Delta Dental Increases Data Agility and Security for the Cloud

Background
Delta Dental, headquartered in San Francisco, is a holding company for a group of companies that collectively form the largest dental benefits system in the U.S.

Challenge
As the largest dental benefits system in the U.S., Delta Dental depends heavily on software applications to support the orchestration of core business processes such as contracts management, customer onboarding, and claims processing. Moving to the cloud is part of Delta Dental’s long-term digital strategy to improve scalability and time to market across its application portfolio. However, data-related challenges stood in the way of realizing the full potential of cloud:

» While Delta Dental used Amazon Web Services (AWS) to quickly provision compute and storage resources for dev/test environments, those environments were not complete without application data.

» Traditional approaches to migrating data to the cloud are highly manual and slow. Initial migration efforts involved data extraction followed by the physical shipment of an appliance, a process that took 8 weeks to complete.

» To protect cloud data from breach and to enable regulatory compliance, Delta Dental needed to secure Personally Identifiable Information (PII) and Protected Health Information (PHI) before moving data to AWS.

AWS allows teams to quickly spin up and tear down infrastructure at unprecedented speeds. But without a sound methodology to also deliver secure, high-quality data to that infrastructure – and at a similar, accelerated pace, Delta Dental would be unable to maximize the cloud-related benefit of rapid time to market.

Key Benefits

Decreased Time to Market for Key Applications:
Dramatically faster data migration to AWS, enabling teams to quickly provision ready-to-use development environments on demand.

Increased Cloud Security:
Automated data masking secures confidential information in the cloud from breach, and ensures HIPAA compliance.

Reduced Infrastructure Costs:
Space-efficient virtual data copies significantly decrease storage requirements for both cloud and on-prem environments.
Solution

Delta Dental implemented a hybrid cloud architecture using AWS and the Delphix DevOps Data Platform that empowers teams to stand up complete dev/test environments in a matter of minutes. The Delphix platform non-disruptively collects data from Delta Dental’s production applications and applies masking to that data to protect any confidential information. Delphix then replicates masked data to a second instance of the DevOps Data Platform that resides in AWS. From that cloud-based instance, teams can instantly provision virtual, space-efficient data copies to dev/test environments running on AWS EC2 instances.

Results

By leveraging Delphix and AWS solutions together, Delta Dental is transforming environment setup processes that would otherwise result in lead times that slow down application development. Instead of having to wait for multiple, serial processes to procure and configure hardware and software, followed by a paralyzingly slow migration of production data, Delta Dental can create cloud environments—infrastructure plus data—in a single process. With Delphix, Delta Dental teams have been able to:

» Reduce the time it takes to move data to cloud environments from 8 weeks to hours. Mask sensitive PII and PHI before replicating data to AWS.

» Decrease storage requirements in AWS by using data virtualization instead of physical data copies. In addition, for its 16TB on-premise claims processing database, Delta Dental has realized significant reduction in the storage it needs for non-production environments.

Delta Dental now leverages a hybrid cloud approach across several key applications that support claims processing and other key business processes. In concert with AWS, Delphix brings dramatically greater scalability and speed to development. Delta Dental can determine requirements for a new application project on one day, then marshal the necessary data and compute resources to execute against those requirements within 24 hours. Delta Dental’s future plans include the greater use of Delphix APIs for refreshing, rewinding, bookmarking, and branching data.

Legacy approaches to refreshing data in AWS requires teams to repeat the full, manual process of extracting, moving, and importing data to the cloud. But with a hybrid cloud architecture and Delphix, Delta Dental can keep on-premise and cloud environments in sync, with Delphix continually gathering data from production sources. The data is then masked and replicated to AWS. With fresh, secure data available in the cloud, Delta Dental can easily deliver new virtual data copies to a team of over 200 developers, in just minutes.

“Delphix transforms how we use AWS and increases our development velocity. When we implemented the Delphix platform within our hybrid cloud architecture, we immediately increased our ability to scale to meet new business requirements.”

Sai Adiv, Director of Application Development, Delta Dental

“The combination of Delphix and AWS gives us the agility we need to succeed in today’s application-driven economy. By easily and securely moving data to the cloud, we’re able to release new features to the market faster, while also lowering cost and risk.”

Shan Swaminathan, VP of Application Delivery and DevOps, Delta Dental