Intro to GCP

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Understanding the Cloud

- As we saw in Week 8, Cloud computing is the delivery of IT services, such as computing power, database storage, networking, software and analytics over the Internet ("the cloud")

- Instead of buying, owning, and maintaining physical data centers and servers, companies can obtain technology services from a third-party provider

WHY GCP?

- Google Cloud Platform (GCP) is a suite of cloud computing services that run on the same infrastructure that Google uses internally for its end-user products (YouTube, Gmail, and Google Maps)

- GCP offers a broad range of globally distributed cloud computing services including computing, data storage, data analytics, machine learning, and network services.

Key GCP features

- **Global Infrastructure:** Extensive network of data centers worldwide for low latency and high availability.
- **Advanced Data Analytics and Machine Learning:** Leveraging Google's expertise in these areas, GCP offers powerful tools like BigQuery and TensorFlow.
- **Openness and Interoperability:** Works seamlessly with other cloud platforms and on-premises systems.
- **Strong Security and Compliance:** Built-in security features and certifications to protect your data.

GCP building blocks

- **Compute Engine:** Create and manage custom virtual machines (VMs) to run your applications.
- **App Engine:** Develop and host scalable applications without worrying about the underlying infrastructure.
- **Cloud Storage:** Store and manage vast amounts of data in a durable and accessible manner.
- **BigQuery:** Analyze petabytes of data with speed and ease, using standard SQL.
- **Cloud SQL:** Host instances of popular relational databases like MySQL, PostgreSQL, and SQL Server.
- **Cloud Functions:** Execute serverless code in response to events, such as database changes or file uploads.

Use cases

- **Web Hosting and Application Development**
- **Data Storage and Database Management**
- **Data Analytics and Big Data**
- **Machine Learning and AI**

Google Cloud

Hands on BigQuery

- To begin your GCP journey, you'll need to create a Google Cloud account.
- Go to the Google Cloud Platform at: https://cloud.google.com
- Click on "Sign In" and use your Google account (or create a new one)
- You'll be prompted to provide billing information. Don't worry, GCP offers a free tier to explore its services (about 300$)

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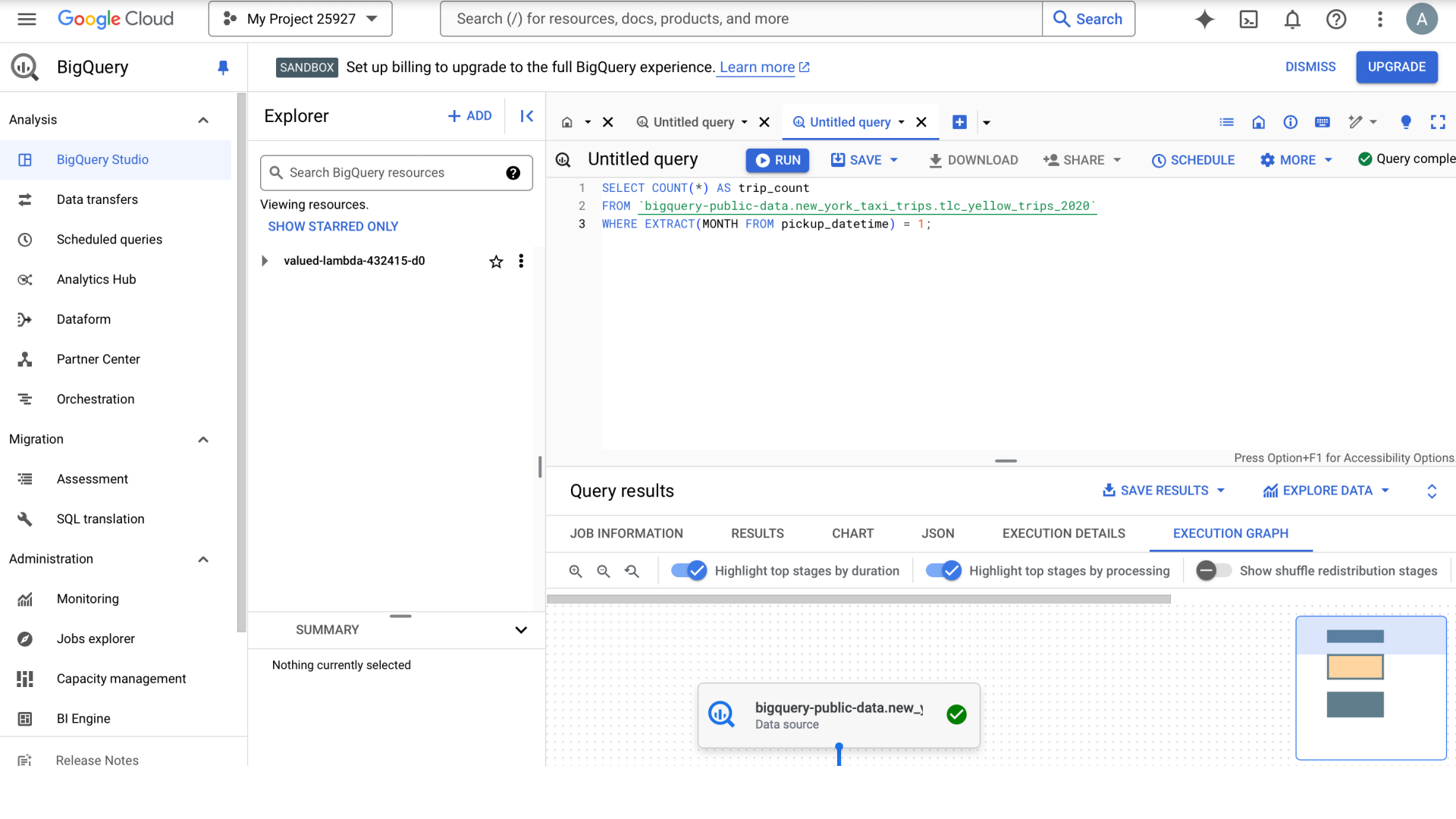
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Query comple
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3 WHERE EXTRACT(MONTH FROM pickup_datetime) = 1;
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JOB INFORMATION
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JSON
EXECUTION DETAILS
EXECUTION GRAPH
Highlight top stages by duration
Highlight top stages by processing
Show shuffle redistribution stages
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Data source

Hands on BigQuery

We will now move to the Console to do some querying on public datasets!

THANKS !