



Scaling to Support 15 Billion Transactions Daily with Cloudera Enterprise

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— Jeremy Kayne, CTO, Bidtellect

Overview

Bidtellect is a leading native advertising technology and solutions company. The company’s real-time bidding (RTB) platform facilitates the buying, selling, and delivery of native ads across the web.

Using **Cloudera Enterprise**, Bidtellect helps its clients optimize their advertising investments, with speed and scalability to support billions of transactions daily.

Impact

By moving to Cloudera Enterprise, Bidtellect can optimize bidding models, which directly leads to increased profitability and customer retention.

“In the native advertising market, coming in second place equals a loss of business,” said Jeremy Kayne, CTO, Bidtellect. “Cloudera is arming us with the tools to help us deliver the best return on our clients’ advertising investments, with speed and at scale. We can find meaningful data insights and create predictive modeling to determine what ads to show where and how we should bid.”

Additionally, Bidtellect improved customer trust and staff productivity by increasing the stability of its **Apache Hadoop** environment with Cloudera Enterprise.

“Today, our platform is more stable than ever, and we’re a more trusted and respected vendor as a result of our relationship with Cloudera,” said Kayne. “The return on investment is at least three to one. We would have had to hire at least two additional full-time employees or shift entire parts of our team to focus on the Hadoop stack had it not been for **Cloudera Support**. Our employees are happier and able to focus on growth and innovation.”

Business Drivers

Online advertising is rapidly changing, moving from traditional fixed-sized ads to new “native” ads that conform to the style and content of a publisher’s website.

“People just don’t interact with banner ads anymore,” explained Kayne. “Today, native ads, which fit the form and the function of a publisher’s website, more effectively engage users and deliver content that users want to interact with.”

Bidtellect’s strategy is to use data to serve up content, at scale, to advertisers better than any of the competition. Today, the company manages a petabyte of data and supports nearly five billion transactions daily. Within the next year, executives estimate that the company will reach a scale of over 15 billion daily transactions. Nearly 99 percent of the company’s transactions are completed in 50 milliseconds or less.



Key Highlights

Industry

- Digital marketing (Ad exchange)

Location

- Delray Beach, Florida, USA

Business Application Supported

- Real-time bidding
- Predictive modeling

Impact

- Improves profitability and customer retention
- Allows technologists to focus on creating intellectual property for the company
- Delivers a 3-1 ROI through greater staff efficiency

Data Sources

- Clickstream
- Transactional database (including metadata)
- Aerospike NoSQL database

Technologies in Use

- Apache Hadoop Platform: Cloudera Enterprise
- Apache Hadoop Components: Apache Kafka, Apache Spark
- BI & Analytics Tool: R

Big Data Scale

- 1 PB

Bidtellect piloted another Hadoop distribution prior to implementing Cloudera Enterprise, but its development and operations team found itself spending significant time managing the Hadoop cluster rather than focusing on the core competencies of its business.

“The other Hadoop vendor had a hard time supporting [Apache Spark](#) or [Apache Kafka](#), and that created an enormous strain on our team,” said Kayne. “We had to fight operational problems almost daily and this got in the way of our product development.”

Solution

By deploying Cloudera Enterprise, Bidtellect development and operations staff can now concentrate on building intellectual property versus maintaining the Hadoop stack.

With its Cloudera enterprise data hub ([EDH](#)), Bidtellect uses Spark to drive the extract, transform, and load (ETL) process between clickstream data and advertising exchanges. This allows Bidtellect to manage a global bidding platform without duplicating infrastructure.

Spark also enables Bidtellect to implement machine learning, facilitating constant data model optimization.

And, using Kafka, Bidtellect can stream data into the HDFS repository from multiple locations across the globe simultaneously so that advertisers in Europe benefit from the same intelligence as those in the United States.

Why Cloudera

According to Kayne, staff evaluated Hadoop distributions from Cloudera, Hortonworks, and MapR before selecting Cloudera Enterprise, which it found to be the fastest, easiest, and most secure Hadoop platform.

“When we were managing Spark and Kafka in-house, we had issues with corrupt messages and the pipeline failing,” said Kayne. “With Cloudera’s expertise, we’ve been able to solve those problems. We’ve also gotten tremendous value out of their core offerings. [Cloudera Manager](#) and Cloudera Support simplified the setup process and have saved us lots of time and energy. The Cloudera team is fantastic and has felt like an extension of our own since day one.”

About Cloudera

Cloudera delivers the modern platform for data management and analytics. The world’s leading organizations trust Cloudera to help solve their most challenging business problems with Cloudera Enterprise, the fastest, easiest, and most secure data platform built on Apache Hadoop. Our customers can efficiently capture, store, process, and analyze vast amounts of data, empowering them to use advanced analytics to drive business decisions quickly, flexibly, and at lower cost than has been possible before. To ensure our customers are successful, we offer comprehensive support, training, and professional services. Learn more at [cloudera.com](#).

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