Software Engineering Firm Ups Performance, Speeds Development, & Simplifies Testing with Diffusion

Quick Facts

Baker Technology, a specialist software engineering firm for financial services, builds bespoke trading applications for global investment banks and exchanges. They use the Diffusion Real-Time API Management platform to provide a single, secure, unified gateway for distributing and synchronizing shared data models out to their Internet trading platforms built in HTML5. Diffusion reduces the development time and effort the company would otherwise spend writing the network stack to connect their Internet trading platforms to a variety of back-end services.

Industry

Financial Services

Challenges

• Access to real-time data feeds over the Internet into HTML5 clients,
• Reducing project technical delivery risk,
• Increasing speed of development,
• Aggregation of multiple APIs in one endpoint.

Solution

The Diffusion® Cloud Real-Time API Management Platform

Benefits

• Single platform for connecting and distributing trading application data,
• Multiple browser-to-server protocols with transparent switching depending upon network availability,
• Seamlessly manages failover among different server nodes,
• Easy test environment set-up with permissive development licenses,
• Simplifies and speeds bespoke application development.

Overview

Baker Technology specializes in user interfaces built in HTML 5. All of their development is done in London, allowing them to work extremely closely with their clients.

Their experience has demonstrated that the firm's London teams consistently outperform offshore or internal teams due to the company's high level of financial services domain experience and efficiency of development and delivery.

Baker Technology teams both develop new applications and migrate existing applications off legacy technologies – quickly and cost-effectively.

The Challenge

Since the firm's founding in 1997, Baker Technology has specialized in building bespoke trading systems. Baker Technology's reputation is based upon deep knowledge of the trading business and efficient delivery of real-time front-end systems.

With clients demanding platforms that are ever more technically challenging to build, the company's ongoing challenge is to minimize project complexity and maximize development efficiency for their clients, to give them a competitive advantage. A single platform for aggregating, managing, and distributing data in real time, helps them meet this goal.

The Requirements

Baker Technology first encountered Diffusion in 2011 when working with a large international investment bank. Baker Technology was engaged to build the front-end of a large, Internet-facing, FX trading

platform. Since then, the company has successfully delivered a wide range of projects for other organizations, with the core of their business coming from:

• Single-dealer platforms,
• Internal sales platforms,
• Exchange trading platforms,
• Real-time business intelligence platforms.

These platforms span a wide range of financial products including FX Cash, Money Markets, FX Options, Bonds, and Repos.

Across these platforms, Baker Technology has identified some common themes:

• The need to access and manage data from multiple services and third-party systems,
• The need to provide real time data distribution over the "last mile" to users on the Internet,
• Projects have high levels of technical complexity,
• Challenges around testing the user interface with high volumes of real time data,
• Aggressive time to market required by the clients.

> "Using the **Diffusion** Real-Time API Management Platform **derisks & simplifies** our **development.** With Diffusion, we eliminate a high proportion of technical risk in a project."
>
> David Bull, Director
> Baker Technology

*"With **Diffusion,** our **development teams don't** have to **worry about the network stack**. As a unified data platform, **Diffusion handles complexity** accessing the services on the back-end and **provides** us with the **data in real time to our front-end trading applications."***

Peter Baker, Director, Baker Technology

The Solution

Efficient, high-performance, and highly scalable data management and distribution is a key component of Baker Technology's bespoke trading systems development projects.

The Diffusion Real Time API Management Platform provides a secure, unified method of distributing and synchronizing data models between the server and clent tier. By using Diffusion as an edge tier, the Baker Technology development teams are relieved of the time and effort they would otherwise have to invest in connecting the disparate back-end data sources to their bespoke front-end applications.

A key part of any development project is thorough testing. With Diffusion, Baker can easily stub out the back-end and use a simulator to connect to the Diffusion API to run their rigorous functional and performance test cases - automatically as part of the build pipeline. The ease of testing with Diffusion, allows the company to build higher quality systems with more predictable performance and failure/recovery profiles.

Today & Tomorrow

An important ongoing benefit of the Diffusion platform is that teams start with a known platform for handling the data distribution. This reduces delivery times for new applications by allowing developers to concentrate on business deliverables rather than low level technical infrastructure.

Following the 2011 project for the large international investment bank customer, Baker Technology has been engaged to rebuild the bank's FX trading system twice, as business needs have evolved. They rebuilt the application in HTML5 in 2014 with a complete UX refresh in 2016.

David Bull, a Director at Baker Technology, says, *"With Diffusion in place as a data distribution layer, we were able to completely re-platform the user interface without changing the services on the back end. The bank was able to deliver a new experience to their clients, while leveraging the existing investment in their core services."*

Today Baker Technology continues to work with Diffusion on new projects for global financial clients.

*"The **Diffusion** Real-Time API Management Platform **is a big benefit** for us because it provides a **common gateway** into our clients' micro services **via a single API**. It **manages fan-out, scaling, and high availability** for the large global systems that we build. **Diffusion reduces both complexity** and **development time** for our User Interface teams. "*

David Bull, Director
Baker Technology

*"The **Diffusion** platform gives my team **a solid, well-known platform** on which **to build** the **complex business features** required by my clients. By **using Diffusion, we eliminate a big chunk of the technical risk of a project**."*

David Bull, Director,
Baker Technology

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