



Cisco WebEx

Improving the Customer Experience and Customer Ratings

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— Joe Hsy, Director of Development and Engineering, Cisco WebEx

Overview

Cisco WebEx is a leader in conferencing services, supporting more than 26 billion conference minutes each month. Its audio, video, and web conferencing services help users connect and collaborate with colleagues around the world.

The company's ability to process, discover, model and serve petabytes of data in real time has helped staff improve customer ratings and uncover up to 17 times more fraud.

The Challenge

Maintaining a leadership position in the web conferencing market requires keeping a keen eye on service quality and customer needs. The time it takes to join a meeting, the quality of the audio and video feeds, and the ability for users to easily collaborate all play a role in customer satisfaction and ratings.

One of the challenges Cisco WebEx faced was that different data silos were used to track service issues, client usage, and potential fraud. The organization had no easy way to combine or correlate data across these silos. This limited the company's ability to see end-to-end the customer experience. Additionally, the company's current tracking couldn't support an increasing volume of telemetry data—expected to rise to several petabytes in the next few years.

“We wanted to tie the business side of WebEx with the operational side and conduct analysis that we simply couldn't with siloed information,” explained Joe Hsy, director, Development and Engineering, Cisco WebEx

The Solution

By moving from disparate data silos to a data discovery and analytics environment on an enterprise data hub on Cloudera, powered by Cisco UCS servers, WebEx staff can now combine and correlate operational data with business information to improve decision-making across all aspects of its business—product development, engineering, marketing, sales, and customer service.

By using the machine learning algorithms in [Apache Spark](#), the company can automatically create new rules as new patterns are detected to continuously improve fraud detection and service monitoring.

WebEx processes real-time streaming data (via [Spark](#)) and shares the data with its services and fraud teams (via [Apache Kafka](#)) so they're alerted of any operational anomalies as conferences are underway and can fix any issues immediately.

Key Highlights

Industry

- Telecommunications

Location

- San Jose, California, USA
- Supports global conferencing in over 230 countries

Business Application Supported

- Data discovery and analytics for service monitoring, fraud monitoring, and customer care
- Machine learning for real-time processing, troubleshooting, and analysis
- Stream processing for real-time alerting

Impact

- Increased customer ratings through improved service
- Identified 17x more fraud
- Delivered platform at 1/10 the cost of traditional data warehouse and BI environment

Technologies in Use

- Apache Hadoop Platform: Cloudera Enterprise, Data Hub Edition
- Apache Hadoop Components: Apache Kafka, Apache Spark
- Servers: Cisco Unified Computing System (UCS)
- Discovery: Platfora
- Log Management: Splunk

Big Data Scale

- Nearing 1 PB

Cloudera Enterprise, Platfora Big Data Discovery, and Cisco Unified Computing System (UCS) servers drive this Apache Hadoop based enterprise data hub, providing a platform that can scale out to accommodate petabytes of data at one-tenth the cost of a traditional data warehousing and BI infrastructure.

“Cloudera and Platfora enabled us to significantly reduce the number of tools we need to manage, and decreased the time to launch new use cases from one month to less than a day,” said Hsy. “The unified management capabilities of Cisco UCS servers have reduced provisioning times by close to 80 percent. Software tools can only perform as well as the infrastructure on which they are running.”

Impact: Improving Customer Satisfaction Ratings

One of the team’s first use cases for its new platform was understanding “meeting join time”—how long it takes a customer to join a meeting—as this has a direct impact on the user’s overall meeting experience.

With the new data discovery and analytics environment, staff can drill down into all the necessary data—web data, server data, network data, user behavioral data, back-end system data—to understand not only that a problem is occurring, but why. Such insight has enabled the organization to better isolate the root cause of problems and take action to improve the customer experience.

Additionally, through usage analysis, the company can now better understand how customers use its products and provide recommendations about which features might be beneficial based on their specific applications.

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Impact: Stopping Fraud in its Tracks

Several years ago, WebEx staff began exploring how to systematically uncover and stop fraudulent meetings, in which hackers use customer accounts to bill long-distance calls.

At the time, the organization had to manually code “rules” based on detected fraud patterns, such as if a certain number of users called into a meeting at a certain frequency and from specific countries. While the manual rules helped identify many fraudulent cases, it was difficult for staff to keep up with fraudsters’ evolving tactics.

“As hackers realized that we had these rules, they changed their behavior,” said Hsy. “Now, using machine-learning algorithms, the system can identify the new patterns as they evolve and automatically create the new rule sets. When we compared both approaches, the machine-learned rules did much better, helping us detect up to 17 times more fraud based on historic data.”

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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