



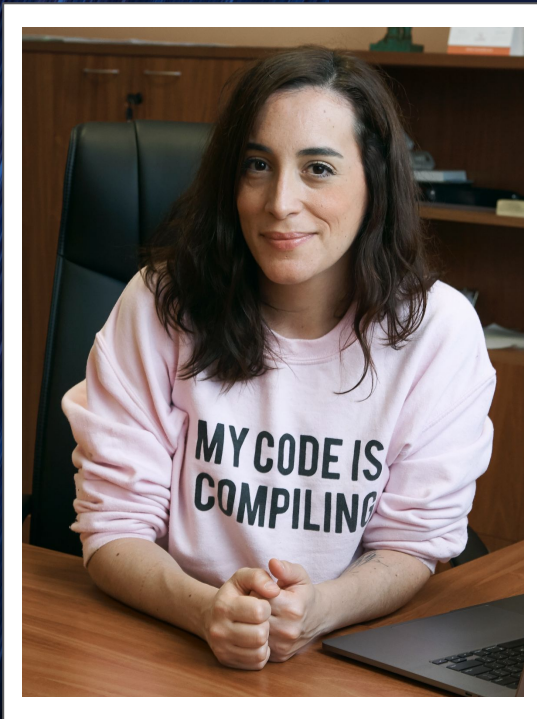
QUARKUS INSIGHTS

Episode #169

# What's new in Infinispan

17/06/2024

Katia Aresti  
Infinispan (Red Hat)

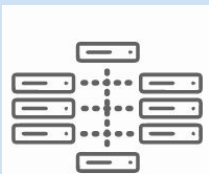


# Katia Aresti

- Principal Software Engineer
- Core member of Infinispan
- Quarkus Contributor since 1.0
- Red Hatter since March 2017
- Devvxx France CFP since 2015
- Java Champion
- Les Cast Codeurs Podcast (2023)
- LinkedIn Learning instructor
- Acting and Improv Passionate

# Infinispan

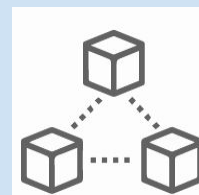
100% Open-Source, Apache 2, In-Memory Distributed Database



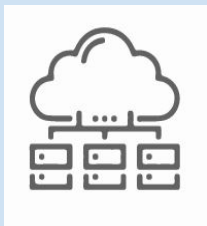
Interoperability



Resilient  
Fault Tolerant Data



ACID Tx



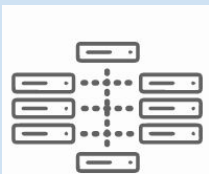
Clustered Processing



Query

# Infinispan

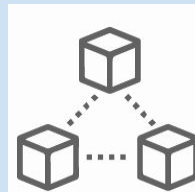
100% Open-Source, **Apache 2**, In-Memory Distributed **Database**



Interoperability



Resilient  
Fault Tolerant Data



ACID Tx

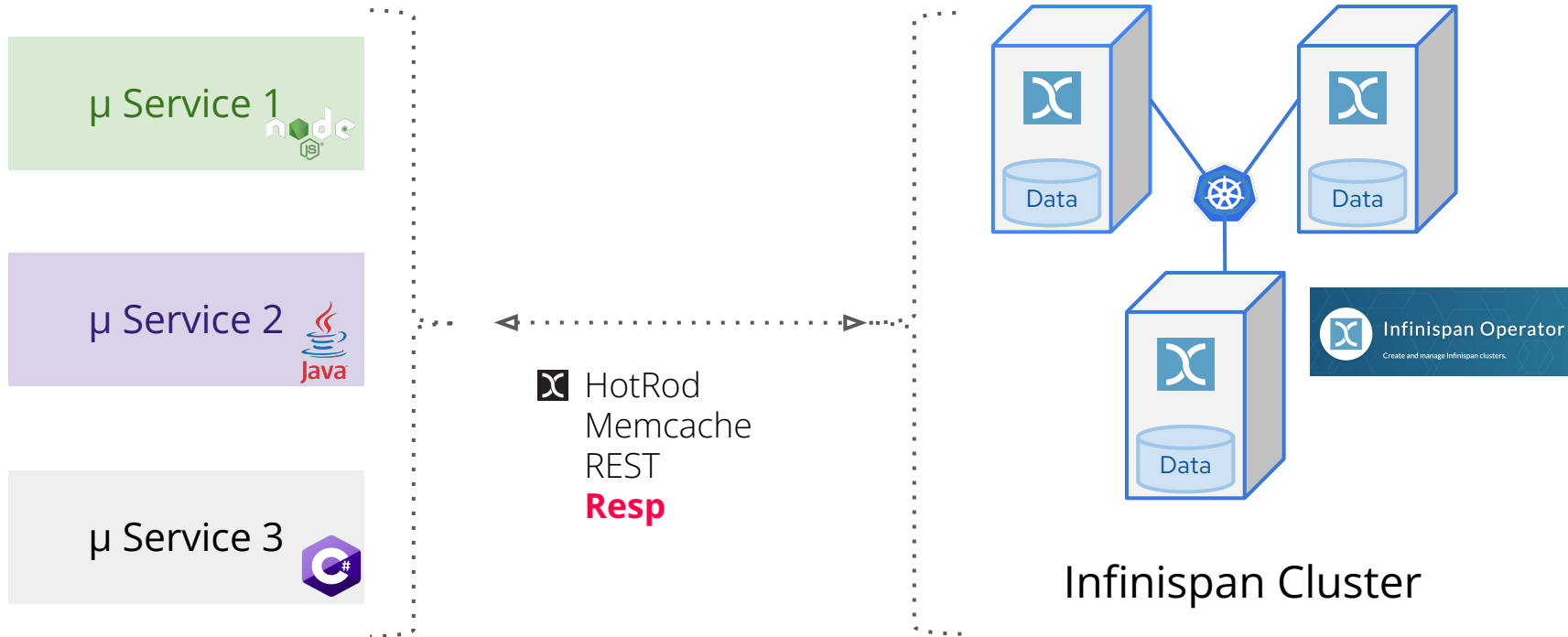


Clustered Processing



Query

# Infinispan Client-Server







Infinispan

15

# Well known integrations and use cases



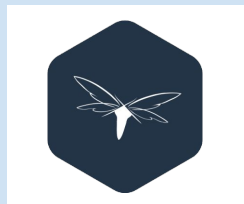
Hibernate 2L Cache



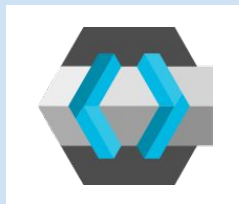
Camel



Spring Boot



HA Wildfly

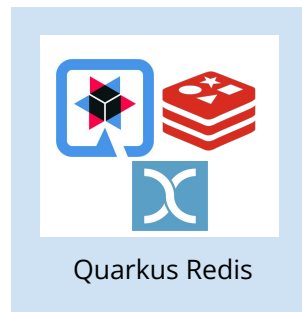
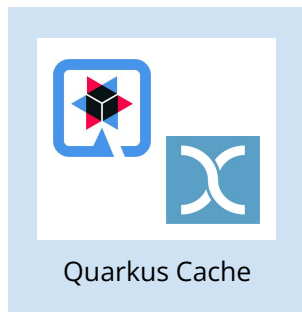
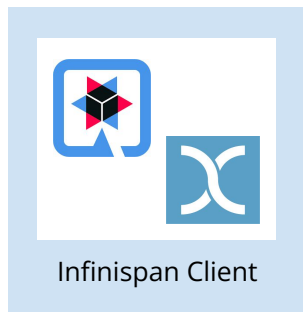


HA Keycloak



Quarkus

# Infinispan and Quarkus





# Infinispan Client Updates

- Protostream 5: new API
- Search API improvement
- Testing improvement
- Named connections
- Improved Cross Site Replication
  - Keycloak HA Architecture, with with active-passive replication
- Improved integration with OpenTelemetry
- And more... !



DEMO



# Infinispan Cache Extension

- Available since Quarkus 3.11
- Deprecates Infinispan Client custom annotations
- Dependency

```
<dependency>  
  <groupId>io.quarkus</groupId>  
  <artifactId>quarkus-infinispan-cache</artifactId>  
</dependency>
```





DEMO



# Infinispan Hot Replacement for Redis

- RESP protocol preview in 14.0
- RESP Protocol implementation
- Commands and Data Structures support
  - Basic commands, Auth, Clustering
  - Strings, Lists, Sets, SortedSets ...
  - [https://infinispan.org/docs/stable/titles/resp/resp-endpoint.html#redis-commands\\_resp-endpoint](https://infinispan.org/docs/stable/titles/resp/resp-endpoint.html#redis-commands_resp-endpoint)
- Infinispan Cache Alias functionality





DEMO



# Infinispan and Langchain4j

- Vector Search implementation with Hibernate Search 7.1
- Langchain4j => Embedded Storage  
<https://docs.langchain4j.dev/integrations/embedding-stores/infinispan>
- Dependency

```
<dependency>
  <groupId>io.quarkiverse.langchain4j</groupId>
  <artifactId>quarkus-langchain4j-infinispan</artifactId>
  <version>0.15.1</version>
</dependency>
```













DEMO





# Thank You!!!

-  [Infinispan website \(documentation, blog\)](#)
-  [Quarkus and Infinispan Client extension](#)
-  [Quarkus and Infinispan Reference](#)
-  [Granite RAG with Infinispan Embedding Store by Clement Escoffier](#)
-  [Quarkus and Infinispan Insights Demo 2024](#)
-  [Real time data on the open hybrid cloud with Quarkus and Infinispan](#)
-  [Highly available Identity and Access Management with multi-site Keycloak deployments](#)
-  [Create and manage Red Hat Data Grid services in the hybrid cloud](#)

## Q & A