

# DataArt: Web-Based System for Targeted Advertising

- Industry
  - Advertising
- Customer
  - U.S.-based advertising company
- Business area
  - Targeted advertising to mobile devices, social media and interactive TV
- Technology
  - Java, MySQL, Javascript, Mobile
  - Java, Spring, Spring JDBC templates, javascript, jQuery, HTML5
- Challenges
  - High system load
  - Ad targeting implementation
  - Multiple system components async interaction
  - Complex event processing
- Integration with
  - Facebook
  - Parade.com
  - InboxDollars.com
  - Cashcrate.com
  - Business2Solutions (in progress)
- Geography
  - New York City
- Process
  - Agile

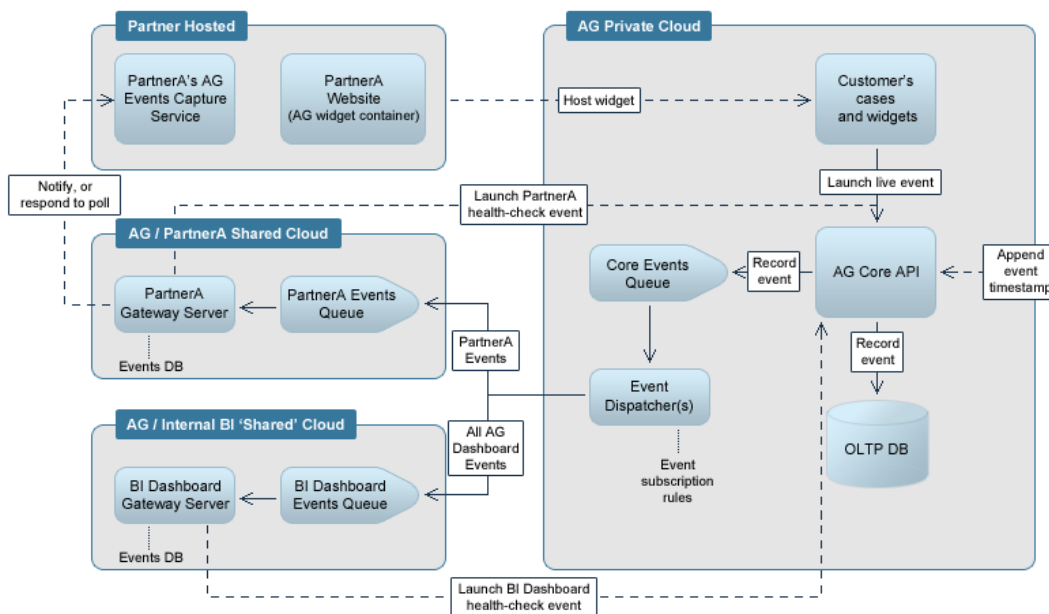
## Challenge

A U.S.-based customer, whose mission is to enable advertisers to deliver branded content to their target audience with more efficiency, engaged DataArt to redesign and expand the existing advertising portal.

To optimize the related expenditures, the client requested that DataArt implements the project using Cloud Computing.

The portal is instrumental for the customer as it provides a wide range of unique and highly innovative advertising services, allowing advertisers to present videos and other branded content to a carefully selected audience, thus establishing a desired connection between brands and consumers.

The portal users watch entertaining branded content and video ads they love and are rewarded for their time and attention with special offers of rewards and discounts. The rewards system is implemented using special numerical codes displayed during the content's presentation. The user can then enter the displayed code into the system to become entitled to a reward, or to gain discounted access to a product from the advertised brand.



As delivered to DataArt, almost none of the legacy system functioned as required. The client could neither add advanced functionality to support the business expansion plans, nor offer the services enabled by the system's basic functionality of expected quality. Thus, the system had to be both completely redesigned and significantly expanded to meet the customer's growing expectations.

The system also needed to be highly scalable to support the project's gradual, but significant future expansion. The peak load on the website varied significantly, especially during the periods when the client launched major advertising campaigns. Cloud computing allowed to better resolve this and other important issues during the application redesign while providing significant cost savings.

For the system implementation, third party integration and QA DataArt used and efficiently managed distributed teams in several locations. Finally, SQS service was required for dataflow processing, which made Amazon EC2 cloud-computing technology a natural choice for project implementation.

## **Solution**

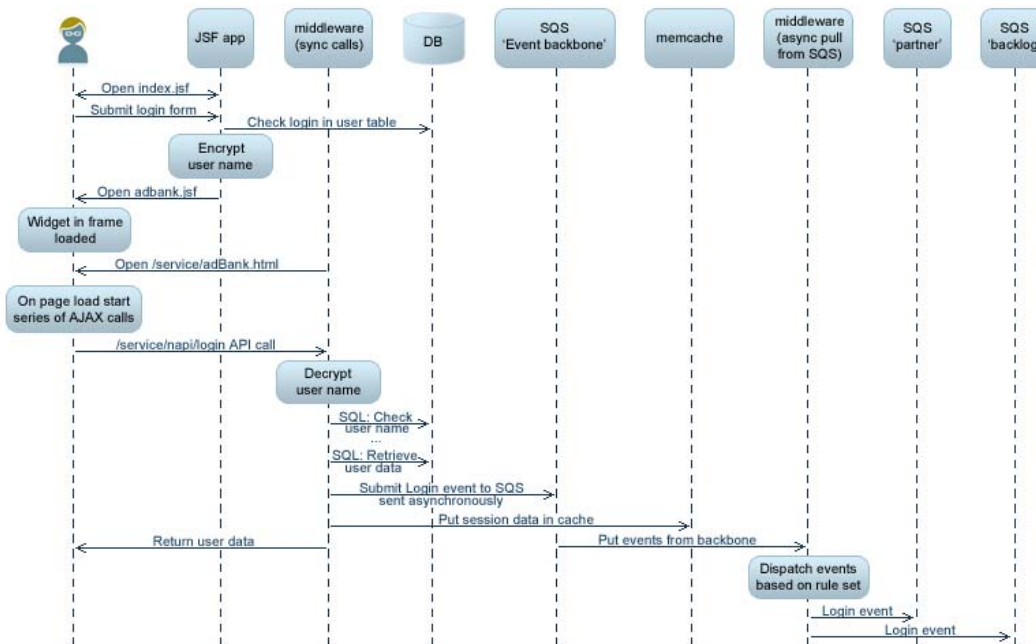
DataArt proposed to use Amazon's cloud-computing technology. This approach reduced the client's technology expenses several-fold.

DataArt redesigned and expanded the system to include a user-friendly Ajax GUI. The application's processing power was enhanced, and the number of concurrent users it can support has increased several-fold. The added API enables the system's integration with multiple external systems, such as Facebook, Parade.com, Inboxdollars.com, Cashcrate, and others.

The main challenge posed by the project was incorporating the newly developed client widget and backend into the legacy system where this part of the functionality was implemented using JSF. The project team included two software development engineers and one QA engineer. DataArt delivered a powerful solution that has been successfully used by the customer to extend their services to a growing number of U.S. clients. The solution's easy and cost-effective scalability has recently been proven when the customer decided to expand their market beyond the U.S.

## **Technology Solution**

The solution was developed using Amazon EC2. Amazon SQS was used to provide the asynchronous data exchange between the different components of the system. The project was assembled and deployed using the Rightscale cloud management system. Continuous integration was ensured using Atlassian Bamboo.



## Result

The customer has received a powerful tool that fully supports their unique advertising services. Since the launch of the new portal, the company's customer base has rapidly grown and the system has been recently scaled up to support the client's overseas expansion plans.

## About DataArt

DataArt is a custom software development firm that builds advanced solutions for the financial services, healthcare, hospitality and other industries. Combining domain knowledge with offshore cost advantages and resource flexibility, DataArt develops industry-defining applications, helping clients optimize time-to-market and minimize software development risks in mission-critical systems. With an unrivaled talent pool of highly skilled software engineers in New York, London, Russia and Ukraine, DataArt provides the technical skill, accountability and industry knowledge needed to deliver custom applications on time and on budget.

DataArt clients include Standard & Poor's, Harmonic Fund Services, Ogilvy, artnet, Panasonic, Cancer Research, Charles River Laboratories, Betfair, Misys, leading asset management firms and three of the top ten investment banks.