

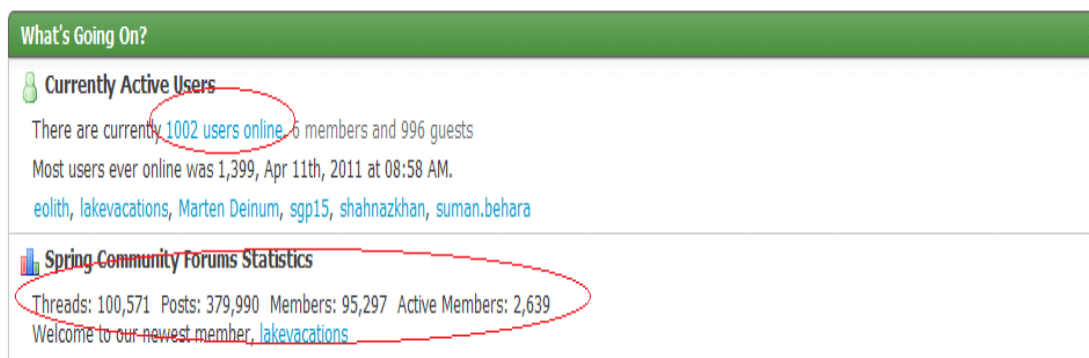
## Spring Framework

The Spring Web MVC Framework is a robust, flexible, and well-designed framework for rapidly developing web applications using the MVC design patterns

### 1-The Society:

A big active society, more than 12.5k followers on Spring's active twitter account, while Spring's forum enjoys a significantly large and friendly community with more than 95k members and more than 100k threads.

The screenshot below shows the number of users online, threads, members and active members:



The screenshot below displays Spring's official Twitter account where followers are always updated to the latest news and announcements:



Below are the links for Spring's twitter account and Spring's Forum:

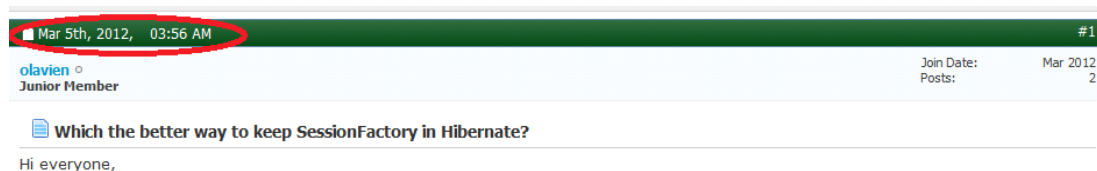
Twitter: <https://twitter.com/#!/springsource>

Forum: <http://forum.springsource.org/>

## 2-Frequency of asking questions and getting replies:

As mentioned before, Spring enjoys a large helpful community, with more than 100k threads in the forum, questions are frequently asked and answers are received within 3 days maximum, samples are shown below:

This user posted his question on the 5th of March:



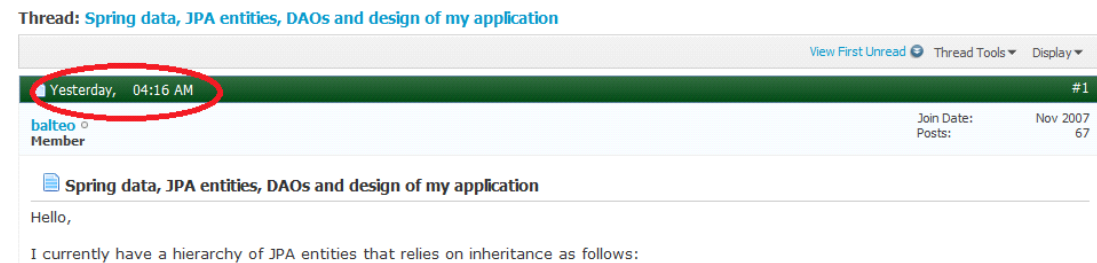
A screenshot of a forum post. At the top, a green header bar shows the date and time "Mar 5th, 2012, 03:56 AM" circled in red, and the post number "#1" on the right. Below the header, the user "olavien" is listed as a "Junior Member" with a join date of "Mar 2012" and 2 posts. The post title is "Which the better way to keep SessionFactory in Hibernate?". The post content begins with "Hi everyone,".

And the answer was received within just 2 hours:



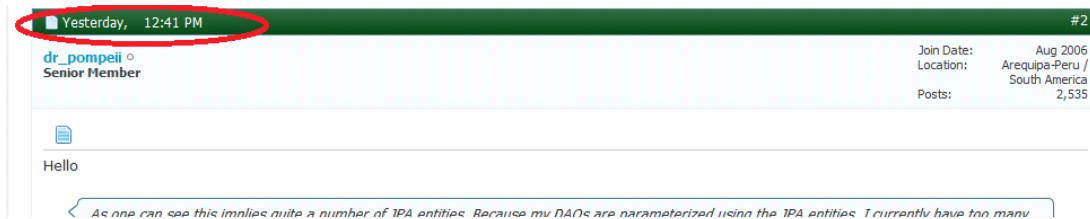
A screenshot of a forum post. At the top, a green header bar shows the date and time "Mar 5th, 2012, 06:05 AM" circled in red, and the post number "#2" on the right. Below the header, the user "Marten Deinum" is listed as a "Senior Member" with a join date of "Jun 2006", location "The Netherlands", and 11,811 posts. The post content begins with "Performance wise there shouldn't be an issue or difference, coding wise the way as shown in the reference guide is the correct way. You really don't want to do those ugly lookups in your code with some crazy Hibernateable class, it is nearly impossible to test/differentiate."

This second user posted his problem on the 7th of March:

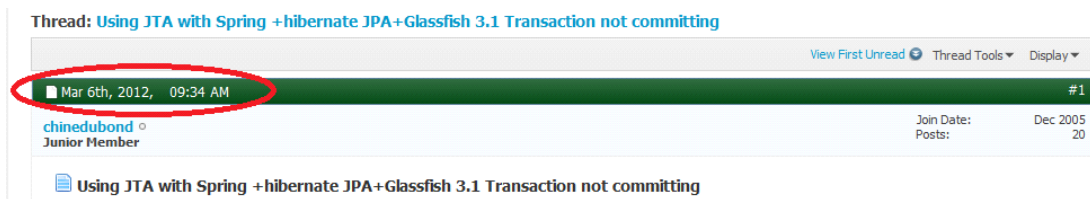


A screenshot of a forum post. At the top, a green header bar shows the date and time "Yesterday, 04:16 AM" circled in red, and the post number "#1" on the right. Below the header, the user "balteo" is listed as a "Member" with a join date of "Nov 2007" and 67 posts. The post title is "Spring data, JPA entities, DAOs and design of my application". The post content begins with "Hello," and "I currently have a hierarchy of JPA entities that relies on inheritance as follows:".

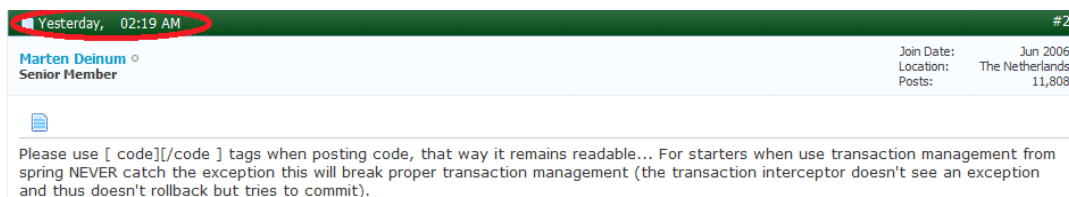
And the first response was within 8 hours:



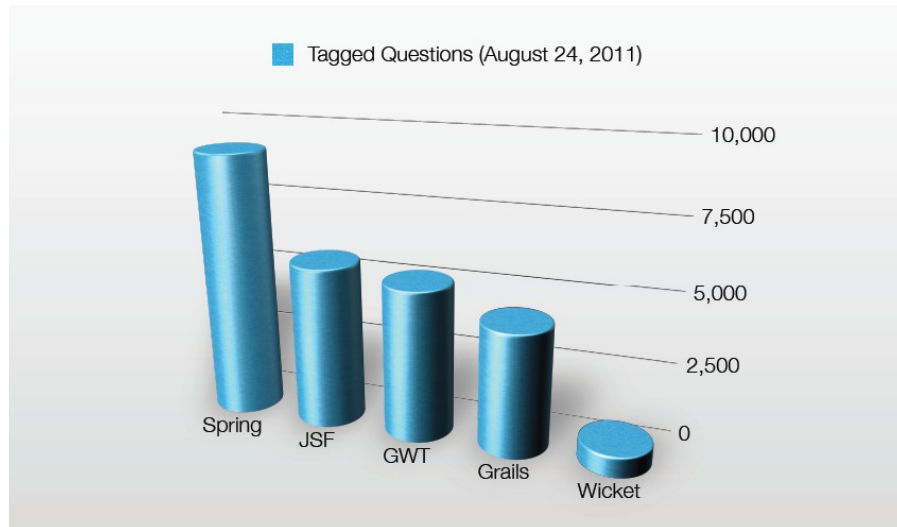
This third user posted his problem on the 6th of March:



And the first response was received within one day on the 7th of March (Yesterday):



Below is a graph depicting different frameworks versus the number of tagged questions on Stackoverflow.com where Spring enjoys the largest number of questions on the website



So apparently the forum is active and the user can easily post his/her problem and receive an answer ASAP, and also if a user encounters a problem with Spring, its highly probable that he/she could find a post on other websites such as stackoverflow.com discussing the same problem and providing helpful answers.

### 3-Release cycle:

According to Spring's official website, the latest version of the framework (2.9.0) was released on 3 March-2012 and devs are working towards Spring 3.2 that will be released on July-2012.

Spring's official website: <http://www.springsource.com/>

### 4-Documentation:

a) Spring's official website provides full documentation covering several related aspects such as:

- Spring Framework
- Spring Security
- Spring Webservice
- Spring Data

Spring's official website also provides several videos and tutorials for beginners

Reference documentation:

<http://static.springsource.org/spring/docs/3.0.x/spring-framework-reference/html/>

Tutorials link: <http://www.springsource.org/tutorials>

- b) over 120+ youtube videos (mostly tutorials)
- c) 4 books on amazon e.g Spring in Action (best among users)

### 5-Learning curve:

According to members of the Spring community, reading the documentation and watching the provided tutorials will help the user to quickly understand how to use the framework. However, Spring is not considered to be among the easiest frameworks to learn.( due to massive amount of xml used)

### 6-Configuration:

for installation there are two options either the eclipse plug-in or the standalone framework, for the plug-in its simplicity is the same as any plug-in in eclipse you just download it and restart eclipse, and for the standalone program it is also very similar to eclipse and only takes a minute to start using it. But when it comes to the speed to start using it, it gets a little tricky as you should do some steps to create the right project and add the right files, but once you created the project adding files is a piece of cake. And no special configuration required. As for the database connection, there is a step by step window that helps throughout the process but you must first download the proper database that will work and contain the right files needed for the connections.

Installation Instructions link:

[http://download.springsource.com/release/STS/doc/STS-installation\\_instructions.pdf](http://download.springsource.com/release/STS/doc/STS-installation_instructions.pdf)

### 7-Authentication, Authorization and Security:

Spring Security provides authentication, authorization and other

security features over applications

Spring security's main features:

- LDAP support
- Captcha
- Remember-me
- Password encoding

Other features can be found in the link below:

<http://static.springsource.org/spring-security/site/features.html>

### 8-Descriptive errors:

User already using eclipse so all the errors are described the same way as eclipse, adding to that you are told in which line is the problem and what exactly it is, there is also an autocorrect to help while coding.

### 9- Compatibility & Migration:

it's very simple to update to newer versions, where you just update the version you have and then restart the program to take effect (while sometimes you don't need to restart), the roadmap is decent enough to catch up with the changes (log is posted 3 months early), and the differences between versions are well handled in forums and updated docs.

As eclipse is compatible with the different OS also spring is compatible with Windows/Ubuntu/Mac , however needs some tweaking for Apache TomCat on Mac ( if you want an application server).

Spring MVC provides rich REST support,All mobile clients - whether it's J2ME, Windows Phone 7, Blackberry, Android, or iOS - support RESTful communication,The Web UI has been tested successfully with FireFox, Opera, Safari, Chrome, and IE6+

### 10-Power points:

it contains all up-to-date technologies needed, specially dependency

injections and exception handling, what may be a little of drawback is its need to understand xml (but not to a very advanced point, just basics will work), it doesn't have a drag and drop elements like .NET and in order to preview your code you must run it (no dynamic preview).instant reload not build in (need Jrebel or Spring roo). however most problems got solutions on forums and Add-ons.

### 11-Performance & Scalability:

Minor complains about performance, one of the solutions is using the Spring module which supports GigaSpaces . This will enable user to maintain his data in a reliable fashion in memory (speeding up data access for your application code) and continue to persist it into the DB in an asynchronous fashion. thus,increasing the scalability and performance of the spring-based application.

### 12-best practice:

Spring is a powerful Java application framework, used in a wide range of Java applications. It uses dependency injection to achieve simplification and increase testability. Spring beans, dependencies, and the services needed by beans are specified in configuration files. The XML configuration files, however, are verbose and unwieldy. They can become hard to read and manage when you are working on a large project where many Spring beans are defined.

Techniques to make life easier with xml :

<http://tinyurl.com/7u4h7wh>

to sum up, XML is the prevailing format for Spring configurations. XML-based configuration can become verbose and unwieldy when many beans are defined. Spring provides a rich set of configuration options. Appropriately using some of the options can make the XML configurations less cluttered. Following good practices may help you to create clean and readable XML configuration files.

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