Apache solar

Introduction

Solr was created in 2004 as an in house project to add search capability for the CNET networks. It was donated to APACHE Software Foundation after CNET Networks decided to make it open source. After a number of versions of the Solr, with every version having enhancements, the latest version today is the Solr 5.0 which is a standalone application. Apache Solr is an open source enterprise search platform written in JAVA. Its major features include full text search capabilities that enable matching phrases, hit highlighting, real time indexing, no SQL features, extensible plugin architecture, dynamic clustering, database integration and rich document handling (e.g Word, PDF). Providing distributed search and index replication, Solr is highly scalable and fault tolerant.

Evidence of Developer Interest

Solr uses the Lucene library at its core for full-text indexing and search, and has REST –like HTTP/XML and JSON APIs that make it usable for popular programming languages. Although there are databases and frameworks such as HADOOP, Apache Solr has been on top of these due to its standalone noSQL store. Solr effectively serves as a data access layer for doing key value lookups as well as making the data fully indexed and searchable. Search with speed is always the first requirement in many deployments, which is pushing many organizations to use the search engine like a noSQL store for that robustness and flexibility.

Another aspect that makes Apache SOLR popular is the governance model enforced by it to maintain accuracy of records. Solr uses Apache Zookeeper to handle distribution and puts a governance model behind the data retrieval process to guarantee delivery. The main difference with NoSql data sources is they are optimized around lots of writes and they are constantly updating so that they can keep track of all the different searches and transactions done.

Solr has also addressed the deep paging problem because the deeper you go into results the slower the query will be by introducing the cursor. This cursor feature enables users to quickly navigate through pages.

Evidence of User Interest

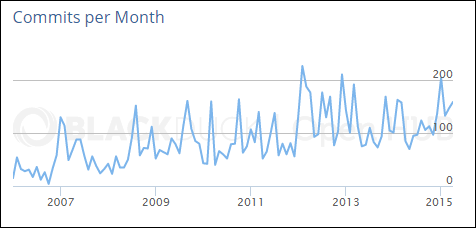
Despite open source giants like google, some organizations are using Solr because it is a free and excellent option to build a quick search experience. It has fast searching and indexing speeds, flexible data model, great query API, buit on top of proven technology (Lucene). It is easier to roll a service using Solr that can help improve the search quality for users, which has led Google and other giants like Microsoft and Oracle to adopt their ways of working as per the new use cases and data models.

Appropriateness and usefulness of documentation

The Apache Solr has a Wiki page where all the official documentation about every release can be found. Of particular it has the Solr reference guide which is published by the project after each minor release. The Wiki page covers all the topics including installation and configuration, search and indexing, Solr Cloud , Advanced tools, Tips, Tricks and Use cases, Solr Clients, Operations and Production and user contributed content.

Readability and Maintainability of code

Apache Solr has about 22% of source commented. This lack of comments lowers Apache Solr in terms of readability. Open Source Porjects live on for many years, and it is very important for the code to be readable since it has to adopted by other software professionals who can work and contribute to it. However Apache Solr had its first lines of code written in 2006. And over the years there has always been activity and releases which show that the code may be well maintained. However over the last 12 months Apache Solr has not seen any change in activity .This may be a good sign indicating that the development is continuing at the same pace and not dropping off.



GlassFish

GlassFish is an open source application server project launched by Sun microsystems in 2005. Over the years of development, Oracle launched the latest version of GlassFish 4.1 which included over a thousand bug fixes and latest releases of Web Sockets. GlassFish is the first implementation of JAVA EE and as such supports Enterprise JavaBeans, JPA, JavaServer, JMS, RMI, servlets. This allows developers to create enterprise applications that are portable and scalable and that integrate with technologies.

Evidence of Developer Interest

One of the biggest reasons for GlassFish to be popular is that it is fully JAVA compatible EE server. GlassFish has well developed scalability, and management features. Its modular architecture enables to configure it extensively and it components can be restarted without restarting the whole server. It can be considered as an application server when planning to host some big scale applications. It looks big but is actually relatively small around 53Mb. Beyond incremental compilation which most IDE’s offer these days and deploy-on-change (simply save the source and reload the web page), the time to deploy an application is the key to a developers productivity. GlassFish has spent time optimizing this process and offers sub-second redploy time for simple applications. Another reason GlassFish is popular among developer is that it has a very interactive administration console where admin can test web services. GlassFish particularly increases developers productivity when used in integration with NetBeans IDE. In terms of server configuration GlassFish is very good because everything needed to maintain and manage the server is put into asadmin utility and running a shell script is all it takes to configure the server. GlassFish has a large and active community and also has the possibility to move on to the commercial version to get official support and more advanced management tools from oracle.

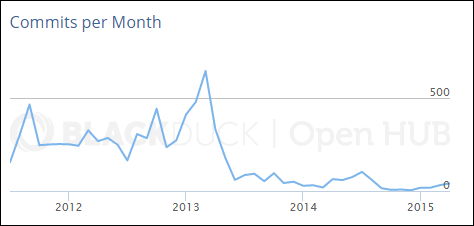
Appropriateness and usefulness of documentation

GlassFish installation package is quite handy. However unlike Jetty or Tomcat it is not as straightforward to get GlassFish up and running. There are multiple install methods. But it is required to go through some documents to understand the installation procedure.

The GlassFish forum is quite active, there are many mailing lists that specialize on different areas and parts of GlassFish . The documentation is also pretty good. However it can be a little awkward to navigate through documents and some of them are outdated.

Readability and Maintainability of Code.

Across all JAVA projects, 31% of all source code lines are well commented. For GlassFish around 44% of all source code lines are commented. The high number of comments indicate that the code is well documented and organized and is a sign of good development team. In terms of maintainability GlassFish is good, it had its first code written in 2011, and has had decent activity and releases since then. However over the last 12 months, GlassFissh has had decreasing development activity. It could be a warning sign that the interst in project is waning or it may indicate a mature code base that requires few fixes and changes.



Opportunities to contribute to the project

GlassFish has plugins available for all major IDE’s. But the problem with the plugin is that the information is scattered around. The plugin for NetBeans is already bundled with the IDE but others need to find the correct website to install the plugin. The information regarding where the plugin can be found is poor but the IDE support is great once the plugins are found. In terms of real time metrics GlassFish may need some contribtutions to push it to top , but in terms of server configuration it is definitely tops the list.

Chromium

Chromium is an open source web project that results in releases of google chrome. Chromium is a project with all developmental releases and the chrome is the stable version. Because chromium is open source it is available in many Linux distribution software repositories for easier installations. However on windows and Mac it is tougher to use chromium.

Evidence of Developer interest

Chromium may not be the first choice for most developers due to the absence of number of features that are present in other web browsers like the integrated flash player, auto update function that is being used in many downloadable tools and other features like security sandbox, support for media formats like mp3. It lacks the crash reporter, so if there’s a bug the developer will have to get a bug trace in the old fashioned way. Chromium also lacks the usage tracking feature that sends information about how to use different parts of the browser. However in spite of these it is a pretty fast browsing solution. Chromium is nice because it allows Linux distributions that require open source software to package a web browser that is similar to chrome. One of the major aims is for chromium to be a tabbed window manager or shell for the web as opposed to it being a traditional browser application. The application is designed to have minimal user interface. The interface is identical to chrome and has the exact same options as well as extension and theme support. Chromium is perhaps the best browser if you are just browsing the internet.

Evidence of User Interest

Chromium may not be the favorite among users because it is not as popular as chrome for the reasons mentioned above. Chromium is mainly the project for all developmental releases. However due to its lightweight some users do use chromium for faster browsing. Especially on lInux chromium is very easy to use since it is already available in the software repository and can be easily installed from the Ubuntu software center with one click.

Appropriateness and usefulness of documentation

Chromium has some decent documentation about its installation for different operating systems. It also includes developmental guides for developers. It has also provided links for reporting any bugs. In general it has provided good documentation that can be easily followed.

Readability and Maintainability

Chromium is written mostly in C++. Out of all the code 22% of the source code contains comments. This lack of comments lowers chromium in terms of readability. In terms of maintainability chromium has done very god job. There have been many releases since 2008. Also there have many fixes over the years and chromium has been one of the most active open source projects having large number of commits and with the latest commit done a month ago.

