

INTEGRATING SYSTEMS IN THE AGE OF QUARKUS, KNATIVE AND KAFKA

Zineb Bendhiba
@ZinebBendhiba



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Zineb Bendhiba





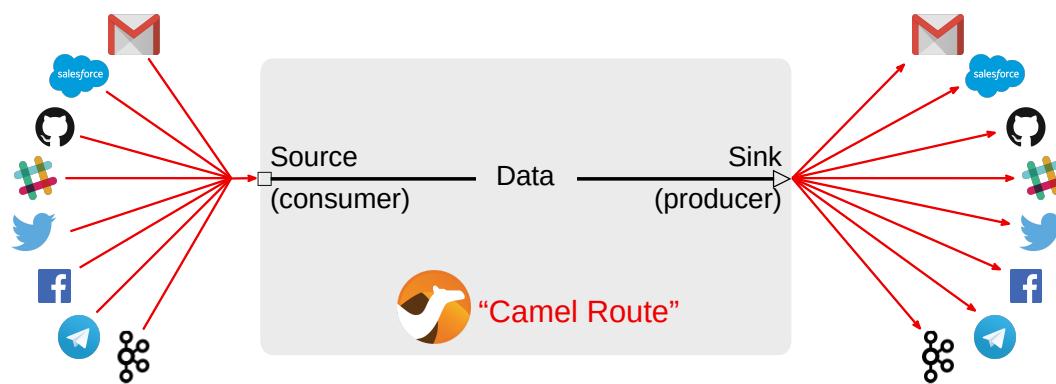
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APACHE
Camel

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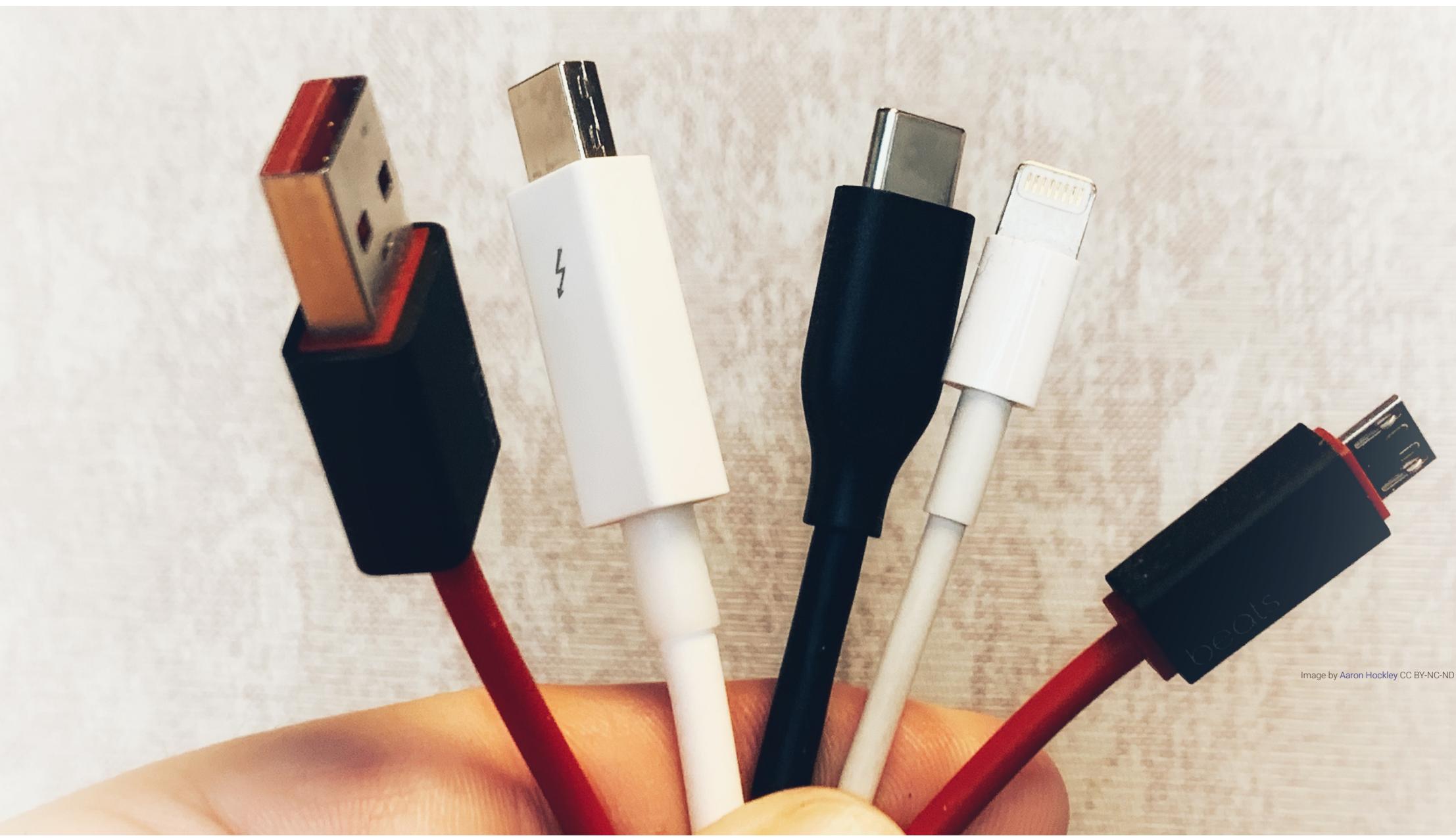


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350+ CONNECTORS

Filetypes:

- Plaintext, XML, HTML, CSV, JSON, ZIP, ...
- Apache Tika (MS Office, OpenDocument, ...)

Data & messaging

- Hazelcast, Infinispan, Redis, ...
- Cassandra, MongoDB
- JDBC, SQL, JPA
- Kafka, Debezium
- JMS, AMQP, QPID, STOMP

Protocols:

- TCP/UDP, DNS, FTP, HTTP, IRC, SSH, ...
- REST, GRPC, git, ...
- IoT: CoAP, MQTT, PubNub

APIs:

- Social: Facebook, Twitter, LinkedIn
- Box, Dropbox, Google Calendar/Drive/Mail/Docs
- Salesforce, SAP, ServiceNow, FHIR
- GitHub, Jira, Telegram

Check [the full list](#)

Public/private Clouds:

- AWS: S3, SQS, Kinesis, ...
- Azure: Blob, Queue, ...
- Google: BigQuery, PubSub
- DigitalOcean, Kubernetes, OpenShift, etcd, Docker

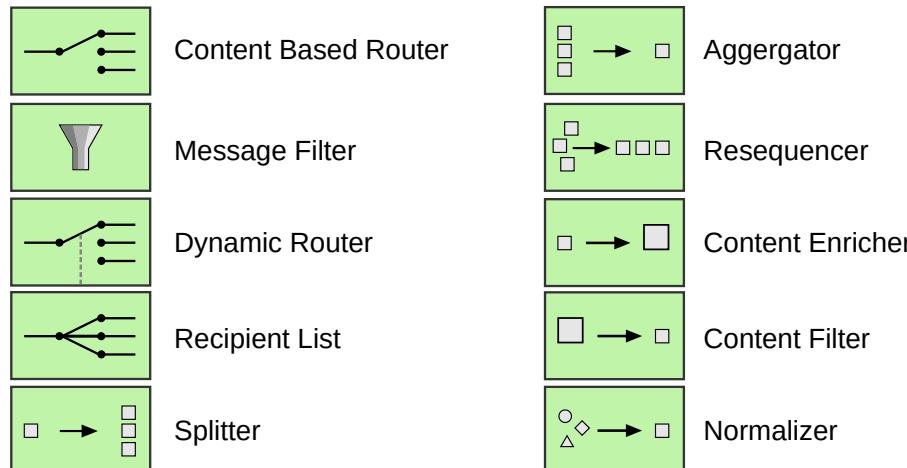
Misc:

- Barcode
- Base64, JsonPath, Freemarker, Groovy, Mustache, Ruby
- JMX, OpenTelemetry, OpenTracing, OptaPlanner, Syslog



Image by Jess Larson

ENTERPRISE INTEGRATION PATTERNS (EIP)



<https://www.enterpriseintegrationpatterns.com/>

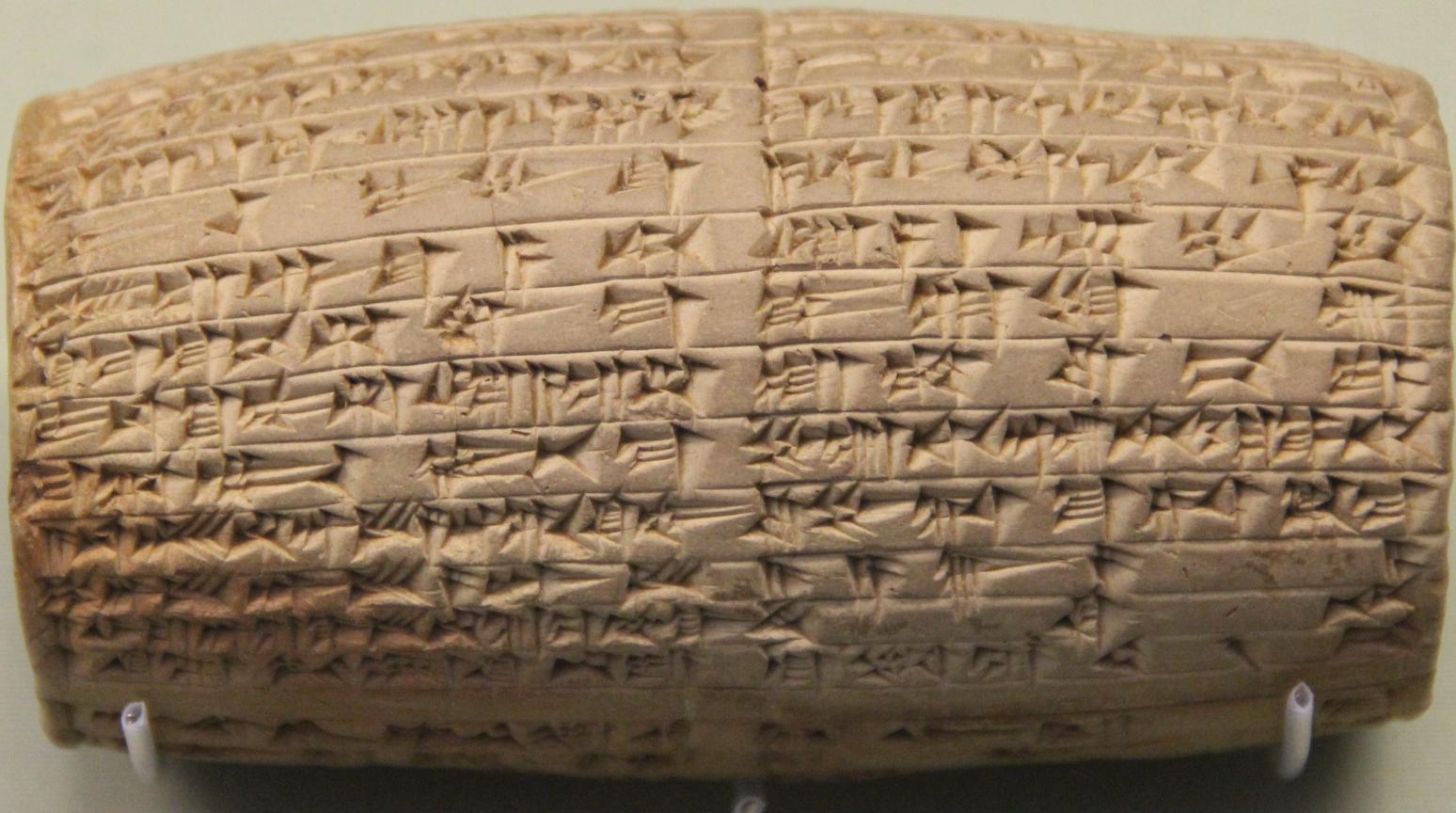


Image by Gary Todd CC0 1.0

DOMAIN SPECIFIC LANGUAGES (DSL)

Java

```
class MyCamelRouter extends RouteBuilder {  
    @Override  
    public void configure() throws Exception {  
        from("aws2-s3://my-bucket?prefix=hello.txt")  
            .log("Got an S3 file: ${body}")  
            .to("telegram:bots");  
    }  
}
```

XML

```
<routes  
    xmlns="http://camel.apache.org/schema/spring">  
    <route id="my-route">  
        <from uri="aws2-s3://my-bucket?prefix=hello.txt"/>  
        <log message="Got an S3 file: ${body}"/>  
        <to uri="telegram:bots"/>  
    </route>  
</routes>
```

Groovy, Scala, Kotlin, YAML, ...



SUPPORTED PLATFORMS



QUARKUS



Spring Boot



Standalone



Knative/Kubernetes



A close-up photograph of a camel's head and neck in profile, facing left. The camel has a thick, brown coat and a prominent hump. The background is a clear blue sky.

Image from pxhere.com CC0 Public Domain

Camel on Quarkus



a build time toolkit

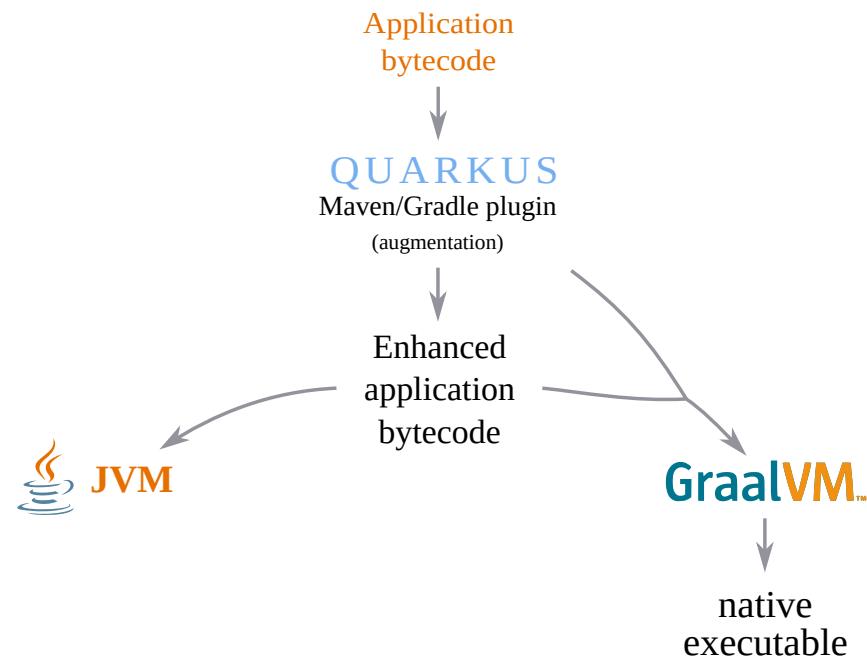




Image from tenor

WHY CAMEL ON QUARKUS?



Small size on disk

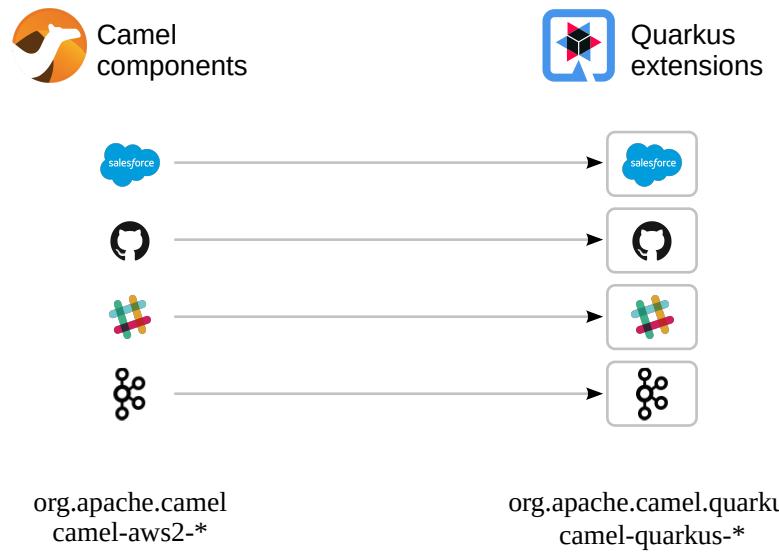


Fast boot time



Low memory footprint

- ✓ Small container images
- ✓ Instant scale up
- ✓ More containers with the same amount of RAM





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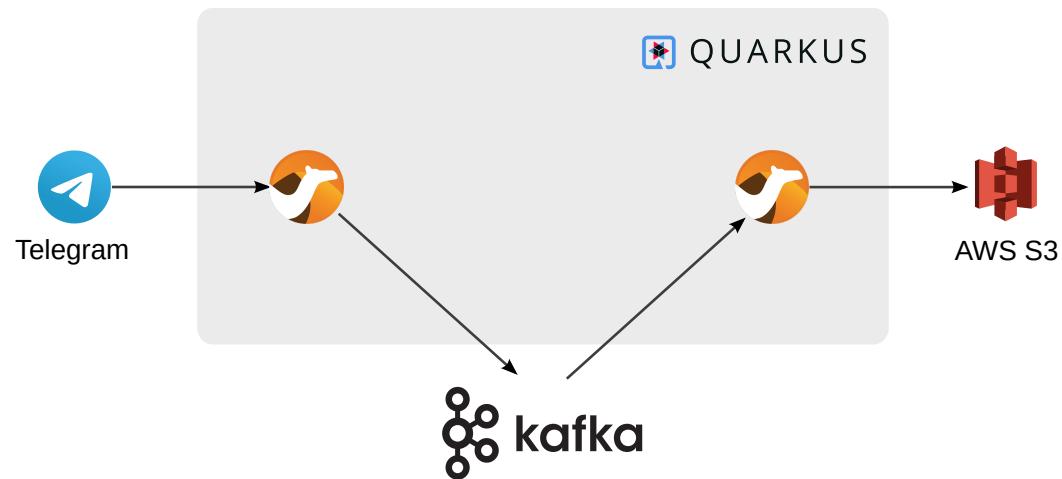


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CAMEL QUARKUS DEMO



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github.com/zbendhiba/telegram-kafka/tree/220617-bucarest-java-summit



HOW CAN WE DEPLOY ON KUBERNETES?

THE QUARKUS WAY

Build and push an image

- `quarkus-container-image-jib`
- `quarkus-container-image-docker`
- `quarkus-container-image-s2i`

Generate Kubernetes resources

- `quarkus-kubernetes`
- `quarkus-minikube`
- `quarkus-openshift`
- `quarkus-kubernetes-config`

[Watch Quarkus Insights #15: Kubernetes and OpenShift with Quarkus](#)



Make it simpler!

Image by Anders Lanzén CC BY-NC-SA 2.0

CAMEL K OVERVIEW

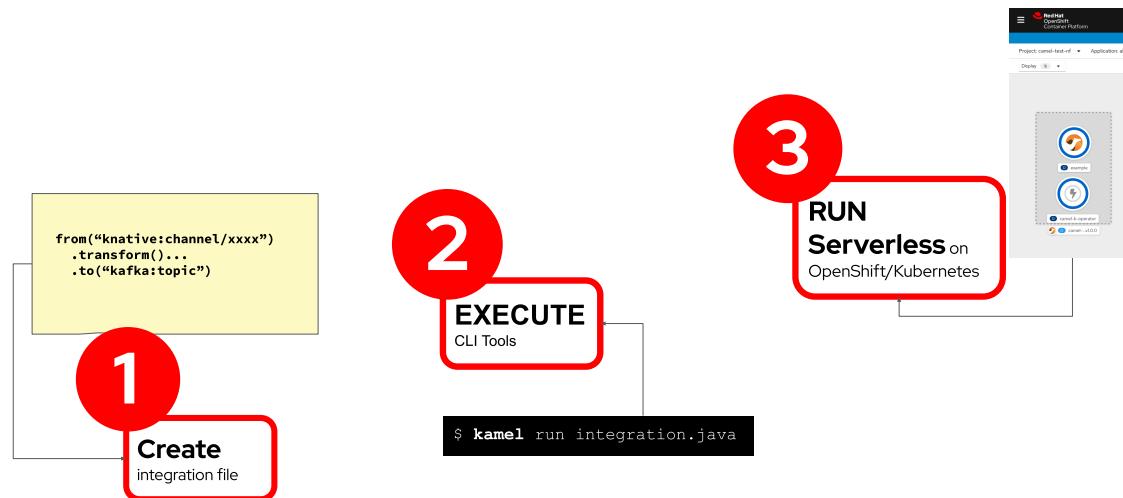
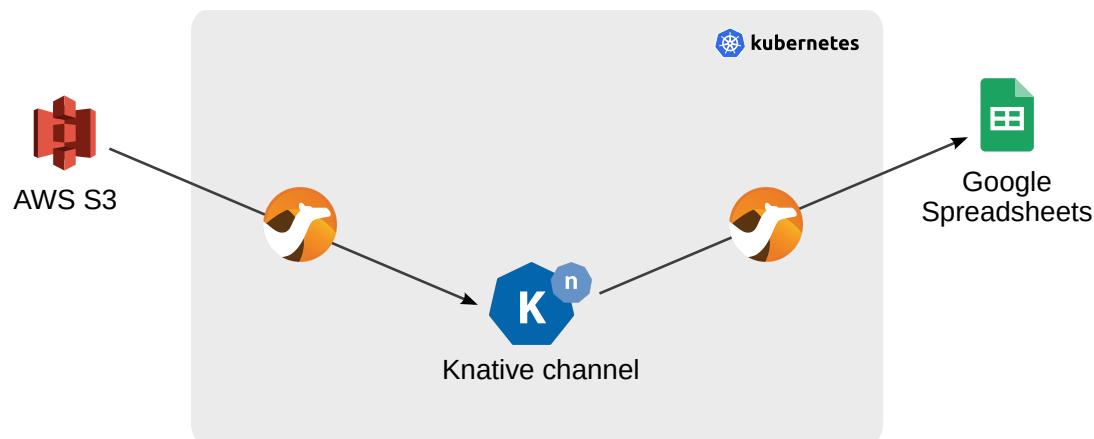




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CAMEL K DEMO



github.com/zbendhiba/telegram-kafka/tree/220617-bucarest-java-summit/camel-k

WRAP UP

- ✓ Apache  = an integration toolkit with 350+ connectors
- ✓    on Quarkus
- ✓ Scale to  and easy to deploy to Knative
- ✓ Stream data from/to Kafka



APACHE

Camel

- <https://camel.apache.org>
- Chat: <https://camel.zulipchat.com>
- Mailing list: dev@camel.apache.org
- Follow [@ApacheCamel](#)

Feedback and contributions are welcome!

THANK YOU



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