</template><template autoinsert="true" context="interfacebody_context" deleted="false" description="Code in new
interface type bodies" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.interfacebody" name="
interfacebody">
</template><template autoinsert="true" context="enumbody_context" deleted="false" description="Code in new enum
type bodies" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.enumbody" name="enumbody">
</template><template autoinsert="true" context="annotationbody_context" deleted="false" description="Code in
new annotation type bodies" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.annotationbody" name="
annotationbody">
</template><template autoinsert="true" context="catchblock_context" deleted="false" description="Code in new
catch blocks" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.catchblock" name="catchblock">
// ${todo} Auto-generated catch block
${exception_var}.printStackTrace();</template><template autoinsert="true" context="methodbody_context" deleted="
false" description="Code in created method stubs" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.
methodbody" name="methodbody">
// ${todo} Auto-generated method stub
${body_statement}</template><template autoinsert="true" context="constructorbody_context" deleted="false"
description="Code in created constructor stubs" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.
constructorbody" name="constructorbody">
${body_statement}
// ${todo} Auto-generated constructor stub</template><template autoinsert="true" context="getterbody_context"
deleted="false" description="Code in created getters" enabled="true" id="org.eclipse.jdt.ui.text.codetemplates.
getterbody" name="getterbody">
return ${field};</template><template autoinsert="true" context="
setterbody_context" deleted="false" description="Code in created setters" enabled="true" id="org.eclipse.jdt.ui.
text.codetemplates.setterbody" name="setterbody">
${field} = ${param};
</template>
</templates>

```

## Making Geronimo Updates Appear in Eclipse

This section describes how to make changes to Geronimo in Eclipse appear in the Geronimo runtime and the Eclipse debugger, also known as "round-trip debugging." Assuming you have extracted and built Geronimo and imported the source code as projects in Eclipse, source code updates to Geronimo must be built, packaged, and assembled before they will appear in the debugger. The steps are given here:

### 1. Update the Source Code.

Use the debugger or Java view to edit Java source code. Changes to the code should appear in the location from which you imported the project. (Items below marked with <> are local directory names. Specific examples follow the conceptual locations.) For example editing `MyUpdate.java` produces a change in the given local directory:

```

<install>/server/trunk/framework/modules/<moduleName>/src/main/java/<package>/MyUpdate.java
(e.g. c:/g/server/trunk/framework/modules/geronimo-system/src/main/java/org/apache/geronimo/system/main
/StartupMonitorUtil.java)

```

### 2. Update the Classes

Eclipse is normally set to automatically build Java file changes. You can also trigger project builds manually from the Eclipse Project menu or use build tools to compile the change. The build should produce changes in the following directory:

```

<install>/server/trunk/framework/modules/<moduleName>/target/classes/<package>/MyUpdate.class
(e.g. c:/g/server/trunk/framework/modules/geronimo-system/target/classes/org/apache/geronimo/system/main
/StartupMonitorUtil.class)

```

### 3. Update Archive Files

You will have to package your new classes and make a module snapshot JAR. If you are not using the Eclipse Maven plugin, switch to a command line window and use your build environment to run Maven.

```
cd <install>/server/trunk/framework/modules/<moduleName>
(e.g. cd c:/g/server/trunk/framework/modules/geronimo-system)

mvn install (to build classes, package classes, and run unit tests, which produces)
<install>/server/trunk/framework/modules/<moduleName>/target/<moduleName>-<version>-SNAPSHOT.jar
(e.g. c:/g/server/trunk/framework/modules/geronimo-system/target/geronimo-system-2.2-SNAPSHOT.jar)
```

#### 4. Replace the Snapshot in the Geronimo Repository

Now you must take your new code snapshot and overlay the code that your Eclipse runtime uses. For example, if your runtime is pointed to <runtime>/geronimo-<assemblyName>-<version>-SNAPSHOT (e.g. c:/temp/server/geronimo-tomcat6-javaee5-2.2-SNAPSHOT), replace:

```
<runtime>/geronimo-<assemblyName>-2.2-SNAPSHOT/repository/<modulePackage>/2.2-SNAPSHOT/geronimo-system-2.2-SNAPSHOT.jar
(e.g. c:/temp/server/geronimo-tomcat6-javaee5-2.2-SNAPSHOT/repository/
    org/apache/geronimo/framework/geronimo-system/2.2-SNAPSHOT/geronimo-system-2.2-SNAPSHOT.jar)
```

If your runtime is pointed to the build tree <runtime>/geronimo-<assemblyName>-<version>-SNAPSHOT (c:/g/server/trunk/assemblies/geronimo-tomcat6-javaee5/target/assembly), replace:

```
<runtime>/geronimo-<assemblyName>-2.2-SNAPSHOT/repository/<modulePackage>/2.2-SNAPSHOT/geronimo-system-2.2-SNAPSHOT.jar
(e.g. c:/g/server/trunk/assemblies/geronimo-tomcat6-javaee5/target/assembly/repository/
    org/apache/geronimo/framework/geronimo-system/2.2-SNAPSHOT/geronimo-system-2.2-SNAPSHOT.jar)
```

#### 5. Restart Plugins Modules That Use the JAR

For a module such as geronimo-system, you need to restart the server. For a module like geronimo-jetty6, you'd restart Jetty and all the web apps.

#### 6. Debug

Rerun the application or test case which use your code. You can verify your new code is in use with a temporary console `println out.println( "My new code" )` or by placing a break point in the new code.

## Other Useful Information

If you plan on contributing code or patches to the project please configure your subversion client and follow the coding conventions described here:

- [Subversion Client Configuration](#)
- [Coding standards](#)
- [How to prepare and contribute patches](#)