Apache Kafka & .NET

Event driven programming

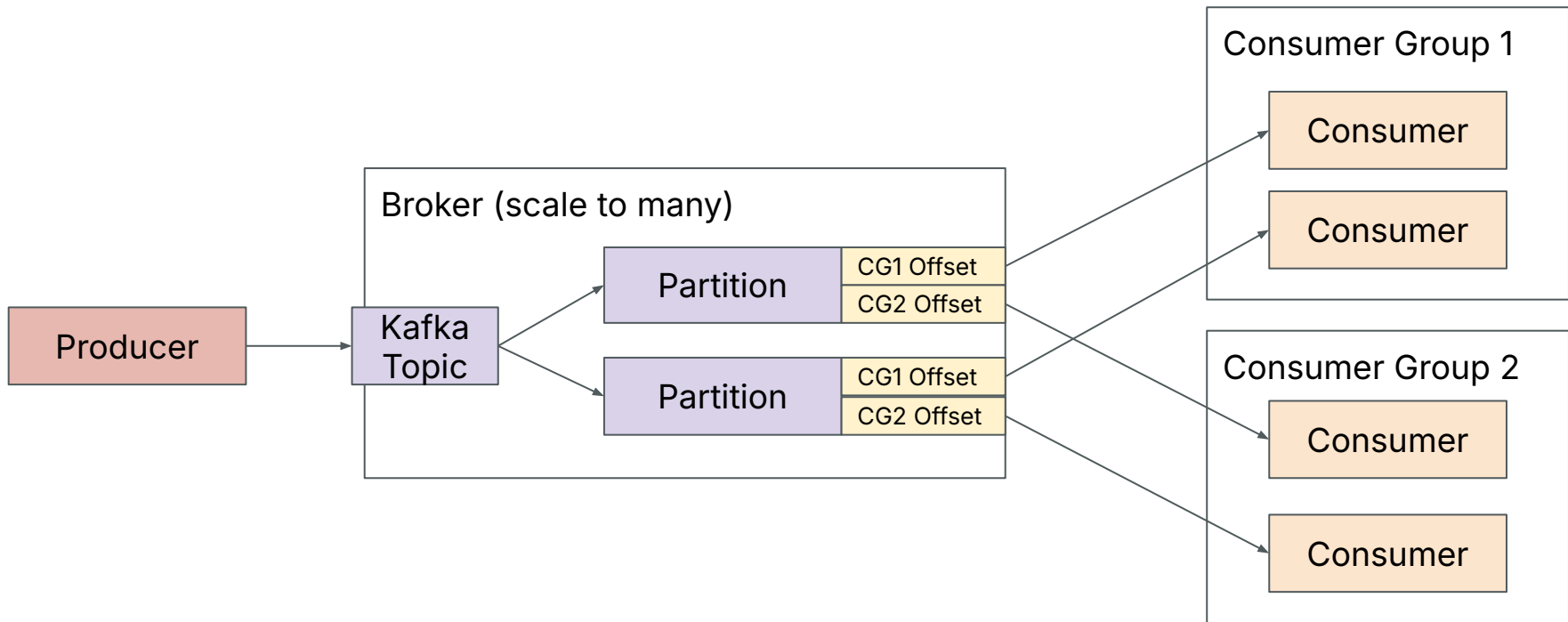December 2023
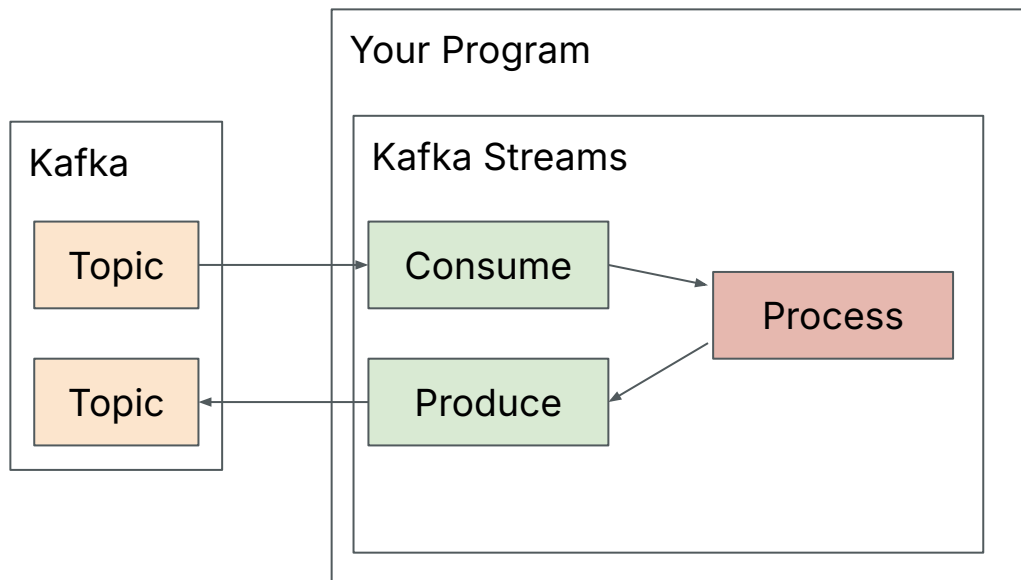
Kafka: Message Broker

Kafka Streams

Processor Topology

A **processor topology** or simply **topology** defines the computational logic of the data processing that needs to be performed by a stream processing application. A topology is a graph of stream processors (nodes) that are connected by streams (edges). Developers can define topologies either via the low-level Processor API or via the Kafka Streams DSL, which builds on top of the former.

PROCESSOR TOPOLOGY
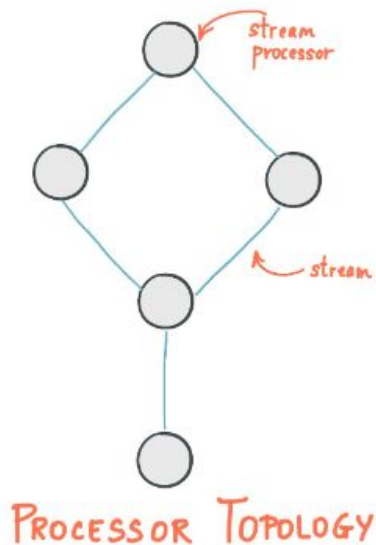
The Architecture documentation describes topologies in more detail.

Stream - Table Duality

KStream

Key	Value
John	{ "item": "Apple", "Qty": 3 }
Paul	{ "item": "Banana", "Qty": 1 }
George	{ "item": "Mango", "Qty": 1 }
John	{ "item": "Apple", "Qty": -1 }
John	{ "item": "Banana", "Qty": 1 }

KTable

Key	Value

John	[
	  { "item": "Apple", "Qty": 2 },
	  { "item": "Banana", "Qty": 1 }
	]

Paul	[{ "item": "Banana", "Qty": 1 }]
George	[{ "item": "Mango", "Qty": 1 }]

GroupBy, Aggregate

kSQL

ksqlDB allows us to read, filter, transform, or otherwise process streams and tables of events, which are backed by Kafka topics. We can also join streams and/or tables to meet the needs of our application. And we can do all of this using familiar SQL syntax.

Kafka and .NET

Feature	Java Support	.NET Support
Producer / Consumer	✅	✅
Json Proxy API	✅	✅
kSQL	✅	✅
Streams	✅	❓

Kafka and .NET

Feature	Java Support	.NET Support
Producer / Consumer	✅	✅
	✅	✅
	✅	✅
	❓	

.NET Stream Processing Library for Apache Kafka ™ • license MIT • chat 7 online • build no status

Package	Nuget version	Downloads
Streamiz.Kafka.Net	nuget v1.6.0	downloads 570k
Streamiz.Kafka.Net.SchemaRegistry.SerDes	nuget v1.6.0	downloads 110k
Streamiz.Kafka.Net.SchemaRegistry.SerDes.Avro	nuget v1.6.0	downloads 32k
Streamiz.Kafka.Net.SchemaRegistry.SerDes.Protobuf	nuget v1.6.0	downloads 22k
Streamiz.Kafka.Net.SchemaRegistry.SerDes.Json	nuget v1.6.0	downloads 36k
Streamiz.Kafka.Net.Metrics.Prometheus	nuget v1.6.0	downloads 5.6k
Streamiz.Kafka.Net.Metrics.OpenTelemetry	nuget v1.6.0	downloads 5.2k
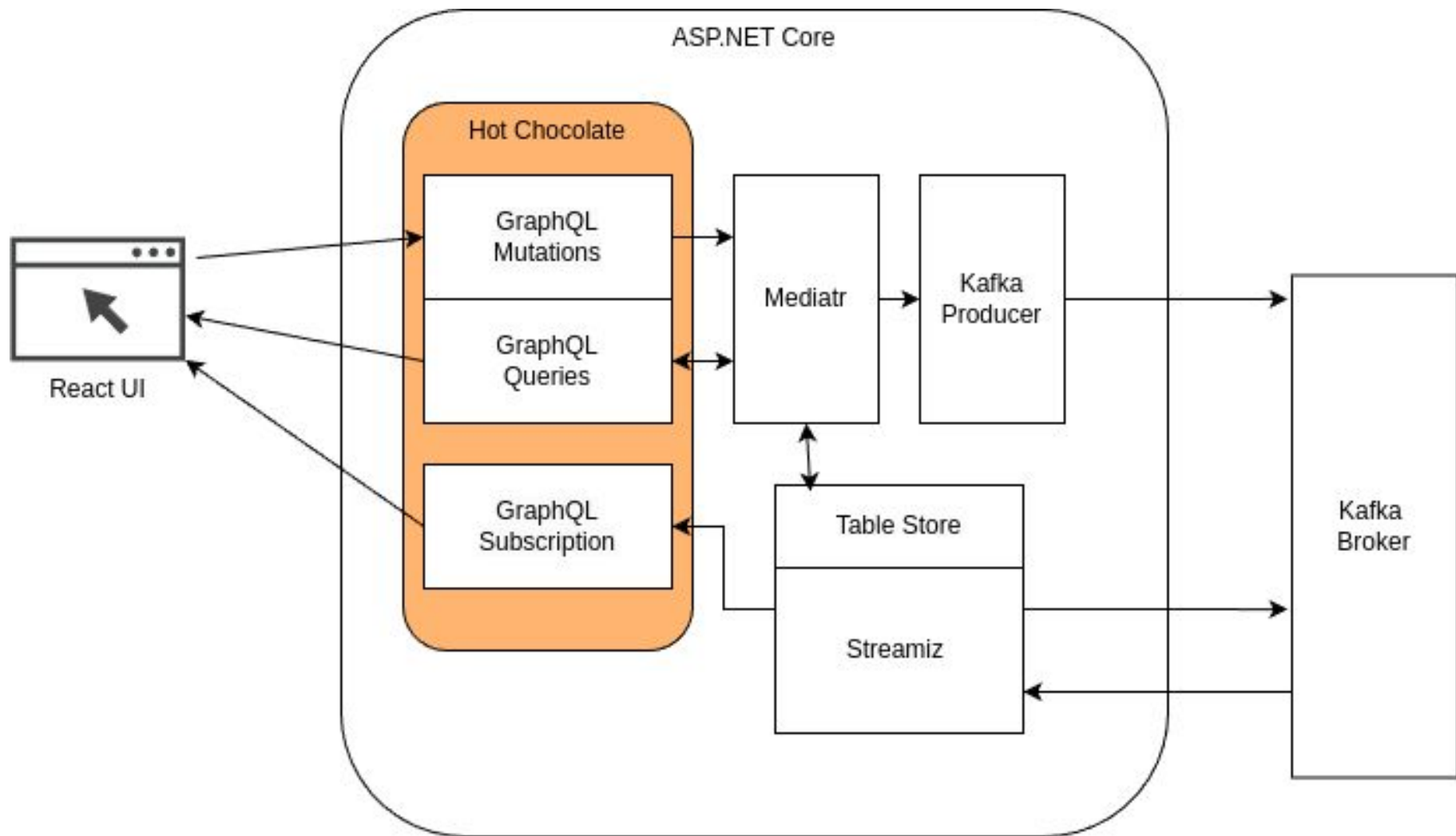
NDC

Conferences

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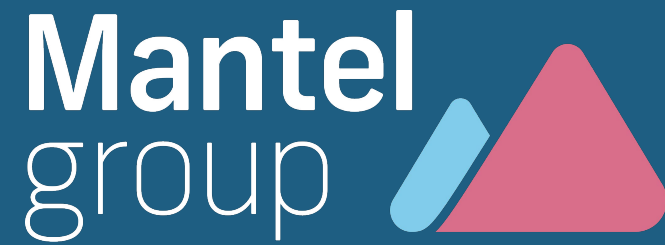
BRISBANE

Table Of Contents

Mantel
group

Changing how the world works for the better.

Mantel
group

Add client logo here. Set the height of the logo to the same height as this rectangle. Please remove rectangle once done.

Presentation template

Mantel Group base template

August 2023

Mantel group

Presentation template

Mantel Group base template

August 2023

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Sydney

Perth

Adelaide

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Queenstown

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Table Of Contents

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Layouts for presentation

With Mantel Group logo and tagline

Single row heading

Awesome subheading

Marshmallow roll sweet roll topping shortbread toffee. Chocolate bar marshmallow sweet chocolate carrot cake. Croissant cake caramels gummi bears icing. Powder brownie ice cream candy donut liquorice muffin jelly marshmallow roll. Jelly fruitcake donut chupa chups jujubes. Muffin marshmallow roll pudding caramels biscuit pudding.

Changing how the world works for the better.

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