

Eclipse-DCO Battery Simulation System

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1. General

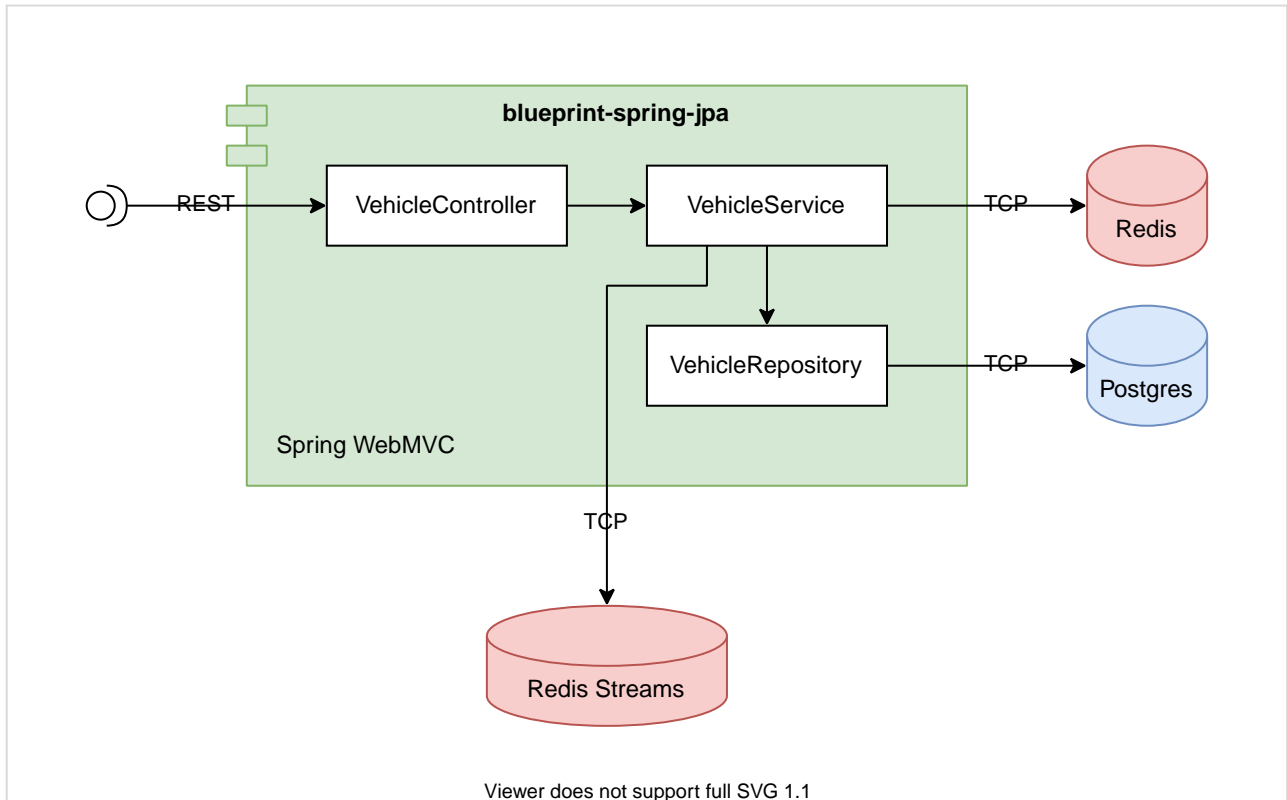
Bring your coding skills to the forefront as you decode the secrets of EV battery dynamics simulation and engineer solutions for a sustainable future. You'll encounter a predefined scenario that presents a challenge encompassing topics such as battery and fleet management. You will do so by harnessing the combined power of two Eclipse Projects - SDV Console and SUMO.

2. Architecture

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2.1. Component Model

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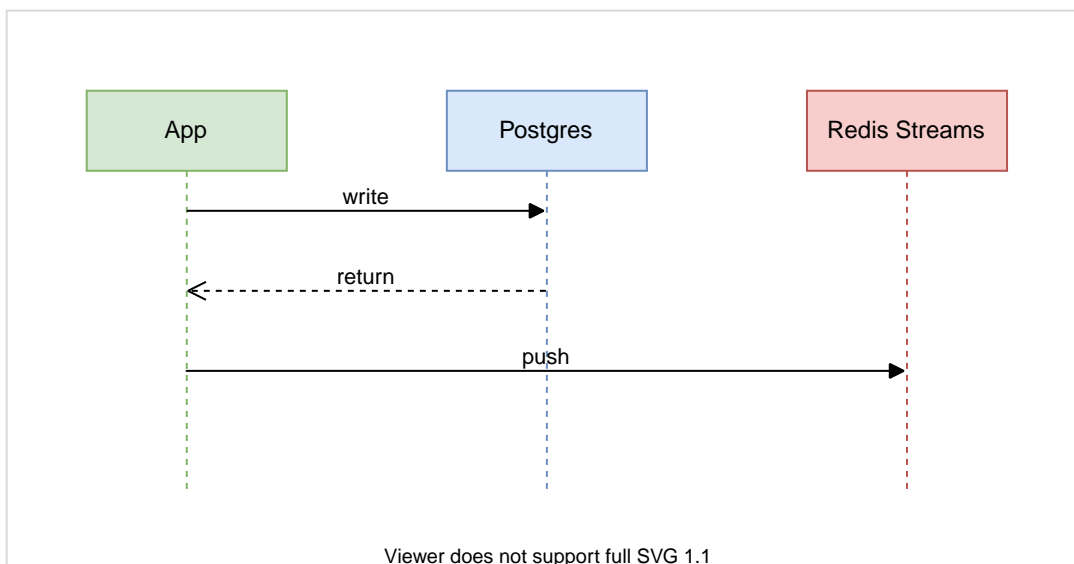
2.2. Data Model

Proin venenatis fermentum velit, in dictum mi maximus ac. Nam augue lectus, finibus in semper aliquet, ornare sit amet libero. Nullam eget est sit amet felis pulvinar tincidunt. Aliquam laoreet est nec nisl euismod, quis laoreet orci ultricies. Etiam tincidunt nibh in nunc volutpat eleifend sed vitae ex.

vehicles	
PK	<u>id: string</u>
	createdAt: timestamp
	createdBy: string
	updatedAt: timestamp
	updatedBy: string
	scope: string
UQ	vin: string
	brand: string
	license: string

2.3. Runtime Behaviour

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3. System Requirements

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3.1. Application

Type	Minimum	Recommended
CPU	0.5	1
RAM	512 MB	1024 MB

3.2. Database

Type	Minimum	Recommended
CPU	0.5	1
RAM	512 MB	1024 MB
Storage	10 GB	100 GB

4. System Configuration

Proin venenatis fermentum velit, in dictum mi maximus ac. Nam augue lectus, finibus in semper aliquet, ornare sit amet libero. Nullam eget est sit amet felis pulvinar tincidunt. Aliquam laoreet est nec nisl euismod, quis laoreet orci ultricies. Etiam tincidunt nibh in nunc volutpat eleifend sed vitae ex. Maecenas vitae urna interdum sapien euismod commodo vitae at neque. Ut sit amet scelerisque ex. Praesent at nisi semper, ullamcorper elit eu, placerat lorem. Donec sit amet aliquam tortor. Cras imperdiet convallis ligula et maximus. In posuere purus vel nisl sodales aliquet.

4.1. Environment Variables

Name	Default	Description
APP_REDIS_HOST	localhost	The Redis host name
...

5. System Permissions

Proin venenatis fermentum velit, in dictum mi maximus ac. Nam augue lectus, finibus in semper aliquet, ornare sit amet libero. Nullam eget est sit amet felis pulvinar tincidunt. Aliquam laoreet est nec nisl euismod, quis laoreet orci ultricies. Etiam tincidunt nibh in nunc volutpat eleifend sed vitae ex. Maecenas vitae urna interdum sapien euismod commodo vitae at neque. Ut sit amet scelerisque ex. Praesent at nisi semper, ullamcorper elit eu, placerat lorem. Donec sit amet aliquam tortor. Cras imperdiet convallis ligula et maximus. In posuere purus vel nisl sodales aliquet.

Name	Description
VEHICLE_READ	Allow user to read vehicles
...	...

6. System Interfaces

Find all available interface definitions here.

▼ OpenAPI

```
Unresolved directive in _06-system-interfaces.adoc -
include::../api/openapi/openapi-scenario.yml[]
Unresolved directive in _06-system-interfaces.adoc -
include::../api/openapi/openapi-track.yml[]
```

7. Cross Cutting

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7.1. Metrics

Application metrics can be pulled from `/management/metrics` path in a Prometheus compatible format.

Name	Description
vehicle_create	Sum of device creations.
vehicle_delete	Sum of device deletions.
...	...

7.2. Logging

The application logs to standard output and if variable `SPRING_PROFILES_ACTIVE` contains `json` the format will be in JSON. All important audit messages can be found in the following table.

Log	Description
[AUDIT_VEHICLE] vehicle <VIN> has been <ACTION>	Audit actions performed on a device. Actions can be created, updated or deleted.

7.3. Versioning

The application is using Semantic Versioning.

All changes on the API level are backward compatible and the API follows the [Zalando RESTful API and Event Guidelines](#).

8. Glossary

Below there are term definitions explained.

Term	Definition
CPU	Central processing unit
PK	Primary Key
RAM	Random-access memory