**Brief introduction of SocketPro continuous SQL-stream sending and processing system (Part 1: Sqlite)**

**Introduction**

Most of client server database systems only support synchronous communication between client and backend database by use of blocking socket and some chatty protocols that requires a client or server to wait for an acknowledgement before sending a new chunk of data. The wait time, which is also called as latency, could be starting from a few tenth for a local area network (LAN) to hundreds of milliseconds for a wide area network (WAN). Large wait times can significantly degrade the quality of an application.

Fortunately, UDAParts has developed a powerful and secure communication framework named as SocketPro, which is written with continuous inline request/result batching and real-time stream processing capabilities by use of asynchronous data transferring and parallel computation for the best network efficiency, development simplicity, performance, scalability, and many great and even unique features at the site (<https://github.com/udaparts/socketpro>).

Further, UDAParts has applied the powerful SocketPro framework onto popular opened source databases such as Sqlite and MySQL as well as others through ODBC drivers to support continuous SQL-stream sending and processing. At the last, these components for databases are totally free to you forever.

For reduction of learning complexity, we use Sqlite as the sample for the first article.

**Source codes and samples**

All related source codes and samples are located at <https://github.com/udaparts/socketpro>. After cloning it into your computer by GIT, pay attention to the subdirectory usqlite inside the directory socketpro/samples/module\_sample at the site (<https://github.com/udaparts/socketpro/tree/master/samples/module_sample/usqlite>).

You can see these samples are created from .NET, C/C++, Java and Python development environments. They can be compiled and run on either Linux or windows platforms. However, we only use C# code at this article for explanations.

In regards to SocketPro communication framework, you may also refer to its development guide documentation at socketpro/doc/**SocketPro development guide.pdf.**

**Asynchronous Sqlite and MySQL/MariaDB are free to you**

It is noted that the two SocketPro server plugins (MySQL:smysql and Sqlite:ssqlite), which are pre-compiled inside directory ../socketpro/bin from UDAPArts, are completely free for you to distribute together with SocketPro client (usocket) and server (uservercore) core libraries. It is planned that an ODBC based plugin will be also created for free in the future.

I wish you can provide us a few suggestions and feedbacks as well as bug report so that these free plugins can be further improved to meet your needs better.

You can compile the two plugins from provided source codes for debugging and learning, but I don’t expect you will distribute your compiled plugin libraries as your compiled plugin libraries will cause an evaluation dialog prompted out at client side randomly.

100% asynchronous data transferring