

ANDA BUILDS ROBUST AND ECONOMICAL APPLICATIONS WITH SPRING

Anda is the 4th largest distributor of generic pharmaceuticals in the US, offering more than 7,000 items that include medications, vaccines, medical supplies, over-the-counter drugs and vitamins. Anda ships next day deliveries to customer locations across the country and guarantees fulfillment accuracy of over 99.99%. To meet this pledge and serve its customer's critical health care needs, Anda has developed a suite of in-house applications to take orders in a variety of formats, via the company's customer-facing website and other methods. Application performance, availability and flexibility are all essential to Anda's ability to meet customer requirements.

CHALLENGE

Before using Spring, the de facto standard platform to build, run and manage enterprise Java applications, Anda built the company's main application – which processes customer orders – from scratch with Enterprise JavaBean (EJB) technology. Using this platform, Anda had difficulty in scaling the application to meet increasing product demand.

In particular, the application had performance issues during peak demand times at the end of each day, when pharmacists across the country were placing orders for the next day. At those times, server response time would go from less than a second to several seconds. The slowdown caused many customers to call Anda's customer service phone line, inundating the phone center with a mass of unnecessary calls.

"Life before Spring was difficult," recalls Bradley Barnett, Senior Web Developer, Anda. "We had to manage the application on a granular level, and worry about tasks such as startup and shutdown."

"Wiring disparate systems together was challenging," he continues. "We had to write a lot of code to integrate the systems, and there was no single place we could go to configure and make changes."

The amount of code used to program interfaces was ridiculous, says Barnett, and involved a lot of cutting and pasting, and redundant work. In fact, a staff of five programmers was needed just to maintain this aspect of the application.

SOLUTION

To solve these challenges, Anda turned to Spring for key capabilities such as transaction management, messaging control, security, and the critical parts of their web interaction. Barnett says Spring was chosen for ease of use, familiarity among developers, and easy integration.



SPRINGSOURCE RESULTS

Spring delivers the following business results to Anda:

- Accelerated Project Life Cycle
- Reduced Development Costs
- Strong Application Security
- Flexible Integration
- Superior Application Quality
- Higher Application Availability

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"Spring is where I start on every project," says Barnett. "It's the glue that holds everything together. Spring is indispensable in enterprise Java development today." Barnett notes that another advantage of Spring is the ease of finding help, documentation and tutorials online, thanks to the strong community and the broad breadth of knowledge behind the Spring platform. "Spring is a much more user friendly open source technology than others we have used," Barnett adds. "As other open source projects release new versions, I found that their documentation gets stale very quickly and takes a while to update, since it is not as actively supported as Spring."

BENEFITS

Spring delivers the following business results to Anda Pharmaceuticals:

Accelerated Project Life Cycle

Barnett's team built a new application in Spring for reordering products from suppliers electronically, and the application was already in testing after just two months of development. "Spring makes it easy to set up a new project, and accelerates time to market," Barnett affirms. "Spring enables us to get up and running fast, with the functionality and security we need. I can't imagine starting a project without it."

Reduced Development Costs

"Spring definitely saves the company money," Barnett notes. "The open source software allows us to build very robust and reliable applications but for very economical software cost." Anda also saves money with Spring because the company can maintain smaller, more productive teams. In fact, the most recent application was developed by Barnett and just one other developer. "The amount of code in our latest application would require the work of a lot more people and a lot more time, if we were not using Spring," Barnett asserts.

Strong Application Security

Anda leverages Spring's reliable security component to maintain controls within the company's electronic ordering application. Regulations enforced by the US Drug Enforcement Agency (DEA) and other government agencies impose strong controls over the distribution of pharmaceuticals to ensure that only officially authorized individuals receive drugs. Because it is illegal to send controlled substances to anyone who is not registered to receive them, this is a vital responsibility for Anda. Consequently, the company relies on proven Spring Security to define roles and authenticate system users, to ensure the security of the entire process. "Spring Security is vital to the whole application," states Barnett.

Flexible Integration

According to Barnett, one of Spring's advantages is the ability to plug into different systems. Because the company receives orders from so many different points – from online orders to FTP requests and even Excel spreadsheets via email – it is important to have a platform that can enable the integration of all these file types, as well as interface with multiple systems such as AS400, SAP and SQL. "Spring is quite phenomenal, the way it brings everything together," says Barnett.

Superior Application Quality

Spring supports better application quality for Anda because the components are already tested and proven by the worldwide Spring community, and because applications developed on Spring are easier to test, troubleshoot and debug. In fact, Barnett says most problems are caught at startup.

Higher Application Availability

Anda has found that the reporting features incorporated into Spring via JMX enable faster problem resolution and higher application availability. Using the Spring JMX reporting, Anda was able to isolate and fix a problem with dropped FTP connections without having to restart the server and take down the rest of the site.

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