



Use Case: Messaging

Messaging systems facilitate communication, interaction, and collaboration between diverse user-groups and applications via social networks, cloud services and more.

Industry

Online Marketing Services

Challenges

- Reliance on IBM DB2 relational database limited ability to scale to support high volumes of dynamic data
- Database limited storage of data for longer than 90 days
- Data-driven email messaging and social marketing services required continuous availability

Solution

- DataStax Enterprise for content storage and activity tracking by powering more than 10,000 one-to-one interactions between small businesses and customers daily

Results

- Reduced operational costs by replacing expensive relational system with DataStax Enterprise
- Increased data workload capacity from several million database transactions per minute to more than 10x that amount
- Easily scale out on commodity hardware across multi-data centers
- Ensure 100% uptime of content storage and activity tracking engine

MESSAGING

CONSTANT CONTACT TRACKS MILLIONS OF MESSAGES PER MINUTE WITH DATASTAX

With more than half a million customers, worldwide, Constant Contact provides online marketing tools, including email marketing, social media marketing, event marketing, local deals, digital storefronts, and online surveys to help small businesses generate new customers, repeat business, and referrals. Constant Contact consistently ranks as one of the top email senders worldwide.

The Challenge

Constant Contact has been in business for more than 12 years and specializes in servicing very small organizations, with 70% of their customers having ten or fewer employees. This means the company must be very smart about IT expenditures to deliver a very low-cost service to their customer base, without sacrificing quality or reliability of service.

Their primary challenge was scaling legacy database systems to support extreme volumes of email and social data captured by their solution. Previously relying on an IBM DB2 relational database, the maximum duration to store historical detail data was limited to 90 days. Constant Contact's technical team needed to maintain at least two years' worth of data to support new social media products and provide customers with access to data for analysis, in a cost-effective manner. Constraints of legacy systems forced the organization to evaluate modern technologies.

The Solution

The need for scale, speed, and support for multiple data centers brought the technical team at Constant Contact to DataStax Enterprise and Apache Cassandra™. "To do what we need to do today without Cassandra would be cost prohibitive and significantly harder to manage operationally," said David Connors, Vice President of Operations.

In describing their criteria and search for an RDBMS replacement, Connors said, "Speed, scalability, and multi-data center support were primary criteria when choosing DataStax Enterprise over other NoSQL providers. Additionally, the ease of development was a major plus. In comparison, other options quickly fell out of the running."

Mark Schena, manager of systems automation at Constant Contact, points out that another key reason for choosing DataStax Enterprise was operational simplicity in managing a very complex, distributed database system.

"DataStax Enterprise hasn't been a really intensive system to operate," said Schena. "From a management perspective, we don't spend a lot of time in the system. As a result, I would describe our experience with Cassandra to be effortless."

Vibrancy in the open source (Cassandra) community was another key motivating factor in selecting DataStax, according to Jim Ancona, systems architect at Constant Contact.

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*Dave Connors
VP of Operations
Constant Contact*

The Results

With DataStax, Constant Contact easily manages six 72-node clusters that span two data centers, with plans to add another production database cluster. The two largest data use cases managed by DataStax Enterprise at Constant Contact are content storage and activity tracking. The content storage application holds all user-generated content for email campaigns and other marketing products, with the data being HTML in nature. The tracking application deals with time-series data. It manages all customer interactions and actions, including clicks, opens, sends, and other types of event data.

Although Cassandra has been the primary data store, the team is now starting to introduce analytic nodes into their configuration, which is simple to do with DataStax Enterprise. Connors says they are looking to scale their systems that currently handle several million database transactions per-minute to something that will handle ten-times that amount. He and the team at Constant Contact see DataStax Enterprise as the platform that will power this initiative.

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About DataStax

DataStax is the fastest, most scalable distributed database technology, delivering Apache Cassandra to the world's most innovative enterprises. Datastax is built to be agile, always-on, and predictably scalable to any size.

With more than 500 customers in 45 countries, DataStax is the database technology and transactional backbone of choice for the world's most innovative companies such as Netflix, Adobe, Intuit, and eBay. Based in Santa Clara, Calif., DataStax is backed by industry-leading investors including Lightspeed Venture Partners, Meritech Capital, and Crosslink Capital. For more information, visit DataStax.com or follow us @DataStax.

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