AHEAD

AHEAD + AWS for Delivering Cloud Solutions *in Healthcare*

aws PARTNER Premier Tier Services

How healthcare providers can leverage AHEAD and Amazon Web Services (AWS) to overcome industry challenges, and improve patient and clinician experiences

The healthcare industry has been facing staffing shortages and reduced margins, especially since the recent pandemic. At the same time, the demand for digital health services has been growing. Many new and disruptive HealthTech companies are launching digital-first business models that offer better experiences for both patients and clinicians, and some healthcare providers are struggling to keep up.

Many long-standing healthcare providers need to modernize their existing IT infrastructure and adopt cloud solutions to stay competitive and overcome the challenges of a digital future. By implementing cloud-based solutions using a strategy approach, the healthcare industry can bring new efficiencies to their businesses, deliver better user experiences, and explore emerging technologies like AI and the Internet of Medical Things (ioMT).

In this whitepaper, we'll discuss some of the major obstacles to cloud adoption in the healthcare industry, and how partnering with both AHEAD and AWS together can lead to better outcomes.

Cloud Challenges in Healthcare

Although many healthcare providers want to migrate to the cloud, they still face considerable obstacles. Here are some of the most common challenges:

Lack of alignment between cloud services and the business means many organizations aren't entirely clear about how cloud migrations will deliver business value. This leads to IT teams implementing cloud services that aren't aligned with actual business needs and underutilizing those that are.

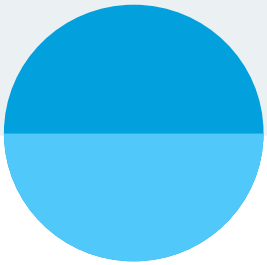
An unclear cloud methodology leads to confusion and delays during migrations. Without a clear plan, healthcare providers struggle to efficiently migrate business systems to the cloud, resulting in potential downtime and disruptions that impact patients and clinicians.

Unpredictable cloud costs and a shift from capital to operational expenses are major concerns for healthcare providers. The need for FinOps to manage the unique cost model of the cloud has become more apparent in the healthcare industry.

Cloud security concerns in the heavily regulated healthcare industry prevent many organizations from fully realizing their cloud strategies. Healthcare providers are often unsure how to implement proper governance and controls when adopting cloud services.

Limited cloud skills within healthcare organizations creates challenges during cloud migrations and makes it difficult to maintain the cloud infrastructure going forward. The shortage of skilled professionals in the IT industry further strains the resources healthcare companies have to

Healthcare Cloud Challenges We See



No alignment to Business & Research

Clients are unable to align cloud services to the actual needs of the business or research. Many requests for services pull healthcare IT in many directions with no strategy.

Lack of Migration Methodology

Many organizations lack the approach or methodology to create an effective cloud migration.

Unpredictable Cost Model

As organizations transition to cloud, many struggle with lack of predictability for cost consumption as well as the transition from capital to operational expense.

Cloud Security Concerns

As organizations transition to cloud services, aligning security programs to build governance and controls in cloud is still a challenge.

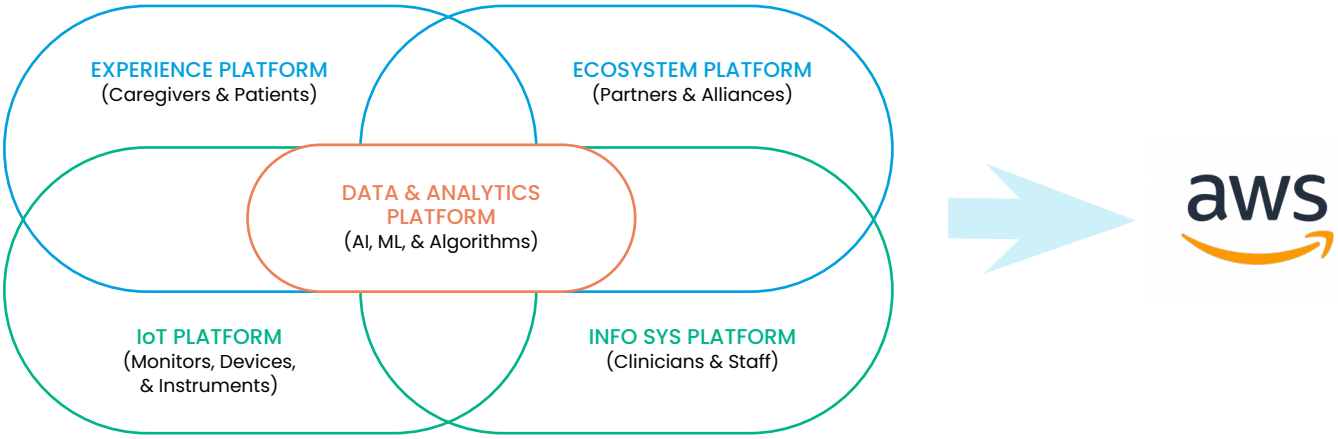
Limited Cloud Skills

Healthcare organizations encounter difficulties in maintaining and managing their infrastructure due to a lack of available skilled personnel.

AWS for Healthcare

AWS has launched a number of cloud services tailored to healthcare and life sciences. This includes AWS HealthScribe to automatically generate clinical notes using AI, AWS HealthImaging for storing and analyzing medical images, and AWS HealthLake for storing health data. These purpose-built health solutions — along with other industry-agnostic cloud services — make AWS a great choice for healthcare providers migrating to the cloud.

NEW CAPABILITIES = NEW DIGITAL PLATFORM
These new capabilities are driving public cloud consumption



Here are some of the key capabilities of AWS for healthcare:

- Clinical systems modernization: AWS provides the proven infrastructure to run mission-critical clinical applications, such electronic health records (EHRs) and medical imaging in the cloud. Healthcare providers can modernize the entire continuum of care to reduce administrative burdens and improve patient experiences.
- Analytics and AI/ML: AWS has created purpose-built AI services for vision, transcription, and natural language processing so that organizations can address a wide range of health industry issues. Healthcare providers can derive greater insights from their health data to solve business challenges and improve operations.
- Patient and clinician experiences: Through near real-time, omni-channel engagement and virtual care tools, AWS and AWS Partners offer solutions that give clinicians quick access to the information they need while reducing the burden of data entry. This can enable faster and more personalized care that improves patient outcomes.

- Internet of Medical Things: AWS makes it possible to deliver IoT-enabled technologies that require fast, secure data collection in the cloud. This helps medical device organizations bring products to market faster to safely and securely meet the needs of patients.
- Partner Ecosystem: AWS Healthcare Competency Partners can help healthcare providers build innovative, cost-effective, and secure solutions that improve operational and clinical effectiveness. This additional technical expertise can drive innovation and unlock greater business value from AWS cloud services.

Data & AI in Healthcare with AHEAD and AWS

AI and machine learning adoption is growing in the healthcare industry. Generative AI and large language models in particular are revolutionizing the way clinicians handle administrative tasks, diagnose patients, and formulate treatment plans. However, many organizations still have challenges when it comes to generating large datasets that are secure and confidential for AI use cases.

A global medical device producer wanted to develop a cloud-based architecture along with optimized code to deploy a dedicated retrieval augmented generation (RAG) generative AI tool for internal synthetic data generation using large language models. This would allow the medical company to test new software, enhance internal studies, and serve other business and research purposes.

AHEAD designed and implemented a lightweight architecture within AWS to deliver a focused and efficient workflow for augmenting foundation models with internal data. This included a fully functional data generation web app with an appealing front end and user experience. By

Better Together with AHEAD and AWS in Healthcare

As an AWS Premier Tier Services Partner, AHEAD can accelerate cloud-based transformation and maximize the business impact of AWS. With our consultative approach, unmatched engineering, and innovative solutions, we build and manage digital platforms that power the most successful organizations globally.

AHEAD has extensive experience in the healthcare industry, with 40% of our clients being healthcare providers. We've also been involved with over 60+ Epic infrastructure deployments and Epic is a long-time strategic client of AHEAD. This means we have the technical acumen necessary to accelerate the impact of healthcare solutions on AWS and other infrastructure.

Here are some of our key capabilities related to cloud transformations for healthcare:

Application & Infrastructure Modernization

AHEAD can help you modernize your applications and infrastructure to fully leverage the capabilities of AWS. This includes VMWare modernization for companies navigating the implications of the recent Broadcom acquisition.

We worked with the Franciscan Missionaries of Our Lady Health System (FMOLHS) to migrate their critical workloads to AWS. Through partnering with AHEAD, the nonprofit healthcare ministry was able to heighten their cloud maturity by improving the management of migration complexities, augmenting cloud skills, and strengthening cloud governance. Our cloud expertise enabled the healthcare nonprofit to implement a secure and compliant AWS environment that furthered their mission of delivering quality patient care and enhancing clinician experiences.

Epic Software Optimization

AHEAD can optimize on-premise or cloud installations of Epic, helping you save money, optimize workflows, and free up resources to focus on improving patient care. We have a deep understanding of Epic installation requirements and work with many partners within the Epic ecosystem.

We helped Sharp — a leading healthcare provider and nonprofit organization — migrate from Cerner to Epic. This involved a network assessment and AWS environment setup to support a cloud-based Epic EMR implementation. AHEAD worked closely with the Sharp team to develop the right strategy to optimize AWS for Epic and advance the healthcare provider's other cloud initiatives.

FinOps as a Service

AHEAD can help you maximize your cloud investments with FinOps as a Service. We have a team of FinOps and cloud SMEs that can help you gain greater visibility into your cloud spend and proactively uncover opportunities to reduce your monthly cloud expenses.

Our FinOps team helped a global medical device producer improve cloud spend visibility on AWS by 80%. We developed a self-service FinOps dashboard that provides real-time insights into AWS spend patterns and trends. This allowed the medical company to better control cloud costs and optimize cloud usage.

Platform Engineering as a Service

AHEAD can help you streamline your development processes with self-service internal platforms for AWS and other infrastructure providers. Our Platform Engineering as a Service offering includes platform, CI/CD, and Developer Accelerators to automate legacy workflows related to software deployments, infrastructure management, and more.

We partnered with the American Medical Association to create a digital platform that helped them automate workflows and integrated additional AWS services. Our platform engineering team built a foundational library with defined desired services and feature sets for different applications to help the healthcare organization adopt Infrastructure as Code. This new digital platform enables the American Medical Association to have more secure and agile product releases.

Cloud Security

AHEAD can help you improve your cloud security posture. Our engagements range from cloud security strategy and planning to fully managed cybersecurity services. We also have a Cloud Security Accelerator that allows you to identify security posture deviations, automate risk mitigation, and stream compliance with industry regulation.

As part of our AHEAD Managed Services, we have a client that undergoes frequent security audits to proactively address potential cybersecurity risks. Our security team discovered several vulnerabilities, and quickly worked with the client's IT team to remediate the cloud security issues before they became a cybersecurity incident. By partnering with AHEAD, the client has improved their overall cloud security posture by 90%.

The healthcare industry is undergoing a digital transformation, with cloud computing playing a pivotal role. AHEAD's AWS Cloud Solutions provide healthcare organizations the power to unlock data-driven insights, accelerate research and development, and future-proof their operations in an ever-evolving landscape.

Don't miss this opportunity to learn how you can embrace the cloud and deliver superior healthcare experiences. Explore and unleash the power of cloud computing, revolutionize patient care, and streamline operations with AHEAD and AWS. Contact us today to schedule a free consultation and discover how we can transform your Healthcare delivery.

AHEAD

Combining cloud-native capabilities in software and data engineering with an unparalleled track record of modernizing infrastructure, we're uniquely positioned to help accelerate the promise of digital transformation.

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