



# SpringSource Tool Suite 2.2.1

- New and Noteworthy -

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## NEW FEATURES – 2.2.1.RELEASE

### Spring Development Tools

#### Spring Roo Integration

The Roo integration requires Spring Roo 1.0.0.RC3 to be installed. Due to API changes previous versions are not supported anymore.

The Roo Shell now supports hyperlinking of created and modified resources as shown in following screenshot. Clicking the hyperlink in the Shell will open the linked file in the default editor registered for the selected file type.



```
Roo Shell 1.0.0.RC3 [rev 389]
Welcome to Spring ROO. For assistance press CTRL+SPACE or type "hint" then hit ENTER.
roo> entity --name org.springframework.domain.Pet --testAutomatically
Created SRC_MAIN_JAVA/org/springframework/domain/Pet.java
Created SRC_TEST_JAVA/org/springframework/domain/PetDataOnDemand.java
Created SRC_TEST_JAVA/org/springframework/domain/PetIntegrationTest.java
Created SRC_MAIN_JAVA/org/springframework/domain/Pet_Roo_Entity.gj
Created SRC_MAIN_JAVA/org/springframework/domain/Pet_Roo_ToString.gj
Created SRC_MAIN_JAVA/org/springframework/domain/Pet_Roo_Configurable.gj
Created SRC_TEST_JAVA/org/springframework/domain/PetDataOnDemand_Roo_Configurable.gj
roo>
```

The CTRL+R (or CMD+R on Macs) shortcut has been modified to allow global invocation; no need to open a file before invoking the command.

Additionally STS 2.2.1 features a new New Roo Project wizard to create new Roo projects by running the Roo command 'project'.

STS will come preconfigured with an external Roo installation ready to use from within STS.

The integrated template has been updated to latest available version. Please note that the project template available in the New Project Template Wizard has been deprecated in favor of the new Roo Project Wizard.

### Groovy & Grails Development Tools

#### Update to Grails Tools; now with GSP Editor

The Grails tools have been updated to support an editor for GSP files. Within STS, the new GSP Editor will be the default editor for \*.gsp files.

Also the keyboard shortcut to open the Grails Quick Command Prompt has been changed to CTRL+ALT+G to prevent conflicts in certain views of Eclipse. The shortcut is now globally available; no need to open a file before invoking the command.

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STS 2.2.1 will not come with a Grails installation out of the box. Instead Grails can be installed from the Extension Install available from the STS Dashboard.

For more details please visit:

<http://www.grails.org/STS+Integration>

Note: the Grails tools are not considered final and are still in early development stage. Please add your comments to <https://issuetracker.springsource.com/browse/STS-487>.

### Runtime Integration

#### Support for dm Server 2.0.0.M6

STS 2.2.1 supports the latest milestone M6 of SpringSource dm Server 2.0.0. Several bugs and issues have been solved that prevented using dm Server 2.0.0.M6 with STS.

## ENHANCEMENTS – 2.2.1.RELEASE

#### Windows 64 bit package and installer

STS 2.2.1 makes a package and installer for Windows 64-bit available. Please make sure to use a 64-bit JDK with this version of STS.

#### Fixed Bugs and Enhancement Requests

Here is a full list of resolved bugs and enhancement requests for the 2.2.1.RELEASE release:

##### Sub-tasks

- [STS-432] - investigate PDE's manifest formatter for reuse possibility
- [STS-433] - hook formatter into manifest auto-generation tools
- [STS-438] - investigate the new server view's common navigator api
- [STS-440] - implement problem markers in the servers view
- [STS-441] - ensure functionality falls back gracefully on Eclipse 3.4
- [STS-558] - Don't explicitly mark groovy classes as public

##### Defects

- [STS-114] - Built in tc Server cannot be stopped
- [STS-274] - STS unusable when using a certain workspace
- [STS-351] - Incremental Bundlor adds imports for packages exported by the bundle
- [STS-386] - Put Tomcat back in the distro
- [STS-436] - Not finding tomcat server configuration for tcServer
- [STS-510] - Quickfix and validate as-you-type doesn't understand factory-method and reports an error about a missing constructor
- [STS-530] - Exception when running installation package
- [STS-567] - error logged when opening help
- [STS-569] - IllegalStateException error logged on startup
- [STS-570] - [windows] editing of property values fails in tc Server properties section
- [STS-574] - The focus button in the Spring Explorer should not be enabled if no task is

## SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY

active

- [STS-592] - Jars in lib folders are not added to the Grails project classpath
- [STS-594] - Incompatibility between dm Server Runtime and Apache Studio 1.4 (LDAP tools)
- [STS-602] - NullPointerException on workspace startup
- [STS-603] - STS 2.2.0 Release uses \*much\* more memory than STS 2.1
- [STS-604] - Grails Command prompt doesn't popup when no groovy file is open
- [STS-606] - Outline view does not respond to page changes in the config editor.
- [STS-607] - The properties view for the config editor should respond to selections in tables
- [STS-608] - Issue with STS & latest DM Server Mile Stones
- [STS-609] - Manifests regularly end up with imports for packages only referenced in test code
- [STS-615] - High CPU utilization when doing normal things in STS
- [STS-619] - java.lang.NoClassDefFoundError:  
com/springsource/server/ide/ui/editors/model/ImportBundleHeader

Stories

- [STS-228] - As a user, I would like a Windows x64 version of STS
- [STS-392] - As a user I want to configure that generated manifests/test.mf are always autoformatted

Tasks

- [STS-613] - Provide the ability to use Ctrl+G command from inside GSP file

The change log is also available at:

<https://issuetracker.springsource.com/secure/ReleaseNote.jspa?projectId=10010&styleName=Html&version=10441>

## NEW FEATURES – 2.2.0.RELEASE

### Spring Development Tools

#### Only IDE to fully support latest Spring 3.0

STS has been updated to support latest versions of Spring 3.0 (including RC1 and RC2).

#### Editing, Validating and Visualization of Autowire-based Configurations

Spring configurations based on @Autowired, @Resource and custom annotations can now be visualized and validated within STS. This feature can be mixed and matched with traditional XML-based configurations and understands qualifier annotations and XML definitions.

To enable the visualization of autowired bean dependencies, open the STS preferences and navigate to Spring -> Beans Support and check the "Display extended content" option.

In order to turn on validation warnings and errors displayed in the Java Editor, enable the "Annotation-based Autowiring Rule" of the "Beans Validator" (Preferences -> Spring -> Project Validators).

The screenshot displays the Spring IDE interface. The top pane shows a Beans Graph with a central node 'annotatedBean' and three child nodes: 'testBean', 'nestedTestBean1', and 'nestedTestBean2'. The 'annotatedBean' node has three dependency icons (a green 'G' with a number) pointing to the child nodes, with values 1, 0, and 1 respectively. The bottom pane shows the XML configuration for the beans, with the 'beans' namespace and 'context' namespace. The XML includes an annotation configuration and bean definitions for 'annotatedBean', 'testBean', 'nestedTestBean1', and 'nestedTestBean2'.

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:context="http://www.springframework.org/schema/context"
  xsi:schemaLocation="http://www.springframework.org/schema/beans http://www.springframework.org/schema/beans/spring-
    http://www.springframework.org/schema/context http://www.springframework.org/schema/context/spring-context-2.5
  >
  <context:annotation-config />
  <bean id="annotatedBean"
    class="org.springframework.beans.factory.annotation.AutowiredAnnotationBeanPostProcessorTests$ConstructorsColl
  <bean id="testBean" class="test.beans.TestBean" />
  <bean id="nestedTestBean1" class="test.beans.NestedTestBean" />
  <bean id="nestedTestBean2" class="test.beans.NestedTestBean" />
</beans>
```

## Visualization and Testing of REST and MVC Applications

Usages of @RequestMapping annotations can now be visualized in a separate view called “@RequestMappings”. To open the view select the configuration file of configuration set in the Spring Explorer and select “Show Request Mappings” in the context menu.

The view allows accessing the URL in an embedded web browser. The user is queried for required values defined in the REST-style URL.

## Validation of Namespace-based Configurations

STS now validates namespace elements in XML configurations files. In order to turn on validation warnings and errors displayed, enable the “XSD Tool Annotation Rule” of the “Beans Validator” (Preferences -> Spring -> Project Validators).

The screenshot displays the STS IDE with an XML configuration file named 'sts-385.xml' open in the editor. The XML content includes several namespace elements: <util:list>, <task:scheduled-tasks>, <osgi:reference>, and <util:constant>. The editor shows several error markers (red 'X' icons) on the left side of the XML text, indicating validation failures.

Below the editor, the 'Problems' view is open, showing a list of 7 errors and 1 warning. The errors are as follows:

Description	Resource	Path	Location
'java.lang.String' is not a sub type of 'java.util.List'	sts-385.xml	/validation/src	line 14
'java.util.ArrayList' specifies a class where an interface is required	sts-385.xml	/validation/src	line 30
Class 'java.lang.NoSuchClass' not found	sts-385.xml	/validation/src	line 15
Class 'java.lang.NoSuchClass' not found	sts-385.xml	/validation/src	line 29
Class 'org.springframework.core.NoSuchClass' not found	sts-385.xml	/validation/src	line 36
Field 'NO_SUCH_FIELD' not found on class 'org.springframework.core.Ordered'	sts-385.xml	/validation/src	line 35

## Namespace Schema Versions derived from Classpath

When using the “New Spring Configuration File” wizard or the Spring Config Editor to add or remove namespace definitions, STS will now inspect the project’s classpath to derive appropriate schema versions used in the “schemalocation” attribute.

This behavior can be overridden in the STS preferences by navigating to Spring -> Beans Support -> Namespace Versions. Disabling the option "Use highest XSD version that is available on the project's classpath" will allow explicitly setting the default version to use. Those can be configured on the same preference page.

### Visualization support for @Transactional and @Secured

Usage of @Transactional and @Secured annotations and appropriate XML configuration to enable annotation processing for those annotations will now be reported in the Beans Cross References View.

This enables validation of transactional and security cross-cutting configurations right inside the IDE.

### Spring Roo Integration

The Spring Roo support will now only use externally configured Roo installations; this is similar to the way Java Runtimes are configured with Eclipse. To configure available Roo installations open the preferences and navigate to Spring -> Roo Support.

STS will come preconfigured with an external Roo installation.

The integrated template has been updated to latest available version: Spring Roo RC2.

## Groovy & Grails Development Tools

### First Eclipse-based IDE to provide Grails Tools

For the first time ever on the Eclipse platform, STS 2.2.0 provides support for Grails application development. For more details please visit:

<http://www.grails.org/STS+Integration>

### Greatly improved Groovy language Support

STS now offers easy install for the greatly improved Groovy Eclipse plug-in. For a detailed New & Noteworthy visit:

<http://groovy.codehaus.org/Groovy-Eclipse+2.0.0M1+New+and+Noteworthy>

## OSGi Development Tools

### Support for OSGi Blueprint Services Specification

STS 2.2.0 provides support for editing, validating and visualizing OSGi Blueprint Services XML configuration files.

The Blueprint XML namespace is available in the same way as any other Spring namespace is available.

## Tutorials and Help

[www.springsource.com](http://www.springsource.com)

## SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY

### Easy install of ALM Connectors and Third Party Plug-ins

STS features a new Extension install mechanism that provides easy access to installing the most commonly used Eclipse third-party plug-ins into STS.

The Extension install is available from the STS Dashboard; Extension tab.

The screenshot shows the SpringSource Tool Suite interface. At the top, there are browser tabs for 'PetTypeController\_Roo', 'system-test-config.xml', 'application-config.xml', 'RewardNetworkImpl.java', and 'STS Dashboard'. Below the tabs is the 'SpringSource Tool Suite' header with a search bar and the SpringSource logo. The main content area is titled 'Find:' and contains two sections of extensions:

- Language and Framework Support**
  - Grails Support**: Support for creating Grails projects, automatic dependency management and running commands. by SpringSource, Free, Commercial, Beta.
  - Groovy Eclipse**: The purpose of the Groovy Eclipse plugin is to promote the Groovy platform and ecosystem as a viable and productive development environment for Java developers. by Codehaus.org, Free, EPL/ASL, Beta.
- Task and Change Management**
  - Tasktop Pro (available Oct 26)**: Task-focused web and file browsing, task context management for external applications, task time tracking and reporting. by Tasktop, \$99, 60 day trial, Certified.
  - Atlassian Connector for Eclipse (available 10/31)**: View and manage JIRA issues, Bamboo builds, Crucible code reviews and FishEye source code repository insights. by Atlassian, Free, EPL, Certified.
  - Danube ScrumWorks (available Oct 26)**: Integration for Danube's ScrumWorks Pro agile software management system. This connector bundle is provided by Tasktop and includes Tasktop Pro. by Tasktop, \$149, 60 day trial, Certified.
  - Google Gmail and Calendar (available Oct 26)**: Create tasks from Gmail conversations and schedule tasks using Google Calendar. by Tasktop, Included with Pro, Certified.
  - Rally (available Oct 26)**: by Rally, Free, Commercial, Certified.

An 'Install' button is located at the bottom right of the extension list. At the bottom of the page, there are navigation tabs for 'Dashboard', 'Knowledge Base', 'Extensions', and 'Configuration'.

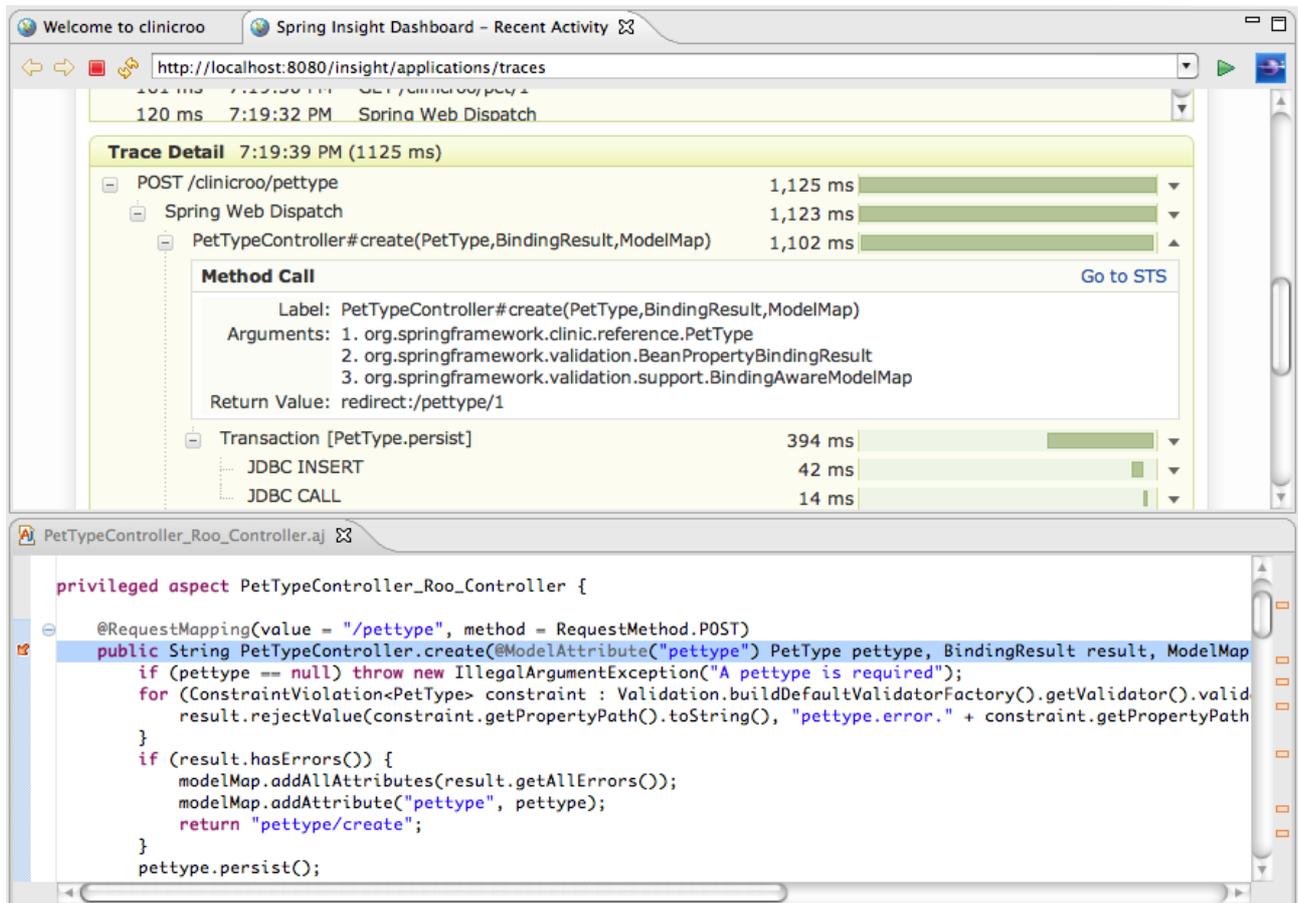
### Runtime Integration

#### Integration of tc Server Developer Edition with Spring Insight

To open the Spring Insight dashboard from with STS, select the tc Server in the Servers view and right-click to open the context menu; select Open Dashboard.

Within the Spring Insight Dashboard you can navigate back to source code by selecting "Go to STS" in a frame within the transaction stack.

## SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY



The screenshot displays the Spring Insight Dashboard interface. The top window shows a trace for a POST request to `/clinicroo/pettytype` at 7:19:39 PM, with a total duration of 1,125 ms. The trace details include a Spring Web Dispatch (1,123 ms) and a PetTypeController#create method call (1,102 ms). The method call details show the label `PetTypeController#create(PetType, BindingResult, ModelMap)`, arguments: `1. org.springframework.clinic.reference.PetType`, `2. org.springframework.validation.BeanPropertyBindingResult`, and `3. org.springframework.validation.support.BindingAwareModelMap`, and a return value of `redirect:/pettype/1`. Below the trace, the source code for `PettyTypeController_Roo_Controller.aj` is shown, highlighting the `create` method implementation.

### VMware Workstation Integration for running dm and tc Server in "local clouds"

STS allows to start, stop and debug tc and dm Server instances running inside VMware Workstation. Only a JVM needs to be installed in the Guest OS as the server runtimes can be provisioned into the guest on demand.

VMware Workstation 6.5 and 7 are supported. Guest operation systems we support an Linux distribution.

### Bundled tc Server updated

STS bundles latest version of SpringSource tc Server 6.0.20.C.

## ENHANCEMENTS – 2.2.0.RELEASE

### Tutorials and Help

### Template Project Wizard Improvements

Template projects will no be downloaded on first access from our download servers. This allows us to keep the template up-to-date without shipping a new version of STS.

[www.springsource.com](http://www.springsource.com)

## Fixed Bugs and Enhancement Requests

Here is a full list of resolved bugs and enhancement requests for the 2.2.0.RELEASE release:

### Sub-tasks

- [STS-203] - Build mirror
- [STS-206] - Write blog post
- [STS-221] - Create JUnit tests for AMS integration
- [STS-345] - Migrate Bundlor JDT over into the dm Server Tools repository
- [STS-353] - Implement and test version detection
- [STS-355] - Update Bundlor dependencies and adjust code and tests to new API
- [STS-356] - Implement and test automatic creation of a MANIFEST.MF if non exists.
- [STS-357] - Implement and test web.xml scanning based on the Bundlor implementation
- [STS-358] - Implement and test improvements to the command history on the dm Server Console page
- [STS-359] - Implement and test warning if stage directory is not accessible
- [STS-360] - Implement and test changes to Bundlor project builder
- [STS-361] - Implement and test configuration UI
- [STS-362] - Implement and test feature to enable tailing on the fly
- [STS-364] - Add a working set selector to the new par bundle & par project wizards and test the feature.
- [STS-365] - Implement an API for gathering @RequestMapping annotations.
- [STS-366] - Create an @RequestMapping table
- [STS-367] - Implement a model for the view
- [STS-368] - Investigate Mylyn discovery portal for possibility of extension or reuse.
- [STS-369] - Implement and test a plugin discovery portal
- [STS-370] - Implement and test download on demand for the templates.
- [STS-371] - Implement improvements to the existing UI
- [STS-372] - Implement improvements to the JSON descriptor
- [STS-373] - Implement improvements to the replacement infrastructure
- [STS-376] - Implement a Javadoc display for the @RequestMapping selection.
- [STS-377] - Implement UI and functionality for open URL in embedded browser
- [STS-383] - Improve error handling during template project creation
- [STS-384] - Ensure proper project import for template project creation
- [STS-385] - Implement and test detection of classpath changes
- [STS-388] - Implement a sorter for the view
- [STS-389] - Implement context menu actions for selection
- [STS-405] - add UI polish
- [STS-406] - review content and create descriptions and screenshots
- [STS-408] - support specification of version constraints for remote content
- [STS-424] - review UI and implementation
- [STS-426] - Investigate possible possible solutions
- [STS-427] - Implement and test class and interface usage
- [STS-428] - Implement strategy for making sure updated RSS feeds are saved
- [STS-429] - Implement RSS feeds persistence
- [STS-430] - implement and test a mechanism for saving an editor's last active tab
- [STS-431] - Determine format and location to persist RSS feeds

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- [STS-434] - implement a preference option for enabling/disabling graphical capabilities
- [STS-435] - rework the config editor to honour the graphical capabilities preference
- [STS-437] - Add project location option to new template project wizard
- [STS-442] - Implement bean rename refactoring from renaming @bean methods
- [STS-444] - investigate and extend auto deployment implementation
- [STS-445] - design dashboard UI for installing server runtimes
- [STS-446] - modify tutorials to reuse Tomcat installed through configurator
- [STS-447] - support editing of property files
- [STS-448] - add support for recognizing static resources
- [STS-449] - Update templates to use new json descriptor
- [STS-470] - allow running from workspace metadata configuration
- [STS-473] - Dashboard should display cached feeds on startup
- [STS-488] - Implement classpath management (source folders for plugin sources, JAR for dependencies)
- [STS-489] - Implement functionality to run Grails commands in STS
- [STS-490] - Implement UI to configure Grails installation locations and selection on a per project basis.
- [STS-493] - Update build to use Eclipse 3.5.1
- [STS-494] - Drop Eclipse 3.4 support
- [STS-495] - Test STS on Eclipse 3.5.1
- [STS-496] - Build STS 2.2.0.RELEASE and all dependencies
- [STS-497] - Create installer packages
- [STS-498] - Upload release to S3
- [STS-499] - Update New & Noteworthy and other release documentation
- [STS-500] - Update download web sites and wiki
- [STS-501] - Implement and test core WTP server integration for Cloud Foundry
- [STS-502] - Implement and test UI WTP server integration for Cloud Foundry
- [STS-504] - Test dm Server support on Workstation 6.5 and 7
- [STS-505] - Test tc Server support on Workstation 6.5 and 7
- [STS-507] - Document release process
- [STS-511] - Update bundle projects and products
- [STS-515] - Implement support for RFC 124
- [STS-522] - implement categorized discovery view
- [STS-524] - provide a tooltip and decoration for applications
- [STS-525] - investigate drag and drop on modules
- [STS-531] - Implement and test detection of Autowired annotation in the annotation outline
- [STS-532] - Implement and test core support for Autowiring
- [STS-533] - Implement additions to the Beans Dependency Graph
- [STS-535] - Implement 'Run on Server...'
- [STS-536] - Connect Cloud Foundry account when user finishes the server wizard
- [STS-539] - update to latest API
- [STS-542] - create a Cloud Foundry feature
- [STS-543] - Disable CF server finish button until credentials are entered
- [STS-545] - redeploy applications instead of recreating the deployment
- [STS-548] - Use URL field for creating new CF account
- [STS-549] - prompt for credentials when connecting to server

## SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY

- [STS-557] - create a feature for installing m2eclipse
- [STS-572] - put Cloud Foundry feature into Extensions / STS category
- [STS-575] - link to current New & Noteworthy from Help

### Defects

- [STS-107] - Template project wizard: projects listed twice in drop down
- [STS-110] - Template wizards: allow placeholder names to be more unique
- [STS-114] - Built in tc Server cannot be stopped
- [STS-119] - webflow "open graphical editor" hangs eclipse IDE
- [STS-218] - Test all tutorials
- [STS-252] - Lab Manager - Deploying an image works, but gives error
- [STS-269] - Workspace hosed by ClassDefNotFound
- [STS-321] - Invalid log4j.xml generated by Spring MVC Template Project
- [STS-328] - Quick Fix for Import-Bundle doesn't offer all matches, and returns matches that don't satisfy the version range in the manifest
- [STS-331] - Documentation still talks about Spring AP
- [STS-335] - Bundle project is trying to add extra files to itself during incremental build
- [STS-336] - Exported dm Server project has a corrupted MANIFEST.MF
- [STS-338] - dm Server project export does not warn if exported file already exists
- [STS-341] - WEB-INF/web.xml should not be copied to the root of the project for standard WARs
- [STS-349] - Manifest generation fails when using property substitution with Maven pom and property declared in parent pom
- [STS-378] - Interacting with the Servers view results in a NoClassDefFoundError. Starting a Server creates 10s of them.
- [STS-380] - PAR exporter prompts twice when attempting to overwrite an existing file
- [STS-387] - Bundle Classpath container disappears
- [STS-390] - Cannot install STS from update site
- [STS-394] - A trailing comma in a export/import list of a template.mf/manifest is not marked as a syntax error
- [STS-395] - Null pointer exception in outline view
- [STS-398] - Eclipse Web Developer tools is broken
- [STS-399] - Workspace hosed with NoClassDefFoundError
- [STS-400] - Bundlor manifest generation locks up eclipse
- [STS-402] - Unable to start spring sts-2.1.0.SR01 in windows xp professional 64 bit and windows 7 ultimate 64 bit
- [STS-407] - Content assist for favorites does not work reliably
- [STS-411] - Changes to a messages.properties file aren't detected
- [STS-412] - Code completion doesn't work reliably
- [STS-436] - Not finding tomcat server configuration for tcServer
- [STS-451] - Starting second time of STS, it creates new workspace which is different from i determined at the first starting.
- [STS-452] - NPE while building Spring AOP reference model
- [STS-453] - Add refresh button for template wizard
- [STS-458] - STS 2.1.0 with AJDT consumes 100% CPU for minutes...
- [STS-463] - Request Mapping view does not refresh if project is closed.
- [STS-471] - Template project wizard should show better messages
- [STS-472] - Fix template wizard UI nits

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- [STS-475] - Workspace hangs on Eclipse startup
- [STS-477] - installer fails to recognize JDK version
- [STS-478] - publishing fails if Serve modules without publishing is enabled
- [STS-479] - batch-graph editor pane needs scroll bars
- [STS-482] - Installation of subclipse plugin fails
- [STS-483] - STS fails to start after installing Subversive plugin
- [STS-484] - Template selection wizard should show arrow if there is a new version to download
- [STS-485] - Fix download template errors after updating to 2.2.0
- [STS-512] - Deadlock on workspace startup
- [STS-521] - Still OverlappingFileLockException occur
- [STS-526] - bundle deployment via STS has no effect if target dm server installed to path with space in the name
- [STS-527] - Spelling mistake on the first screen of the Roo shell
- [STS-529] - Roo: NPE whilst trying to create project
- [STS-534] - When restarting STS with an open config editor, the editor does not load the beans graph page.
- [STS-540] - Regression: WTP Config detection fails with web.xml that uses xml entity fragments
- [STS-555] - Strange names in RequestMapping
- [STS-556] - Request/Mapping view may crash if the file it points to is deleted or project is closed.
- [STS-559] - [grails] A grails project should remember the grails version used to build it and commands should respect that rather than the global setting
- [STS-570] - [windows] editing of property values fails in tc Server properties section
- [STS-585] - [grails] if configuring the grails installs via the new grails project wizard, on return to the wizard it doesn't know what has happened

### Stories

- [STS-143] - Improve Spring Project Wizard
- [STS-161] - The config editor should remember the last selected page on a per file basis
- [STS-166] - As a user, I want STS to auto-discover different versions of dm and tc server in the package
- [STS-170] - As a user, I want to get visual web URL mappings for REST and other controller configurations
- [STS-171] - As a user, I want to use RFC 124 with STS
- [STS-177] - As a user, I want browse, navigate and validate my Spring autowired configurations
- [STS-179] - As a user, I want to easily install third-party plugins into STS
- [STS-181] - As a developer, I want improvements to the Project Template Wizard and infrastructure
- [STS-234] - As a user, I want to enable application tailing when the server is running
- [STS-244] - Use smart default for XSD version in config file wizard
- [STS-246] - Provide tabular view of @RequestMappings
- [STS-247] - Show Javadocs from @RequestMapping method in mapping view
- [STS-266] - As a user, I want to use Bundlor M5 in STS
- [STS-267] - As a user, I want Bundlor to scan byte code or source code

## SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY

- [STS-281] - Developer wishes to add a new bundle project or new par project to a working set during project creation
- [STS-288] - As a developer I would like to use Bundlor to build a bundle in Eclipse using only a manifest
- [STS-293] - As a user, I want to be able to access my command history in the Eclipse-based OSGi console
- [STS-296] - As a user, I'd like to get a warning if the staging directory is not accessible
- [STS-301] - As a user, I want bundlor in STS to work without a pre-existing MANIFEST.MF
- [STS-302] - Bundlor should scan Eclipse class folder to compute MANIFEST.MF content
- [STS-347] - As a user, I want my web.xml files to be scanned by Bundlor in STS
- [STS-348] - As a user, I want static resource to not trigger application refreshes in tc Server
- [STS-381] - As a user, I want STS to revalidate the Spring structure model on classpath changes
- [STS-393] - Memory Leak in LOB Reading in Oracle??
- [STS-414] - As a user, I want to get validation errors for missing classes referenced from namespace elements
- [STS-419] - As a user, I want RSS feeds to be cached
- [STS-420] - As a user, I want a unified experience to install SpringSource servers as well as Tomcat within STS
- [STS-421] - Improve tc Server support
- [STS-422] - As a user, I want to specify new template project location
- [STS-423] - As a user, I want support for bean rename refactoring when renaming @Bean methods
- [STS-425] - As a user, I want to disable embedded graphs in the config editor
- [STS-486] - As a user, I want to sign up and deploy to Cloud Foundry right from within STS
- [STS-491] - As a user, I want to use Eclipse 3.5.1 with STS
- [STS-492] - Release STS 2.2.0.RELEASE
- [STS-503] - As a user, I want to deploy applications to dm and tc Server running in VMware Workstation 6.5 and 7
- [STS-513] - consume Mylyn 3.3 changes

### Tasks

- [STS-66] - MANIFEST is placed in src/main/java and not in src/main/resources
- [STS-187] - Create 2.1.0.RELEASE (binary, update site, documentation, blog)
- [STS-413] - Improve SpringSource logo in template selection wizard
- [STS-461] - feature license issues

The change log is also available at:

<https://issuetracker.springsource.com/secure/ReleaseNote.jspa?projectId=10010&styleName=Html&version=10332>

## NEW FEATURES – 2.1.0.RELEASE

### Tutorials and Help

#### Task-Focused Tutorials

The Task-Focused Tutorials are now downloaded on-demand and can also be updated without shipping a new version of STS.

### Spring Development Tools

#### Spring Roo Integration

The integrated Spring Roo and accompanying project template has been updated to latest available version; Spring Roo RC1.

Additionally the embedded Roo Shell View now features a toolbar action to open shells for multiple projects right from the view; no need to go through the project context menu.

### Runtime Integration

#### Bundled tc Server updated

STS now bundles latest version of SpringSource tc Server 6.0.20.A.

## ENHANCEMENTS – 2.1.0.RELEASE

### Spring Project Builder Performance Improvements

The performance of the validation and building infrastructure has been greatly improved. The Spring Project Builder is responsible for validating Spring configurations, managing the AOP cross-reference model as well as the stereotype usage information.

### Fixed Bugs and Enhancement Requests

Here is a full list of resolved bugs and enhancement requests for the 2.1.0.RELEASE release:

#### Sub-tasks

- [STS-189] - re-author tutorials that include the SpringTravel project
- [STS-191] - create a command for downloading Tomcat
- [STS-192] - Investigate technology for UI tests
- [STS-194] - UI test for content assist in config editor
- [STS-195] - UI test for quickfix
- [STS-196] - create command to import dependency project
- [STS-197] - create UI that prompts for Tomcat download
- [STS-198] - write test case that downloads Tomcat
- [STS-199] - UI test for visual editing
- [STS-200] - UI test for vmware lab manager integration

## SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY

- [STS-201] - UI test for AMS integration
- [STS-202] - Build STS
- [STS-203] - Build mirror
- [STS-204] - Build distribution and upload
- [STS-205] - Update New and Noteworthy and Feature Comparison
- [STS-206] - Write blog post
- [STS-213] - extract SpringTravel project
- [STS-215] - Implement script to mirror and upload the update site
- [STS-216] - re-author tutorials that require Tomcat
- [STS-222] - Create JUnit tests for Lab Manager
- [STS-226] - Core & UI tests for the manifest editing
- [STS-230] - Create native installers with pack200 support
- [STS-232] - write a test that checks for leaks of the XML model during the config editor lifecycle
- [STS-233] - create a test that opens an external manifest
- [STS-237] - make SWTBot tests run as part of continuous build
- [STS-238] - create releng script that creates a zip files for each tutorial and shared sample project
- [STS-239] - integrate deployment of tutorials and assembly of tutorial descriptor into build
- [STS-240] - implement mechanism for reading remote descriptor for available tutorials and samples
- [STS-241] - download tutorials and samples on demand
- [STS-242] - indicate locally downloaded and new tutorials on the dashboard
- [STS-249] - Convert junit tests to junit4 tests
- [STS-257] - convert existing tutorial descriptors and publish on website
- [STS-258] - support new descriptor fields in authoring tools
- [STS-259] - download dependent sample projects with tutorials
- [STS-261] - Investigate & fix latest SWTBot related build errors in the nightly build.
- [STS-263] - Test STS package on Linux
- [STS-324] - Be able to add a bundle classpath container to a project without giving it a bundle nature first
- [STS-374] - Implement and test dm server install
- [STS-375] - Implement and test tc server install

### Defects

- [STS-17] - Error when Subclipse Mylar Integration (1.0.1) requires plugin "org.eclipse.mylar.tasks.core (0.9.2)", or later version.
- [STS-19] - The filename or extension too long: Unable to Create directory
- [STS-20] - NullPointerException during the tutorial: "Creating a Spring-powered OSGI Bundle"
- [STS-21] - Create new runtime error analysis hangs
- [STS-24] - Broken link in SSTS Eclipse documentation.
- [STS-25] - Typo in SpringSource logo in (at least) the PetClinic sample application.
- [STS-28] - Too Long directory/filenames in Windows Eclipse Distributions (springsource-tool-suite-1.0.0.RC1-e3.4-win32.zip)
- [STS-29] - Validation error with ehcache configuration
- [STS-30] - Missing 'Note' and 'Tip' icons in help pages

## SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY

- [STS-31] - Java Build Path disappears after on selecting "Focus on Active Tasks" - delete/close, problem with eclipse and my system it appears.
- [STS-33] - Login for update-site not accepted
- [STS-34] - When unzipping the package, On Vista Home Premium, so of the files ( ... AOP....) will not unzip because the class NAMES are too long.
- [STS-35] - When a project is running on Spring AP, the r-click >> Run As >> Run on Server has no effect
- [STS-38] - Test Bug
- [STS-39] - TEST bug
- [STS-40] - (TEST) Error setting component for JIRA issue. Component id is null: Unknown
- [STS-41] - Test Bug submitted from STS. Please ignore or delete.
- [STS-42] - Test Bug
- [STS-43] - Tutorial not found in path "com.springsource.platform.tutorials.introduction/" from plug-in "org.springframework.osgi.tutorials"
- [STS-44] - Test bug
- [STS-45] - Knowledge Base tab doesn't repaint properly
- [STS-47] - My Support Issue
- [STS-49] - Classpath Container Exclusion doesn't work properly
- [STS-50] - Not all required dependencies are downloaded from the repository, for a certain library
- [STS-51] - The Bundle Repository Browser doesn't display all available options
- [STS-52] - Red error markers inside manifest file don't disappear if dependencies are downloaded using the Bundle Repository browser
- [STS-53] - Authoring tool doesn't save the step's context as defined by author
- [STS-54] - test
- [STS-57] - Constant "updating bundle classpath" between two projects
- [STS-63] - JUnit version included in STS is incompatible with Spring 2.5+ test classes
- [STS-65] - Manifest parse Exception
- [STS-73] - test
- [STS-74] - STS Dashboard > Knowledge Base > "Update from SpringSource" fails behind a proxy
- [STS-79] - Spring WebFlow TFT checks flow configs against the old Webflow XSDs
- [STS-82] - 500 error in webflow TFT
- [STS-88] - Download dm Server link should not have to go out to internet
- [STS-91] - After installing an svn plugin and restarting: "The state indicates the bundle is resolved"
- [STS-92] - Inconsistent warning/error markers in Spring XML files when beans
- [STS-100] - Not able to disable PMD or change settings
- [STS-101] - Not able to uninstall SpringSource Tool
- [STS-106] - Null assertion fails in project template wizard
- [STS-111] - STS 2.1.0.M1 doesn't start on Linux 64
- [STS-112] - SpringSource template projects do not show up in New->Project... dialog
- [STS-113] - Error in workspace when removing project from tc Server
- [STS-116] - Generation of MANIFEST.MF from template does not indicate when it fails
- [STS-117] - Aptana cannot be installed
- [STS-120] - Properties page on "Software updates and addons
- [STS-123] - Adding a Spring Bean Definition file generates many instances of the same dialog box

## SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY

- [STS-126] - Intermittent error running bundlor
- [STS-127] - STS 2.0.2 restarts in a loop due to osgi exception
- [STS-129] - Unmet org.eclipse.swt requirement when updating
- [STS-130] - Eclipse won't start after installing or updating plugins twice
- [STS-134] - Project created by Spring "Create a new Shared Services Project" template has errant manifest.mf entry
- [STS-135] - par editor fails when file from local file system is opened
- [STS-144] - STS 2.1.0.M2 won't start after installing Subclipse and Yourkit plugins
- [STS-184] - LinkageError while opening batch job config
- [STS-185] - Spelling mistake in web-application-config file in Getting Started with Spring Web Flow
- [STS-229] - Support for XML namespace usage in elements not at root level
- [STS-235] - Bundle refresh happens even when changing tests in /src/test/java
- [STS-243] - Support RFC66 WARs in the PAR export wizard
- [STS-250] - DataSourceTransactionManager bean definition error: no setter found for property dataSource
- [STS-251] - Adding a config files explicitly that's already included through an import breaks the AOP tooling
- [STS-253] - Lab Manager - Error messages appear in triplicate
- [STS-260] - Spring Web Flow configuration issues
- [STS-262] - DM Server Clean option from STS
- [STS-264] - errors when opening help
- [STS-265] - [e3.5] startup on Linux fails
- [STS-270] - Configured Roo installation directory not picked up
- [STS-272] - Configuring STS to point to a newer version of Roo does not work.
- [STS-275] - Dashboard ignores proxy authentication settings
- [STS-325] - Shared services war and shared libraries war added as par dependencies are not able to uninstall even if they are removed from par editor in STS
- [STS-330] - Adding OSGi project bundle nature breaks Java EE dependencies on other projects

### Stories

- [STS-124] - As a user, I want to use STS with Eclipse 3.5
- [STS-154] - Enable manager app in included tc Server and Tomcat
- [STS-155] - Include Spring-Travel as an example project
- [STS-157] - Prompt to download Tomcat if tutorial requires it
- [STS-163] - Increase test coverage for UI components
- [STS-164] - As a user, I want to be able to download nightly snapshot builds from one consolidated update site
- [STS-167] - As a user, I want to install dm and tc server from the WTP server adapter install
- [STS-175] - As a user, I want to install tutorials and project templates on-demand and get notifications for new items
- [STS-244] - Use smart default for XSD version in config file wizard
- [STS-255] - Add Groovy and Grails support in Eclipse/STS
- [STS-273] - As a user, I want to use Roo RC1 with STS
- [STS-344] - Maven Bundlor property substitution causes errors in STS

### Task

## SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY

- [STS-26] - Password not remembered for update site
- [STS-46] - Support for maven2 and subversion
- [STS-68] - Launching server using clean argument
- [STS-90] - Upgrade bundled org.springframework.batch.core from RC3 to RELEASE
- [STS-94] - Provide support for automatically adding Spring Project Nature when attempting to create a new Spring Bean Definition file
- [STS-104] - Subversive Plugin
- [STS-121] - Ensure Roo template can be used with a 2-part top level package name
- [STS-187] - Create 2.1.0.RELEASE (binary, update site, documentation, blog)
- [STS-254] - Console view not available on Mac

The change log is also available at:

<https://issuetracker.springsource.com/secure/ReleaseNote.jspa?projectId=10010&styleName=Html&version=10183>

## NEW FEATURES – 2.1.0.RC1

### Spring Development Tools

#### Automatic addition of Spring Project Nature

The New Spring Bean Definition and New Web Flow Definition file wizard now provides the option to automatically add the Spring Project Nature if not already present.

### OSGi Development Tools

#### Validation of `template.mf`

STS will now validate the Bundlor `template.mf` file along `MANIFEST.MF` and `TEST.MF`.

## ENHANCEMENTS – 2.1.0.RC1

#### Support for Eclipse 3.5

STS 2.1.0.RC1 now supports installation into Eclipse 3.5 Galileo as well as Eclipse 3.4 Ganymede. For installation please point your update manager to:

<http://www.springsource.com/milestone/e3.4>

Package downloads are also available based on Eclipse 3.4 and 3.5.

Additionally STS 2.1.0.RC1 can now be updated with nightly snapshot builds from the following update sites:

Spring IDE: <http://dist.springframework.org/snapshot/IDE/nightly>

dm Server Tools: <http://dist.springsource.com/snapshot/DMS-TOOLS/nightly>

STS: <http://dist.springsource.com/snapshot/STS/nightly/e3.4>

In order to successfully install STS from an update site the following plugins need to be installed or at least available from any enabled update site:

AJDT: <http://download.eclipse.org/tools/ajdt/35/update> or  
<http://download.eclipse.org/tools/ajdt/34/update>

Mylyn: <http://download.eclipse.org/tools/mylyn/update/e3.4>

Mylyn Extras: <http://download.eclipse.org/tools/mylyn/update/extras>

PMD: <http://pmd.sourceforge.net/eclipse>

### Failed Restart after Installation of Third-Party Plugins

STS 2.1.0.M1 and M2 would not start after installation of various third-party plugins due to a missing Equinox Weaving Feature. Details can be found in JIRA:

STS-91: After installing an svn plugin and restarting: "The state indicates the bundle is resolved" <https://issuetracker.springsource.com/browse/STS-91>

This problem has been addressed.

### Fixed Bugs and Enhancement Requests

Here is a full list of resolved bugs and enhancement requests for the 2.1.0.RC1 release:

#### Defects

- [STS-45] - Knowledge Base tab doesn't repaint properly
- [STS-47] - My Support Issue
- [STS-49] - Classpath Container Exclusion doesn't work properly
- [STS-50] - Not all required dependencies are downloaded from the repository, for a certain library
- [STS-51] - The Bundle Repository Browser doesn't display all available options
- [STS-52] - Red error markers inside manifest file don't disappear if dependencies are downloaded using the Bundle Repository browser
- [STS-53] - Authoring tool doesn't save the step's context as defined by author
- [STS-54] - test
- [STS-57] - Constant "updating bundle classpath" between two projects
- [STS-63] - JUnit version included in STS is incompatible with Spring 2.5+ test classes
- [STS-65] - Manifest parse Exception
- [STS-73] - test
- [STS-92] - Inconsistent warning/error markers in Spring XML files when beans
- [STS-100] - Not able to disable PMD or change settings
- [STS-101] - Not able to uninstall SpringSource Tool
- [STS-106] - Null assertion fails in project template wizard
- [STS-112] - SpringSource template projects do not show up in New->Project... dialog
- [STS-113] - Error in workspace when removing project from tc Server
- [STS-120] - Properties page on "Software updates and addons
- [STS-123] - Adding a Spring Bean Definition file generates many instances of the same dialog box
- [STS-126] - Intermittent error running bundlor
- [STS-127] - STS 2.0.2 restarts in a loop due to osgi exception
- [STS-129] - Unmet org.eclipse.swt requirement when updating
- [STS-130] - Eclipse won't start after installing or updating plugins twice
- [STS-134] - Project created by Spring "Create a new Shared Services Project" template has errant manifest.mf entry
- [STS-135] - par editor fails when file from local file system is opened
- [STS-144] - STS 2.1.0.M2 won't start after installing Subclipse and Yourkit plugins
- [STS-184] - LinkageError while opening batch job config

## SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY

### Task

- [STS-46] - Support for maven2 and subversion
- [STS-90] - Upgrade bundled org.springframework.batch.core from RC3 to RELEASE
- [STS-94] - Provide support for automatically adding Spring Project Nature when attempting to create a new Spring Bean Definition file
- [STS-104] - Subversive Plugin

The change log is also available at:

<https://issuetracker.springsource.com/secure/ReleaseNote.jspa?version=10313&styleName=Text&projectId=10010>

### Defects

- [DMST-2] - PAR export does not include bundle jars
- [DMST-30] - Refresh of synthetic context bundle causes shared services war and shared libraries war are not working which are part of par in tooling
- [DMST-36] - Changes in static resources not published to dm server
- [DMST-42] - Artifact not found when redeploying PAR after error
- [DMST-44] - Closing or deleting a deployed par project doesn't undeploy it from the server
- [DMST-45] - Remove OSGi Project Nature doesn't clear markers
- [DMST-46] - Stage area is not kept in sync with user code
- [DMST-47] - VM arguments sometimes overwritten
- [DMST-55] - Required-Bundle in com.springsource.server.ide.runtime.core not causing referenced bundles to install
- [DMST-57] - Confusing warning message on exporting non-existing packages in MANIFEST
- [DMST-58] - Manifest errors continue to show even after removing the Bundle Dependencies class path container
- [DMST-59] - Manifest not updated from template.mf
- [DMST-61] - Removing a bundle from a Server does not undeploy the underlying bundle
- [DMST-64] - Failing bundles removed from Server view are not uninstalled.
- [DMST-65] - MANIFEST.MF generation fails silently on very small "problems"
- [DMST-67] - BundleClasspathContainer: re-importing exported package causes build path problems
- [DMST-75] - The Eclipse JPA bundle doesn't show up in the tools at it's latest version.
- [DMST-81] - Manifest tooling generates loads of errors and popups
- [DMST-82] - Intermittent error from bundlor plugin
- [DMST-83] - Bundlor + CVS created exports for the .cvs directories
- [DMST-85] - JUnit Test with @Transactional fails
- [DMST-86] - Can no longer deploy a bundle on to a dm server instance.
- [DMST-91] - NPE when opening a .mf file
- [DMST-93] - Running Bundlor with an invalid template fails very quietly
- [DMST-100] - Bundles are published even if the server is stopped
- [DMST-103] - NPE in BundleManifestsOutlinePage

## SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY

### Story

- [\[DMST-3\]](#) - As a user, I'd like to be able to add existing bundle jars to my PAR project
- [\[DMST-77\]](#) - As a user, I want my template.mf to be validated
- [\[DMST-98\]](#) - support Eclipse 3.5

### Task

- [\[DMST-38\]](#) - Add binary bundles to par project in eclipse
- [\[DMST-40\]](#) - Add PAR Export Wizard
- [\[DMST-62\]](#) - Change dm Server Tools to use the new Manifest Parser

The change log is also available at:

<https://issuetracker.springsource.com/secure/ReleaseNote.jspa?projectId=10080&styleName=Html&version=10329>

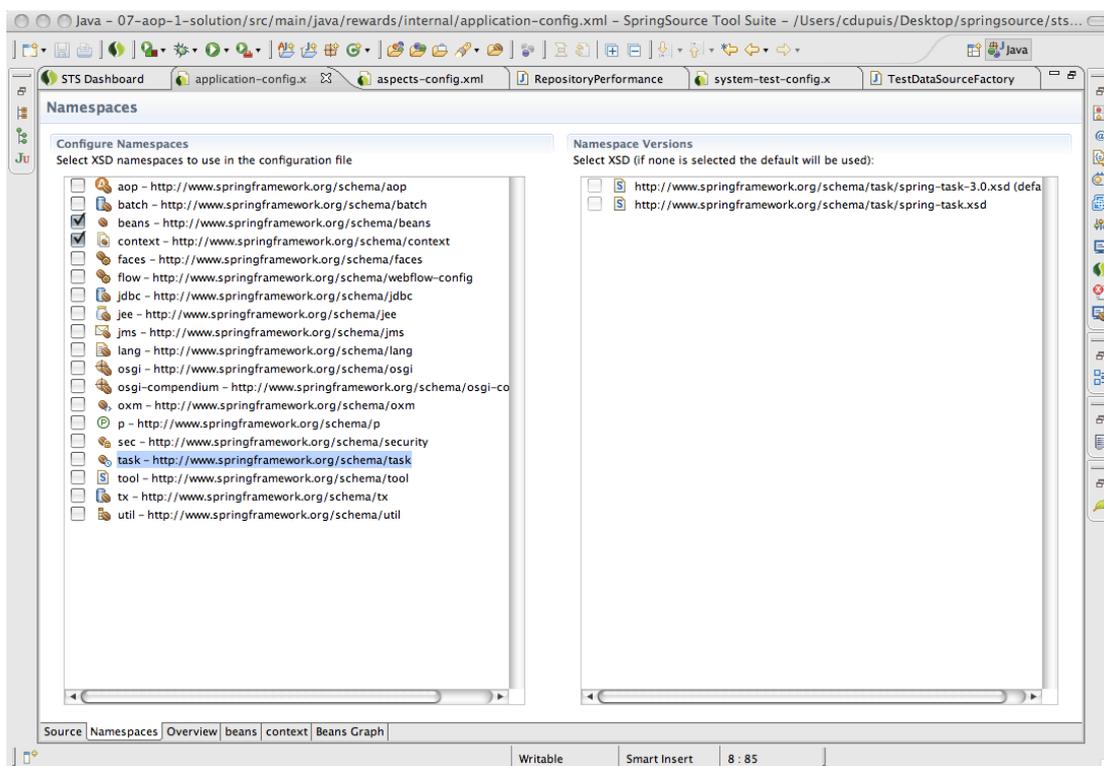
## NEW FEATURES – 2.1.0.M2

### Spring Development Tools

#### Update to Spring 3.0 M3

STS has been updated to internally use Spring Framework 3.0.0.M3. This ensures that STS understands configurations that use Spring 3.0 features.

The new `<task:* />` and `<jdbc:* />` are both now available and are integrated into STS as the other Spring namespaces with content assist, hyperlinking and validation.



#### Spring Batch Visual Editor

The visual editor for Spring Batch has been greatly improved and does now support a much broader range of editing tasks.

To access the Batch Editor open a Spring XML bean definition file with Batch jobs in it with the Spring Config Editor and select the batch-graph tab.

If you are a Spring Batch developer check it out and let us know what you think.

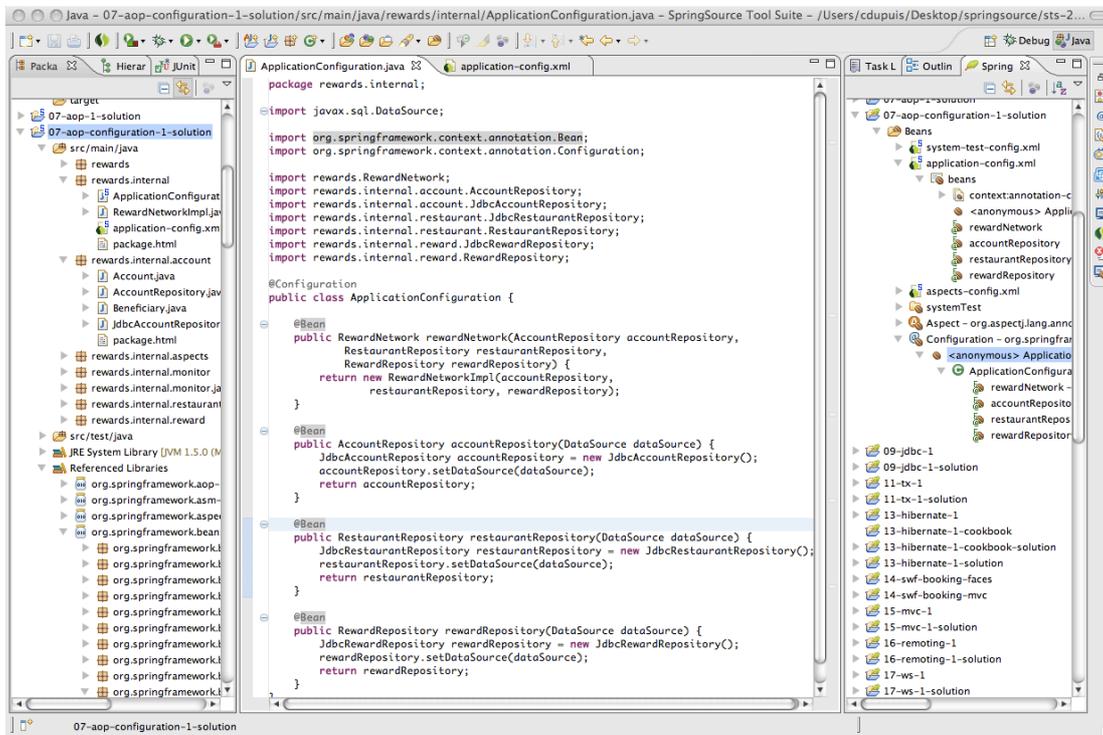
# SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY

## Support for @Configuration Classes

Spring 3.0 introduces a new Annotation-based configuration approach through the use of @Configuration and @Bean annotations. Those annotations are now supported by STS: Spring beans configured by @Bean are visible within the Spring Explorer, Dependency Graph and can be referenced in Spring XML.

Additionally those new annotations have been added to the Stereotype and Annotation Grouping Support of STS. This provides easy access and navigation of configuration classes.

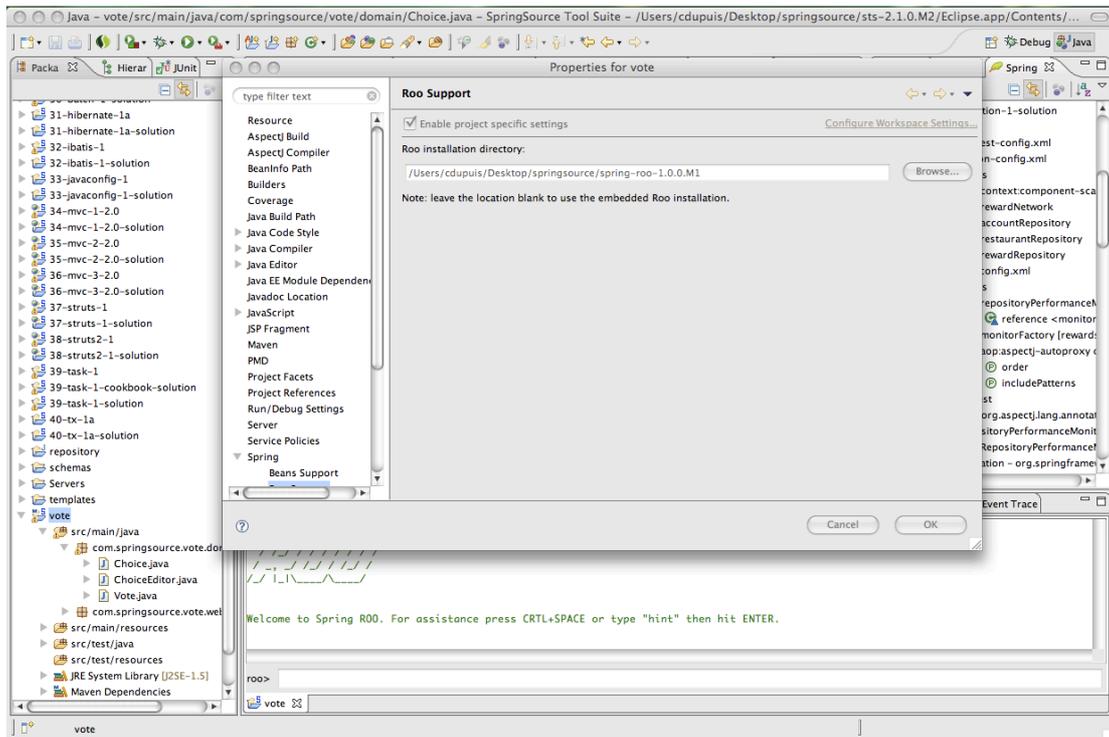
The integration will also validate configuration classes and report problems (e.g configuration class declared as final, see the Spring 3.0 documentation for more details on restrictions) within the Java Editor.



# SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY

## Spring Roo Integration

The Spring Roo integration has been updated to ship the latest 1.0.0.M1. Additionally developers can now configure an external Roo installation to be used inside STS instead of the bundled one. This allows usage of new Roo versions and add-ons without the need of a new STS version.



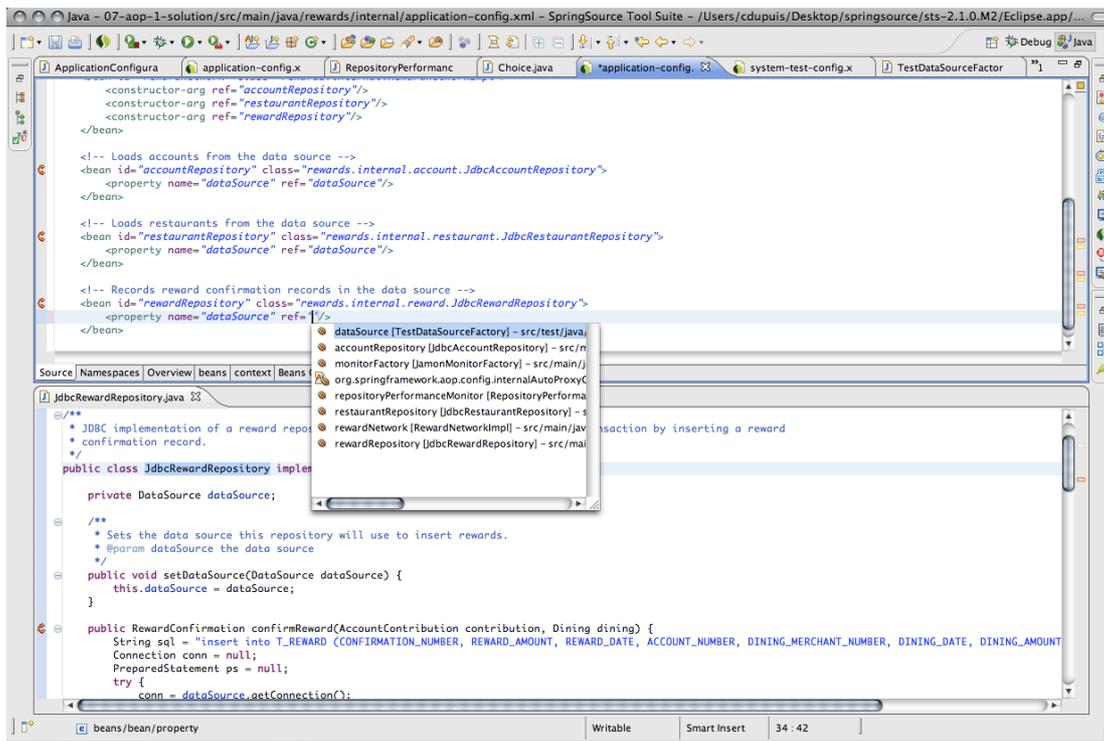
The Roo installation can be configured on a per project or workspace level; this allows to target workspace projects to use different versions of Roo and a different set of addons.

The Roo project template has been updated to be compatible with 1.0.0.M1.

# SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY

## Type-aware Bean Reference Content Assist

A long-standing feature request has been added in STS 2.1.0.M2: content assist for Spring bean references now prefers beans that match property and constructor types. Beans that match the property or constructor argument type get a higher priority and are clearly separated in the content assist proposal UI.



## Runtime Integration

### Management of tc Server Instances and Groups

STS now allows managing of groups and single instances of tc Server right inside the IDE. The tc Server integration, introduced with STS 2.0.2, has been extended to allow start and stop operations as well as remote application deployment on tc Server instances that are managed by SpringSource AMS.

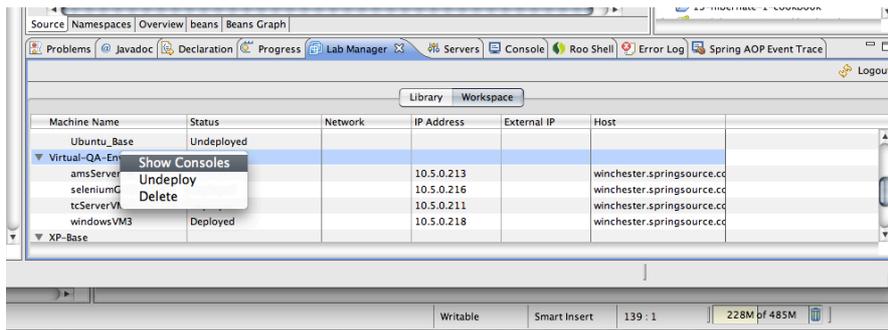
To configure a group or single instance within STS, open the WTP Servers view and create a new server. In the New Server wizard select SpringSource AMS server type and complete the wizard.

# SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY

## VMware Lab Manager Integration

STS includes a view called 'Lab Manager' which allows you to connect to a VMware Lab Manager installation and browse configurations. Also users can start, stop configurations and open consoles for the VM instances right inside the IDE.

This feature can be installed from the update site at <http://www.springsource.org/milestone/e3.4>. It will be included in the distribution with the next release.



## ENHANCEMENTS – 2.1.0.M2

### Performance Improvement

STS 2.1.0.M1 exhibited excessive CPU usage under certain conditions, which could require killing the process. This issue has been reported by the community and been addressed and verified to solve the issue. The issue details are available at:

STS-98: Excessive CPU Usage <https://issuetracker.springsource.com/browse/STS-98>

### Fixed Bugs and Enhancement Requests

Here is a full list of resolved bugs and enhancement requests for the 2.1.0.M2 release:

#### Defects

- [STS-83] - STS 2.1.0.M1 embedded tcServer has extraneous wtpwebapps directory
- [STS-84] - NullPointerException in Roo Tab completion
- [STS-95] - Roo Simple project template uses Apple JVM container
- [STS-97] - STS 2.0.2 fails to start after installing SVNKit Connectors
- [STS-98] - Excessive CPU Usage
- [STS-99] - STS crash report: Error during shutdown AssertionFailedException
- [STS-102] - Eclipse wont start-up raising AssertionFailedException: null argument
- [STS-103] - ensure that tc Server webapps are deployed to proper directory
- [STS-109] - NPE from quickfix code under java 6

#### Task

- [STS-85] - update Roo project template to latest Roo version
- [STS-86] - Spring beans do not appear in context tab and quick context
- [STS-96] - Add the template project wizard to the New menu

The change log is also available at:

<https://issuetracker.springsource.com/secure/IssueNavigator.jspa?reset=true&pid=10010&fixfor=10302>

## NEW FEATURES – 2.1.0.M1

### Spring Development Tools

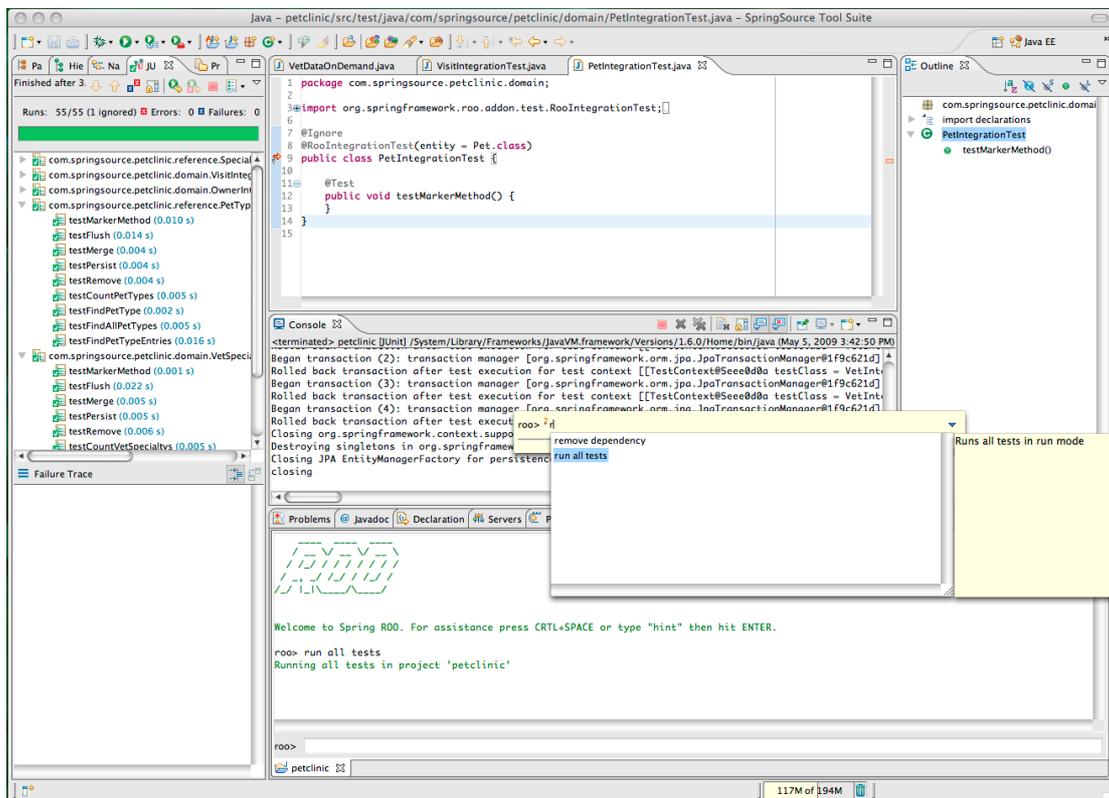
#### Project Templates

STS 2.1.0.M1 contains project templates to help jumpstart new Spring-based projects with little to no effort. The following projects templates are available:

- Spring MVC
- Spring Web Flow
- Spring Faces
- Spring Batch
- Spring Roo
- OSGi Bundle for SpringSource dm Server

#### Spring Roo Integration

In order to make the productivity advantages of Spring Roo available inside the IDE, STS integrates the Roo Shell and provides a Quick Roo Command Prompt (CTRL+R or CMD+R on Mac).



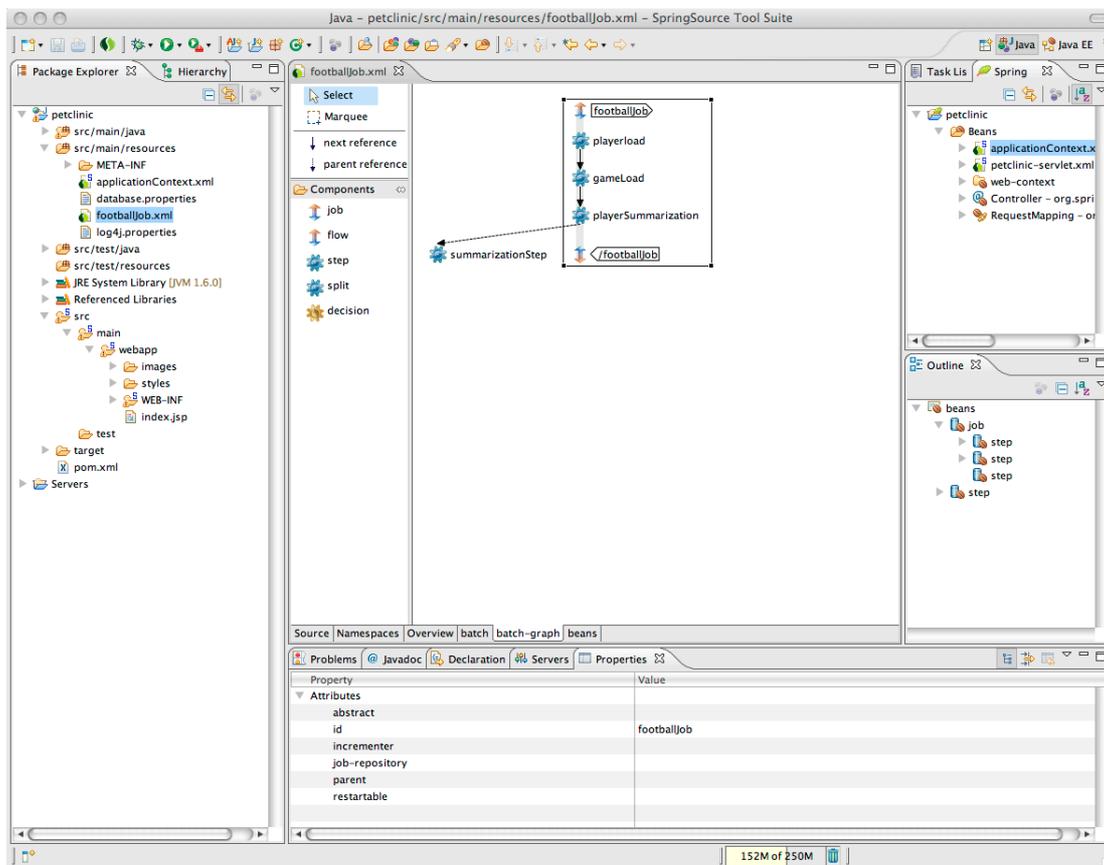
## SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY

Additional Roo commands are available that provide access to Eclipse/STS functionalities:

- `deploy -server "<WTP server name>"` – Deploys the Roo project to a WTP server, like dm or tc Server, and starts the server.
- `runldebug all tests` – Executes all JUnit tests in Eclipse/STS and opens the JUnit view.

### Spring Batch Visual Editor

The Visual Spring Configuration Editor, which has been introduced with STS 2.0.0, has been extended to allow visual editing of Spring Batch Jobs and Flows.



This editor is in its very early stage. Every feedback is welcome.

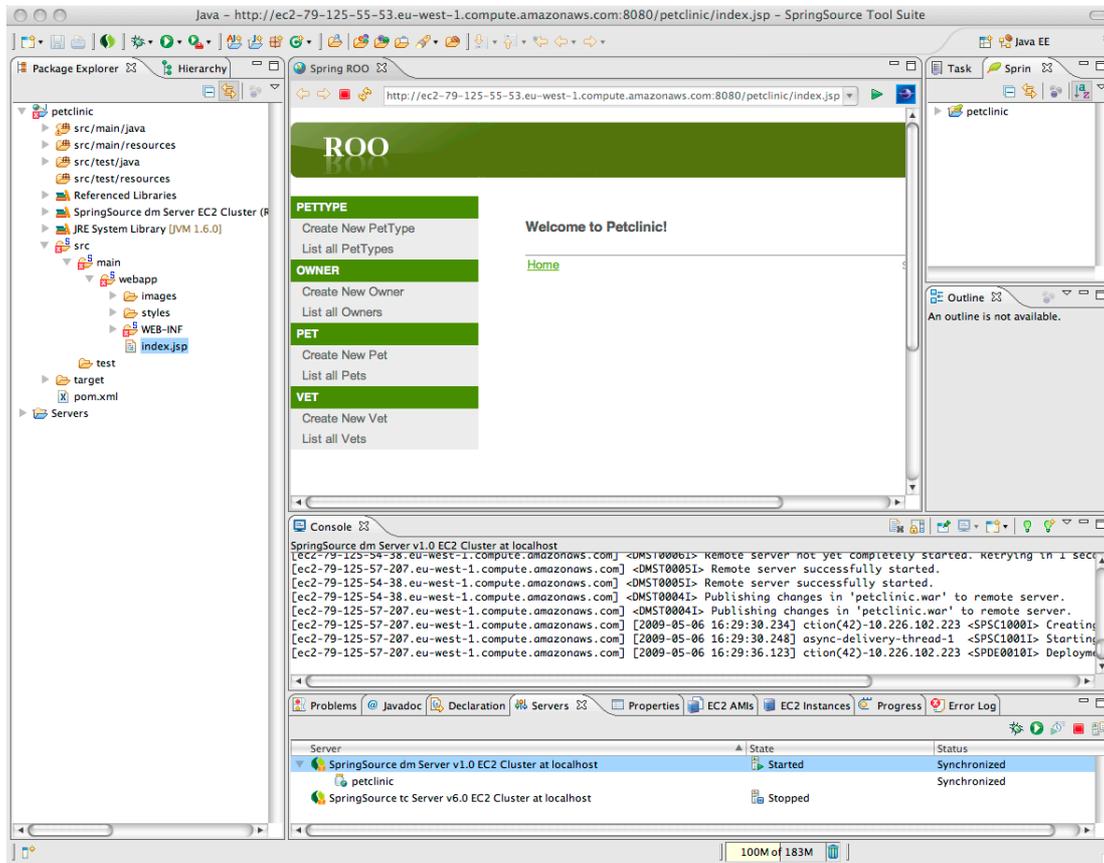
### Runtime Integration

#### Amazon EC2 Integration and Deployment Support

STS allows to deploy WAR applications, OSGi bundle and PAR projects to dm and tc Server running in the Amazon EC2 cloud. Corresponding AMIs for dm and tc Server have been published by SpringSource.

The EC2 integration will automatically handle the setup of the application server cluster and load balancer if required.

# SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY



Deploying to the cloud is simply a matter of dragging your project to the integrated cluster in the WTP Servers view!

## Bundling of dm and tc Server

STS 2.1.0.M1 comes equipped with both SpringSource server runtimes, ready for use. On first opening of a Workspace STS will auto-configure those server runtimes and make them available from the WTP Servers view.

Also both server runtimes can be used outside of STS: you'll find them in the root folder of the STS installation next to the sts-2.1.0.M1 folder.

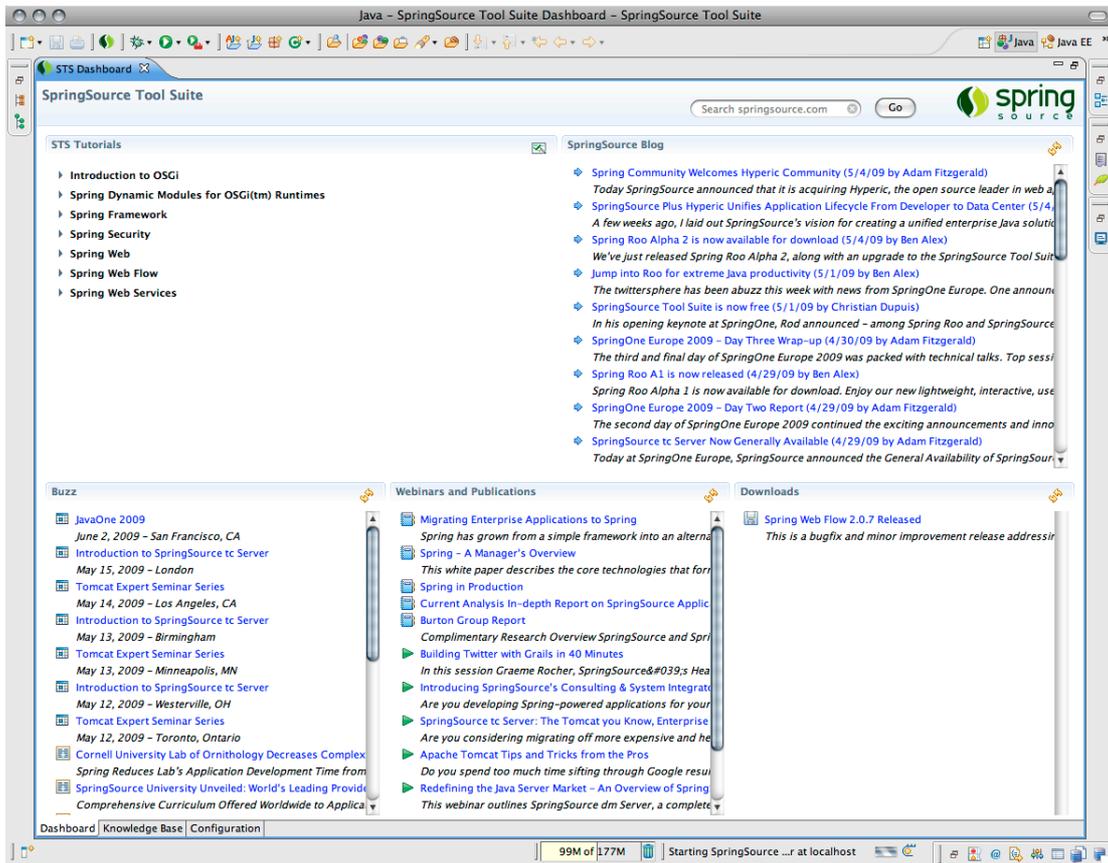
Note: this only applies for the distribution download.

# SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY

## Integration

## Dashboard

STS has been updated to contain a more modern and content-rich Dashboard for easy access to all news, buzz and downloads around Spring and SpringSource.

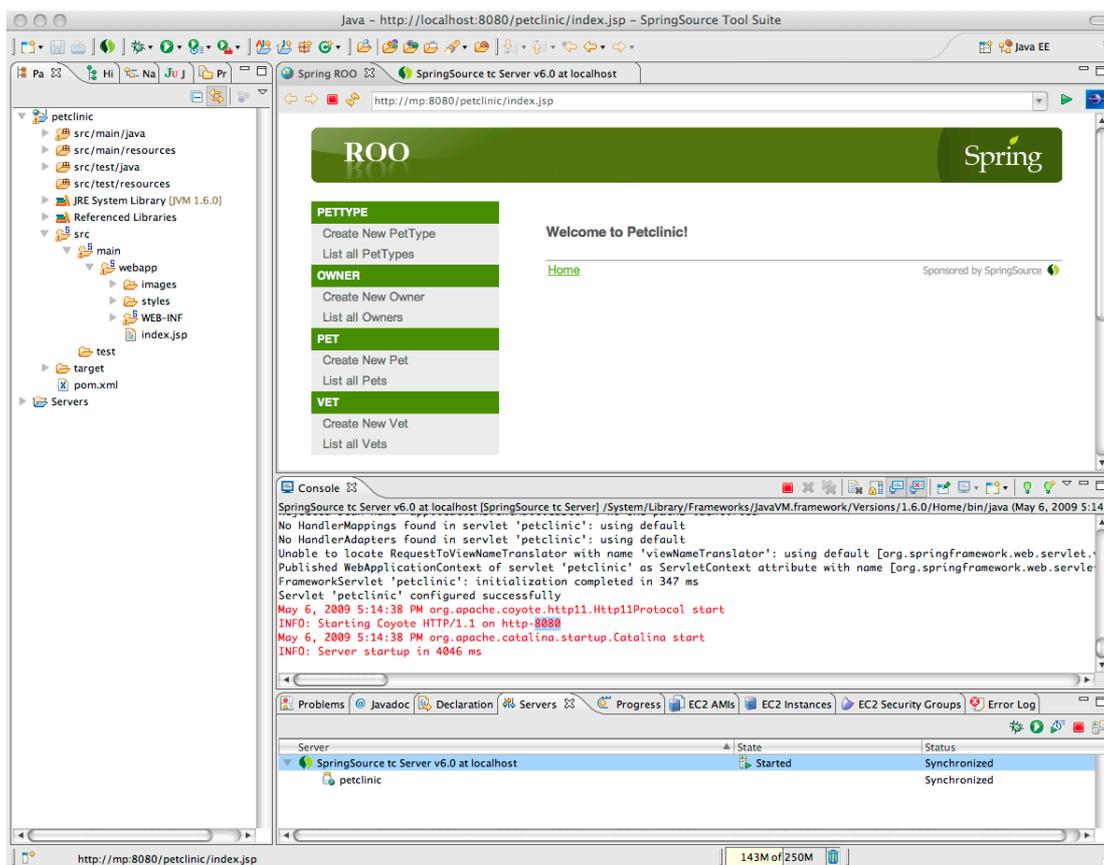


## NEW FEATURES – 2.0.2

### Runtime Integration

#### Support for SpringSource tc Server

STS 2.0.2 ships with integrated WTP support for SpringSource tc Server. It is now very simple to use tc Server as a deployment target inside of STS.



## ENHANCEMENTS – 2.0.2

### Change in Package Folder Name

When extracting the SpringSource Tool Suite ZIP archive, you'll notice that the name of the top-level folder has been changed from eclipse to sts-2.0.2.RELEASE. This has been done to make it easy to keep several versions of STS around.

### Fixed Bugs and Enhancement Requests

There are no resolved issues or feature requests in 2.1.0.M1 as this version is the first available build.

## NEW FEATURES – 2.0.1

### Spring Development Tools

#### Performance Enhancements

The performance of the Spring Project Builder (responsible for validating Spring XML configuration files, creating the AOP cross-cutting model, extracting the Annotation stereotype information) for processing incremental changes of Java source files has been greatly improved.

### Integration

#### Integration of m2eclipse

STS 2.0.1 bundles the open-source Maven plug-in m2eclipse.

#### Updates to Eclipse components

STS 2.0.1 has been updated to incorporate Eclipse Mylyn 3.1.

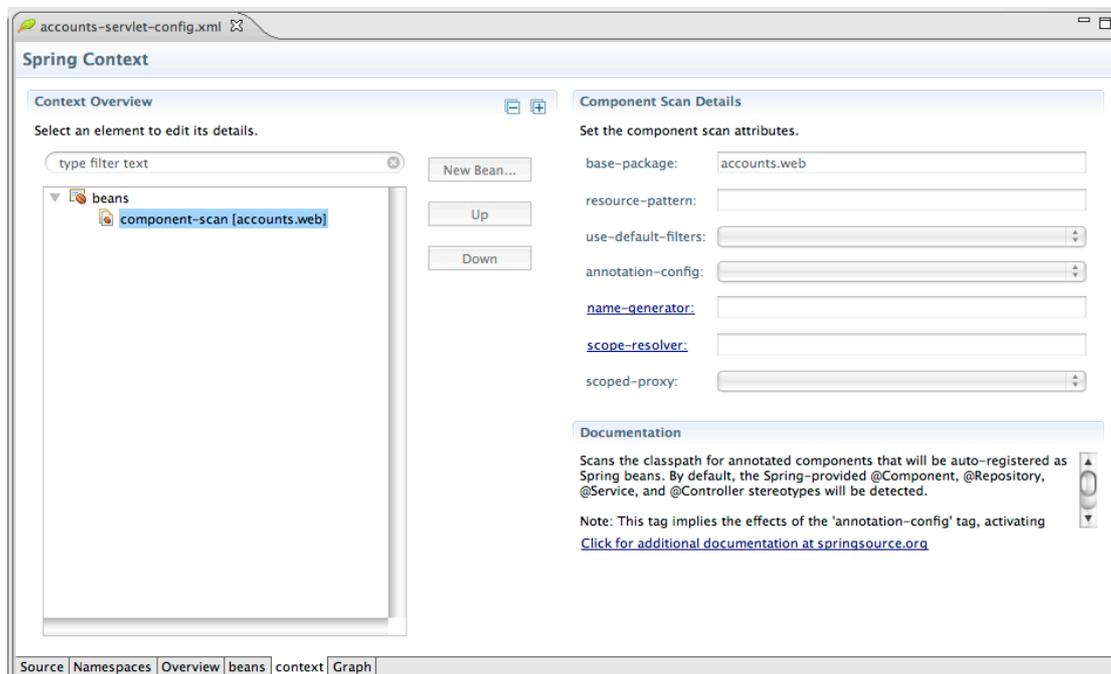
## NEW FEATURES – 2.0

### Spring Development Tools

#### Spring Configuration Editor

Spring XML application files can now be edited from a rich forms-based UI. Each XSD namespace dynamically adds a new Tab to the editor. The editor provides content-assist and hyperlinking for the input fields as well as validation and access to documentation from the XSD.

The editor embeds the classic XML Source Editor and Spring IDE's Bean Dependency Graph on separate tabs.



STS provides extension points for integrators or customers to provide their own UI for in-house namespaces.

In STS the Configuration Editor becomes the default editor for Spring XML files.

#### Project Creation Wizard

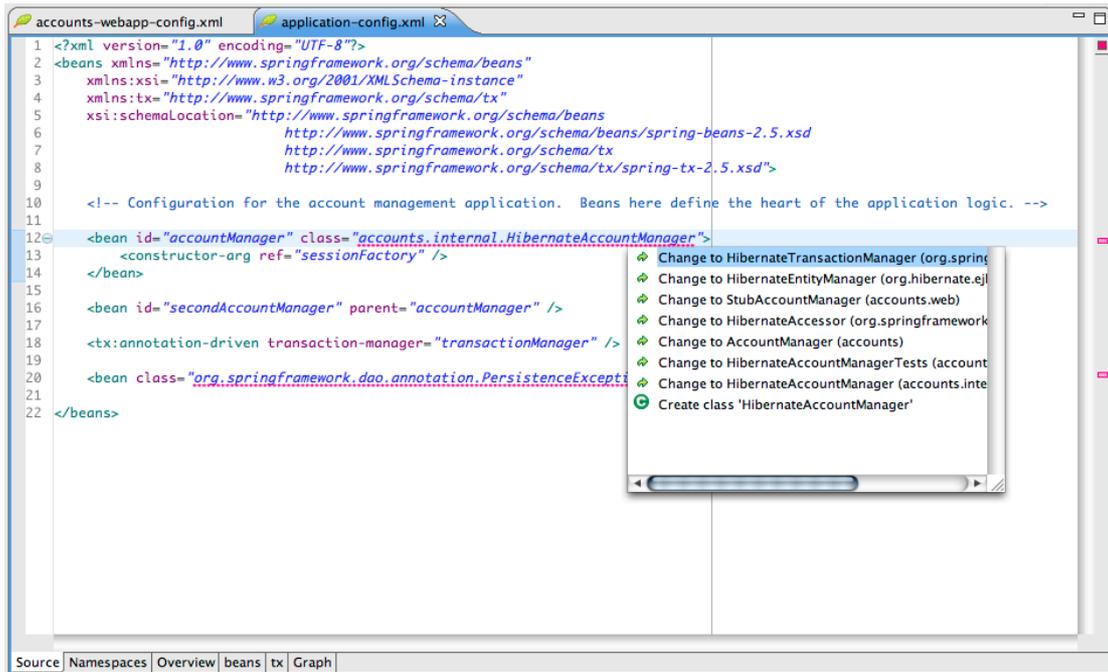
STS provides a template-driven New Project Wizards that uses pre-defined best-practice project templates to create user projects. The generic infrastructure can query the user for required input (project name, top level package name, as well as self-defined placeholders).

Access the Project Creation Wizard from File -> New -> Other... -> SpringSource Tool Suite -> Template Project

## Quick Fixes and Quick Assist

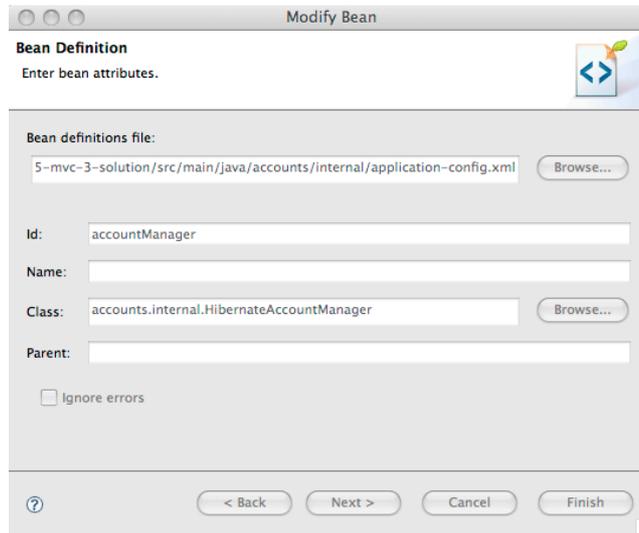
Spring IDE provides validation of Spring XML configuration files but never provided hints to solve reported problems (e.g. missing bean class, missing referenced bean).

STS will now provide Quick Fixes for reported problems. Furthermore the same validation and quick fixes are accessible while editing the file (validate as-you-type) and not only after a file save.



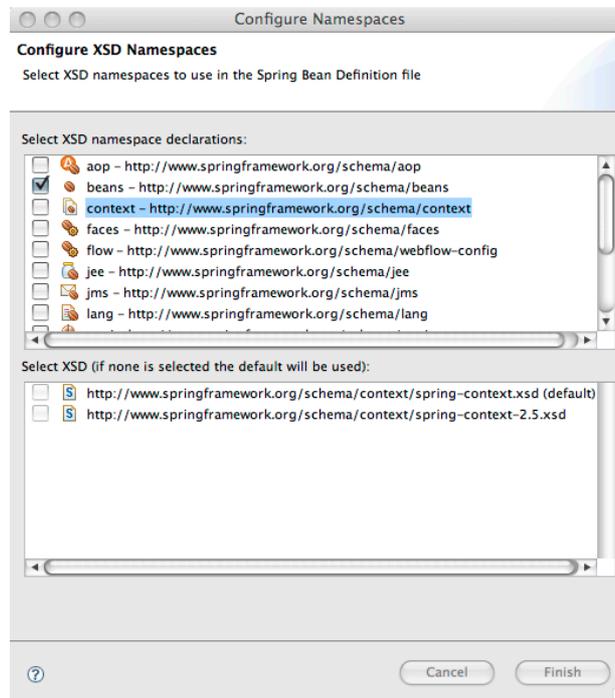
## Bean Creation Wizard

STS now has a wizard for easing the creation and modification of a bean definition. The wizard can be opened from the File menu, the New wizard or the Spring Explorer.



## Namespace Configuration Dialog

STS 2.0 makes it easy to add/remove namespace declarations from Spring XML application files. Simply use the context menu Configure Namespaces ...



## OSGi Development Tools

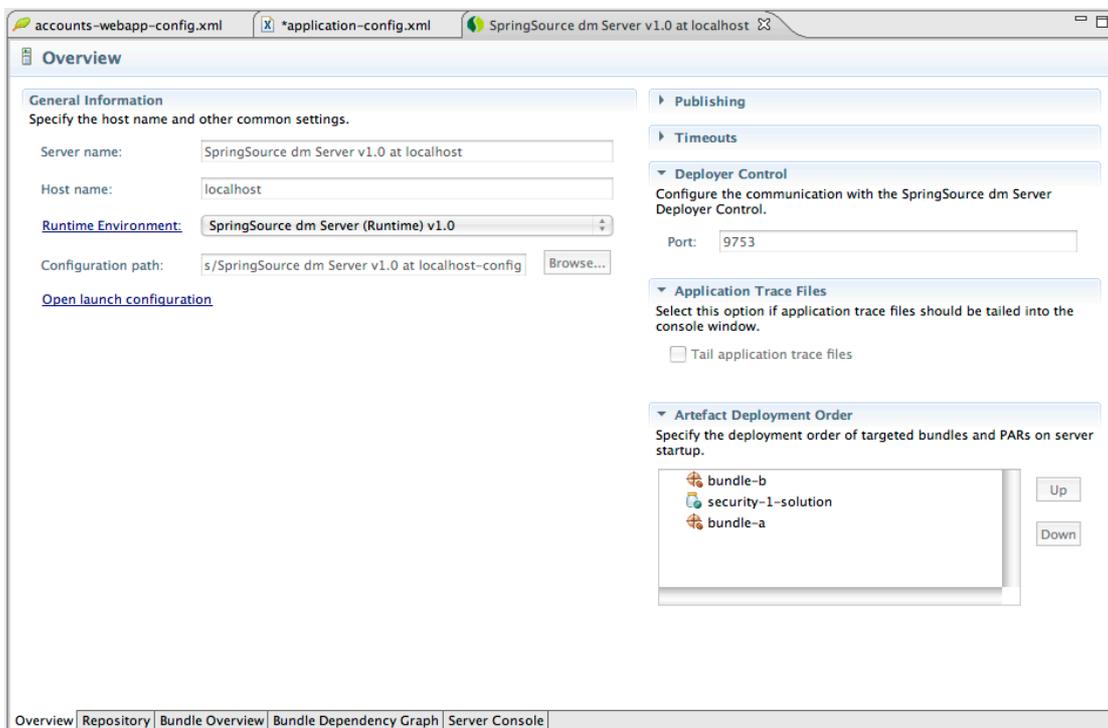
### Artifact Deployment Order

The deployment order for bundles and PARs when restarting a dm Server instance from the tools can now be configured.

To change the deployment order open the WTP Server Editor by double-clicking on the dm Server instance in the Servers View.

Please note that changing the order will not be reflected in the Servers View, which is always sorted alphabetically. This is a limitation of the current architecture of WTP and will hopefully be corrected in Eclipse 3.5.

Feature is available in the dm Server Tools.



### Application Trace File Tailing

It is now possible to tail the application trace files into the Eclipse console window. Configure the tailing from the Server Editor.

Feature is available in the dm Server Tools<sup>1</sup>.

<sup>1</sup> SpringSource dm Server Tools is a separate open-source product licensed under the EPL v1.0 and bundled with STS.

## Bundle Overview

STS 2.0 provides a Bundle Overview page that is essentially a graphical view of the Equinox OSGi console.

The page allows you to inspect bundle dependencies based on package import/exports as well as services. Furthermore information about the bundle and its MANIFEST.MF is available.

The Bundle Overview page is accessible from the Server Editor (third tab).

To use the feature the dm Server must be running as this information is currently collected from the running server.

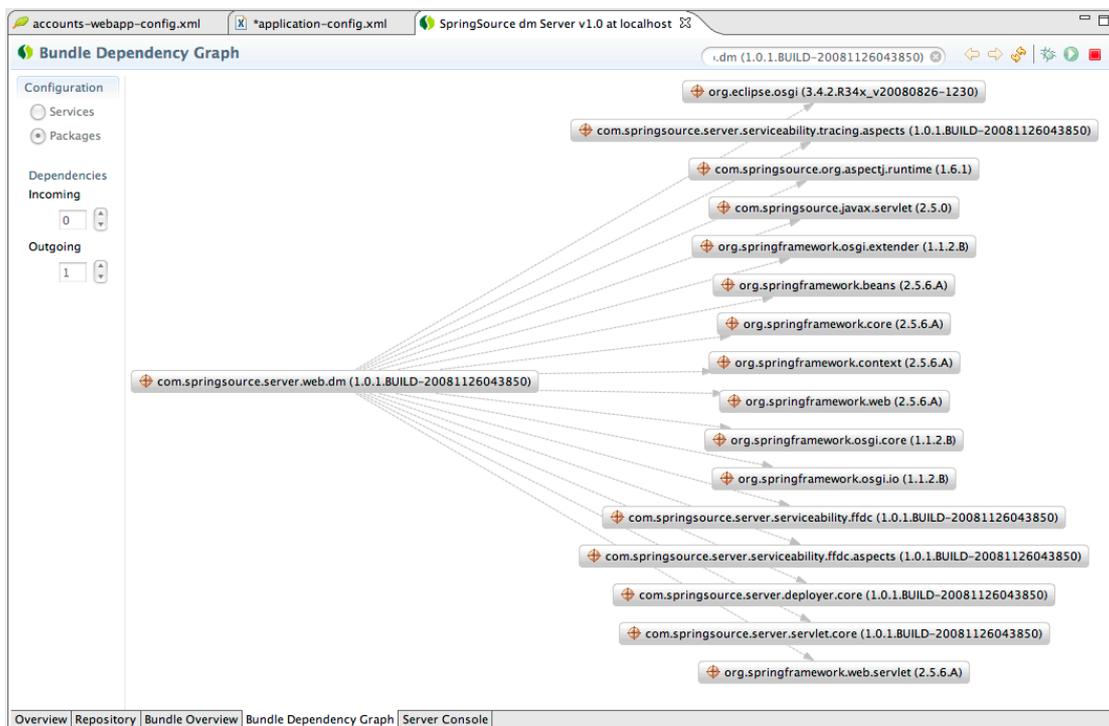
Feature is NOT available in the dm Server Tools.

## Dependency Graph

STS can now visualize the bundle dependencies based on package import/export relationships and service consumption.

The Bundle Dependency Graph page is accessible from the Server Editor (4th tab).

To use the feature the dm Server must be running as this information is currently collected from the running server.



Feature is NOT available in the dm Server Tools.

## OSGi Console

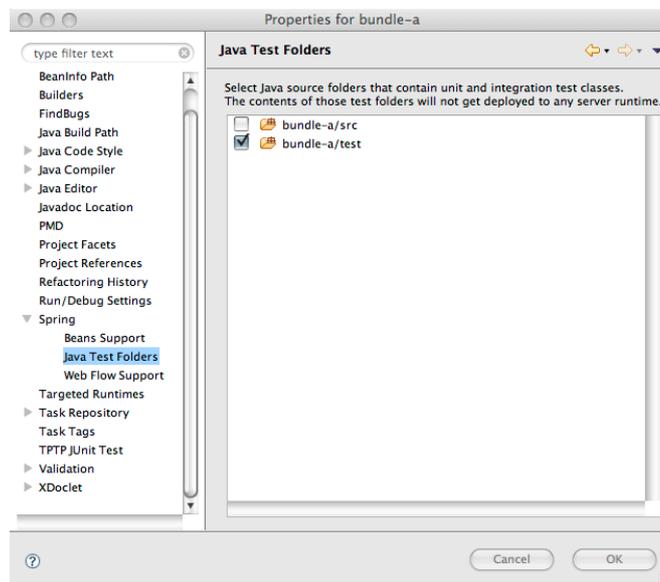
STS offers easy access to the Equinox console without the use of telnet. Open the last tab on the Server editor to access the console.

Feature is NOT available in the dm Server Tools.

## Test dependencies based on TEST.MF

Source folders can now be marked as being "Test source folders". Open the project preferences and then Spring -> Java Test Folders to select the test folders. If the tools find a META-INF/TEST.MF in a test source folder the dependencies will be added to the Bundle Dependencies Classpath container.

For now there is no validation that application code does not accidentally access test dependencies. This is planned for dm Server 2.0.



Feature is available in the dm Server Tools.

## PAR and Bundle Project Export Wizard

Both PAR and Bundle projects can be exported into a PAR or JAR archive that is deployable in the SpringSource dm Server. The Export Wizard can be launched from the STS/Eclipse Export menu (File -> Export...) or the Overview Page of the Manifest Editor.

Feature is available in the dm Server Tools.

## Manifest Generation

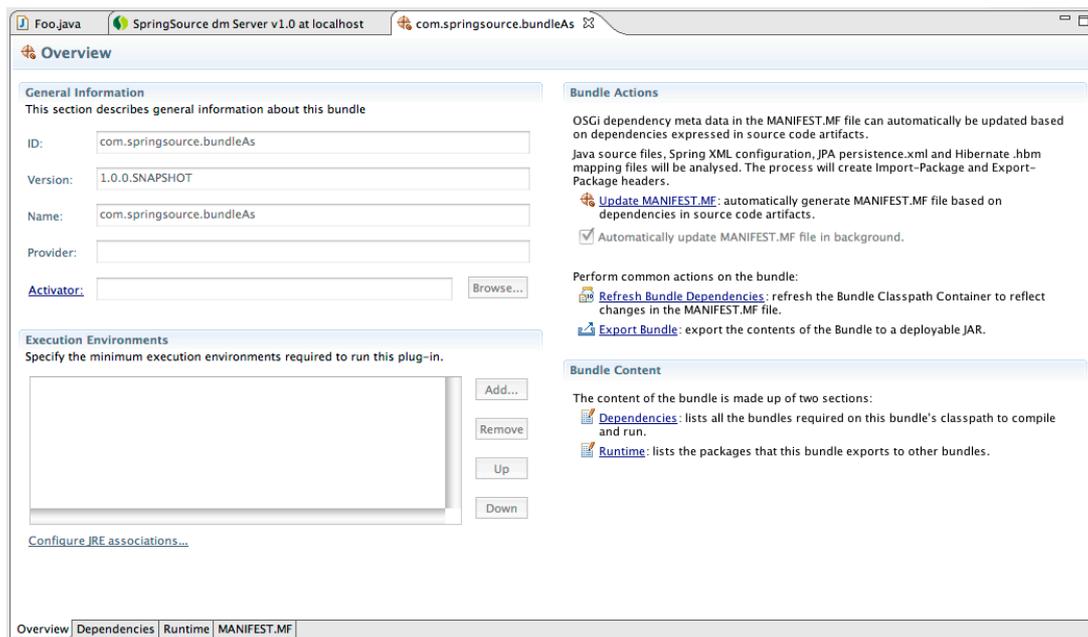
Import- and Export-Package Manifest headers can be auto-generated using the integrated SpringSource Bundlor. Bundlor scans the source code of the project (Java artifacts, Spring

## SPRINGSOURCE TOOL SUITE 2.2.1.RELEASE - NEW AND NOTEWORTHY

XML configuration files, Hibernate .hbm mapping files and JPA persistence.xml) and creates appropriate Import- and Export-Package headers.

The Bundlor integration can be triggered on-demand from the Overview Page of the Manifest Editor. Furthermore Bundlor can be integrated into the project build to automatically update the Manifest of code changes in an incremental fashion. This can be configured on the Overview Page of the Manifest Editor.

Bundlor expects a file called template.mf in the root of the project. If the project has configured source folders, Bundlor will generate a TEST.MF for the test-only dependencies.

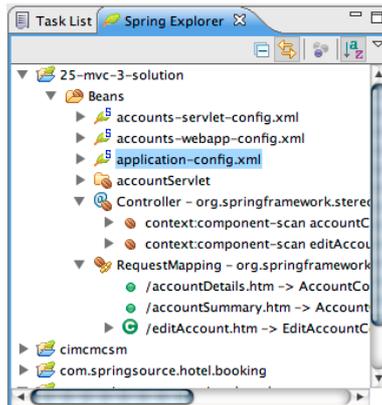


Feature is available in the dm Server Tools.

## ENHANCEMENTS – 2.0

### Annotation Grouping

Since version 1.0, STS provided tools to group Bean definitions based on meta data like Stereotype Annotations. This feature needs to be enabled through the Spring Meta Data Builder from Project Builders tab (Spring Project or Workspace preferences).



This is useful for projects that use @MVC Controllers as it displays the URL-to-HandlerMethod mapping in the Spring Explorer and allows to easily navigate URL mappings.

### Spring Configuration Auto-discovery

STS will auto-detect Spring XML configuration files for well-known project types and automatically configure Spring IDE. All auto-detected configuration files will be added to a Config Set.

STS will automatically detect configuration files in the following project types:

- WTP Dynamic Web Projects (based on web.xml and Spring conventions)
- SpringSource Bundle Project (META-INF/spring/\*.xml or Spring-Context Manifest header)

This can be extended to integrate with customer standards and project layouts.

### XML Configuration Files from external JAR files

Spring XML configuration files from workspace external locations can now be configured with Spring IDE. That enables users to reference XML files in JARs that are linked in through a Maven Classpath Container or the M2\_REPO classpath variable.

### Spring IDE uses bundles from the SpringSource Bundle Repository

Underlying Spring IDE now uses bundles from the Bundle Repository.

## Eclipse components updated to latest versions

STS 2.0 has been updated to include latest versions of required components:

- Eclipse Platform 3.4.2  
<http://download.eclipse.org/eclipse/downloads/drops/R-3.4-200806172000/whatsnew3.4/eclipse-news-part1.html>
- JDT 3.4.2  
<http://download.eclipse.org/eclipse/downloads/drops/R-3.4-200806172000/whatsnew3.4/eclipse-news-part2.html>
- PDE 3.4.2  
<http://download.eclipse.org/eclipse/downloads/drops/R-3.4-200806172000/whatsnew3.4/eclipse-news-part4.html>
- AJDT 1.6.4  
<http://www.eclipse.org/ajdt/whatsnew164/>
- WTP 3.0.4  
<http://www.eclipse.org/webtools/releases/3.0.0/newandnoteworthy/>
- Mylyn 3.0.5  
<http://www.eclipse.org/mylyn/new/new-3.0.html>