Cognizant

Case Study: Healthcare

Powering business expansion and new services through HIPAA-compliant cloud

A healthcare information company wanted a scalable, secure and cost-efficient healthcare cloud product suite to help it achieve faster time to market with better IT agility. Cognizant developed a robust, AWS cloud-driven IT operations strategy that created a highly scalable, available, secure and HIPAA-compliant environment.

The client, a U.S-based healthcare intelligence company offers predictive analytics for population health and care management. As the company expanded its solution to a wider customer base, needed to support and service clients' needs efficiently by setting up medical-grade managed services operations.

At a Glance

The client, wanted to expand its offerings and client base, but its on-premises infrastructure was creating challenges with scalability, cost efficiency, security and compliance, and infrastructure management.

Cognizant developed a 100% cloud infrastructure for the company, delivering increased security, compliance, scalability and flexibility to swiftly onboard customers and meet their evolving processing needs.

Outcomes

- 40% operational cost savings.
- 30% faster product build.
- 50% savings in tools costs.

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In addition to improving customer service, the company needed infrastructure resources that could not only scale out with fluctuating processing demands but also support faster development to deliver new features and services to customers.

However, its existing on-premises infrastructure did not have the flexibility or scalability to support its business expansion strategy or onboard new customers within an acceptable timeframe. The company's most pressing needs included a robust cloud strategy, information security, data protection and data governance, and a target reference architecture.

- Highly available and scalable HIPAA-compliant environment.
- Reduced the time it takes to onboard customers from two months to one week.
- Improved security management using best-in-class tools.
- Better readiness to extend its customer base across the globe.

Cognizant's cloud migration strategy using AWS

Cognizant developed for the client, IT and cloud migration strategies to ensure their technology was closely aligned with the organization's overall business objectives. This strategic undertaking included developing an IT operating model and assessing cloud platforms and complementary third-party best-in-class products and capabilities. The strategy also included building an operating model for environment, security, compliance and incident management.

The cloud migration strategy for the healthcare analytics leader was designed and implemented using AWS, third-party products (SAS, Mirth, Hadoop, Tableau and others), best-in-class security solutions (Splunk, TrendMicro, QualysGuard, SIEM and others) and Cognizant's HIPAA-compliant Healthcare Cloud Reference Architectures (HCRA), Cloud Step framework, Cloud360 tools and accelerators.

More than 200 AWS workspaces were used to provide cloud environment access to all the remote users of the client's solutions, across different global locations.

After identifying AWS as the target cloud platform, Cognizant designed and implemented a cloud infrastructure that encompassed 100% of the client's IT landscape. HIPAA-compliant security

and privacy measures were implemented in the infrastructure, network, data and application layers.

Cognizant also implemented an operating model to monitor and respond to security events proactively. Multiregion and multizone backup and disaster recovery were factored into the solution to address recovery time and recovery point requirements.

In addition, Cognizant implemented a virtual workspace and automated build, deployment and provisioning to accelerate collaboration between developers and data scientists.

Cognizant used its Cloud Steps modernization framework methodology to identify and evaluate key criteria, including the capabilities of different platforms and products to meet extensive healthcare regulatory and compliance requirements as well as the client's functional needs.

The cloud infrastructure provides extensive privacy, security and business continuity functions to safeguard protected health information and ensure higher user and customer satisfaction. It enables cloud-based development on virtual workstations, accelerating the efforts of the client's developers to add new features and functions to the company's core analytics services, in collaboration with data scientists.

AWS services like elastic load balancing and auto-scaling make the infrastructure scalable and highly available. This flexibility enables the healthcare analytics major to add new customers within an acceptable timeframe and provides a constantly ready state environment to meet customers' variable data processing demands. These features contribute to better quality of service and greater user satisfaction.

Enabling better insights with faster development

A modern cloud infrastructure is essential to virtual development environments. Automated build, deployment (Jenkins, Chef, JIRA and others), provisioning (using CloudFormation and others) and virtual workstations (AWS Workspaces) in the cloud enable the client company's developers and data scientists to quickly provision resources and work from any location.

This capability, along with Cognizant's HCRA and domain expertise, shortened the client's time to market for new applications and analytics features by 30%, improving its position in a highly competitive industry.

Taking its entire infrastructure to the cloud has saved the healthcare solutions company considerable upfront costs, as well as 40% in its ongoing operating costs. Cognizant tapped its economies of scale to integrate leading third-party security offerings into the client's infrastructure cost effectively.

The on-demand scalability of the infrastructure ensures it aligns with its processing needs on a real-time basis. After the implementation, the client gained the provision to develop new features to support members as well as the assurance that its security and compliance requirements are met.

About Cognizant Healthcare

Cognizant's Healthcare Business Unit works with healthcare organizations to provide collaborative, innovative solutions that address the industry's most pressing IT and business challenges—from rethinking new business models, to optimizing operations and enabling technology innovation. A global leader in healthcare, our industry-specific services and solutions support leading payers, providers and pharmacy benefit managers worldwide. For more information, visit www.cognizant.com/healthcare.

About Cognizant Digital Systems & Technology

Cognizant Digital Systems & Technology works with clients to simplify, modernize and secure IT infrastructure and applications, unlocking the power trapped in their technology environments. We help clients create and evolve systems that meet the needs of the modern enterprise by delivering industry-leading standards of performance, cost savings and flexibility. To learn more, contact us at simplify@cognizant.com or visit www.cognizant.com/cognizant-digital-systems-technology.

About Cognizant

Cognizant (Nasdaq-100: CTSH) is one of the world's leading professional services companies, transforming clients' business, operating and technology models for the digital era. Our unique industry-based, consultative approach helps clients envision, build and run more innovative and efficient businesses. Headquartered in the U.S., Cognizant is ranked 193 on the Fortune 500 and is consistently listed among the most admired companies in the world. Learn how Cognizant helps clients lead with digital at www.cognizant.com or follow us @Cognizant.

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