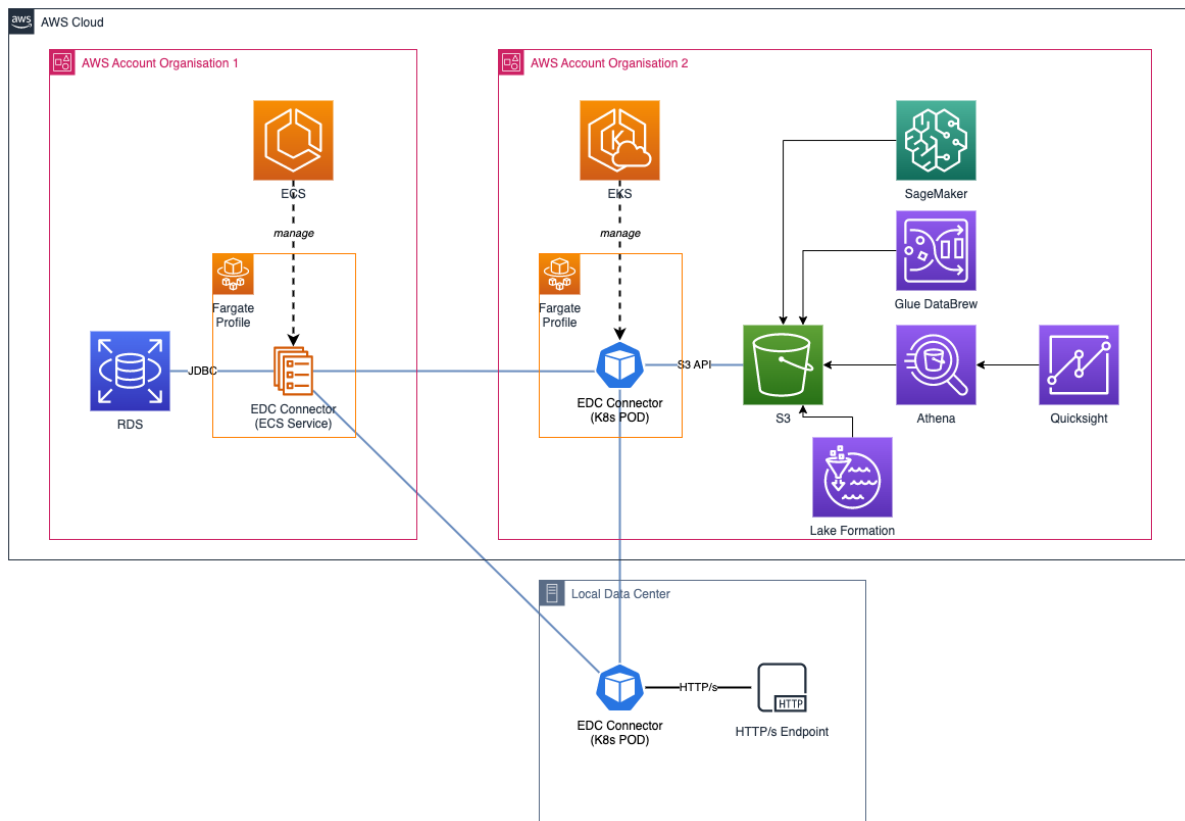
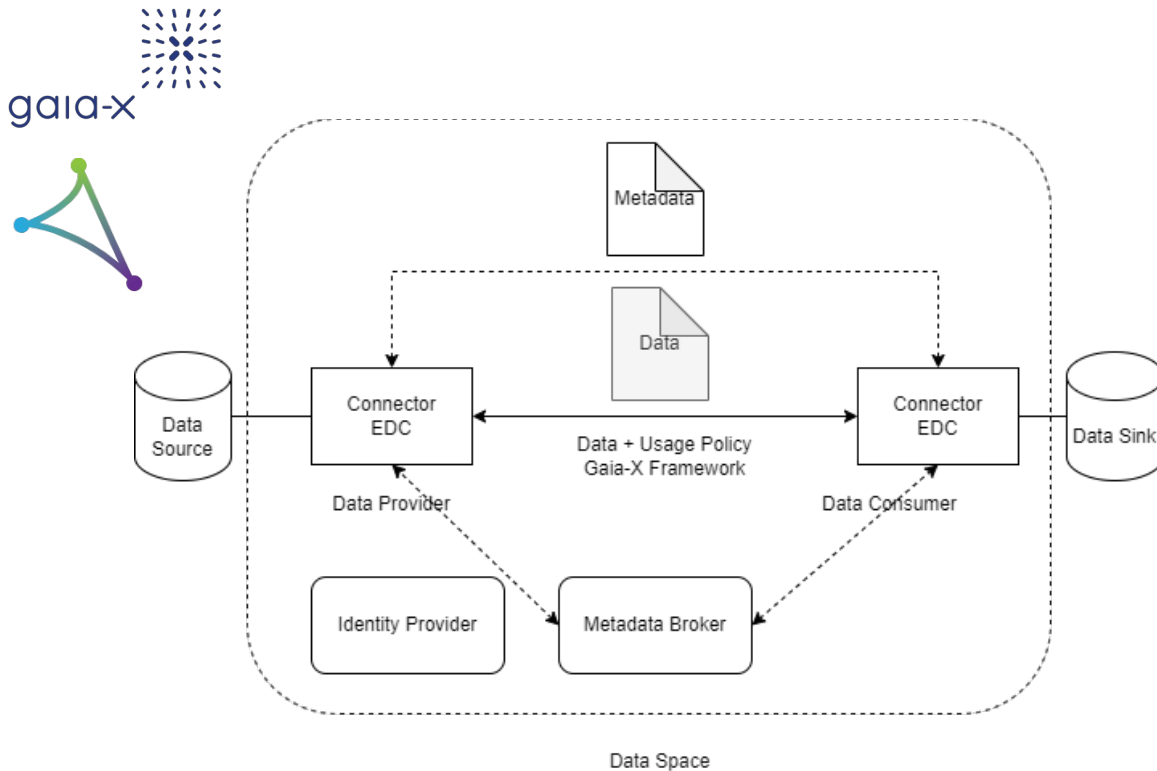


Runtime Components (TEMP / in Theory)



[1] Kubernetes Deployment of EDC Connectors in AWS Cloud

During runtime, a Kubernetes pod containing EDC Connector with the necessary components will be deployed in AWS Cloud. At least 2 pods will be deployed to test the result of data exchange between 2 connectors. Users could check via HTTPS Endpoint of the Kubernetes Pods. Whether or not we need the S3 as the data source is still TBD.



Code Components

Components (TEMP)

EDC Connector [2]

Core component where data is transferred, consume data offers, and maintains control over the data. Control means in this case data sovereignty and compliant.

Metadata Broker

Also known as data marketplace, is used for the publication and displaying of data sources and their terms of use. Provides metadata in a machine-readable format.

Vocabulary Provider

Provides necessary domain knowledge on data transfer in the form of vocabularies and ontologies. TBD which ontologies to be used for this project (most likely GAIA-X Core Ontology). Must ensure machine-readability of data.

Identity Provider

The identity provider evaluates the trustworthiness of data providers, data users as well as data and data apps, and it also allows secure communication based on the evaluations.

Technology Stack

Java

Eclipse Data Connector is inherently written in Java and the open source EDC Connector serves as a starting point for a custom Connector to suit the project needs.

Gradle

Gradle is used for building the application and its dependencies.

Kubernetes

Since we are deploying in the AWS Cloud, we need the means to orchestrate the interoperability of data between 2 connectors or multiple clouds. Kubernetes is open-source.

AWS

Amazon Web Services (AWS) provides extensive services especially for cloud deployment such as S3 and EC2 without worrying about the underlying infrastructure.

References

[1] <https://aws.amazon.com/de/blogs/publicsector/enabling-data-sharing-through-data-spaces-aws/>

[2] <https://eclipse-edc.github.io/docs/#/README>

[3] <https://gaia-x.eu/gaia-x-framework/>

[4] <https://kubernetes.io/>