

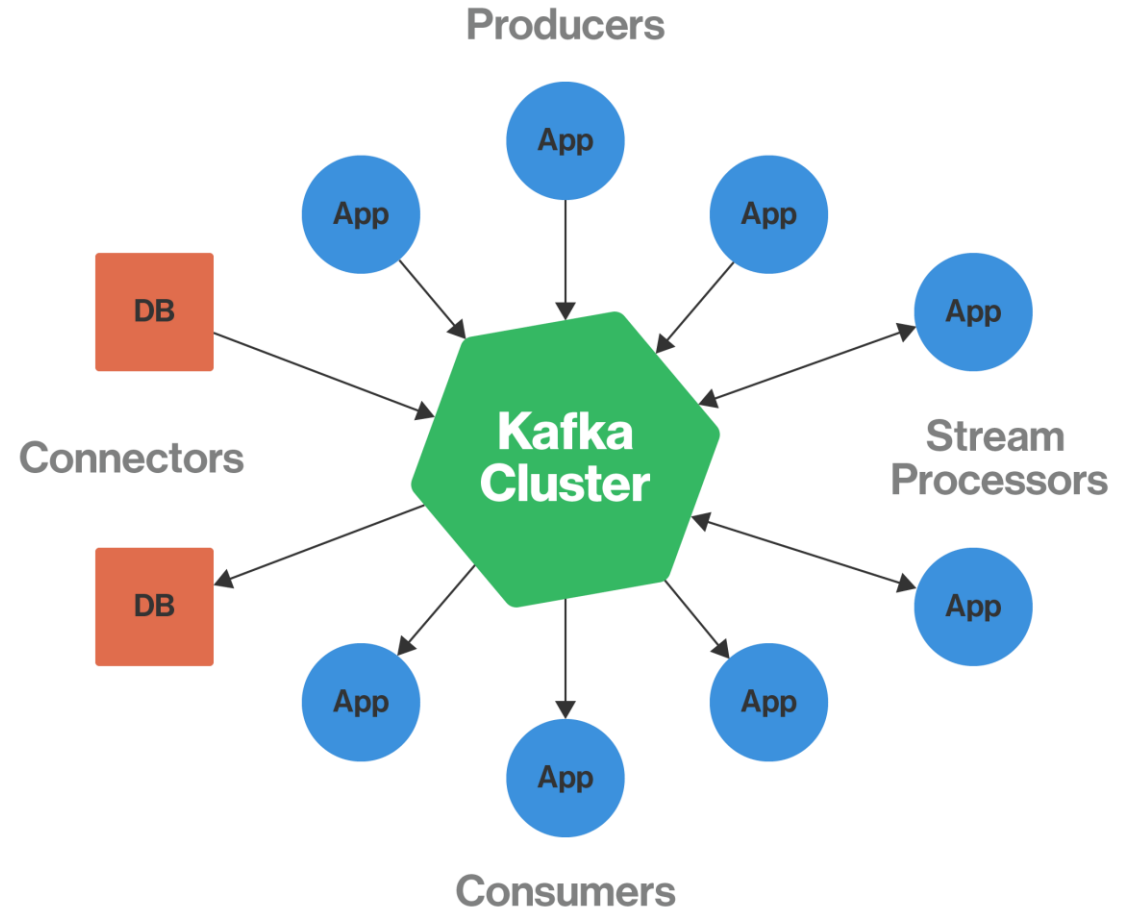
CloverDX and Kafka

Tech Demo: Kafka in CloverDX

Calvin Cortez

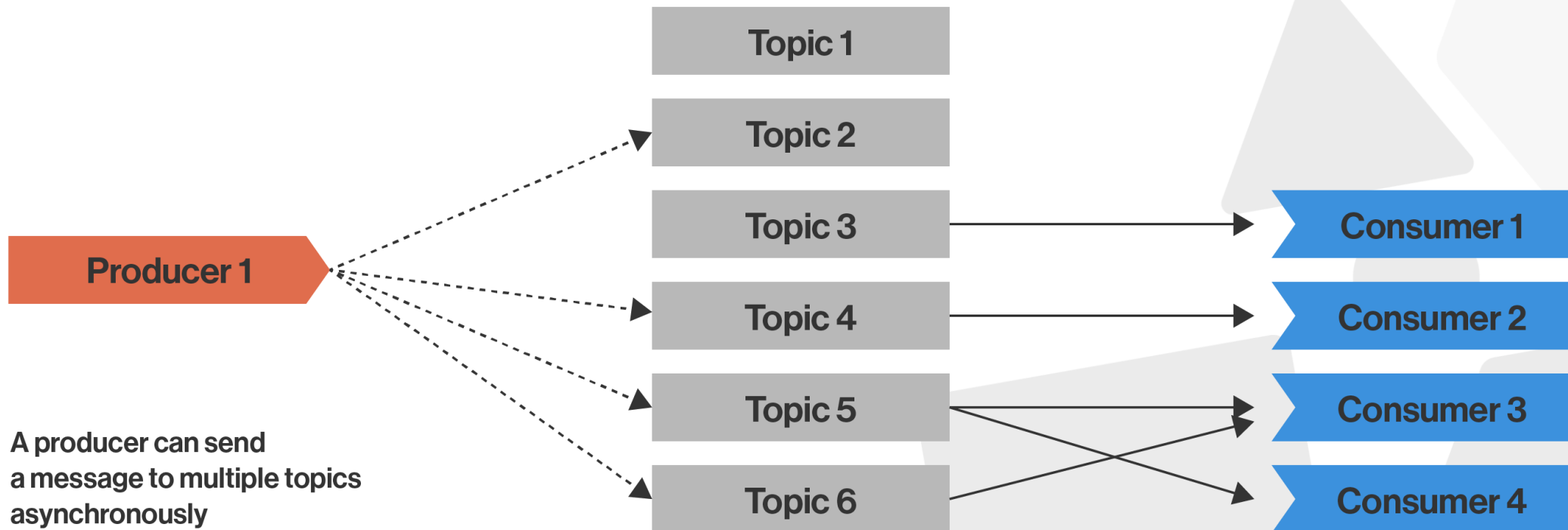
What is Kafka?

- A distributed streaming platform used to provide data in real-time to many applications.
- It publishes and subscribes to streams of records (Similar to a message queue)
- Ideal for connecting large volumes of data to many sources and targets



Kafka Topics

A topic is a category or feed name to which records are published. Topics in Kafka are always multi-subscriber: A topic can have zero, one, or many consumers that subscribe to the data written to it

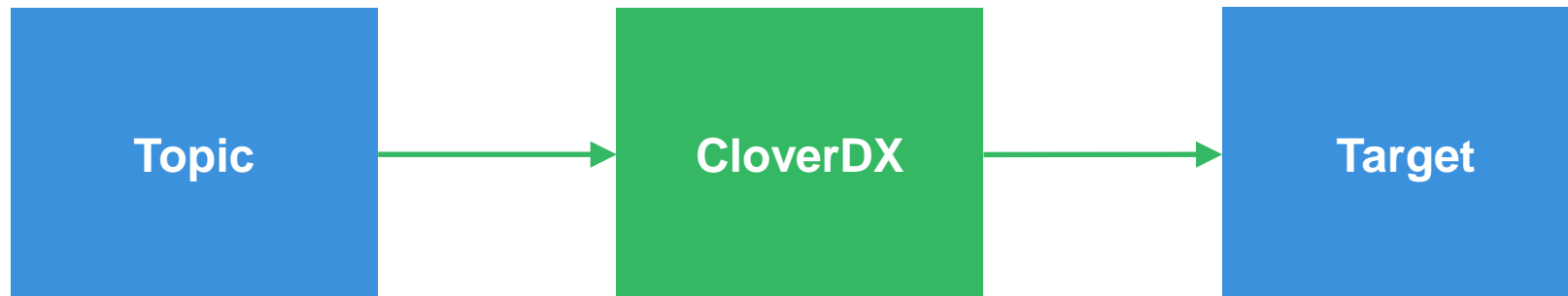


Limitations

- **While Kafka allows us to stream data in large quantities; it doesn't provide us with real data-wrangling capabilities**
- **We often need to enrich our data before it is usable in our target environment**
- **Messages are purged from our Kafka environment after a certain amount of time**
- **Consider: How do we create a comprehensive and auditable data pipeline with Kafka?**

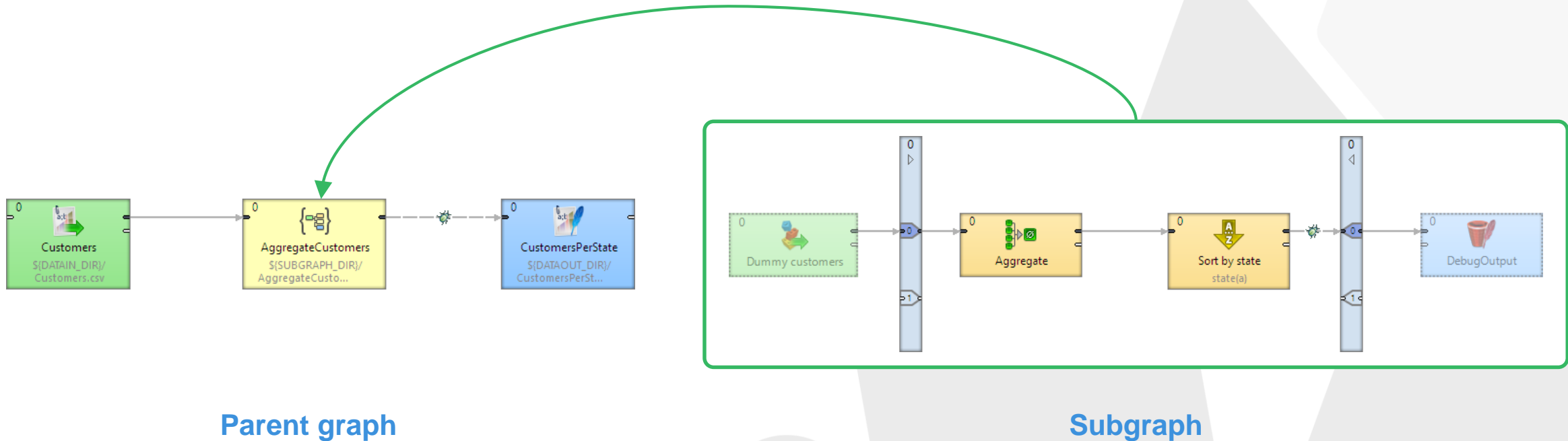
CloverDX: Data Management Platform

- We can design and build components to work with Kafka within CloverDX
- Enrich, Clean, Validate Data
- Process Kafka data streams and push them to appropriate targets (APIs, Data Warehouses, etc.)
- Create easily manageable and auditable data pipelines leveraging the power of Kafka



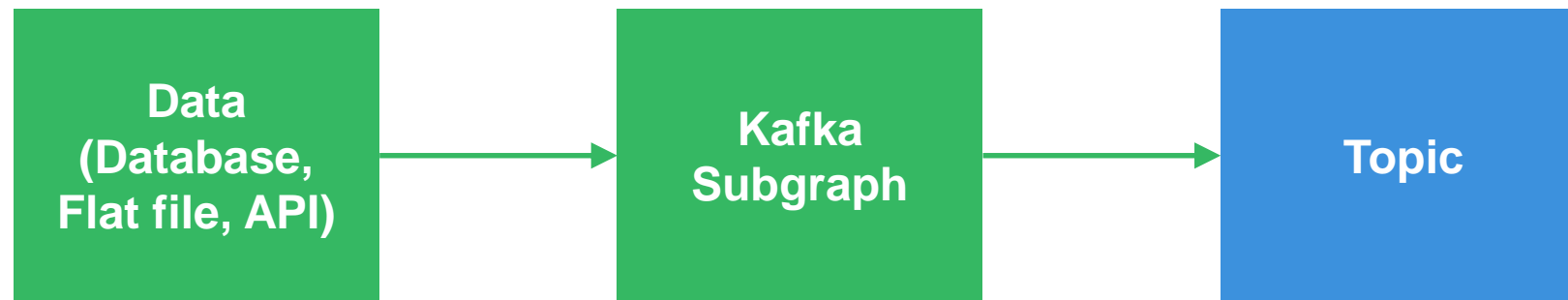
Graphs and Sub-Graphs in CloverDX

- Sub-Graph: A logical collection of components that encompass a complex process (such as writing to and reading from Kafka Topics)
- We can use sub-graphs to wrap Kafka capabilities into a module that we can re-use.



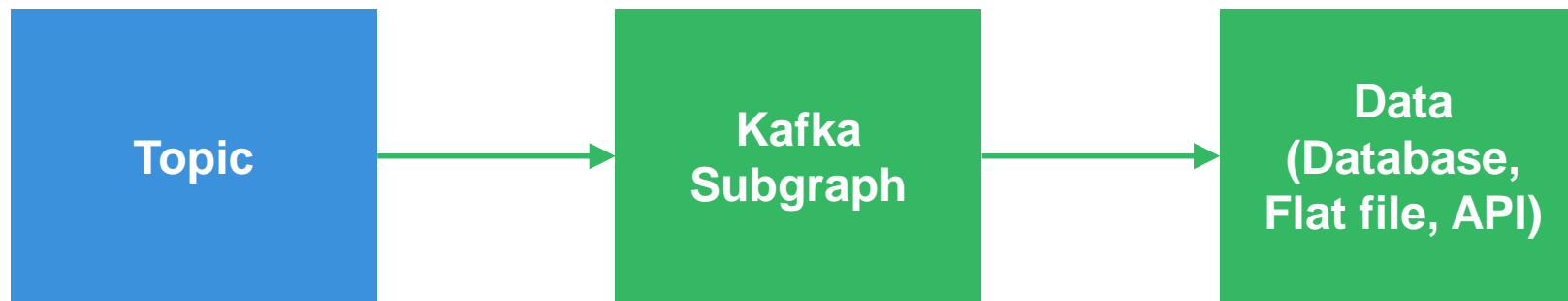
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Writing to a Topic:



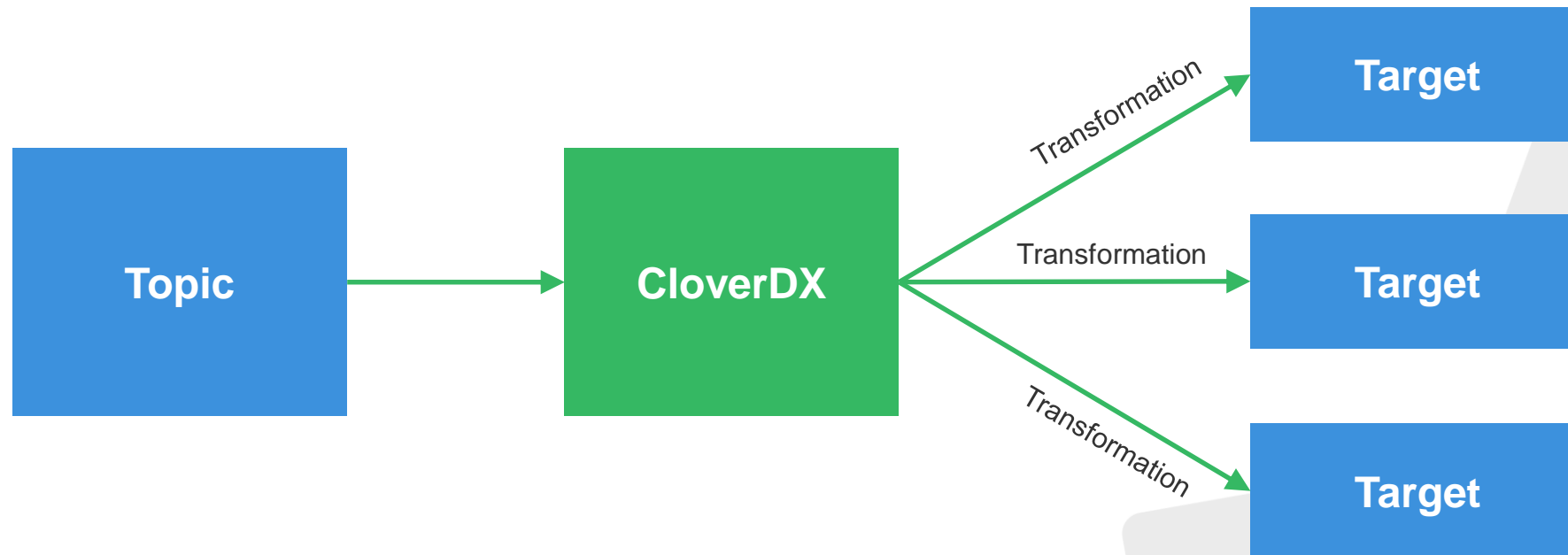
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Reading from a Topic:



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Dynamically Transforming Data:



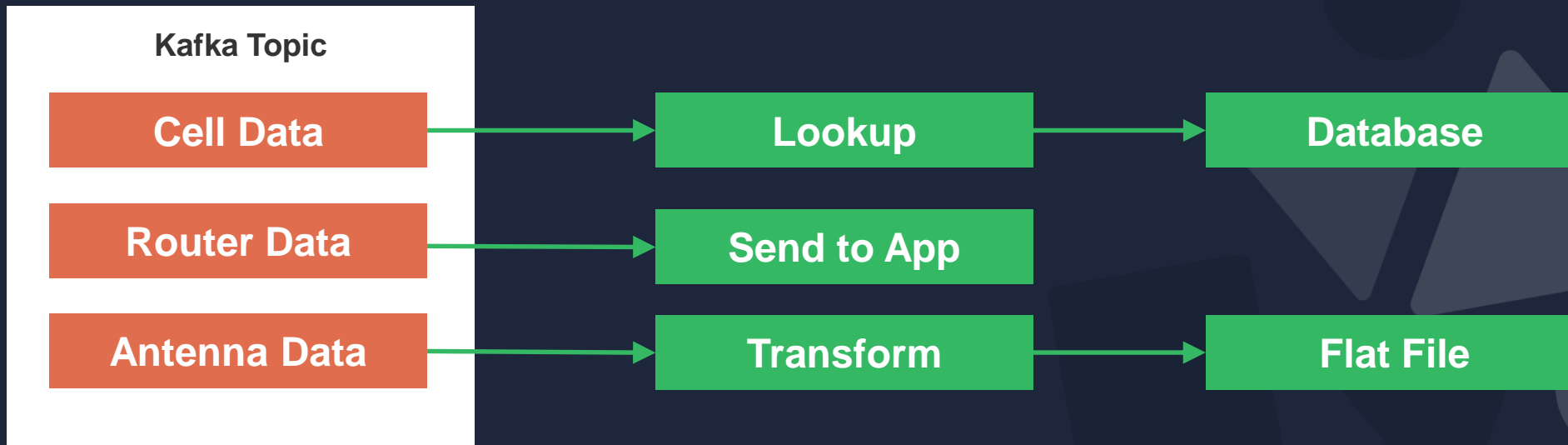
Demo

Telecom Use-Case

Kafka Topic:

Cell Data:	Timestamp	Device_Type	UUID	Failures	Packets Sent	Days Since Reboot	Region
Router Data:	Timestamp	Device_Type	UUID	Status_Code			
Antenna Data:	Timestamp	Device_Type	Inventory_Number	Failures	Distance to Tower	Packets Recieved	Packets Lost

Telecom Use-Case



Questions?

Thank you!

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