



iBus//MessageBus *Success Story shorts*

iBus//MessageBus – the unique messaging solution

iBus//MessageBus is the only fully distributed serverless JMS product available. Unique group coordination features for application-level clustering simplify the development of load-balanced, high available and inherently fault-tolerant applications. It is uniquely designed for local applications requiring zero downtime, zero administration operation with the highest possible publish/subscribe message delivery rate. Seamless integration with iBus//MessageServer allows the advantages of both products to be uniquely combined for solutions such as real-time trading or live auction systems.

Solution examples

The following short success stories are examples of how Softwired customers and partners have deployed iBus//MessageBus to meet their business needs, outlining the challenges faced and the benefits they enjoyed.



Several of the largest players in the municipal-bond market, including Merrill Lynch & Co., the Salomon Smith Barney unit of Citigroup Inc. and Morgan Stanley Dean Witter & Co., are creating a new service that allows brokers and institutional investors the ability to buy and sell municipal bonds online. Softwired partner, WebCritical, is responsible for the development of this ambitious project.

The Challenge:

The venture, called "TheMuniCenter," will combine the inventories and distribution capabilities of four of the largest players in the municipal bond market. By accessing TheMuniCenter's site, investors and brokers can search for specific municipal-bond issues as well as trade municipal securities.

The Solution:

In partnership with GTT, WebCritical is designing and implementing a scalable technical architecture that will support multiple products (beyond Municipal bonds) and thousands of transactions per second, meeting the high transaction rate requirements of such a platform.

"After evaluating multiple products, we chose Softwired purely because of their ability to deliver the throughput we needed. No other company came close," said

WebCritical's managing director of enterprise support solutions, Kevin Pirko. "Softwired understands our requirements and has been extremely responsive to our suggestions and needs. Having their consultants on-site has proven to be a great way of understanding and solving the issues."

Architecture

Both iBus//MessageBus and iBus//MessageServer 4.1.1 are being used in the project, integrated to provide the mix of features required:

- JMS IP multicast via iBus//MessageBus for data distribution with low latency and high throughput.
- iBus//MessageServer for those messages which need persistence together with the right tools to keep the application ready for business 24x7.

The combination of the two products also ensures that the dynamic scalability needs resulting from the unpredictable workloads placed on the system are met. TheMuniCenter platform runs on Sun Solaris.

More details: www.webcritical.com



The World's largest online auction house recently launched a new service: recreating the atmosphere of a real-life auction floor, only online. Real-time bidding,

absentee bidding, taking part in actual auctions as they happen – a true merging of the virtual and real auction experiences!

The Challenge:

To capture the excitement and support the intense bidding action of the real environment. Providing the high-volume, time-critical messaging infrastructure required, the solution would need to ensure that all participants in the online auction and the staff present on the actual auction floor itself always see the latest bid information and to keep the system running, no matter what!

The Solution:

eBay's approach to the problem was to implement a cluster of special dedicated web server machines to send and receive bid and confirmation information between the data center and all registered online auction participants (via Java applets running within the web browsers of the participants). At the same time, bids are sent to an Auctioneer applet, being monitored by an official on the auction floor to alert of bids made, their confirmations being received in return.

Architecture:

Employed within the eBay data center itself, iBus//MessageBus provides the messaging backbone between the clustered Sun Enterprise 450 web servers and Auction Manager machines. Two important feature aspects of the product were critical to its selection for this project:

- IP Multicast is used to ensure that all participants in the auction are constantly up-to-date with the latest highest bid and that bids are distributed instantly to the real-life auction house for registration. No bid can afford to be missed.
- The unique group coordination features of iBus//MessageBus were used to provide fail-safe high-availability between the primary and backup Auction Manager servers, distributing bid and confirmation information reliably to all connected servers within the cluster.

More details: www.ebayliveauctions.com



The virtual call center offered by LivePerson provides the benefits of a call center without the investment: All services are provided via the hosted service framework running on servers in the LivePerson data center.

The Challenge:

The Internet, as currently designed, is not intended for real-time interaction. This limitation needed to be overcome; the highest level of functionality possible was to be provided to LivePerson customers while minimizing the overhead imposed on them. At the same time, the infrastructure chosen needed to present a single image across an entire cluster of web servers which would have extremely high volumes of traffic passing through them, while avoiding single points of failure or contention. In contrast to the 12 to 14 "hits" per "conversation" on Yahoo, for example, LivePerson expected to have to deal with some 300-400 such "hits" during a customer "conversation".

The Solution:

LivePerson found the answer to their needs in iBus//MessageBus:

- Reliable point to multi-point communication via IP multicast provided the asynchronous messaging support needed
- The single image required was guaranteed by ensuring that all relevant data required to keep databases stored on individual web servers within the data center is distributed to them all, instantaneously.

"iBus//MessageBus is unique in that it is the only serverless Java Message Service (JMS), multicast product that we have found to be totally reliable," said J.R. Reagan, Chief Technology Officer with LivePerson. "It is genuinely scalable, extremely lightweight, filters information by content, and requires a minimum of configuration and administration effort, for example, we can do on-line upgrades without taking the service off-line."

Architecture:

The LivePerson solution runs on Windows NT servers.

More details: www.liveperson.com or in the corresponding report extract from "Middleware Spectra, Volume 14" on our web site at:

<http://www.softwired-inc.com/pdf/news/SoftWiredLivePerson.pdf>

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