



eLender Solutions/Smart Queue



The Challenge

An unreliable messaging infrastructure resulted in lost messages, duplication of work, network storms, employee inefficiencies, making it much more difficult to maintain customer service level agreements.



The Solution

A reliable, real time, geographically distributed, enterprise service bus and workflow solution based on Neuron-ESB and the Microsoft Technology Platform that provides a “one-stop shop” for managing all aspects of the real estate lending industry.

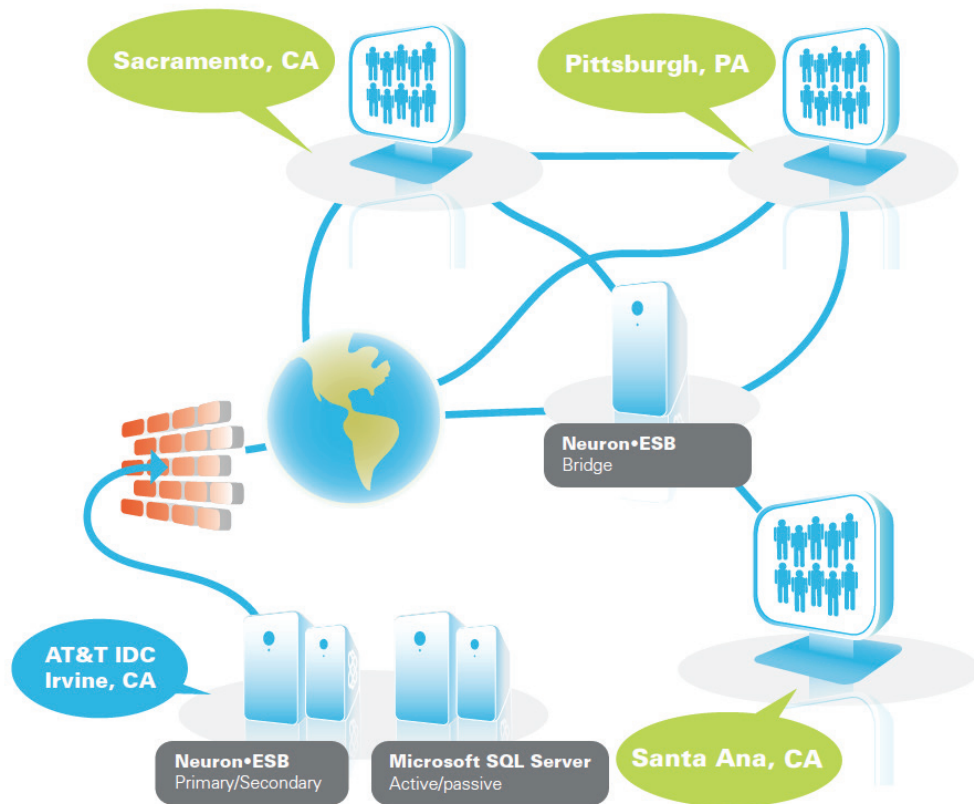


The Benefits

- Reduced labor costs
- Elimination of lost messages
- Employee trust
- Greater operational efficiency
- Increased capacity to handle new customer volume
- Increased customer satisfaction

“Neuron ESB provides the messaging backbone for one of our critical Lending Services applications. We are currently using Neuron ESB 1.0 to distribute up to 28 million messages to 1,500 desktops hourly.”

– Ron Hodgson, Vice President of Application Development of LSI,
a subsidiary of Fidelity National Information Services



The Challenge

LSI is the largest centralized provider in the United States of property valuation, title and closing services to the first mortgage, home equity, and subprime markets, as well as to mortgage servicers and investors. LSI provides centralized processing services for the top 25 banks in the country, servicing over 75% of the market and has distinguished itself as the premier provider of unique and automated solutions. This effort has been fueled by the commitment of LSI's parent, Fidelity National Information Services (NYSE:FIS, part of the S&P 500) to differentiate itself by acquiring industry leading technologies, service providers and data repositories.

LSI's drive for automation and exception-based processing has made it the clear leader in the real estate lending industry. To maintain market leadership, LSI continually innovates to meet the demanding service level agreements of their customers. Adopting strategic Microsoft technologies for their internally developed eLender Solutions (eLS) product has proven instrumental in maintaining a strong lead over their competitors. LSI's eLS system is based on task driven workflow. This is accomplished via a custom workflow engine, job specific user interfaces and their 'Smart Queue' system. The original Smart Queue application used a multicast messaging system to manage the distribution of work and order exceptions for 1,500 regional workstations, geographically distributed across Sacramento CA, Santa Ana CA and Pittsburgh PA.

While the eLS system has proven effective at automating much of the work that was once manual, over time problems arose with the messaging component of the Smart Queue application which caused delays in processing and duplication of work. Compounding the problem were the distributed nature and real time messaging needs of the Smart Queue desktop application, running on each of the 1,500 regional workstations. Due to the strict SLAs that LSI enforces within their own organization on behalf of their customers, eLS-generated work and order exceptions are required to be processed in near real-time. The existing messaging system for Smart Queue was susceptible to lost messages and proved too resource intensive, impeding guaranteed delivery of messages to the regional workstations. Users were required to spend additional time through the entire lifecycle of an order, rather than quickly process orders within their queue. In addition, the messaging system was responsible for propagating work order "lock" messages in real time across the regional workstations. The lock messages were responsible for notifying users when an order was being processed and by whom. Since these messages would sometimes be lost, users would not know if an order was being worked on, causing duplication of work across workstations. LSI soon realized that they needed an Enterprise Service Bus (ESB) to meet the challenge of their real time, distributed messaging needs that could both ensure customer SLAs are met, and instill trust among their eLS Smart Queue desktop application users.

The Solution

Lsi turned to Neuron ESB to replace the existing messaging infrastructure for their eLS Smart Queue application. Built entirely on Microsoft .NET, Neuron ESB uses the advanced Microsoft Windows Communication Foundation (WCF) technology to provide real time reliable messaging options in the enterprise. Neuron ESB manages all communication over the bus by sending messages over “Topics” using a publish-subscribe pattern. Topics represent business conversations and can be simple names such as “Inventory” or “Orders”. In the case of the Smart Queue messaging solution, Topics are used to describe messages intended for work queues, as well as lock messages for their regional work center workflow application.

Neuron ESB also provided LSI with a variety of additional messaging options that many ESBs do not offer. For instance, the underlying network protocol used to power a Topic, such as TCP, MSMQ or Peer Channel, can be chosen and configured dynamically with a host of user configurable reliability and durability options. These options provide LSI the flexibility to easily replace the existing messaging infrastructure with Neuron ESB and change the configuration when the business conditions dictate, without impact to the ELS Smart Queue application.

By capitalizing on their existing .NET development skills, LSI developers were able to implement Neuron ESB with little training. By utilizing Neuron ESB’s implementation of reliable Peer Channel multi-cast protocol, real time messaging traffic across 1,500 regional workstation has easily been maintained and managed with minimal cost to operations or additional infrastructure. Built entirely on .NET and WCF, Smart Queue linked directly into the new Neuron ESB to receive and send real time work, order exception and lock messages.

With over 28 million messages per hour being routed by Neuron ESB across the 1,500 regional workstations, LSI moved forward to implement Neuron ESB Zones and Bridges to reduce WAN traffic between operational centers, essentially creating a federated ESB across the disparate geographies of Southern and Northern California.

The Benefits

Neuron ESB provided LSI with a solution for their reliable messaging needs. Built on .NET and the latest WCF technology, Neuron ESB bolstered user confidence by eliminating lost messages. Using Neuron ESB’s reliability layer on top of its Peer Channel network, real time delivery of “lock” messages was ensured, elevating user confidence even further. Once in production, customer satisfaction increased substantially as Service Level Agreements were met, and delays were reduced.

The new Smart Queue application was able to take advantage of Neuron ESB’s client connector to seamlessly connect to the ESB to publish and subscribe to orders, exceptions and locks. Users had instant visibility as orders populated queues in real time. The new Microsoft driven interface gave users the flexibility and experience to execute their tasks quickly, moving from order to order.

The new Smart Queue application, driven by Neuron ESB and built on the Microsoft platform has been in production since January 2007. As LSI moves forward, they intend to expand their use of Neuron ESB to implement dynamically configurable Quality of Service (QoS) options, reporting and monitoring, as well as allocate additional zones and bridges. Neuron ESB will secure their growth and substantially increase their ability to process new volumes of orders received by eLS.