DATASTAX
The power behind the moment.

surescripts®

Use Case: Identity Management
Authentication systems provide identity checks and grant real-time, secure access for customers. These systems track and store entitlements and require high availability to ensure users do not experience application downtime.

Industry
IT Services

Challenges
- Support rapid expansion in number of transactions
- Move away from expensive, inflexible legacy system
- Allow no more than 1.5 hours of downtime per year

Solution
- DataStax Enterprise for always-on, linear scalability, built-in enterprise security features and higher operational efficiency

Results
- Greatly simplified multi-data center support
- Scalability headspace gain
- Increased operational efficiency
- Advanced security

> "As the single largest provider of clinical transactions in the marketplace today, we must behave in a reliable fashion and can't afford downtime. DataStax enabled us to adopt newer technology with a well-managed approach."
>
> *Keith Willard*
> *Chief Architect*
> *Surescripts*

IDENTITY MANAGEMENT

SURESCRIPTS DELIVERS AUTHENTICATED PRESCRIPTIONS WITH AN ALWAYS-ON MODERN DATA MANAGEMENT SOLUTION

Surescripts serves the nation with the single most trusted and capable health information network, built to increase patient safety, lower costs and ensure quality care. The company was founded in 2001 with a mission to build a nationwide network connecting clinicians, EHRs, hospitals, pharmacy benefits managers, pharmacies and technology vendors, to replace paper prescriptions with more accurate e-prescribing. Today, Surescripts connects more than 1 million healthcare professionals and delivers comprehensive patient information to the point of care, including nearly 11 billion transactions annually.

Summary

The strength of the Surescripts network is grounded in two core beliefs: that more actionable patient intelligence at critical points of care means better decisions, and that better decisions mean lower cost, higher quality and increased safety.

As its network and services continue to expand, Surescripts is also embarking on the transition of moving away from the expensive, inflexible legacy database system to a modernized, efficient and scalable architecture better suited to address the latest data management needs.

The Challenge

For Surescripts, the rapid expansion of its network and customer base introduced significant growth on the number of transactions they process. The huge volume of data is pushing the boundary of their legacy relational database system both architecturally and economically. In addition, to meet the customers demanding SLAs, Surescripts has stringent requirement on the reliability of the data management system – no more than 1.5 hours of downtime per year is allowed. The company quickly realized that adding more systems and data centers to meet such requirements is not sustainable with its current database infrastructure. Cost aside, the complexities and synchronizations will also go up exponentially if they continue to operate with the current systems.

Surescripts decided to take a fundamentally different approach to address these new challenges.

The Solution

Surescripts selected DataStax DSE, an always-on data management platform for cloud applications to power their pending transaction service, a core component of their electronic prescription transaction processing switch, the frontline online transaction and processing (OLTP) layer that tracks all the transaction metadata such as who sent what, when, where, how, and what transformation was applied to the messages flowing back & forth at the various touch points such as clinic and pharmacy, or clinic and insurance payer. Such visibility allows Surescripts to audit a transaction throughout its entire journey. DataStax Enterprise (DSE) replaced their legacy relational database system and is now used to store critical sections of an electronic submission.

DSE was chosen for its always-on, linear scalability and built-in enterprise security features required by Surescripts. In addition, DSE provides higher operational efficiency with features such as built-in replication and online upgrade, therefore enabling significant increases in both scale and reliability over other alternatives.

The Results

DSE has been running extremely smoothly upon its deployment into the production at Surescripts. The benefits started to manifest immediately in the following areas:

- Greatly simplified multi-data center support over the legacy relational system

- Scalability headspace gain with DSE's linear scalability

- Increased operational efficiency with OpsCenter – an intuitive, web-based visual management and monitoring solution integrated within DSE

- Advanced security with Transparent Data Encryption (TDE) and LDAP integration ensures the data stored in DSE is HIPAA and PII compliant

Next Step

In the upcoming months, Surescripts will be expanding DSE capacity to address the growing volume of their transactions. Meanwhile, additional data stores will be incorporated into the DSE environment to support new use cases. The company is planning on getting more users trained to take advantage of the modern data management platform.

DATASTAX
The power behind the moment.