

RingCentral

RingCentral trusted by customers for quality business insight powers real-time business intelligence platform with Vertica.

Overview

RingCentral is a global provider of cloud unified communications and collaboration solutions. More flexible and cost-effective than legacy on-premise systems, RingCentral empowers today's mobile and distributed workforces to be connected anywhere and on any device. RingCentral is a leader in the 2016 Gartner Magic Quadrant for Unified Communications as a Service Worldwide for the second consecutive year.

Challenge

RingCentral is an IP voice telephony provider established in the late 1990s. Most of the company's business is done in the North American market, with an active expansion to the European market currently underway. One

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Vertica Database Administrator
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of its competitive advantages is full-fledged telephony functionality for customers without access to the wired telephone network who would like to use a wide range of services, including messaging, voicemail, and the ability to set up remote contact centers.

"There are a fairly large number of companies operating in this sector, which is why we are constantly evolving by offering new services, data plans, etc. Yet it is not enough to merely provide telephony services in order to generate customer loyalty: one way to achieve this is by using a reliable service that supplies 24/7 business intelligence for both external and internal clients," says Igor Trosko, Vertica database administrator, RingCentral.

The ability to receive information quickly is extremely important in the telecom business. This kind of efficiency has to be achieved on several levels. Customers need quick access to information about services provided to them, engineers need to be able to analyze system metrics and marketing and finance teams need to be able to measure business performance.

The lack of fully functional support for online analytical processing cubes (OLAP) in the company's database management system presented the biggest challenge for the company's business intelligence (BI) systems. The



At a Glance

- **Industry**
Telecommunications
- **Location**
Russia
- **Challenge**
Deliver productive business intelligence systems for both external and internal users. Build a solution capable of supporting business growth for years to come.
- **Products and Services**
Vertica
- **Results**
 - + Supported 52,000 requests per day and up to 5,000 requests per hour
 - + Tripled the number of customers using the business intelligence service reaching 350,000 users
 - + Up to 12 billion data entries accessed by customers on a daily basis
 - + Developed internal business intelligence geared toward supporting business growth

company used several well-known products. However, these systems were deployed on a single server. A server failure rendered the services completely inaccessible. They were not too flexible in terms of load management either. Moreover, many platforms with the capability to create data repositories have a very long response time, which is very bad practice in the case of online systems.

"We needed to ensure the shortest possible response time for a large stream of requests of unknown intensity. The number of requests varies greatly over the course of the day: from several requests to hundreds of requests per minute," continues Trosko.

When it came to choosing a new solution, the company opted for the best product without any hidden pitfalls the market had to offer—Vertica Analytics Platform. This platform proved to be an ideal solution and has been used to support business intelligence systems for close to three years now.

Solution

"We were intent on supplying customers with business intelligence in real time with a focus on specific data sets of interest. Our old platforms made this extremely problematic if at all possible. With Vertica we have become confident and started providing better business intelligence," stresses Trosko.

Vertica Analytics Platform uses Massive Parallel Processing (MPP) architecture so that it can better handle load changes. This makes it possible to keep hardware costs to a minimum while delivering a high level of service. Vertica is a stable system that is completely fail-safe. In case of any hardware problems, it can work with fewer servers, which does not affect user experience and can be detected only during monitoring. As an MPP system, Vertica is an ideal solution where reliability meets high performance.

"Alternative solutions, including open source code products, are currently available on the market. Yet they are less functional, stable, and user-friendly in terms of support. Service support in particular is one of the advantages of Vertica," comments Trosko.

The company also looked to keep hardware costs to a minimum. A server that uses a conventional database and delivers equivalent performance would have cost several times more. This would have turned it into a solution of a completely different class. One of the advantages of Vertica is that it is independent of hardware and can run on any standard server solutions. This translates into cost-effective investments in hardware and the fastest possible completion of tasks. The company has also created a vast reserve of capacity that has enabled it to work for three years without changing the logic behind the solution.

"Having created a reasonable reserve of hardware capacity, we have been able to work comfortably while the number of our subscribers has grown several times over. The success of the solution has been so great that the company's growth over the past three years has not affected the system's performance," says Trosko.

Low administration costs came as a bonus. Once the system has been deployed and database configured, the company is able to minimize staff costs by hiring a single administrator.

According to Trosko, the first step was the hardest part of this project. When the decision was made to buy Vertica, the company was forced to relinquish the conventional database management system mentality and embrace new approaches and opportunities. This called for a major change in perception. People experienced in using data storages are less perturbed by this task while database professionals face psychological barriers. This is not a question of competencies but specifically of

the technical culture and mindset of professionals. When it comes to deploying a fundamentally different product, it is important not to confine oneself to old approaches.

RingCentral is pursuing a quite natural centralization policy by migrating all of its business intelligence systems to a single platform. Some tasks are still being historically solved using other platforms, but all business intelligence is gradually transitioning to Vertica, which is perfectly natural.

Results

"Customer satisfaction is the primary source of business growth. When customers have access to detailed business intelligence that competitors are unable to offer, this is a strong argument in favor of our solution. We see a growing number of requests received by the system, which proves that business intelligence services are popular with our customers," says Trosko.

Customer requests account for the bulk of the load. Their number currently stands at 52,000 per day. Customers use the available services quite actively and even integrate them into their own business processes in an attempt to measure the performance of their own employees. This type of business intelligence has generated a surprising amount of demand and serves as a basis for optimization of business processes.

The number of requests from internal users is much lower, close to 1,000 per day. However, company users are interested in deeper BI data mining. While they hold a high opinion of the new BI services, the appetite comes with eating, so to speak, and the new opportunities generate ever new requests. For example, they requested that BI indicators be displayed in real time on computer screens in the company's offices. The ability to keep track of the entire company's performance in real-time gives

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employees a sense of belonging. Far from all companies show their staff the inner workings of their business.

“The project has proven to be cost effective and has started to evolve through an expansion of hardware, software upgrades, and coverage of new business processes. We have demonstrated to management that the system is working and that the investments are justified,” says Trosko. Solution growth is mainly centered on online business intelligence. The hardware is gradually becoming obsolete due to a very large number of customers wishing to receive data frequently, at very short intervals. This generates an excessive load and the need to buy new hardware with greater capacity and resources.

The BI system functionality is also expanding as it adds more metrics and data aspects that can be tracked. Last but not least, additional opportunities emerge for data analysis and management of predictive business intelligence based on the amassed data. The vast body of data can both be demonstrated to potential customers and internal experts as well as used to accomplish various business tasks: make predictions, create marketing plans and policies.

“Every tool is good in its own place. There are many solutions that supplement Vertica Analytics Platform and make it more effective. It does a wonderful job as a platform for a BI system intended for external users,” sums up Trosko.