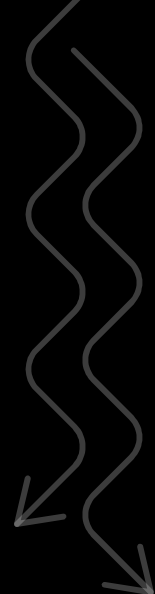


Revamped Developer and Installation Experience: Camunda 8 Architecture Breakthrough

**CAMUNDA
CON 2024**

Roman Smirnov

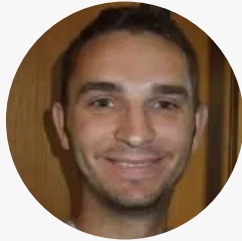
Felix Müller



Welcome!

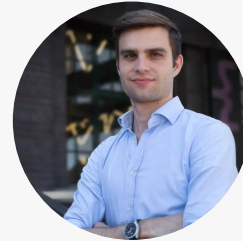


*“At Camunda I focus on the
Camunda 8 Architecture”*



Roman Smirnov
Camunda
Principal Engineer

*“At Camunda I focus on
Core Orchestration
Platform”*



Felix Müller
Camunda
Director Product Management

Agenda



Challenges in Developer and Installation Experience



Unveiling Streamlined Architecture



Introducing new Local Developer Distribution



Live Demo

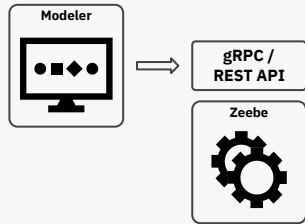


Roadmap and Outlook

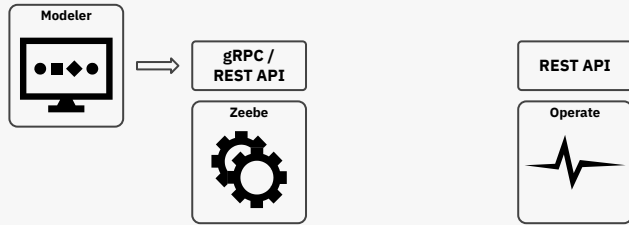


Challenges in Developer and Installation Experience

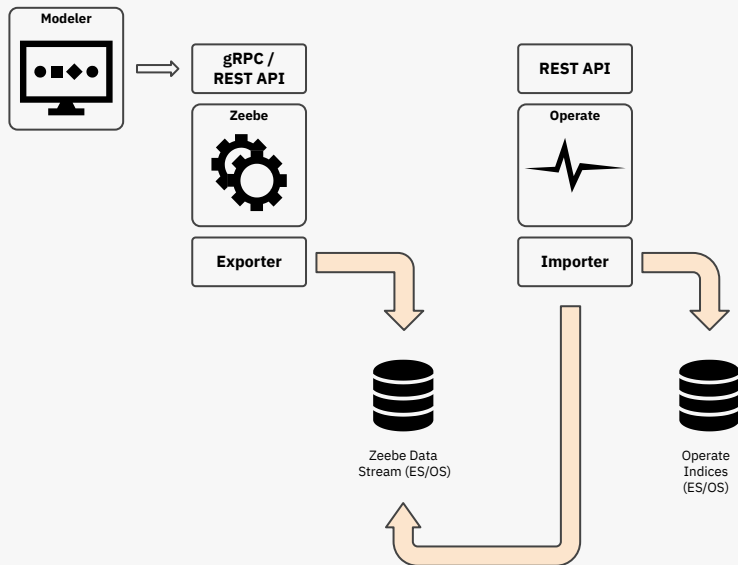
Model and Deploy a Process



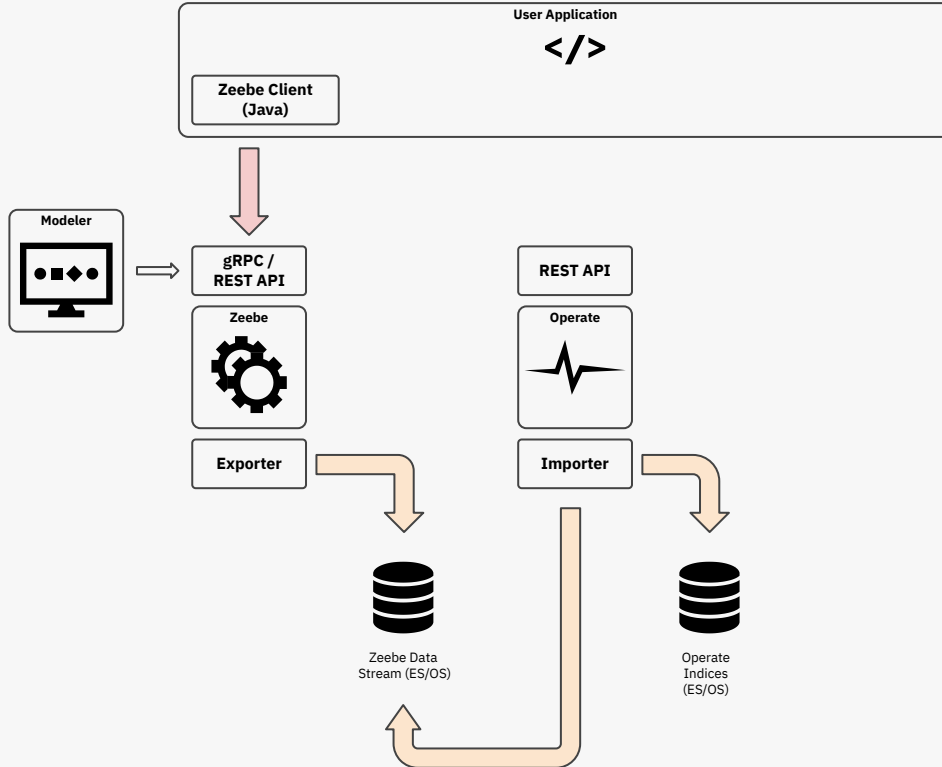
Operate to monitor running Instances



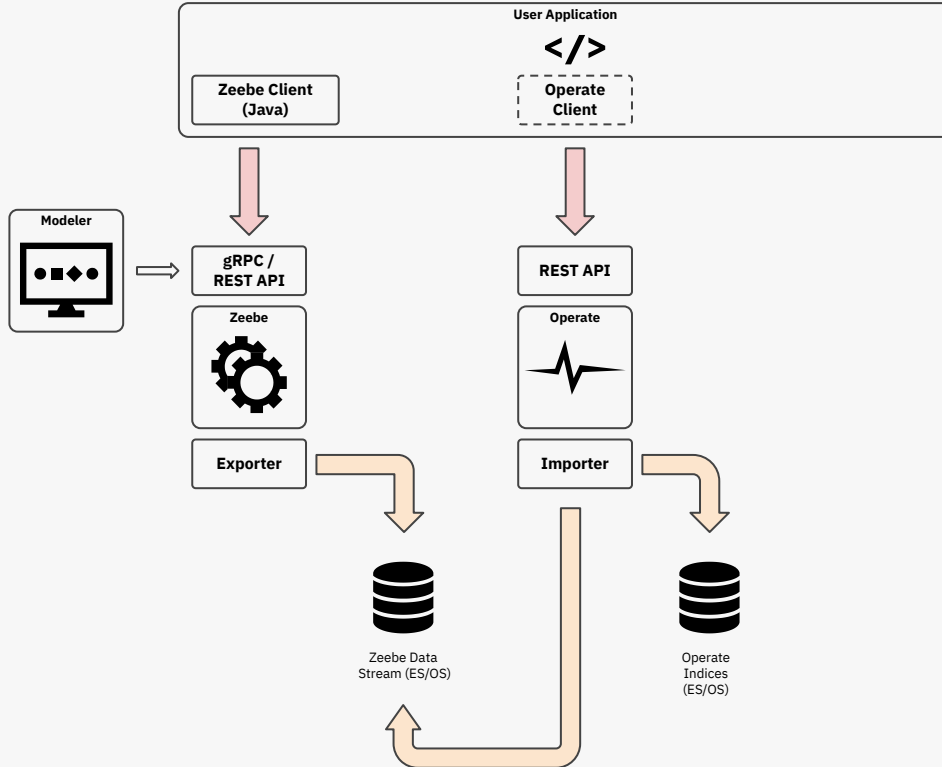
Exporter-Importer-Data Pipeline



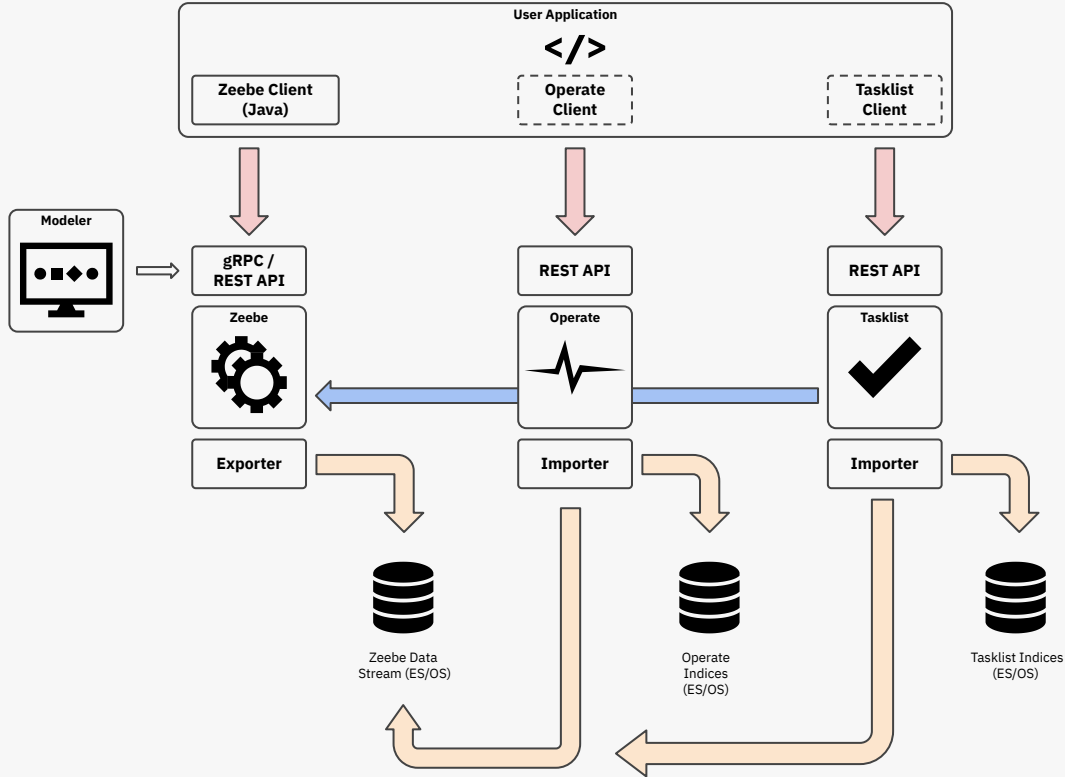
User Application Implementation



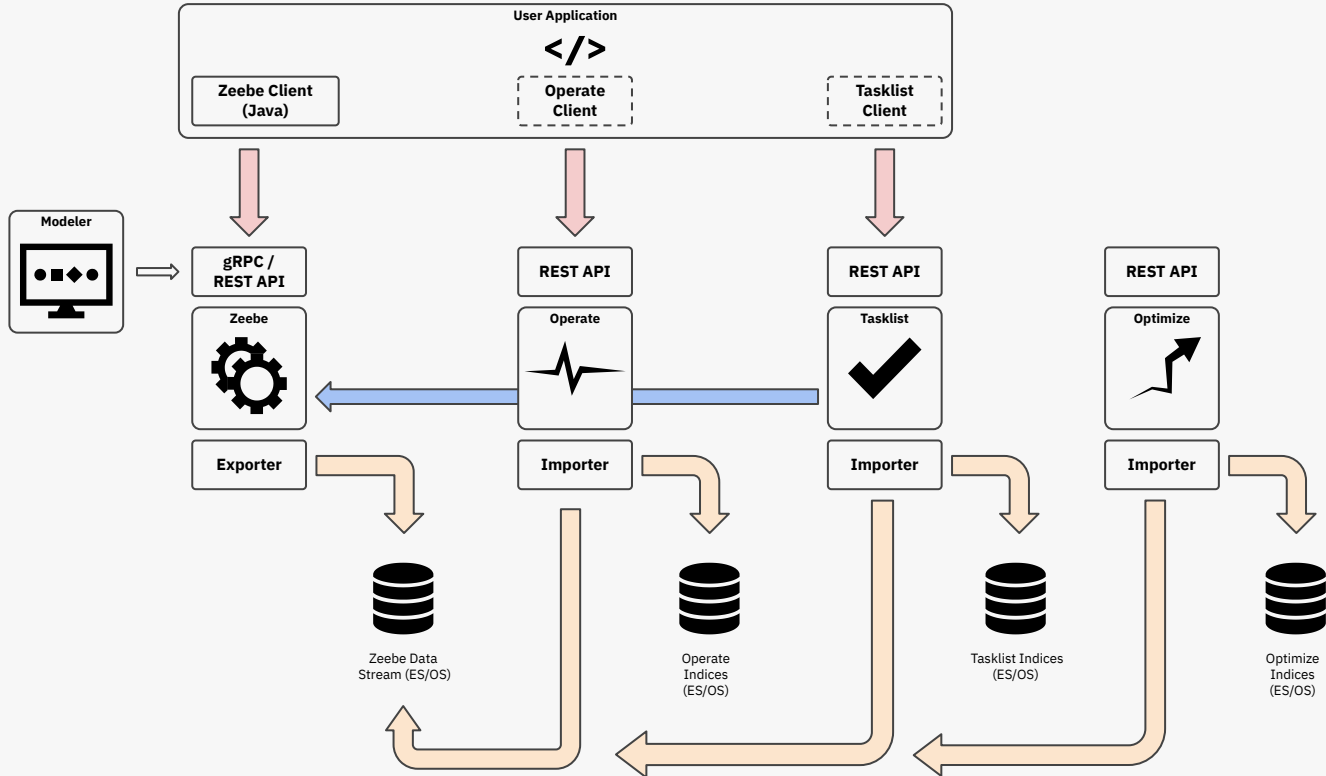
Component-based APIs



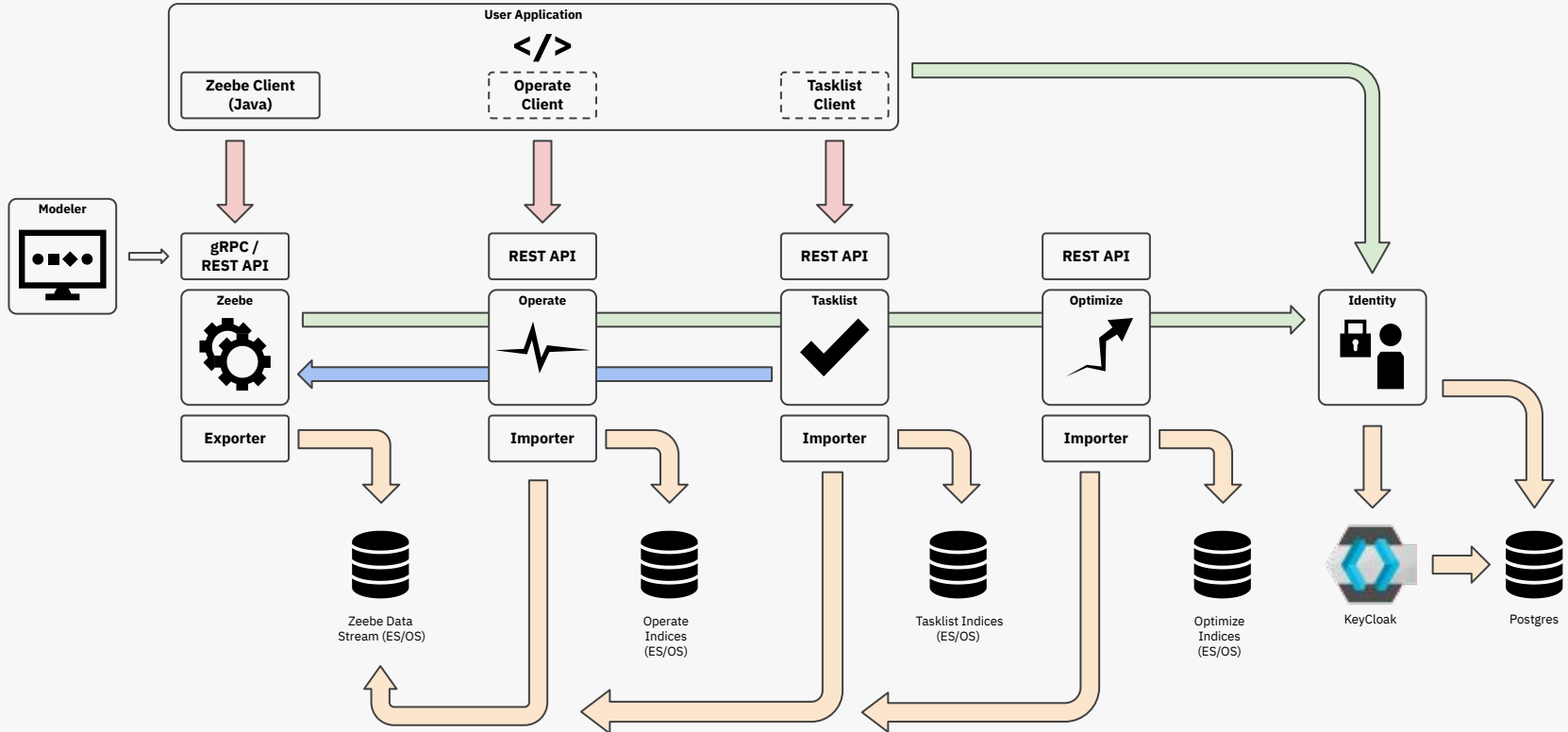
Tasklist to orchestrate User Tasks



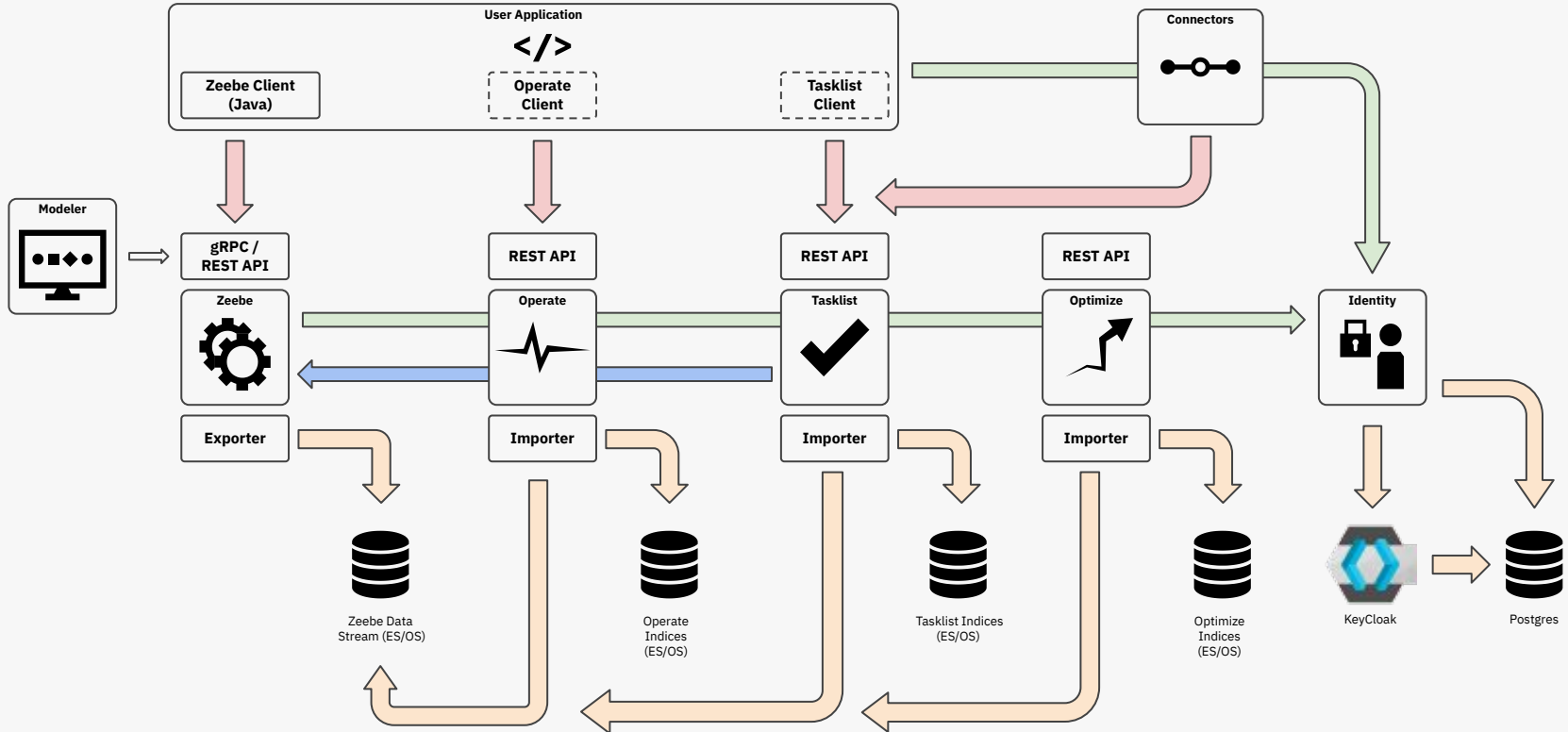
Optimize to analyze processes



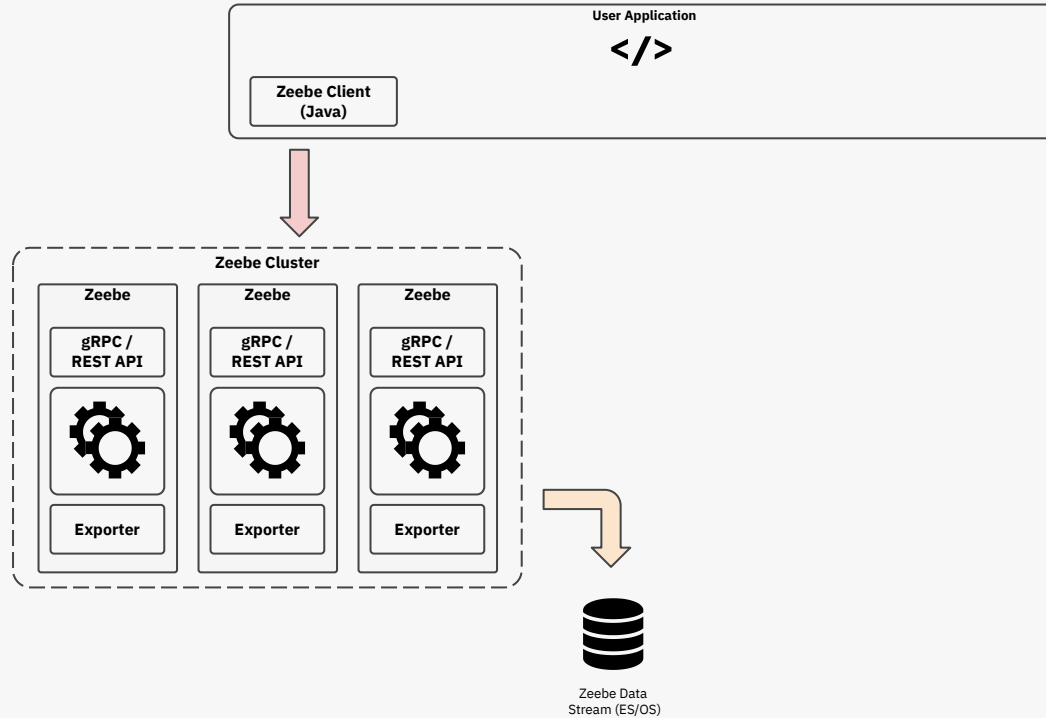
Identity to authenticate and access restrictions



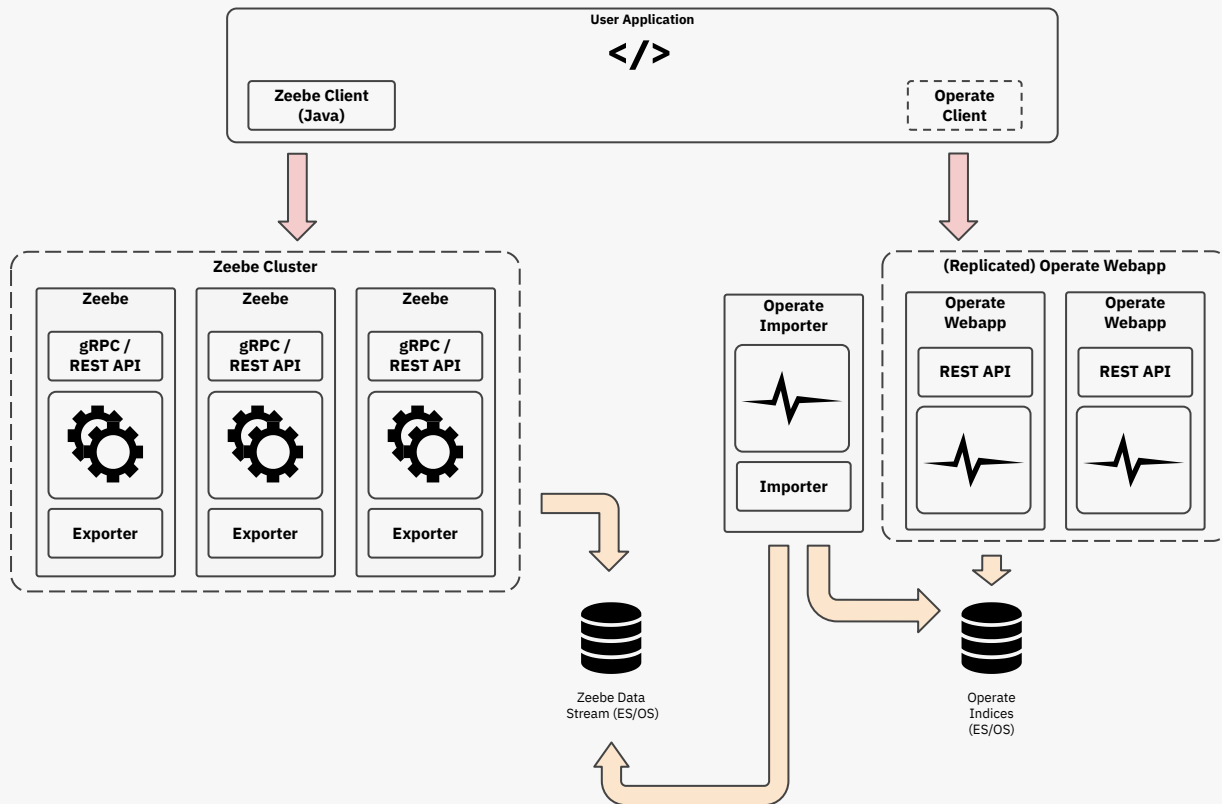
Connectors to integrate with external systems



Getting Production-ready



Operate High Availability



Challenges summarized



Complex configuration and deployment topology

Up to 7 different C8 components and up to 3 external dependencies (Elasticsearch or OpenSearch, Postgres, and Keycloak) must be configured so that they interact correctly with each other.



Scattered Component-based APIs

To implement their use case, users must interact with different APIs, and by that, deal with the complex deployment topology and any inconsistencies between the APIs.



Delayed Data Visibility by Exporter and Importer Architecture

Process Instances get visible, for example, in Operate only after 15s whereby the most time is spent in back offs in the exporter and the importer. User's application must deal with the delay as well.

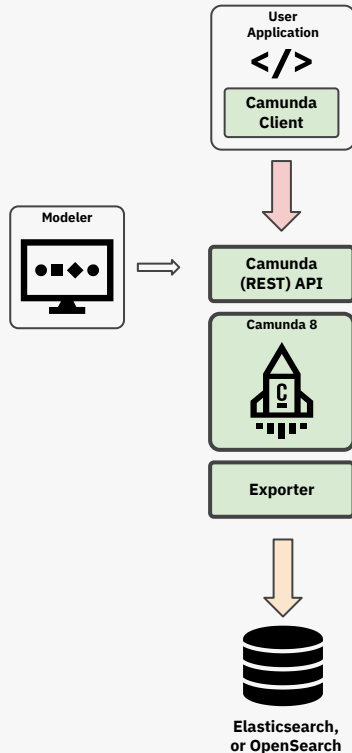


No end-to-end High Availability

While Zeebe is built from scratch being highly available, other components like the Operate Importer are not. Additionally, external dependencies must be setup highly available as well.

Unveiling Streamlined Architecture

One Streamlined Solution



One Single Application

Integrates all core functionality of former components Zeebe, Operate, Tasklist, and Identity in a Single Application.



One Camunda (REST) API

No more scattered APIs, one Solution, one REST API including a Camunda Client supporting all REST endpoints.



Enterprise-grade Security

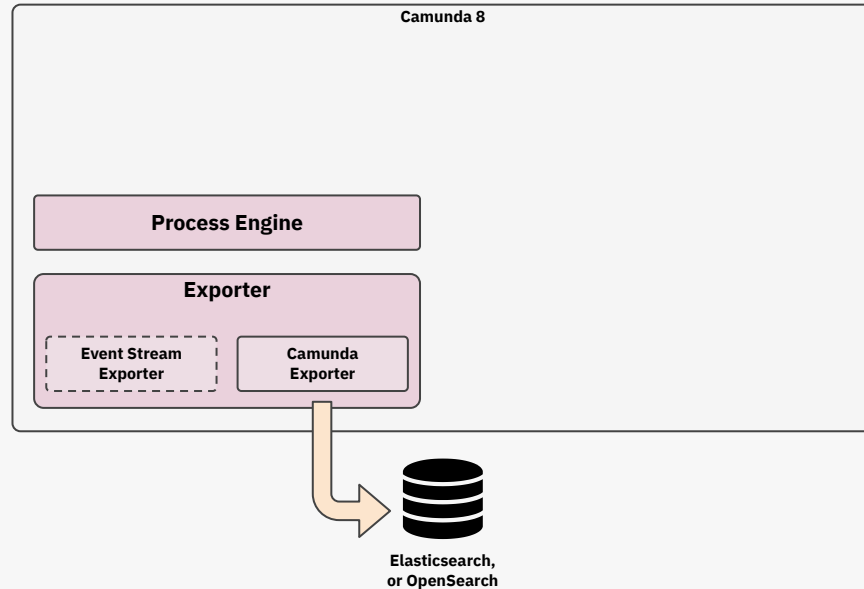
Streamlined and consistent Identity and Access Management (without the necessity of external dependencies like Keycloak).

Harmonized Data Schema

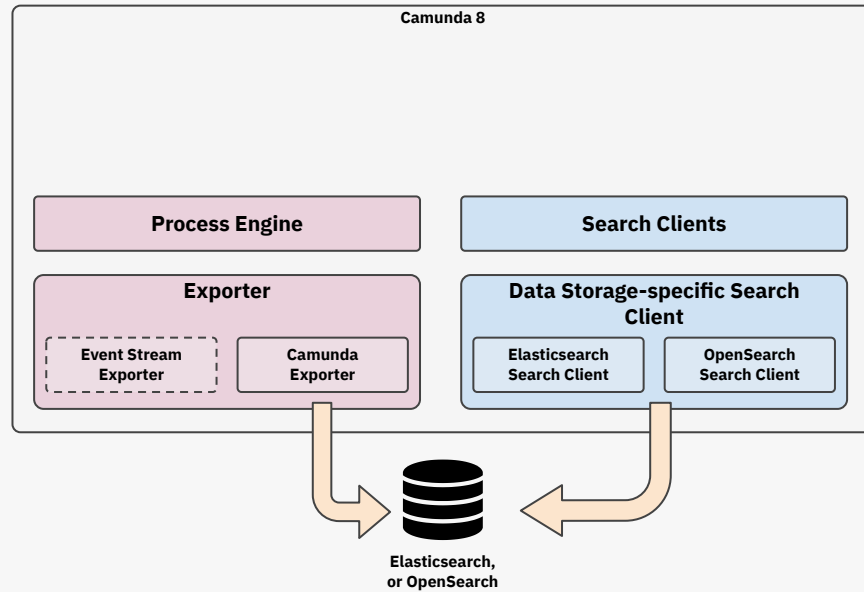


Elasticsearch,
or OpenSearch

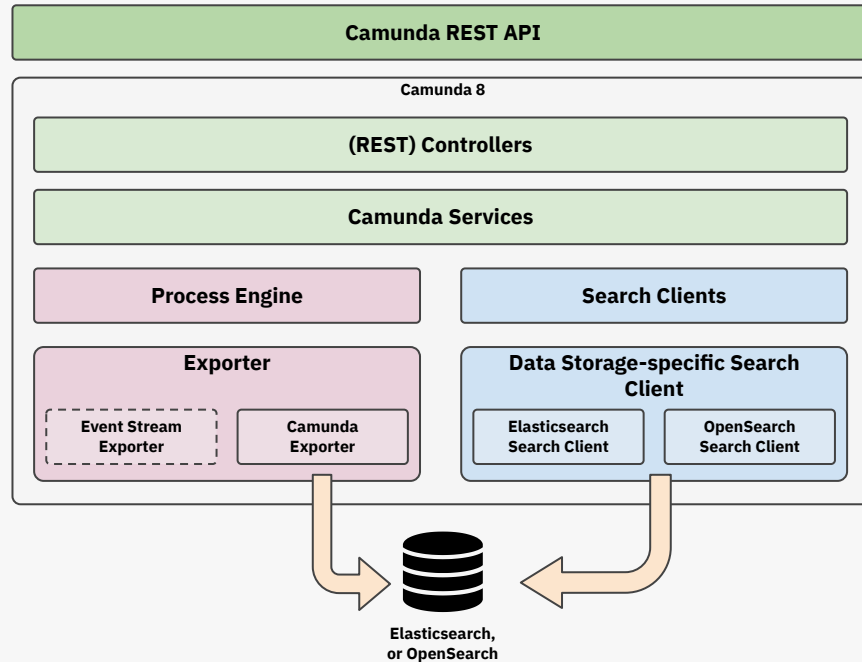
Direct Data Ingestion to Storage



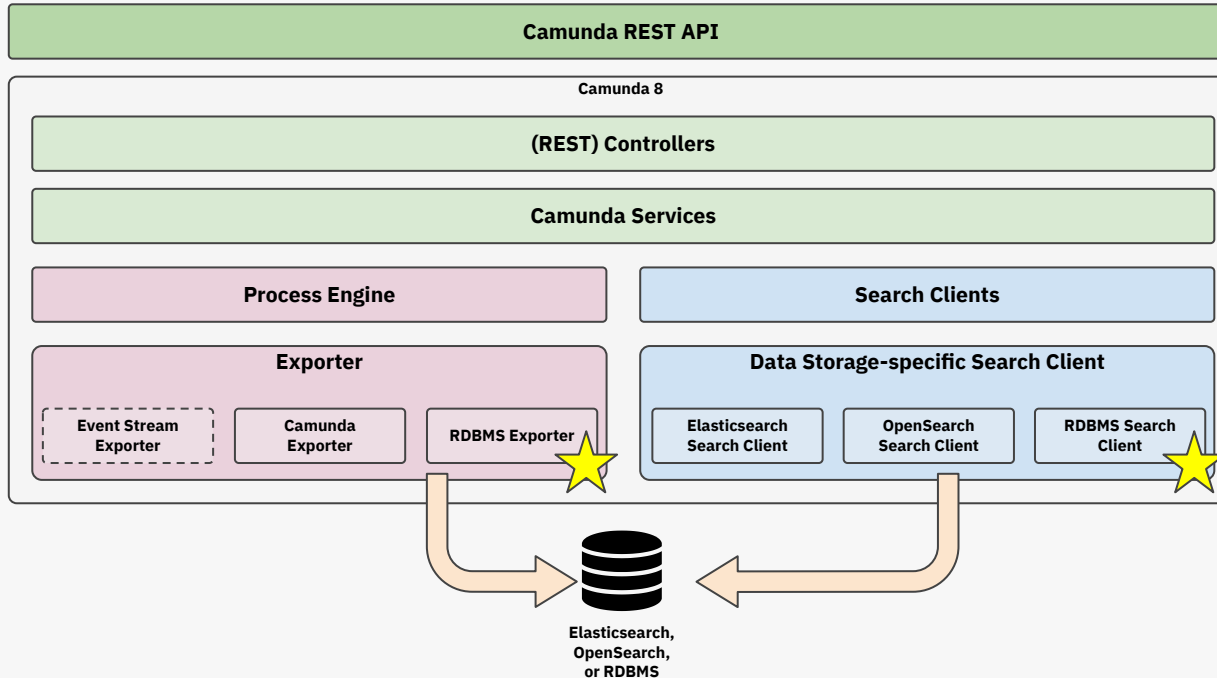
Data Access Layer



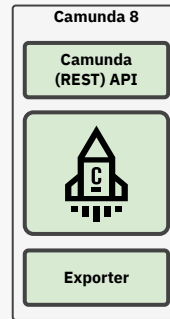
Camunda 8 = One Application



Allows Relational Database Support

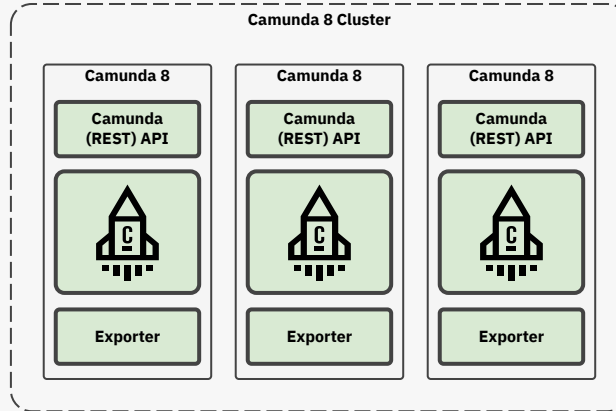


Going into Production



Elasticsearch,
OpenSearch,
or RDBMS

High Availability by Default



Elasticsearch,
OpenSearch,
or RDBMS

Local Development

Introducing Camunda 8 Run



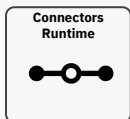
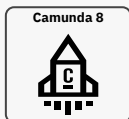
c8run 8.6.0

jessesimpson36 released this 3 weeks ago · [2679 commits](#) to feat-c8run since this release · [c8run-8.6.0...](#) · [e9a7bf8](#)

Full Changelog: [c8run-8.6.0](#)

▼ Assets 6

camunda8-run-8.6.0-darwin-aarch64.tar.gz	903 MB
camunda8-run-8.6.0-darwin-x86_64.tar.gz	926 MB
camunda8-run-8.6.0-linux-x86_64.tar.gz	1.03 GB
camunda8-run-8.6.0-windows-x86_64.tar.gz	912 MB
Source code (zip)	
Source code (tar.gz)	



One Distribution

Everything required for local development is included in one package and simply requires Java environment.



Faster Getting Started

Get Started with Camunda 8 in less than a minute. Just `./start.sh`.



Improved Developer Experience

Run C8 Run locally when developing solutions with Desktop Modeler and your local IDE - even without internet connection.



LIVE
DEMO

EVO

Roadmap and Outlook

Development Options



Local Development

- Desktop Modeler
- Camunda 8 Run (8.6+) - even more lightweight with H2 in 2025
- Unit Tests with Camunda Process Test, CI/CD pipelines
- Code IDE, Git ...

Cloud Development

- Available both as Self-Managed and SaaS
- Web Modeler and Play
- Development Cluster
- Unit Tests with Camunda Process Test, CI/CD pipelines
- Code IDE, Git

Deployment Options



Orchestration Cluster (single cluster)

Manage a single cluster for one team or project

- Installation options
 - SaaS
 - Infrastructure as Service / VMs (Java)
 - Self-Managed Kubernetes ([certified](#))
 - Self-Managed Container services
- Supported databases
 - Elasticsearch or Opensearch
 - Relational Database (Postgres, Oracle, ...) (in 2025)
- Includes
 - Orchestration Cluster Core
 - Zeebe, Operate, Tasklist
 - Unified REST API + Identity + Optimize functionality (8.7+)
 - Connector Runtime

Managed Platform (multi cluster)

Manage multiple orchestration clusters in a managed platform

- Installation options
 - SaaS
 - Self-Managed Kubernetes ([certified](#))
 - Self-Managed Container services (8.8+)
- Supported databases
 - Relational Database (PostgreSQL, Oracle (8.8+))
- Includes
 - Management and Design Cluster
 - Console
 - Web Modeler
 - Multiple Orchestration Clusters

Core Process Orchestration Roadmap



8.6 (October '24)

Simplified Getting Started & Developer Experience
Crucial Feature Parity capabilities

Simplified Getting Started and Developer Experience

- C8 Run for Local Developers
- Camunda REST API (for Process Management - former Zeebe endpoints)
- New Camunda Test Library
- New Getting Started Guide for Spring

Crucial Feature Parity capabilities

- Batch Modification
- Execution Listeners
- User Task Priority
- Version Migration Enhancements
- Version Binding and Version Tag

8.7 (January '25)

Faster Production Installation
Unified Developer Experience

Simplified Production Installation

- **New Orchestration Cluster** provides core functionality of former Zeebe, Operate, Tasklist, Identity
- **Less required dependencies:** Keycloak + one database less
- **Simplified High-Availability Deployments** by new Importer / Exporter architecture
- **Easier installation** in pure Java environments with new guides and improved architecture

Unified Developer Experience

- **Camunda REST API** providing former functionality of separate component APIs
- **Java and Spring SDK fully supported** for all endpoints
- **Enterprise-grade security** by securing all REST API endpoints and applying new permission system consistently

8.8 (April '25)

Unified Configuration and Scalable Operations
Complete sufficient Feature Parity

Enhanced Orchestration Cluster

- Relational Database Support
- Unified Configuration across all services
- Optimize joins Orchestration Cluster

Scalable Operations

- Improved Operational Guides
- Multi-Region Improvements
- Scaling Zeebe Partitions

Sufficient Feature Parity

- Conditional Events
- Audit log for User Process Operations
- Suspend Instance, Definition, Activity

Q&A

Thank You



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