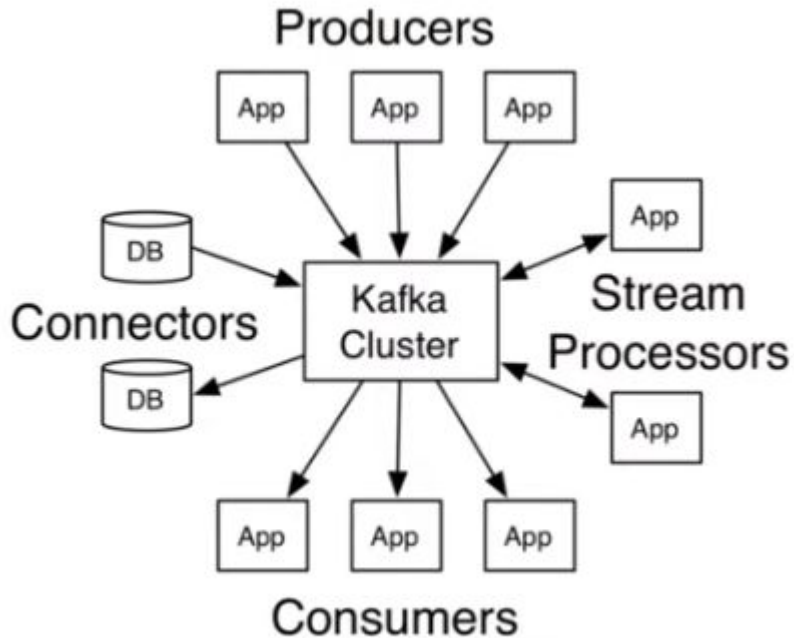


# Simplifying Kafka governance for developers

Muralidhar Basani  
Staff Software Engineer @Aiven

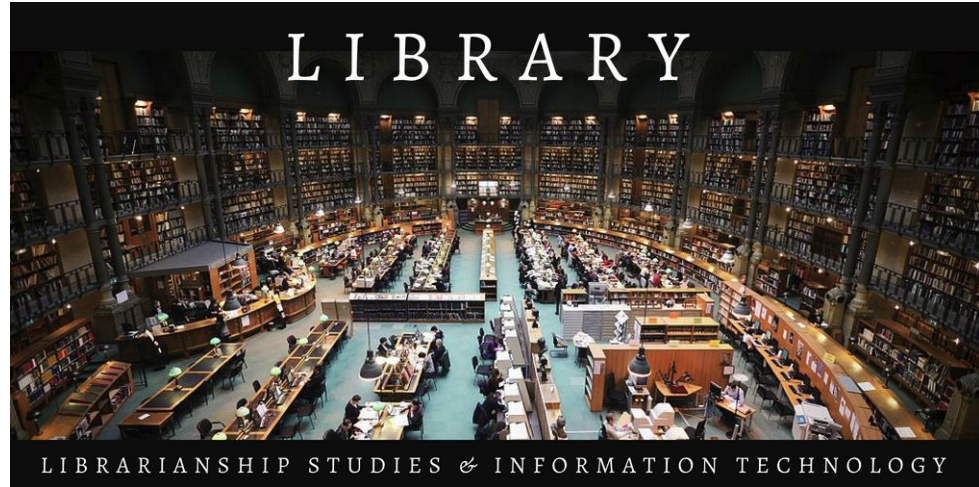
 <https://www.linkedin.com/in/muralibasani/>

# Apache Kafka in brief



Source : Apache Kafka <https://kafka.apache.org>

# What is Governance ?

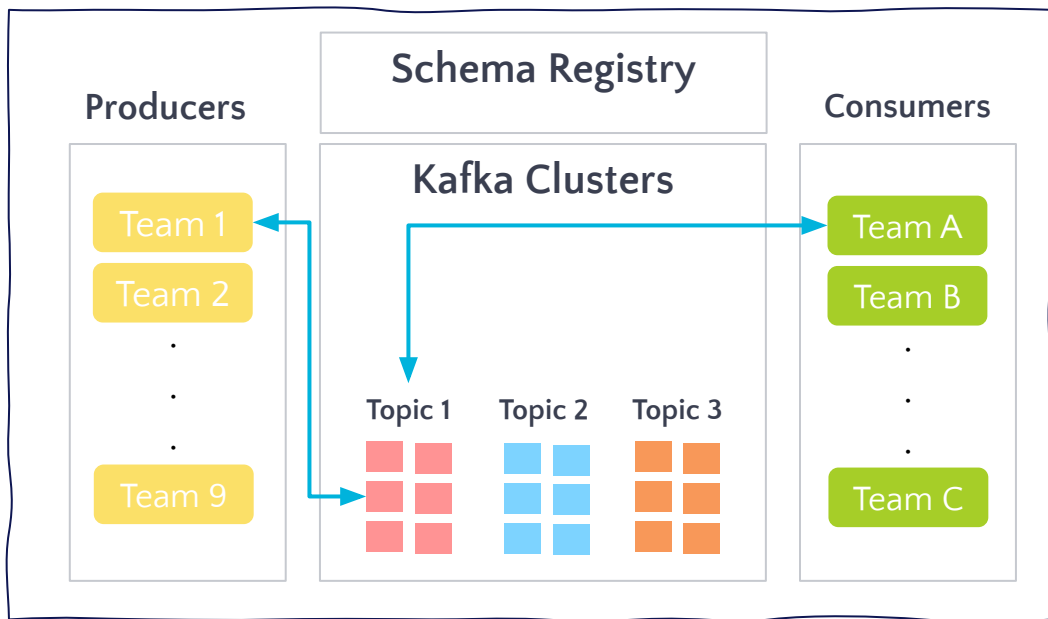


*Images courtesy : [wlbt.com](http://wlbt.com), [librarianshipstudies.com](http://librarianshipstudies.com)*

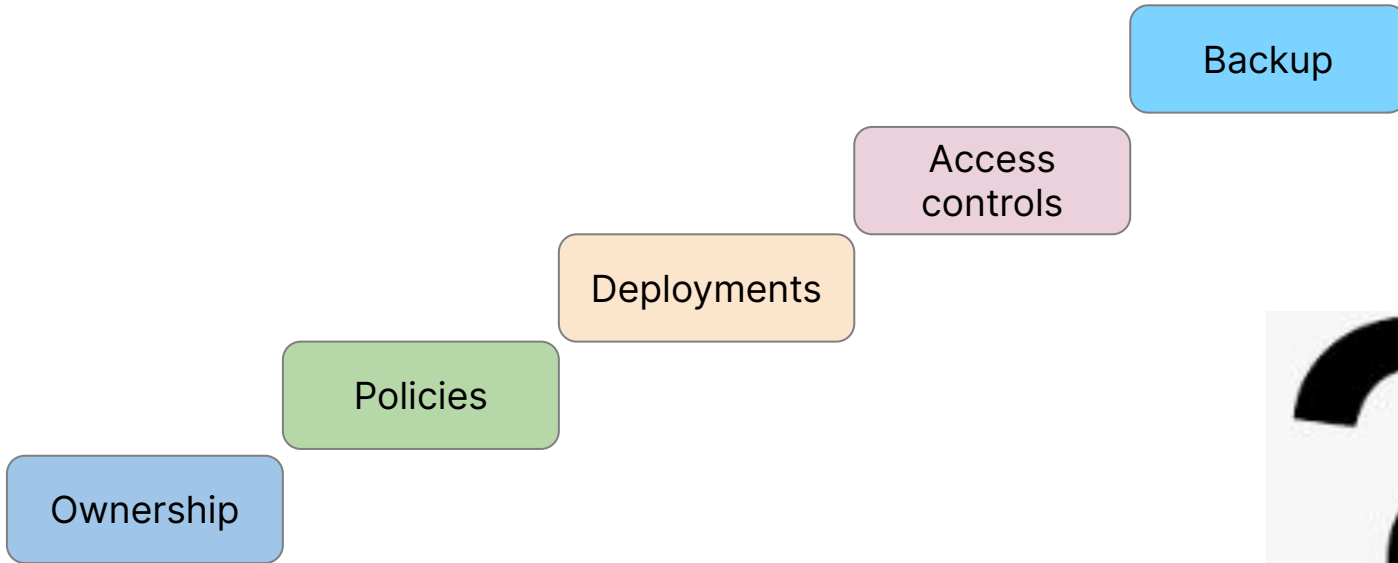


# Kafka environment & Challenges

- Manual Activities
- Longer lead time
- Security issues
- Lacking audit
- Ad hoc Governance
- No Release mgt



# Questions arise



# How to manage Kafka ?

There are a few open source tools available.

- CMAK
- Julie GitOps
- Provectus



# What is Klaw ?

“Klaw is an open source toolkit to govern and manage Apache Kafka<sup>®</sup> topics, access controls, schemas and connectors with full self service.”



# Klaw fundamentals

## GOVERNANCE

Approvals

Audit

Naming conventions

Clear Ownership

Single Source of Truth

## SELF-SERVICE

Search/Discover

Dashboard

Reporting

Multi-tenancy

Validations

## SECURITY

SSO / AD

RBAC

Kafka Security Protocols

Audit Trail

Multi-tenancy

## AUTOMATION

Provisioning

Topic promotion/RM

Metadata Sync

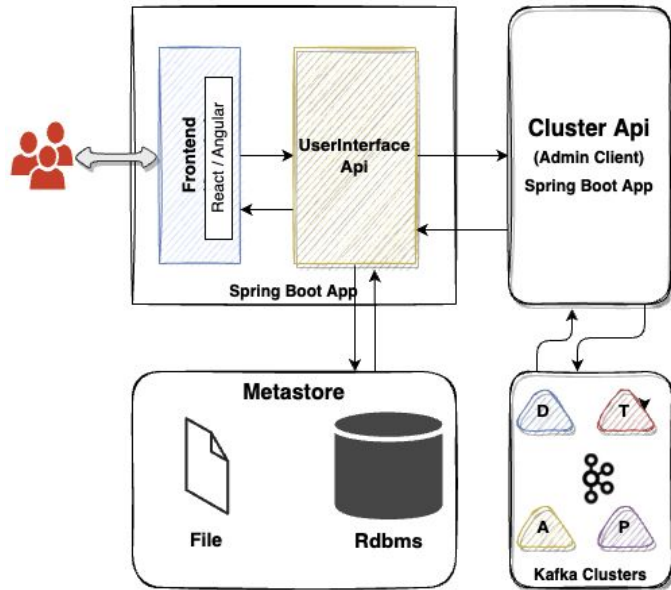
Backup/Restore/Migrate

Notifications





# Klaw architecture

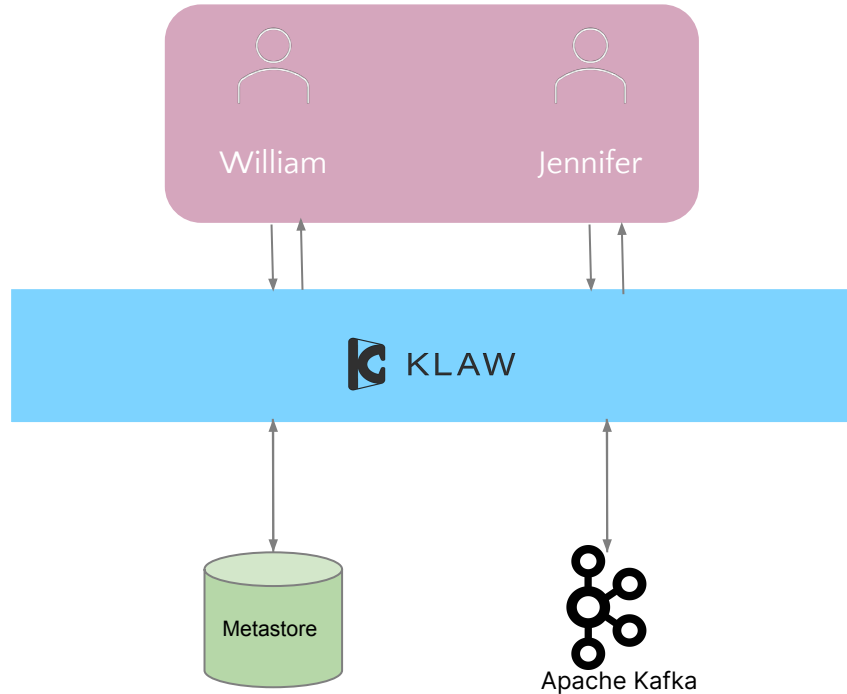


Klaw : Technical Architecture

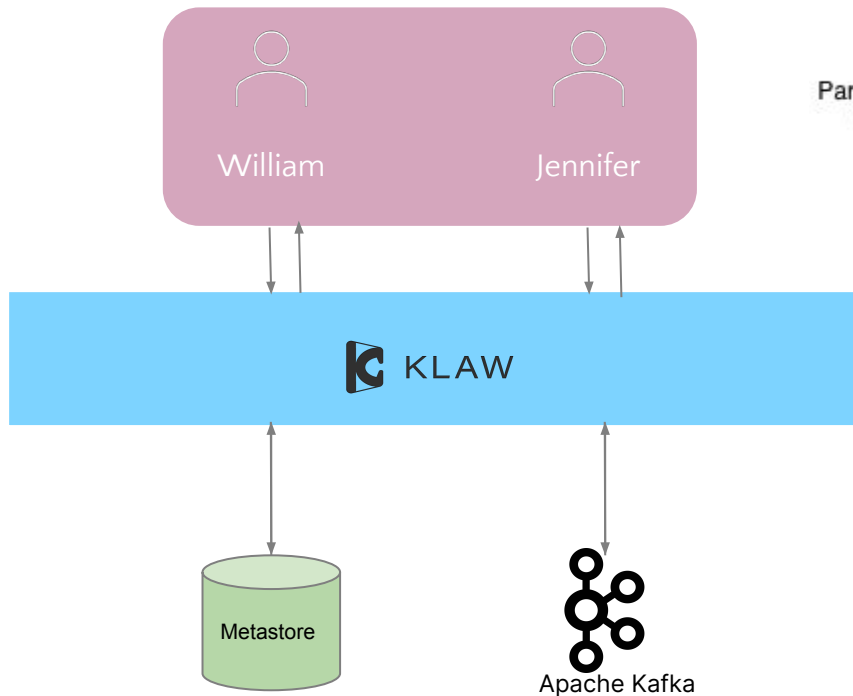
- Spring apps
- Workflows
- Unlimited kafka clusters and topics



# Request / Approval



# Demo : A simple user journey



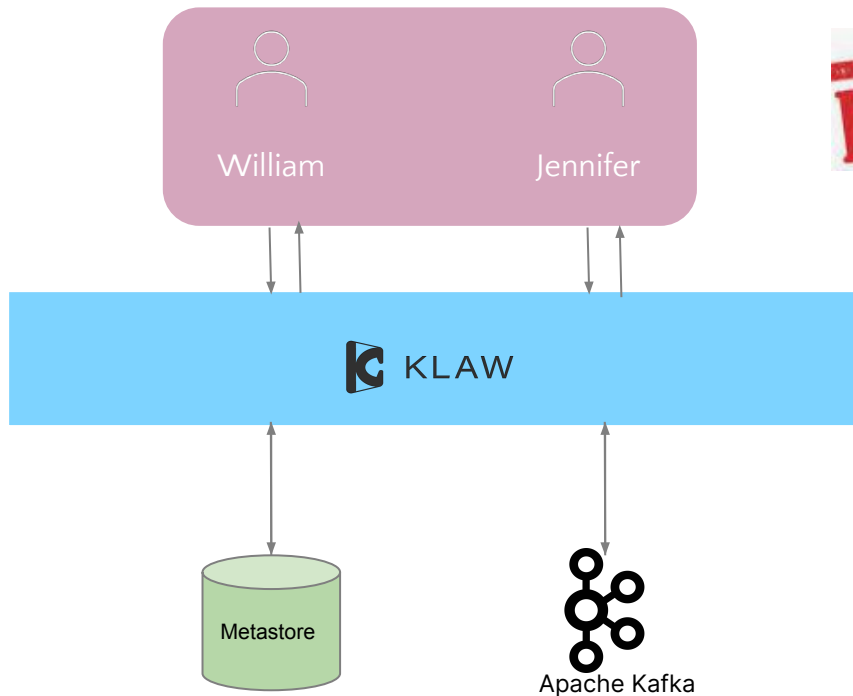
Partition  
0

0	1	2	3	4	5	6	7	8	9	10	11	12
---	---	---	---	---	---	---	---	---	---	----	----	----

- William requests for a Kafka topic
- Request is validated and stored in database
- Jennifer reviews and approves the request
- On approval, topic is provisioned on the Kafka cluster



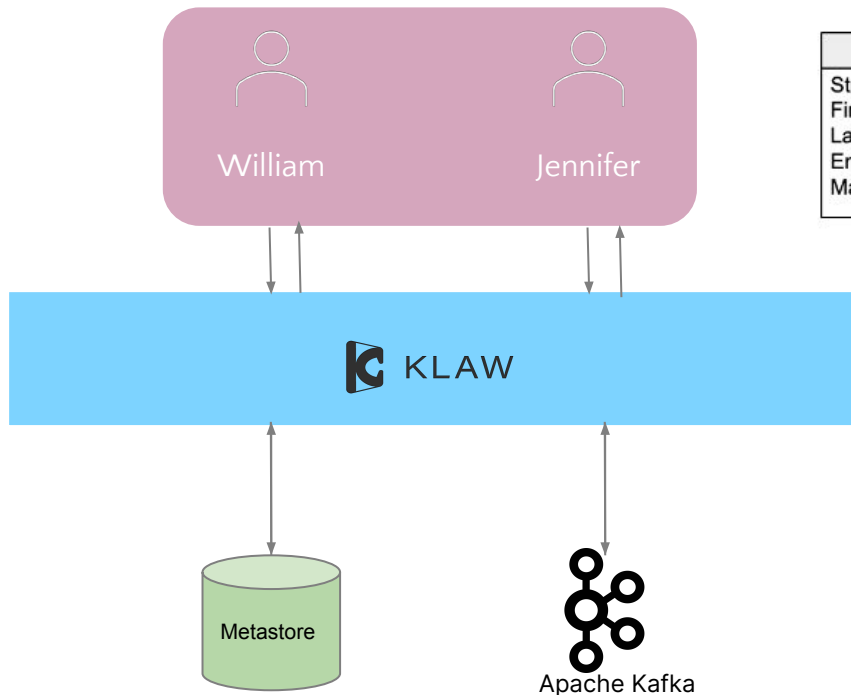
# Demo of Consumer acl



**PERMISSION**

- William requests for consumer acl
- Request is validated and stored
- Jennifer reviews and approves the request
- On approval, acl is provisioned on the Kafka cluster for that topic

# Demo of Schema request

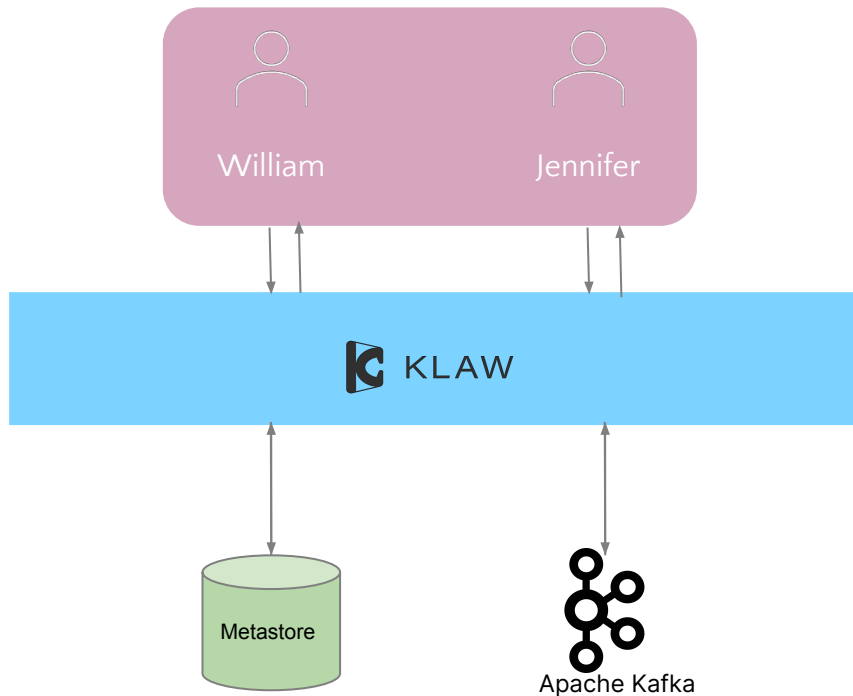


Student		
StudentID	int	PK
FirstName	varchar(100)	N
LastName	varchar(100)	N
Email	varchar(100)	N
Major	varchar(100)	N

- William requests for a schema
- Request is validated and stored
- Jennifer reviews and approves the request
- On approval, schema is provisioned on the schema cluster for that subject



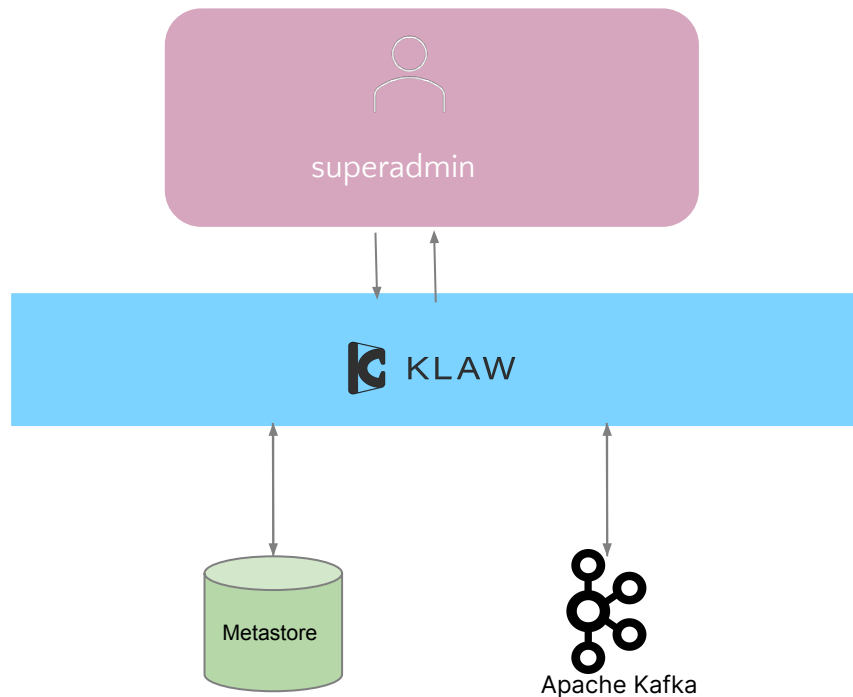
# Demo of Topic promotion



- William requests for a topic promotion
- Request is validated and stored
- Jennifer reviews and approves the request
- On approval, topic is provisioned on the kafka cluster



# Demo of Synchronize Topics



→ superadmin (with sync permissions) can synchronize topics etc from clusters to Klaw and from Klaw to kafka clusters.



# Does Klaw fit in your project ?

- Klaw is an open-source solution based on the Apache license.
- It's web based java application and is available as Docker images.
- Production-ready and deployable in high-availability mode.
- Additionally, Klaw offers a rich React-based interface.





# Project links

- Project is Open source
  - <https://github.com/aiven/klaw>
- Available on Docker
  - <https://hub.docker.com/r/aivenoy/klaw-core>
- Documentation
  - <https://www.klaw-project.io/docs/getstarted>
- Releases
  - <https://www.klaw-project.io/docs/Releases/>
- Blog
  - <https://www.klaw-project.io/blog>
- Community
  - <https://aiven.io/community/forum/tag/klaw>





# Muralidhar Basani

Staff software Engineer  
@ Aiven

[muralidhar.basani@aiven.io](mailto:muralidhar.basani@aiven.io)

 <https://www.linkedin.com/in/muralibasani/>

