Enhance your genomic sequencing operations with BaseSpace™ Sequence Hub on AWS

BaseSpace Sequence Hub is a powerful, easy-to-use bioinformatics compute and storage environment designed to help you build a secure, compliant, and high performing genomic sequencing operation.

Industry trends and challenges

Traditionally, the genomic sequencing space has a large barrier to entry, as it requires large investments in infrastructure. Even companies with existing operations on-premises can experience issues at scale, due to the amount of compute and storage required to manage the massive amount of data they are generating, and the high cost of maintenance. This limits their ability to grow and continue innovating on behalf of their customers.

Why build out your genomic sequencing practice on AWS?

Amazon Web Services (AWS) provides on-demand infrastructure resources and tools designed to be compliant with regulatory requirements, enabling you to simplify and securely scale your genomic sequencing capabilities.

Leverage flexible, high performance compute resources to support genomic sequencing

Efficiently and securely store your data to meet regulatory requirements

Customize your workflows and foster collaboration with your peers

Incorporate advanced analytics into your sequencing platform

BaseSpace Sequence Hub solution overview

BaseSpace Sequence Hub is integrated with AWS services and your Illumina instruments, so you can more easily manage, analyze, and share your data with a curated set of analysis applications.

Accelerate insights by streaming data directly from instruments to AWS

Increase productivity with greater access to genomic analysis applications

Establish comprehensive security and privacy controls

Continuously monitor instrument performance

Lower costs with on-demand resource provisioning

Key capabilities*

End-to-end data protection

Data is encrypted at-rest (AES-256) and in-transit (TLS), with three sets of backups stored synchronously across multiple AWS Availability Zones (AZs) for geo-redundancy.

Real-time analytics

Connecting your instruments to Sequence Hub enables you to continuously monitor and improve your practice with real-time sequencing metrics, run monitoring and history, and predictive instrument performance alerts.

Single-click analysis

Create simple, secure, and efficient pipeline configurations to meet your unique needs, and launch analysis workflows at the push of a button.

Granular identity and access management (IAM) controls

Role-based access controls, single sign-on authentication, and virtual isolation of workloads on the cloud enable you to lock down you accounts to adhere to global security and privacy regulations.

Audit-controlled collaboration

Workgroups, and other data management capabilities, allow you to share projects and runs securely with collaborators, without requiring file downloads, helping to meet security and privacy regulations.

Advanced automation and integration

Extensible APIs empower you to integrate AWS service and your in-house informatics systems with Sequence Hub, so you can easily manage and analyze data at scale.

** While many of these features are available on all versions of BaseSpace Sequence Hub, some are only available in the BaseSpace Enterprise subscription tier.*

BaseSpace Sequence Hub is third-party certified on the following regulatory standards

HIPAA COMPLIANT

ISO 27001 CERTIFIED by schellman

bsi. ISO 13485:2016 Medical Device Quality Management FM 565017

GDPR READY

Getting started

With Illumina and AWS, customers managing genomic data gain improved data management, protection, and access capabilities.

BaseSpace Sequence Hub is available with three different tiers, which can be launched from: basespace.illumina.com/home/index. To learn more, contact your Illumina or AWS account manager.

If you are a first time user, you will need to set up a MyIllumina account and accept the terms.

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