Case Study: Healthcare

Hospital network improves service delivery with a modern IT backbone

Cognizant knows digitally enabled IT is necessary for better healthcare delivery, so we provisioned a modern HIPAA-compliant environment on Microsoft Azure cloud for our client.

Better healthcare delivery through a modern IT environment

A U.S.-based healthcare system encompassing several hospital campuses and a school of medicine had its clinical data housed in disparate systems. The client was looking to modernize its ecosystem of IT infrastructure, systems and dependencies to create an integrated IT ecosystem that would consolidate all cross-department data, in the light of the state-sponsored Delivery System Reform Incentive Payment (DSRIP) program. They wanted to be better equipped to manage the build-and-deployment processes for business-critical applications. The healthcare system wanted a comprehensive, agile, scalable and cost-effective engineering solution that would help provision and manage its environment effectively.

At a Glance

To improve service delivery, a leading U.S.-based integrated healthcare system providing advanced medical care to local and global communities wanted an agile, scalable and cost-effective cloud-based IT environment that would support a provisioning and build-and-deployment solution.

Cognizant, by leveraging our Healthcare Cloud Conversion Factory (HCCF), helped the healthcare system with a Microsoft Azure-based automated provisioning and automated build-and-deployment solution that not only enhances agility and scalability but is also secure and HIPAA-compliant.

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Cognizant®

Faster time to market at reduced cost

Solid foundation
We helped build a strong and integrated technology backbone by provisioning the client's environment and automating build and deployment.

The client needed a solution that would support rapid deployment of both production and non-production environments (development, test, QA and build) in a Microsoft Azure infrastructure-as-a-service (IaaS) setup. The company also wanted to avoid any issues and errors at the point of origin in non-production environments and to achieve effectiveness through an agile approach, for which it sought continuous integration support.

As part of the agile approach, the client wanted to accelerate the automation of activities such as application build and deployment as well as environment creation. Stringent compliance with security, privacy and regulatory requirements such as the Health Insurance Portability and Accountability Act (HIPAA) was a critical priority. A multilayered security strategy had to be implemented.

Cloud for faster and effective provisioning and build and deployment

The hospital network was looking for an agile and scalable infrastructure support model to aid its business transformation in light of the state sponsored Delivery System Reform Incentive Payment (DSRIP) program. DSRIP's goal is to fundamentally restructure the healthcare delivery system by reinvesting in the Medicaid program to reduce avoidable hospital use by 25%.

Cognizant helped the client optimize its IT infrastructure, reduce administrative overhead and enable its team to focus on other business priorities by provisioning the company's environment and automating the build-and-deployment process.

Outcomes:

- 20% cost savings.
- 20-minute environment provisioning and application deployment.
- Reduced authentication latency.
- Faster, more secure data transfer between on-premises and Azure data centers.

using a host of leading-edge Microsoft Azure-based technologies designed to accelerate engineering throughput.

We used the following tools as part of our automated environment provisioning effort:

- Microsoft Azure PowerShell scripts to automate environment creation.
- Customization tools such as Chef and Jenkins to automate deployment into Azure virtual machines.
- GitHub source control repository to meet increasing build and deployment requests.
- JIRA to track projects.
- SonarQube for code quality assurance and optimization.
- Barracuda NG firewall for perimeter-level security.
- Nexpose vulnerability scanner to protect virtual machines.
- Team Foundation Service portal to track build and environment creation requests.

Leveraging HCCF to accelerate the client's cloud adoption journey, we created a cloud-based solution for provisioning a new environment and automating the build-and-deployment process. This provided enhanced agility in producing working code faster at higher quality and lower cost, all within a more secure, HIPAA-compliant environment that stays continuously aligned with the organization's healthcare mission.

An integrated technology backbone from a modern environment

Leading industry analysts HFS ranks Cognizant as the top healthcare service provider. For this client, we combined our deep domain expertise and digital infrastructure leadership to quickly provision a simplified and integrated IT environment. With automated environment provisioning on Microsoft Azure, the hospital network benefits from an integrated technology backbone and better control over its revenues with a highly scalable, available, secure and HIPAA-compliant environment.

The healthcare provider realized 20% cost savings by eliminating the need to hire more resources and reducing manual errors. In addition, by deploying build with the latest application code base in under 20 minutes, Cognizant virtually eliminated lead time and helped the health system improve the time to market of its new environment. Among other benefits, cloud-based provisioning resulted in faster, more secure data transfer between on-premises and Azure data centers.

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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