Scientific Collaboration Portal for Leading Biotechnology Company

Overview

Today, the role of data in scientific research is pivotal. To extract more value from data, organizations are progressively connecting diverse datasets to solve key challenges in healthcare. Technology will help accelerate such collaborative efforts that bring together individuals from diverse backgrounds and perspectives to solve complex healthcare related problems. Collaboration platforms can significantly improve interaction across stakeholders.

Client Requirement

The client, a global biotechnology corporation, encouraged its team of over 500 data scientists to work in a more integrative way with healthcare providers, government organizations, scientific communities, and other research communities. Communicating and sharing existing research assets and collaborating on new scientific research with other stakeholders would help the team achieve faster time to market and fuller impact on addressing challenges and trends in oncology. And since this kind of collaboration has been rarely explored in Lifesciences, the client had to build a custom platform from scratch.
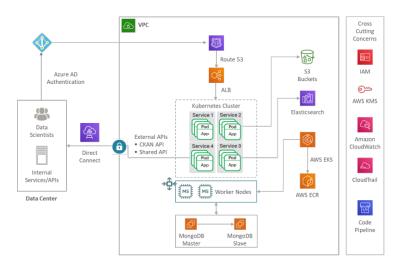
CitiusTech Solution

The client's existing idea around the architecture of the collaborative platform, although functional, lacked a few critical features. First off, the architecture was rigid and not scalable to future demand. Also, it was a single point of failure (SPOF), if failed, could stop the entire platform from working and would need a certain downtime before it could be made functional again. Client wanted to avoid any SPOF and ensure high availability for cloud workloads.

To make the platform reliable, scalable, and highly available, CitiusTech reworked and optimized the platform's architecture. CitiusTech worked with AWS, taking advantage of several key services, including Elastic Kubernetes Services, Amazon Elasticsearch, and Amazon Elastic Container Registry (ECR) on top of existing services. As a result, the collaboration platform could be highly available and scalable and eliminated the SPOF present.

Products:

- Elastic Kubernetes Services
- AWS ECR, VPC, S3
- Elasticsearch, IAM, EC2
- Direct Connect

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Architecture - Scientific Collaboration Portal

Value Delivered

- All-in-one platform to create, share and refine data models

- High scalability and availability (99.5%)

- The platform features deep data search, discussion forums and data repository with versioning

- Faster data model training for quicker time to market

- Currently, over 2000 data scientists engage on the platform working together on large training model datasets in medical oncology

About CitiusTech

CitiusTech (www.citiustech.com) is a leading provider of healthcare technology services, solutions and platforms to over 130 organizations across the payer, provider, medical technology and life sciences markets. With over 5,000 technology professionals worldwide, CitiusTech powers healthcare digital transformation through next-generation technologies, solutions and accelerators. Key focus areas include healthcare interoperability & data management, quality & performance analytics, value-based care, omni-channel member experience, connected health, virtual care coordination & delivery, personalized medicine and population health management. CitiusTech has two subsidiaries, FluidEdge Consulting (www.fluidedgeconsulting.com) and SDLC Partners (www.sdlcpartners.com), with deep expertise in healthcare consulting and payer technologies, respectively. CitiusTech's cutting-edge technology expertise, deep healthcare domain expertise and a strong focus on digital transformation enables healthcare organizations to reinvent themselves to deliver better outcomes, accelerate growth, drive efficiencies, and ultimately make a meaningful impact to patients..

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