Use of Hessian in a desktop financial application to communicate with EJBs

> "We created a prototype using Hessian and realized it would work in production with only minor tweaks. Hessian provided the interface-based remote invocation we needed with minimal coding, and **outperformed our previous proprietary solution.**"
>
> Tim Dawson, International Decision Systems

Solution
Hessian on a Java server and desktop

Product
Hessian

Industry
Equipment finance

Country
Global

Engineering Challenge

International Decision Systems (IDS) acquired an existing Swing-based desktop equipment finance application which used a proprietary communication protocol. This protocol was deemed inefficient and difficult to maintain, so it was necessary to find an alternative that would integrate easily with both the client and server components of the application. The protocol needed to be efficient and be able to pass through a firewall.

Analysis

The existing application had a proprietary communication protocol that fulfilled some requirements:

- Allowed the desktop application to communicate with an EJB server
- Able to work through firewalls via HTTP/HTTPS

However this protocol also had several problems:

- Command-pattern API obscured service usage
- Difficult to maintain
- Inefficient/excessive use of bandwidth

Java Remote Method Invocation (RMI) was evaluated to resolve these problems, however the fact that it was difficult to use with firewalls removed it from consideration. SOAP was also considered, but its complexity and inefficiency was deemed too high. The main advantage of SOAP, its ability to describe the protocol through a WSDL, was not applicable in this situation. Both the client and server parts of the application were to be provided by IDS.

Hessian was evaluated and within a few hours a prototype was ready. The ease of implementation made it possible for IDS engineers to determine quickly that Hessian was a highly efficient and fast alternative. It also met the requirements that it support communication with EJBs and pass through firewalls.

Findings

A number of APIs in the application were converted from using the existing proprietary command-pattern API to using Hessian over the course of an afternoon. IDS engineers were able to see almost immediately that Hessian would be a more maintainable solution and that it exceeded the performance of the previous protocol. The prototype developed was quickly approved for use in the application with only minor changes, was thoroughly tested and remains virtually unchanged. All new EJB services are exposed to the client application via Hessian.

IDS was also able to take advantage of Caucho's fast support service as their application moved forward. When they moved their application to use new Java 5 language features, Caucho was able to address the problem and provide a fix within days. This quick response gave them the confidence that Hessian provides a long-term, highly maintainable solution.

About International Decision Systems

International Decision Systems is a leading provider of equipment finance portfolio management software and services. Headquartered in Minneapolis, Minnesota, International Decision Systems also has offices in Basingstoke, Sydney, Singapore and Bangalore. For additional information about International Decision Systems, visit **www.idsgrp.com**.

About Caucho Technology, Inc.

Caucho Technology is an engineering company devoted to reliable open source and high performance Java-PHP solutions. Caucho is a Sun Microsystems licensee whose products include Resin application server, Hessian web services and Quercus Java-PHP solutions. Caucho Technology was founded in 1998 and is based in La Jolla, California. For more information on Caucho Technology, please visit www.caucho.com.

Contact:

Steve Montal
Co-Founder
Caucho Technology, Inc.
Telephone (858) 518-4400
montal@caucho.com