

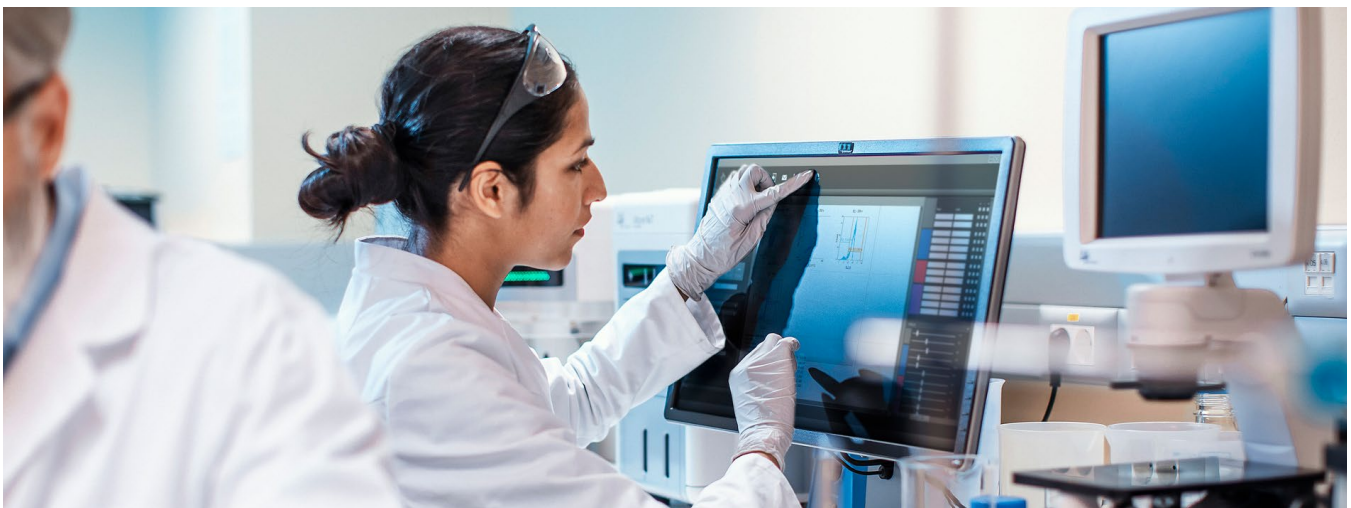
EPAM CORA for AWS HealthOmics

EPAM Collaborative Omics Research Accelerator™ (CORATM) for AWS HealthOmics provides life science and health care organizations with a user-friendly, secure and GxP-ready environment for analyzing and correlating omics data. EPAM CORA also takes full advantage of the power of AWS HealthOmics with features like multiomic and multimodal analysis, population sequencing and fully managed bioinformatics computation.

Designed for ease of use and to meet the needs of bioinformaticians, lab and bench scientists, and clinical providers, EPAM CORA delivers a collaborative and extensible environment for the development and use of computational workflows, democratizing access to high-performance omics computations.

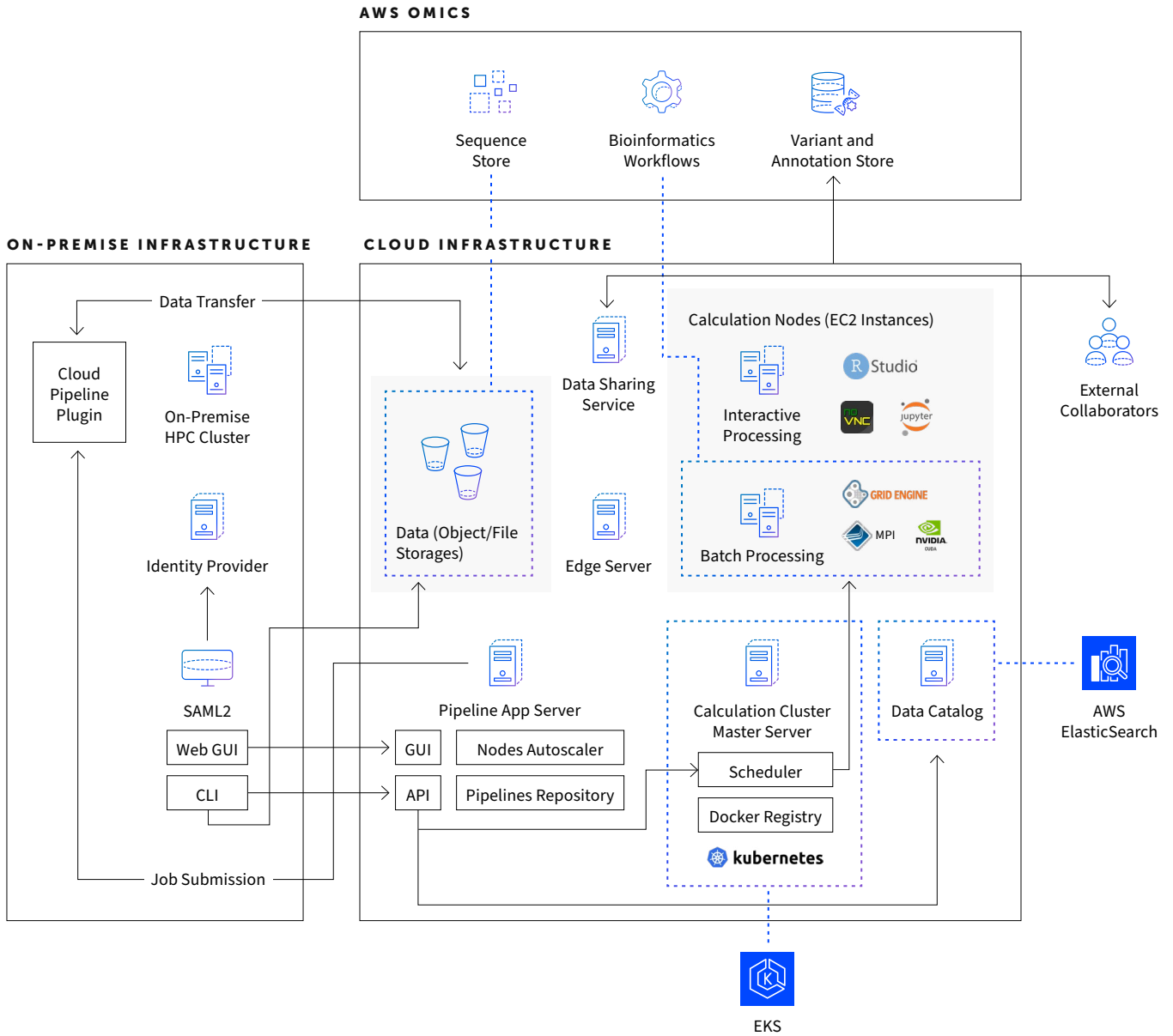
Key Benefits

- **Time savings:** Rapidly deploy the computational tools used by your organization's scientists
- **Increased accessibility:** Easily access any tool via a user-friendly interface with fine-grained access and version controls for all artifacts
- **Cloud migration:** Migrate on-premise clusters into the cloud and provide a versatile solution for application hosting and sharing
- **Optimized workflows:** Construct complex computational workflows using AWS HealthOmics and several other workflow languages
- **Scalability:** Harness elastically scalable cloud high performance computing with many CPUs and GPUs
- **Enhanced accounting:** Generate clear accounting reports for individual and team usage of AWS resources
- **Cost savings:** Utilize cost effective and secure storage of large-scale omics data in AWS HealthOmics' sequence, variant and annotation storage



How EPAM CORA Works

Based on EPAM’s proven open source Cloud Pipeline platform, EPAM CORA empowers users to integrate AWS HealthOmics workflows and data storage into complex computational workflows, managing the work of provisioning the correct computing environment type and size needed for each step. EPAM CORA also provides detailed security and access controls within an organization’s Amazon Virtual Private Cloud (VPC). With extensive version controls for input data, workflows and environments, EPAM CORA enables organizations to reproduce computations over time — a key requirement for dealing with regulatory and IP challenges.



Features

- **Computation & Data Processing:** Create complex, highly scalable and parallel computing and data processing pipelines and then execute them in your Amazon VPC using the user interface, a command-line scriptable interface or a REST API. Each pipeline represents a workflow script with versioned source code, documentation and configuration, and users can create scripts in the EPAM CORA environment or upload them from a local machine.

Pipelines can fully leverage AWS HealthOmics Workflows, including Ready2Run Workflows, as well as the specialized storage engines provided by AWS HealthOmics. A major advantage of EPAM CORA is that users can view pipelines during execution, examine outputs from individual steps in a computation and even close pipeline that isn't working as expected.

- **Data Storage Management:** Create data storage zones, manage input and output data and maintain version control to efficiently reproduce previous runs and store and share raw genomics data efficiently using the AWS HealthOmics data stores.

- **Tools Management:** Create and deploy customized calculation environments using Docker containers.
- **Scientific Computing GUI Applications:** Launch and run GUI-based applications using a self-service web interface, allowing users to easily choose cloud instance configurations or use a cluster. Applications are launched as Docker containers exposing web endpoints or as a remote desktop.
- **Run HPC-Based Solutions in the Cloud:** With EPAM CORA, migrating from an on-premise computing center to a cloud-native environment is easy, allowing you to “lift and shift” your HPC payloads — including schedulers and other tools — into the Cloud and run them “as is.” From there you can replace cluster-based solutions with natively parallelized, autoscaling pipelines as needed or leave legacy solutions to run in cloud-based clusters.

Democratize Access to High-Performance Omics Computations



Are you interested in a secure solution for deploying, managing and running different kind of scientific analysis pipelines using the AWS HealthOmics services?

Speak with an EPAMer to learn more about EPAM CORA.

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