

An emerging biotech startup tackles massive data with custom cloud storage

CASE STUDY

AT A GLANCE

Primary Data Concerns

- Security of valuable data
- Lightning-speed data transfer and storage
- Easy access to perform analysis

Why Bridge Informatics

Experienced, multi-dimensional team of bioinformaticians, engineers, statisticians, and machine learning experts

SITUATION

- A pre-clinical biotech company urgently needed to create a custom cloud infrastructure to facilitate safe and efficient data transfer and storage. The company has been preparing for its first large-scale genomic study, expecting terabytes of whole genome sequencing data in the upcoming months. To process and analyze the results, the Client needed to streamline the storage of massive amounts of data.
- The Client requested to secure Amazon Web Services (AWS) infrastructure before generating the data. It was critical for the Client's scientific team to engage with an experienced partner to build a cloud infrastructure; and to receive comprehensive training on best practices for storing, processing, and securely analyzing data.
- The Client's three primary concerns were the security of the valuable data, lightning-speed data transfer and storage, and easy access to perform the analysis.

STRATEGY

- First, Bridge Informatics assigned a devoted team of experts, including engineers, data scientists, and statisticians, to carefully consider all storage options, computing power, and security protocols.
- Then, we customized a strategic cloud setup blueprint with estimated costs and desired outcomes in line with the Client's research goals. The blueprint was based on the Client's unique project priorities, the number of tasks anticipated, the cadence of new data generation, and the nature of data analysis.
- Finally, Bridge Informatics assessed the Client's cloud knowledge to determine the scope of training needed to self-operate the data infrastructure in the long term.

RESULTS

- Our successful project execution alleviated the administrative burden of setting up cloud service, allowing the Client's scientists to focus on advancing their pipeline and planning the study.
- Bridge Informatics created a centralized data storage for easy access using AWS S3 cloud services, facilitating fast and secure transfer of genomic data internally and with external vendors and collaborators.
- Our team architected data security and virtual private network (VPN) access with stringent multi-layer security measures to ensure valuable data safety.
- Our bioinformatics team designed EC2 virtual environments to run existing and developing analysis pipelines, enabling smooth transition and data integration.
- In addition, we have managed and maintained cloud service provider accounts for cost and resource efficiency.
- Finally, Bridge's cloud engineers trained the Client's team, allowing them to operate the data infrastructure independently and with confidence.