

# Maxcom Telecomunicaciones

Vertica delivers drastically improved performance for regulatory compliance and enables an eighty-five percent reduction in fraud-related costs vs last year.

## Overview

Maxcom Telecomunicaciones is a Mexican integrated telecommunications operator providing managed voice and data services to enterprise and SMBs customers. Founded in 1993, listed in 2007 at the Mexico stock exchange, the company provides a range of services including local and long-distance voice, mobile (MVNO), managed IP data networks, high-speed internet access, and VoIP phone services over its own cutting-edge infrastructure.

**"We initially chose Vertica because of its superior performance and query speed, but we now realize there is so much more we can do. Vertica's machine learning capabilities will help us analyze network performance, predict capacity constraints, and ensure the best quality service to our customers."**

### ALFONSO LARA

IT Director  
Maxcom Telecomunicaciones

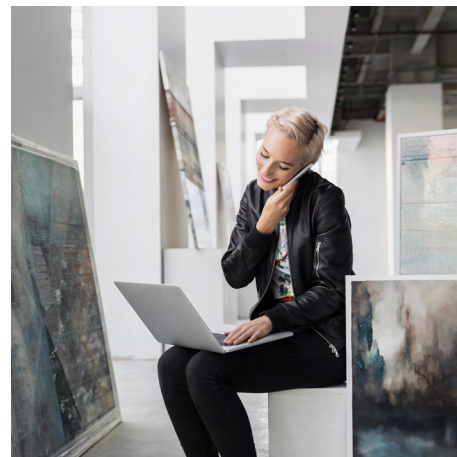
## Challenge

When the Federal Law for Telecommunications in Mexico increased the retention period for call detail records (CDR), it posed a challenge to Maxcom, as explained by Alfonso Lara, IT Director for Maxcom: "Our 1,500 enterprise and 100,000 residential customers generate 25 million calls each day, which we have to keep a record of. We used to keep this data for two months, and it was kept in our Oracle database. Querying such a large data store was complex, and it would take eight hours to perform a standard data query. The new regulation not only increased CDR retention to two years, but it also shortened the time in which to answer queries. Some requests need to be answered within an hour, and with the slow query performance on our Oracle database, that was not going to work for us at all."

Maxcom needed a data analytics solution to comply with the new regulations and enable them to respond to any requests within 12 hours. CDR information needs to be available 24x7x365, and the new solution had to perform at massive scale, given the expected growth in data volumes resulting from a much longer CDR retention period.

## Solution

While Maxcom was exploring options, it received a fortunately timed presentation from



## At a Glance

- **Industry**  
Telecommunications
- **Location**  
Mexico
- **Challenge**  
Scale analytics in order to respond to changing government regulations, improve fraud detection management, and provide superior customer service
- **Products and Services**  
Vertica Analytics Platform
- **Results**
  - + 60x faster query performance
  - + Fraud-related costs reduced by 85%
  - + Full compliance with Federal Telecommunications Law
  - + Cloud deployment offers affordable flexibility and scalability
  - + Advanced machine learning functions support future use cases

**“We started using Vertica data analytics to pinpoint the causes of fraud to close any loopholes and be more proactive in our fraud prevention approach. As a result, our fraud-related costs reduced by eighty-five percent between 2017 and 2018.”**

**ALFONSO LARA**

IT Director  
Maxcom Telecomunicaciones

Contact us at:  
[www.vertica.com](http://www.vertica.com)

Like what you read? Share it.



Vertica and found that the Analytics Platform met all of its requirements. After performing a proof-of-concept, they were pleasantly surprised, according to Juan Nieto, Analytics Manager at Maxcom: “We actually couldn’t quite believe it. Once we loaded our data, a query that would take us eight hours to perform in our Oracle database was finished within eight minutes on Vertica. That is 60x faster. We immediately saw the potential and liked our interactions with the Vertica product and account teams. We soon started the implementation with a local partner.”

Within just three weeks the Vertica Analytics Platform was operational and the Maxcom team starting reaping the benefits. The comprehensive Vertica documentation really helped in becoming productive quickly, and the partnership with Vertica highlighted many other areas in which they could support the Maxcom team, as Juan Nieto describes: “The regulatory requirements with faster query time and longer CDR retention were quickly met, once the relevant queries were defined in Vertica. In the meantime, the Vertica team suggested many other use cases and we started to explore these.”

Alfonso Lara picks up the story: “Fraud detection is key for us, as it’s a very direct cost to our business. We started using Vertica data analytics to pinpoint the causes of fraud to close any

loopholes and be more proactive in our fraud prevention approach. As a result, our fraud-related costs reduced by eighty-five percent between 2017 and 2018. This was the type of example that made our upper management look very closely at Vertica and its potential in other parts of our business.”

Maxcom’s commercial division will leverage Vertica to define and predict customer behavior. When customers increase or decrease their service usage, data analytics highlight this and will enable the team to package tailor-made offers and solutions for customers. This will increase customer satisfaction and retention rates.

The network division could use Vertica to pinpoint any weaknesses in its infrastructure so that network problems can be addressed before they cause any issues to users.

### Results

Alfonso Lara concludes: “We initially chose Vertica because of its superior performance and query speed, but we now realize there is so much more we can do with the platform. Vertica’s machine learning capabilities will help us analyze network performance, predict capacity constraints, and ensure the best quality service to our customers. We are delighted with the ongoing partnership with Micro Focus®.”