



# MySQL Enterprise Certification by LiveTime Software. Inc.



A MySQL® Enterprise Certification  
May 24, 2010



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## **Executive Summary**

LiveTime Service Manager is an ITIL Certified service management tool which is heavily dependent on persistent data. For purposes of this certification the RDBMS used was MySQL Enterprise 5.0 and 5.1 running on 64 Bit Solaris 10 update 4 on SPARC and x86.

Testing comprised of two components, firstly validation of the installation test cases by generating and deploying the schema at run time on the target database. Functional testing followed as LiveTime's Quality Assurance team executed the LiveTime Service Manager test suite.

As expected, all tests were passed successfully, demonstrating LiveTime Service Manager is fully functional when run in an environment with MySQL Enterprise 5.0 and 5.1.

## **Product Description**

LiveTime Service Manager is an ITIL Certified service management tool. Incident, Problem, Change, Configuration, Service Level and Knowledge Management processes are all supported through a unified web interface using latest generation technologies. LiveTime leverages web services to provide integration interfaces to external systems such as Authentication Servers and Asset Management systems. At the core of LiveTime is a fully integrated CMDB that underpins all process workflows.

All this information is persisted in a relational database, in this particular case, MySQL Enterprise 5.0 and 5.1. LiveTime Service Manager is a Java Web Application thus connections to MySQL are made using the provided JDBC Driver.



## Test Case

LiveTime Service Manager is an enterprise grade, ITIL certified Service Management tool. The entire test suite compiled by LiveTime's quality assurance team comprises nearly 1000 test cases. In order to claim compatibility with MySQL Enterprise, the Quality Control team were required to execute the entire test suite against MySQL Enterprise to validate all features function as expected, i.e. as they would on any given database platform.

The Installation test cases validate the schema can be successfully deployed on the target database whilst the usage test cases validate application functionality.

## Test Description

### Installation

The installation test comprises of entering the database connection details (Host, Port, Repository, Username & Password) into the LiveTime user interface and then generating the schema creation script. This script is then executed as a query against the repository specified using a SQL Editor.

Returning to LiveTime Service Manager, selecting the 'Done' and then the 'Save' buttons will cause LiveTime to validate that it can connect to the specified repository and that the schema has been successfully been created.

The connection is made using the provided JDBC Driver, Version 5.1.7. Connection objects are pooled to minimize the number in existence at any point in time. The LiveTime Service Manager schema comprises 129 tables that are heavily inter-related. Most contain multiple foreign keys and several indexed columns. Integer, String, and CLOB data types all feature prominently in the schema. The largest number of columns in a given table is the 'PREFERENCE' table, with 88 fields, followed by the 'CLIENT' table (71) and the 'INCIDENT' table (70). There are 3 separate relationships between the INCIDENT and CLIENT tables for various reasons.

**Success** was easily determined, as LiveTime Service Manager allows the user to access the license installation screen if the schema was successfully deployed. (It will present an error if the schema is invalid). Tests were performed against both MYISAM and INNODB storage engines.



## Functional

Functional testing can't be summarized quite so easily as the entire test suite was executed as part of application system testing for a release. In brief the functionality provided by LiveTime Service Manager was tested in it's entirety to ensure LiveTime was fully functional. All relevant objects could be created in the user interface, and these objects could be seen created in the repository, background tasks would execute using up to date data as a base and the user experience represented to the customer the current state when applicable.

**Success** was determined by passing the full test suite, which includes inspection of the data stored in the repository to ensure the persistence is functioning as expected.

## Preconditions

There are no 'pre-conditions' for execution of these tests other than a functional operating environment, per the configuration details below.

## Configurations

The test was performed on a Sun X4100 M2, Sun T2000 running Solaris 10 update 4, MySQL Enterprise 5.0.45 and 5.1.30, Java 6 u10, and Tomcat 6.0.18 (as the servlet container) and LiveTime 5.5.

## Dependencies

N/A

## Results

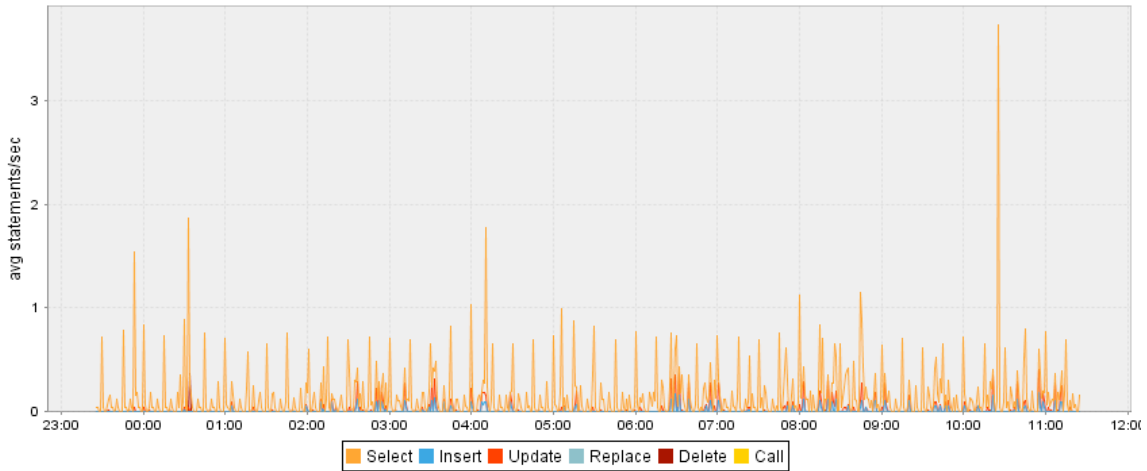
Schema generation and deployment resulted in the successful creation of all 129 tables as per the LiveTime Service Manager 5.5 Schema. Column counts were consistent with known working instances on MySQL Community edition and other platforms.

The approximately 900 functional test cases where executed and passed in their entirety, representing all functional aspects of LiveTime Service Manager functioning to specifications.



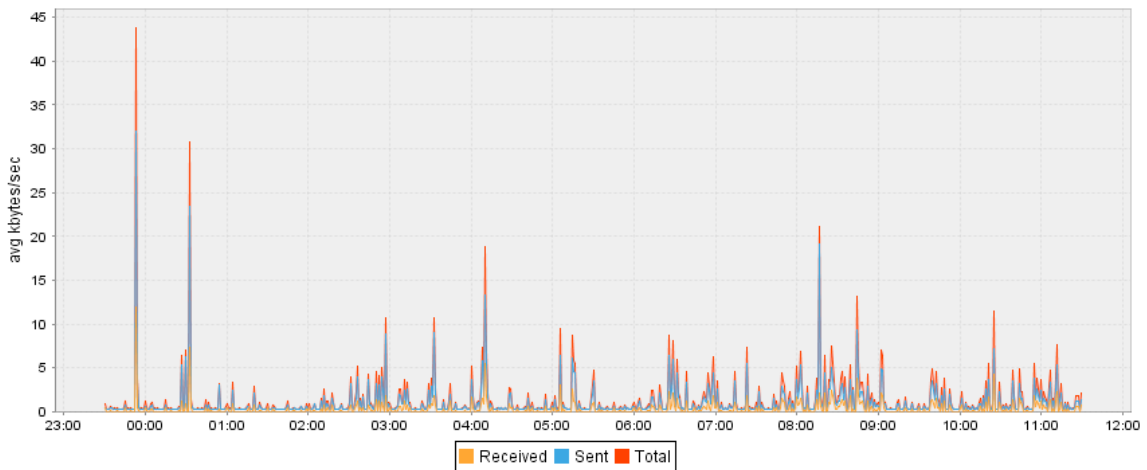
# Benchmarks

## Database Activity



Database activity was measured over 8 hours of routine use to ensure adequate performance using optimized my.conf settings. The above graph represents a snapshot of these results.

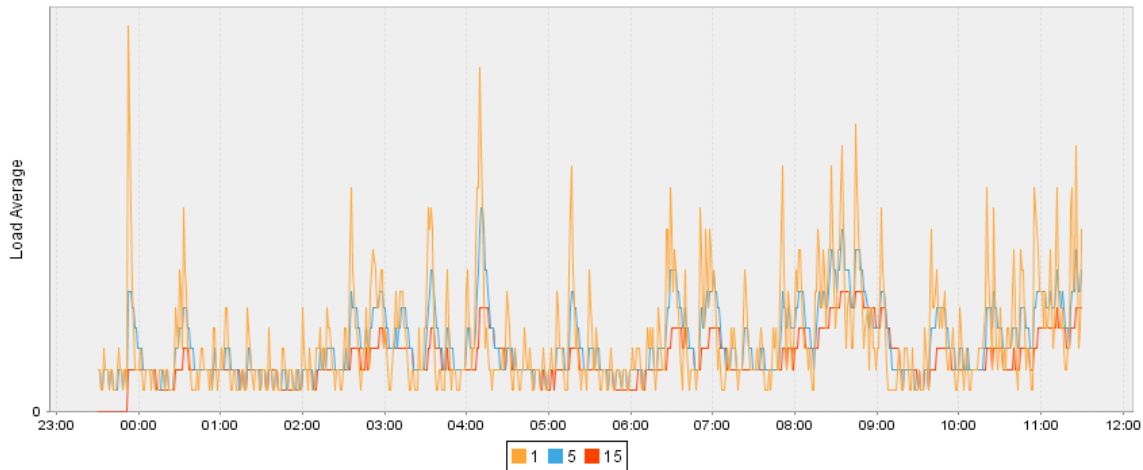
## KBytes In/Out



This graph shows the packet volume over an 8 hour time frame on Solaris 10 Update and MySQL 5.0.45.



## Load Average



Demonstrates the database load over an 8 hour time period.

## About LiveTime Software, Inc.

Headquartered in Newport Beach, California, LiveTime Software, Inc. is a vendor of Web 2.0, ITIL service management, help desk and support automation software for medium to large enterprises. Many global 2000 organizations and educational institutions use LiveTime's vendor-neutral solutions to lower their costs and improve customer satisfaction. Founded in 1999, LiveTime Software is a privately held firm with offices in the United States, Australia and the United Kingdom. For more information visit [www.livetime.com](http://www.livetime.com)

## About Sun's MySQL Database

MySQL is the most popular open source database software in the world. Many of the world's largest and fastest-growing organizations use MySQL to save time and money powering their high-volume Web sites, critical business systems, and packaged software. At [www.mysql.com](http://www.mysql.com), Sun provides corporate users with commercial subscriptions and services, and actively supports the large MySQL open source developer community.

MySQL is a key part of LAMP (Linux, Apache, MySQL, PHP / Perl / Python), a fast growing open source enterprise software stack. More and more companies are using



LAMP as an alternative to expensive proprietary software stacks because of its lower cost and freedom from lock-in.

The flagship product MySQL, the world's most popular open source database, with more than 10 million active installations. Many of the world's largest organizations, including Sabre Holdings, Cox Communications, The Associated Press, NASA and Suzuki, are realizing significant cost savings by using MySQL to power Web sites, business-critical enterprise applications and packaged software. MySQL AB is a second generation, open source company, with dual licensing that supports open source values and methodology in a profitable, sustainable business

## **About Sun Microsystems, Inc.**

Sun Microsystems develops the technologies that power the global marketplace. Guided by a singular vision -- "The Network is the Computer"<sup>™</sup> -- Sun drives network participation through shared innovation, community development and open source leadership. Sun can be found in more than 100 countries and on the Web at <http://sun.com>.