TAIFEX

Taiwan Futures Exchange, top 18 futures exchange in the world, recently launched the next generation Web Transaction Monitoring System (WTMS) with ZK to monitor 40,000 transactions per second for assuring a total amount of 2 billion dollars trading per day.

ABOUT TAIFEX

Taiwan Futures Exchange (TAIFEX) grows dramatically, ranking from 57th in 1998 to top 18 in 2007 in the world. TAIFEX handles more than 2 billion US dollars trading per day.

BACKGROUND

In the past 10 years, TAIFEX had been using a C++ based Transaction Monitoring System (TMS) to monitor transactions. Due to the natural limitations of C++, the system is not platform-independent. Besides, the TMS is a desktop application which isn't convenient for administrators to monitor transaction status because they have to go to that specific server by themselves. It is inefficient and time-consuming.

To solve this problem, Thomas Tian, Director of Information Technology Department at TAIFEX, decide to migrate the TMS from desktop application to Web application – Web Transaction Monitoring System (WTMS).

WHY ZK

Thomas says, "45-minute system down might lost more than 650,000 US dollars." As far as TAIFEX is concerned, they expect a real-time and reliable system to detect abnormal futures trading and they can fix the problem in time.

Thus, the next generation system should be able to monitor 40,000 transactions per second. These transactions data are collected from 4,000 remote trading spots, each of them carrying over 8,000 status indexes.

In addition, a real-time chart-based interactive interface to monitor the status of transactions is required for an easier way to identify abnormal transactions.

> *„Without ZK, it'll be very difficult for us to develop such a dynamic Web application. "*
>
> Thomas Tian, Director of Information Technology Department at TAIFEX

THE SOLUTION

To resolve the latency while displaying huge volume of data on the browser, ZK provides Live Data Trio Mold which loads data on demand in tree, listbox, and grid. It takes less than one second to dig in by expanding the target tree node and closing the unnecessary ones automatically.

For better user experience, ZK provides Google Finance-like chart which allows administrators to enlarge a particular segment of the trend chart for further investigation.

In addition, to update the transaction status automatically, ZK provides Server Push which allows the server to update the data every second on the client actively. It becomes more intuitive for administrators to monitor the transaction status than traditional page-based Web application since no more iteratively mouse-clicking is required.

THE VALUE

It takes TAIFEX only four months to develop and deploy WTMS. The development lead time has been reduced to one forth. Now, administrators and authorized staffs can use a web browser to monitor remotely the real-time status of thousands of transactions concurrently.

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About ZK

Potix Corporation develops and supports ZK, the #1 Ajax solution on SourceForge.net, the world's largest open source host. ZK has more than 1,500,000 downloads since its first release in late 2005. ZK is deployed by a large number of Fortune Global 500 companies, including Deutsche Bank, Barclays, Sony, Sun Microsystems and Toyota, providing them with the ability to rapidly create rich Ajax enterprise level applications.

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