DNAnexus® Apollo™

License Features & Capabilities

DNAnexus Apollo shatters big-data bottlenecks to release the power of genomics and multi-omics in translational research.

Data Management & Traceability	**Keep track of data provenance.** DNAnexus Apollo's file management tools enable users to easily upload, organize, search, add metadata, and view a file's source.
Data Archive	**Save money by storing infrequently used files in less expensive storage on-demand.** Archive and unarchive files easily. You can search and view metadata even when items are in an archived state.
Big Data Analytics	**Efficiently query "big data."** Store structured data in tables and apply standard DNAnexus project-based access controls to databases for quick query results - critical for population-level data, (e.g. UK Biobank). Technical users can work in familiar SQL domain-specific language to query Spark databases and explore data.
Highly Configurable Data Ingestion	**Simplify harmonization and ingestion.** Ingest and harmonize genomic variant data from panel, WES, or WGS studies through DNAnexus best-practices data models making integration across different datasets easy. The DNAnexus Platform is flexible enough to support customized specifications and needs.
Cohort Browser & Analysis Applications	**Explore billions of genotypes & associated phenotypes — in seconds.** Comprehensive, easy-to-use UI application to build,query, and visually explore cohorts containing both clinical and multi-omics data.
Data Sharing, Collaboration, Access Control	**Collaborate securely and compliantly, across hallways and borders.** Apollo provides a centralized, secure environment to manage data and pipeline access on the file, project, and user level. Publish your own tools and pipelines to share them with collaborators.
Audit Trail	**De-risk your audits.** Access a human and machine-readable daily log of all activities (login, upload/download, run analysis, data sharing, etc.) related to users and projects of the organization for seamless auditability and reproducibility.
On-Demand Compute Services	**Efficiently manage compute resources by using only what is needed.** DNAnexus supports a comprehensive fleet of instance types, virtual computer configurations on which jobs can be run on-demand, on both AWS and Azure clouds.
Scalability	**Scale your environment in the cloud.** Leverage a platform that can easily match your computational and storage demands up to millions of samples a year and with multiple-regions available as you scale globally.

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Spark Cluster Support

Leverage Spark for enhanced performance — no expertise required.
Run robust, distributed, and efficiently parallelized computational jobs easily by launching and managing Spark clusters on-demand.

HTTPS Worker Support

Build custom web-interfaces.
Host HTTP apps in DNAnexus jobs and access them via HTTPS URLs, including R Shiny, to quickly spinning up web-based visualizations.

Docker, CWL/WDL support

Move workflows and apps to the cloud.
The platform supports industry-standard Docker, CWL, and WDL, providing pipeline portability for building and hosting your own analyses.

Smart Reuse

Reduce development time.
Save time and money by eliminating workflow repetition. Apply compute resources only to the downstream parts of the pipelines you're optimizing, allowing for the reuse of outputs from earlier steps that were unchanged, and decreasing the time to iterate on a pipeline code.

Apps & Tools

Leverage out-of-the-box DNAnexus apps, third-party apps, or build your own.
DNAnexus Apollo's app library is full of ready-to-use industry standard pipelines with a workflow orchestration framework. The Platform offers GLnexus, developed by DNAnexus to address the needs of population-scale joint genotyping, analysis applications for GWAS, allele frequencies, and more, alongside the flexibility to import or build custom applications and/or pipelines.

Integrated JupyterLab Notebooks

Directly access projects from JupyterLab.
DNAnexus Apollo includes embedded JupyterLab allowing for enhanced collaboration and tracking of work directly in a secure environment.

Data Visualization

Explore genomic data with innovative visual applications.
Data can be rapidly explored and visualized through a genome browser or your own tools.

Developer Experience & Clean API & SDK

Develop on DNAnexus using your favorite language.
DNAnexus Apollo's dx toolkit has language to support creating apps and debugging with ease. Open APIs and SDKs provide the ability to upload and store a variety of different file types with the flexibility to choose command-line or web interface.

Security & Compliance

Keep your data secure and reduce risk.
Apollo is compliant with the industry's strictest security & privacy regulations, including ISO27001, NIST 800 framework, HIPAA, PHI-enabled, GDPR, GxP/ICH regulations, CAP/CLIA, FedRAMP Moderate, and hosts data in your preferred geography.

Expert Science & Cloud Support

Solve today's genomic challenges - faster.
Leverage our xVantage Group, a team of expert scientists with deep bioinformatics and cloud expertise and broad industry experience, to help you achieve your goals.

Organization Administrative Tools

Manage your team's DNAnexus access and activity.
Leverage administrative tools for continuous visibility and easy management of your team's DNAnexus organization-level account. Assign admins, update policies, add/remove members,view compute and billing information, and more all in one place.

*Speak to your DNAnexus Sales representative for more DNAnexus Apollo features and capabilities