

IMPROVING THE CUSTOMER EXPERIENCE ACROSS ITS PROPERTIES

3M

Records per hour processed

Industry

– Entertainment

Locations

– Headquarters: Paradise, Nevada, USA

“We can reach a much broader customer population, people with both gaming as well as nongaming habits, across different age groups, and know exactly which offers we should send.”

Rizwan Patel, Director, Emerging Technology and Innovation, Caesars Entertainment

Caesars Entertainment is the world’s most geographically diversified casino-entertainment company, operating casinos and resorts under the Caesars, Harrah’s, and Horseshoe brand names in over three continents.

Challenge

Facing a shift in dynamics across demographics and age, increasing interest in non-gaming activities, and the exponential growth of unstructured data, including social media and IoT data, Caesars executives sought a modern data platform to remain innovative. The company’s existing data warehouse platform couldn’t provide the scalability, performance, or capabilities needed to improve customer segmentation and expand its analytic capabilities.

“Technology innovation is one of the reasons that Caesars is the world’s most geographically diverse casino entertainment operating company,” said Rizwan Patel, director of Emerging Technology and Innovation at Caesars Entertainment. “We are very good at using our data.”

Solution

Caesars uses Cloudera, running on Intel-based systems, to bring together and process in real time and at scale a wide range of unstructured and structured data. This includes customer data, clickstream data, reservation data, and millions of messages each hour that stream in from point-of-sale and IoT devices.

The platform delivers real-time insights for personalization and recommendation engines. It supports advanced audio analytics and sentiment analytics to give customer service staff insight into how to improve service calls. And it enables machine learning at scale to help Caesars understand each customer’s journey based on their interactions across channels, including reservations, social media, credit cards, and kiosks.

Solutions highlights

- Modern Data Platform: Cloudera Enterprise
- Workloads: Operational Database, Data Science, Data Engineering
- Key Components: Apache HBase®, Apache Kafka®, Apache Spark™ Streaming, Cloudera Manager, Cloudera Navigator
- Data warehouse: Teradata
- Systems: Intel® Xeon® processor E5-based systems

Applications supported

- Customer segmentation
- Customer journey
- Voice / emotion analytics
- Video / image analytics
- Marketing recommendations

Data sources

- Customer data
- Clickstream data
- GPS / Geo-fencing data
- Reservation systems
- Point-of-sale systems
- Table game video
- Call center audio
- Social media
- Location alerts
- Third party data (construction data, traffic data, weather data)

Impact

- Increases revenue with better customer segmentation and personalized recommendations
- Improves campaign performance with faster time to insight
- Strengthens customer service through greater insight into guest sentiment
- Processes over 3 million records per hour and ingests a billion rows of IoT data monthly

Big data scale

- Multiple gigabytes collected each day
- 10 measurements per 1,000 sensors captured every second

Implementation

In implementing a new data platform, Caesars needed to maintain security for Payment Card Industry (PCI) and other security standards. Cloudera Navigator provides the visibility the organization needs to maintain security.

“We’re really impressed with the features that Cloudera Navigator provides for auditing, data lineage, data discovery, metadata management, all packaged together and accessible through a very visually appealing dashboard,” said Patel.

Results

Caesars has realized additional top-line growth and opened new revenue streams with the insights gained.

For example, as Caesars saw a shift to non-gaming expenditures, such as retail, entertainment, and dining, marketing executives could better understand how and where guests were spending their money. What types of restaurants did each guest frequent? Which retailer products was a particular guest most interested in? With this insight, Caesars can send each guest the promotions and offers based on their interests and their overall value across properties.

Incorporating third party data, such as construction alerts, weather data, and IoT data from GPS and video systems, enables the company to generate these personalized offers based on how close a guest is to a particular Caesars property.

“We can reach a much broader customer population, people with both gaming as well as non-gaming habits, across different age groups, and know exactly which offers we should send,” said Patel. “Not surprisingly, our revenue started seeing a positive uptake at around the same time we went into production with our new platform.”

Additionally, Caesars can respond much more quickly as guest interests change. “We have a much tighter feedback cycle for identifying the most successful campaigns and fine-tuning our offers to improve results for specific segments,” said Patel. “Today we are processing more than three million records per hour, which would have been very, very difficult to do on any other platform.”