TECH TOOLS

Google Releases C++ B-Tree Template Library

Google has announced C++ B-tree, a C++ template library that implements ordered in-memory containers based on a B-tree data structure. According to the website, C++ B-tree containers have some advantages over standard containers, which are typically implemented using Red-Black trees. B-trees keep disk seeks to a minimum, and C++ B-tree containers make better use of the cache. The announcement, posted on Google Open Source Blog says that, "for small data types, B-tree containers typically reduce memory use by 50 to 80% compared with Red-Black tree containers."

The Google blog states, "B-trees are well-known data structures for organizing secondary storage, because they are optimized for reading and writing large blocks of data. But the same property that makes B-trees appropriate for use with databases and file systems also makes them appropriate for use in main-memory, just with smaller blocks."

C++ B-tree containers do have some disadvantages. For example, modifying a C++ B-tree container will invalidate all outstanding iterators on that container. However, the library contains "safe variations" on the four containers to address this drawback. C++ B-tree containers have the same interface as the standard C++ containers.

Unmetered.com

PlusServer AG announces the new Unmetered.com hosting site. Unmetered.com offers high-bandwidth, high-capacity hosting optimized for providers of streaming media solutions. Solutions include an 8GB Intel Xeon X3440 server system with unlimited storage capacity and 1,000Mbps bandwidth for EUR 99.00 per month. According to the company, each high-speed hosting package comes with complementary 24/7/365 support. A bandwidth of 1,000Mbps supports 280 simultaneous DVD-quality video streams or 7,800 radio streams at 128Kbbps. Every server comes with a dedicated 1Gb port, and customers can choose either the US or European data center.

Eclipse Releases Hudson 3.0

The Eclipse Foundation announced the release of Hudson 3.0 – a continuous integration (CI) server used to improve the software development process. The Hudson tool is written in Java and it supports tools such as CVS, Subversion, Git, and ClearCase. The announcement states that Hudson increases productivity by coordinating execution of repeated jobs, making it easier for developers to integrate changes and for users to obtain a fresh build.

Hudson 3 offers a new plugin manager to simplify management and installation of more than 400 existing plugins. A redesigned web interface using JQuery offers an improved look and feel. And, the Hudson footprint has been reduced by 50 percent through updates to the underlying libraries to meet Eclipse IP requirements. Libraries using GPL or LGPL licenses were removed, existing libraries were updated, and library redundancies were resolved.

Oracle Releases MySQL 5.6

Oracle has announced version 5.6 of the open source MySQL database.

New features include simplified query development, flexible NoSQL access, self-healing replication clusters, improved IPv6 compliance, and enhanced instrumentation. Additionally, several changes to server parameter defaults provide better out-of-box performance. Version 5.6 of MySQL also offers improved security, with support for stronger encryption of user account passwords and a method for storing encrypted authentication credentials in a config file.

Better performance throughput and application availability are provided by improvements to the InnoDB storage engine. According to Oracle, up to 230 percent improvement can be seen in transactional and read-only throughput. The announcement states that, "InnoDB has been re-factored to minimize legacy threading, flushing, and purge mutex contentions and bottlenecks, enabling better concurrency on heavily loaded OLTP systems, and resulting in significantly improved throughput for both transactional and read only workloads."

Sun Microsystems purchased the popular MySQL open source database system in 2008, and ownership passed to Oracle when Oracle acquired Sun in 2010. Due to licensing uncertainties in the wake of the acquisition, former MySQL developers, led by MySQL founder Monty Widenius, launched MariaDB as a fork of the MySQL database; however, MySQL still claims the title of "the world's most popular open source database."

MySQL Community Edition is the name of the freely available, open source version of the database released under the GPL license. Commercial versions are also available.