Compass Health Data Compass   Home   Data Delivery Services ⌄   **Cloud Analytics Infrastructure** ⌄   Our Partners   News   Contact Us   🔍

Cloud Analytics Infrastructure

Eureka Overview

Eureka is an analytic infrastructure service provided by Health Data Compass to quickly provision virtual machines on Google Cloud Platform (GCP) for data scientists and developers within the Compass partnership. Eureka instances are designed for quick creation and deployment so you can get started whenever you need to. By design each Eureka instance is intended to only exist for no more than 1-year. This means if your analytic needs are dynamic and come in waves, we can create a Eureka instance to match your analytic demands. While generic virtual machines (VMs) are easy for an individual to deploy themselves directly on GCP or any public cloud provider, Eureka virtual machines are unique in the following ways:

HIPAA Compliance

Eureka instances are preconfigured to meet the HIPAA security and compliance standards of Health Data Compass and its partners (CU Denver, CU Medicine, UCHealth, and Children's Hospital Colorado). Therefore, they are pre-approved for storage and processing of protected health information (PHI) from these organizations. These standards extend far beyond typical security controls on virtual machines.

Scalability & Affordability

Eureka instances can be scaled to be just the right size for the workload at hand. Costs scale up and down accordingly, and are charged primarily based on the amount of time a system is running. If your VMs are off in the evenings or weekends, you'll only pay for storage during those times, not for compute power. See the Eureka Cost Estimator.

Various Analytic Capabilities

Eureka offers different analytic environments to meet your needs. You can get up to 3 different VMs with Eureka App VM and you can get high performance computing with Eureka HPC. Learn more about the various Eureka offerings below.

Eureka App VM

Each instance comes with a unique GCP project that includes:

- BigQuery
- Storage
- App VM (sized to your order)
  - VM is CentOS 7 Linux with preinstalled applications
- Cloud Source Repository
- Custom URL for web-based log in to App VM and RStudio
- Limited internet access from App VM (available 7/20/2020)
- Nightly back ups of VM images
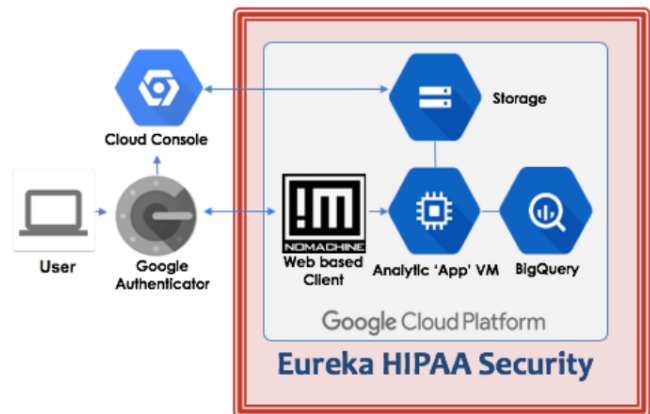
Eureka HPC

Each instance comes with a unique GCP project that includes:

- Storage
- BigQuery
- HPC VM
  - VM is CentOS 7 Linux with SLURM Control for batch job execution
  - Ephemeral VMs spun up based on job needs
- Custom URL for web-based log in to HPC VM
- Limited internet access from HPC VM
- Attached Managed Network File Storage
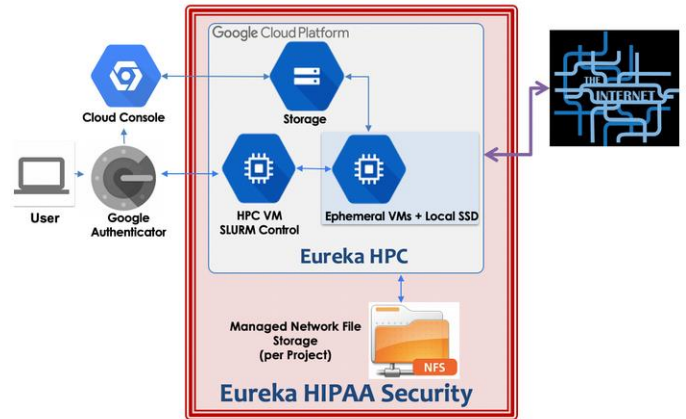
Eureka Data Access

Eureka accommodates users who have their own datasets (PHI or de-identified) by providing secure, HIPAA-compliant upload mechanisms. Users can also request data from Compass and have it delivered as a dataset that is accessible from your Google BigQuery project in Eureka. Lastly, users have access to the latest publicly available datasets Google has provided on Google BigQuery. These datasets include Medicare, genomics, weather data, and more. (See the latest list here.)

Eureka Billing

Users pay for their actual Eureka costs and Compass support services on a quarterly basis. Payment is set up at the time of creation for each of your Eureka instances. Changes to your payment method can be made by contacting Compass directly here.

You can track your Eureka usage on the Google Billing Console (from within your Eureka instance) or you can request an update on your usage from Compass here.

Getting Started

The process for getting your Eureka instance created or accessing an existing Eureka instance is simple and straight forward.

A Compass User Account is needed to access a Eureka instance. To obtain one:

1. Sign the Eureka User Agreement & Terms & Conditions of Service (EUATCS). Read the short agreement before signing, there are important details about Eureka that are very relevant to you before you start.
2. Complete the Compass User Account Intake Form. This survey will help Compass understand your needs for using Eureka, including if you are seeking access to an existing Eureka instance and any Compass-curated data sets.
3. After Compass receives your completed and signed EUATCS we will create your Compass Google Cloud Platform (GCP) account, if you don't already have one.

A new Eureka instance can be requested by contacting Compass directly here and providing the following information:

1. Type of Eureka instance (App-VM, HPC).
2. What analytic activities will occur in the instance. This could include what Compass-curated data sets you will be working with.
3. Provide requirements. These differ depending on the type of Eureka instance being requested:
   1. App-VM: CPUs, RAM, storage and number of VMs needed. Please use the Eureka Price Estimator to determine your requirements and share a screen shot of your final configurations to Compass.
   2. HPC: Attached storage size.
4. Provide a list of users who need access to the Eureka instance. All users will need to have a Compass User Account to access the Eureka instance.
5. Provie a University Speed Type number. This is where Eureka charges will be billed to.
6. Once your Eureka instance has been created, you will get a confirmation email along with further instructions for accessing and using your Eureka.

If you get stuck or lost along the way, reach out to Compass for assistance here.

No longer needing your Eureka instance?

When you are done with your Eureka instance, we can decommission your instance (email us here). Decommissioning a Eureka instance means deleting the Eureka App VM, Eureka BigQuery and Cloud Storage project, Eureka Cloud Source Repository, and backup images. Once a Eureka instance is decommissioned there is no way to retrieve it.

Before you give Compass permission to decommission your Eureka instance make sure all data you want to keep is copied in another HIPAA compliant and secure location. This includes any data on your Eureka App VM, Eureka BigQuery & Cloud Storage project, and any code in your Eureka Cloud Source Repository.