OpenText Magellan-Vertica Telco Demo

Video Transcript

Welcome to our demo of how data-driven insights can enable the telecommunications industry. As the worlds of mobile technology and data analytics continue to evolve at unprecedented paces, meeting the ever-growing demands of customers requires a new level of agility and intelligence.

We have built a self-contained and deployable test drive solution using OpenText's Vertica database and Magellan BI and reporting platforms that provides network monitoring and routing traffic analysis in real time.

Customer demand changes and network capacity are tested on a daily basis. Whenever there are large scale events, like concerts or football games, bandwidth is taxed and geo concentrations of user activity shift.

The solution predicts where to place the next tower to best support the activity for a busy event like a football game. The solution uses Vertica's built-in machine learning algorithms in-database and Magellan for visualization.

We kickoff the demo with the deployment of the Vertica docker container. The database comes up in seconds and is ready for connections. We then launch our data generator which simulates the event ramping up and data is immediately ingested into the Vertica database.

As the event gets underway, the map shows in real-time as network latencies at certain tower sight starts to increase. You can see towers with good average latency in green. Towers with acceptable average latency between 100 and 200 milliseconds are in yellow. Towers with poor average latency over 200 milliseconds are in red high latency.

Also, packet loss starts to increase. If too many of these packets fail to reach their destination, users at the event are going to notice lagging video playback and longer page loads.

Network jitter also begins to increase at network capacity is diminished. Jitter is the variance in latency and is seen as the disruption in the normal sequence of sending data packets. Jitter also impacts service quality by giving the user at and around the event an inconsistent experience.

As the event traffic peaks, this data flows into the database, Vertica's embedded machine learning capabilities are leveraged in the background. The dashboard uses Vertica's built in K-means clustering algorithm to predict and suggest future tower sites to improve the given network landscape and individual tower capacity.

Vertica also predicts quality of service as a key performance indicator. This dashboard uses Vertica's built-in logistic regression machine learning algorithm to compute predicted quality of service by tower location. This is based on a learned model that is refreshed in real-time on the latest data.

Communications companies need a comprehensive and efficient solution for optimizing network performance during high traffic events with real time analysis and predictive algorithms the solution must identify areas of congestion and recommend the optimal placement of towers to ensure a seamless connectivity for users.

We have shown Vertica's cloud database and Magellan's capabilities executing a real-world scenario to highlight the increasingly important capabilities organizations need for empowering digital strategies these advanced capabilities enable organizations to make data-driven decisions faster and more accurately giving them a competitive edge in any industry with OpenText.