

A healthcare solution provider leveraged Instaclustr to accelerate the development of a new communication and workflow ecosystem platform for improved patient outcomes.

Using Open Source and Managed Services to Reduce Complexities and Ensure Uptime

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Introduction

For more than 10 years, a major U.S.-based healthcare solution provider has enabled its end customers with HIPAA-compliant communication and collaboration systems to improve the efficiency and effectiveness of their medical facilities in the United States. The company has over 140,000 registered users across more than 1,500 healthcare facilities in North America. The award-winning firm aims to provide an ecosystem of communication within and between providers and clinics. By connecting healthcare organizations seamlessly, the company can help its customers operate more efficiently and effectively to improve ROI and deliver better patient care anywhere.

The healthcare industry is well known for its complexity, and the high level of regulation and compliance to ensure patient care and privacy adds to its complications. In addition, the lack of standard communication and collaboration between the multiple providers delivering patient care creates delays and inefficiencies.

The healthcare solution provider wanted to add innovative capabilities to its collaboration platform and launch them as new products. The proposed product capabilities included advanced care planning and chronic care, which required adding a new workflow capability to its existing platform. The architecture team selected Cadence Workflow, an open source solution, to provide these capabilities.

The Cadence cluster delivers a scalable workflow and leverages multiple open source projects as part of its design. Although Cadence supports various databases, the provider's architecture team chose Apache Cassandra. In addition, the company needed OpenSearch and Apache Kafka open source projects to implement Cadence in its environment.

SOLUTION SNAPSHOT

ORGANIZATION

A major healthcare solution provider based in the United States.

ORGANIZATIONAL CHALLENGE

Leverage open source and cloud to build and engineer an enhanced healthcare collaboration platform that uses workflows to improve patient care, including adding new capabilities such as chronic care and advanced care planning.

SOLUTION

NetApp Instaclustr provided a managed solution for building and supporting Cadence Workflow. Cadence allowed the healthcare solution provider to enhance its cloud-based patient collaboration platform with new capabilities developed in the Go programming language by the company's IT team.

PROJECT DURATION

Three to four months

BENEFITS

NetApp Instaclustr quickly had Cadence up and running so the healthcare solutions company could prepare for a new product launch. Benefits included:

- » Proactive monitoring and support
- » Seamless maintenance and upgrades, with no downtime

Implementation

The healthcare solution provider has leveraged AWS tools and web services since its inception and continues to use AWS for approximately 70% of its production workloads. The company relies on open source for many areas of its production platform, including MongoDB, Atlas, AWS CloudWatch, and Cassandra. The company began using managed service providers over five years ago to avoid dedicating and training internal staff for every open source project in its environment. The company looks for internal support and maintenance of its open source projects. When that gets prohibitively expensive, it turns to managed service providers.

Business leaders at the healthcare solution provider wanted to implement new workflow capabilities in its collaboration platform via Cadence about a year and a half ago. The company initially tasked internal staff with this project; however, the Cadence environment relies on multiple underlying open source technologies, which creates complexity. When the provider posted support questions in a public Cadence forum, NetApp's Instacluster team offered to assist. The company's CTO was open to further discussions based on previous positive experiences with managed service providers.

Although Cadence became popular through Uber's extensive use of the platform, it is still a relatively new and primarily unsupported open source project. It was essential to the company that an established player, such as NetApp, provide the support. NetApp supports Cadence through its Instacluster platform. The CTO was impressed with Instacluster's experience and knowledge of Cadence's components, including Elasticsearch, Kafka, and MongoDB. NetApp's team was familiar with Uber's implementation and could bring those best practices to the project.

NetApp's Instacluster team set up Cadence and its required infrastructure in just a few days. A live pilot enabled the healthcare solutions firm to continue testing and ensure it made the right choice for extending workflows with Cadence. Once the company decided to use Instacluster to manage Cadence, its developers added the capabilities it required. In less than three months, the team created a new workflow capability for chronic and advanced care, and the company was ready for a go-to-market product launch.

Challenges

Providers and clinics across healthcare use this company's healthcare solutions, and managing the industry's complexity and required compliance is challenging. This compliance includes HIPAA, Stark Law, SOC 2, and other federal and state patient care regulations. The healthcare supply chain is complicated and siloed, which prevents effective communication and collaboration.

To help handle the technology challenges, the company leverages open source, which can reduce costs and accelerate the time to value of application development. However, open source support and maintenance can be complex. The healthcare solution provider's architecture team chose Cadence as its scalable workflow infrastructure, but creating a new environment to test and build applications wasn't easy. Leadership had set aggressive time frames to expand the product offering, which depended upon this workflow infrastructure.

As with many companies, finding and retaining employees with in-demand skills such as open source and Cadence is difficult. Hiring skilled engineers familiar with a wide range of open source projects can take months and incur high costs. To quickly build and deploy these new capabilities, the company's CTO needed skills not readily available in-house. In addition, the company had to support its mission-critical healthcare provider customers responsively and proactively to ensure patient safety and care.

Benefits

The healthcare solutions company quickly benefited from the proof-of-concept environment and infrastructure that Instacluster installed, which enabled its developers to test and develop new capabilities. Instacluster's experienced team worked closely with the CTO's internal team to implement best practices and to onboard the Cadence solution with all the back-end open source necessary to support it.

The Instacluster SLA for uptime, data privacy, and incident response time was also essential, given the company's many healthcare industry requirements. Furthermore, live customer support engineers from Instacluster set up the environment and trained the internal team on Cadence. This significantly reduced the learning curve for its engineers and enabled them to focus on adding business value to the company's customer-facing platform. Once Cadence was in production, Instacluster was available as an extension of the internal team to answer questions or resolve issues.

Instacluster worked to ensure that Cadence maintenance was seamless. The support team proactively advised the CTO of upcoming upgrades and patching but assured him that there would be no downtime. The next day, the CTO checked with all internal teams, and no one knew the entire environment had been upgraded and patched overnight. The healthcare solution provider has reported zero downtime with the Cadence infrastructure since it went live.

Methodology

IDC obtained the project and company information in this document from multiple sources, including information from NetApp, in-person interviews and questions IDC posed directly to the company's employees, and publicly available documents that the company created.

About the Analyst



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Jevin Jensen is research vice president of IDC's Intelligent CloudOps Market service, covering infrastructure as code/GitOps infrastructure automation, FinOps, cloud cost transparency, DevOps, hybrid cloud/public cloud/multicloud management platforms, and edge management.

MESSAGE FROM THE SPONSOR

For organizations using open source technologies to meet the demands of modern applications, reaching and maintaining the highest levels of reliability is critical. However, designing, implementing, deploying and operating open source application infrastructure is extremely complex for engineering and DevOps teams. NetApp Instaclustr is the trusted open source partner for the enterprise that accelerates time to value, reduces ongoing operational costs and delivers improved reliability when adopting these technologies. Unlike other solutions, Instaclustr supports multiple open source application infrastructure technologies across all major cloud platforms and on-prem deployments. Instaclustr also uniquely provides multiple delivery models (managed platform, enterprise support and consulting) all backed by industry leading SLAs and NetApp's 30+ years of enterprise experience.

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