Creating the Sample Application

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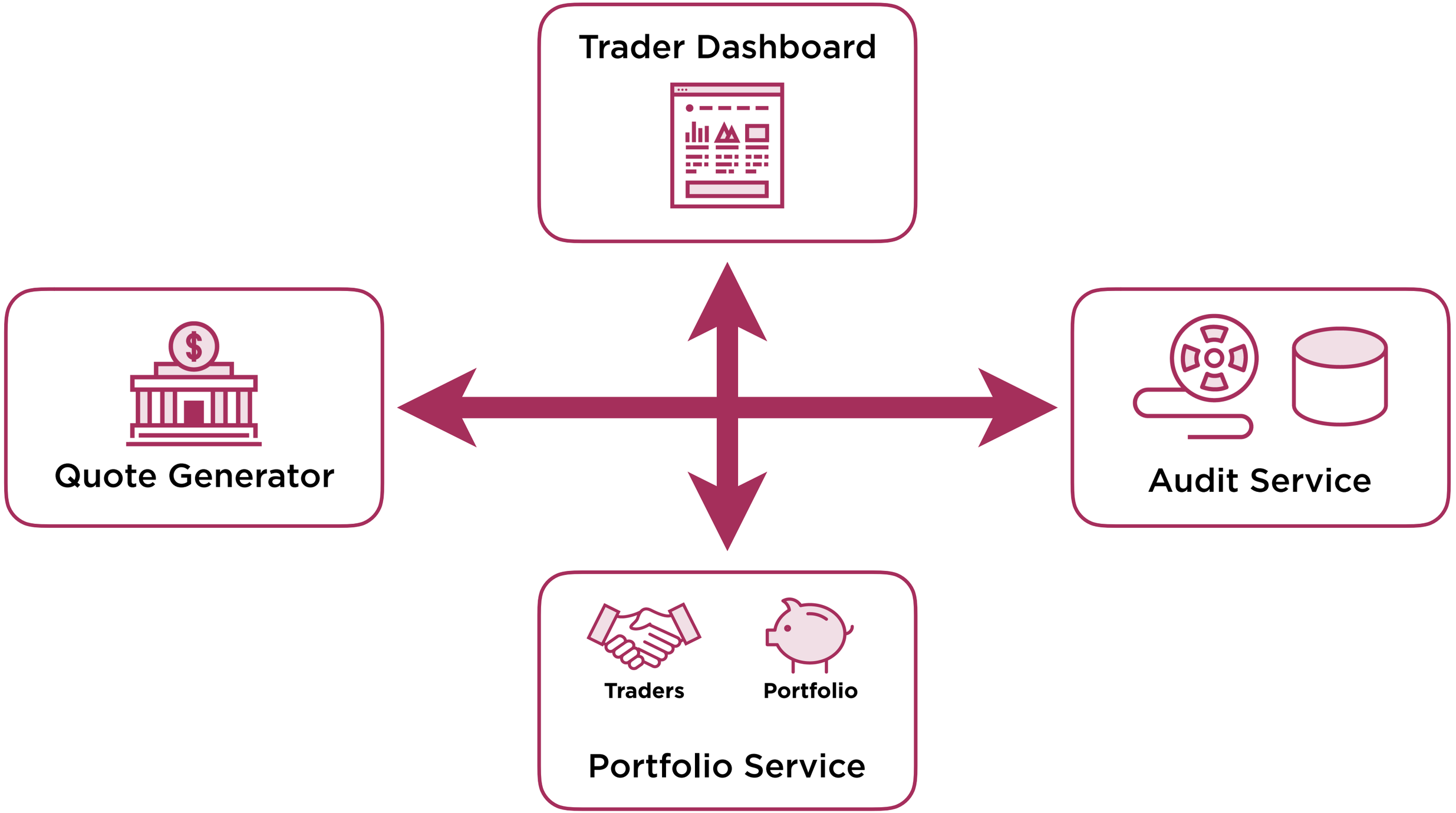
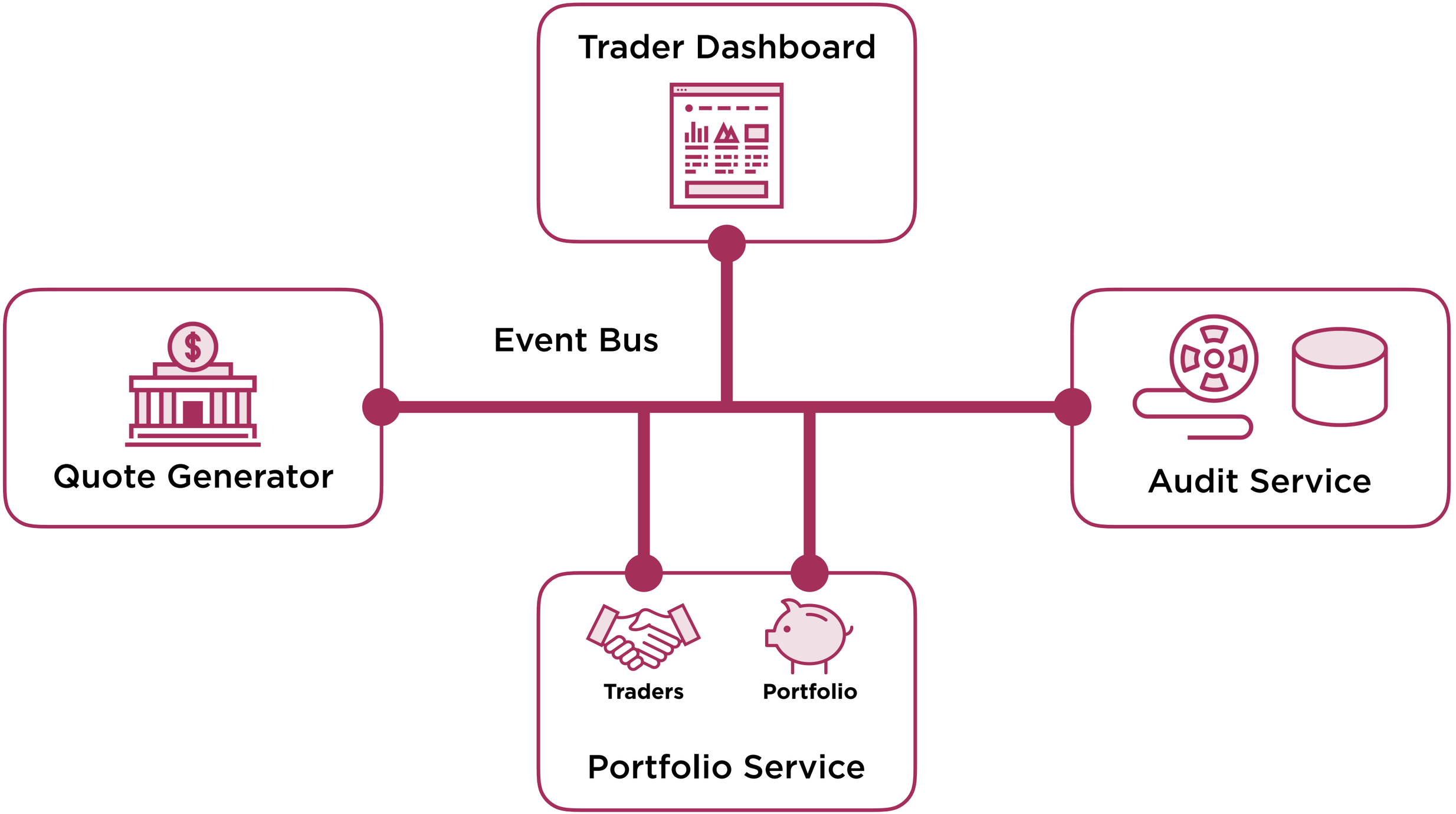
Introduction

Introducing the Microtrader Application

- Local development environment
- Microservices architecture
- Installing the application
- Building the application
- Running the application
- Testing the application

Application Architecture


Trader Dashboard
Quote Generator
Audit Service
Traders
Portfolio
Portfolio Service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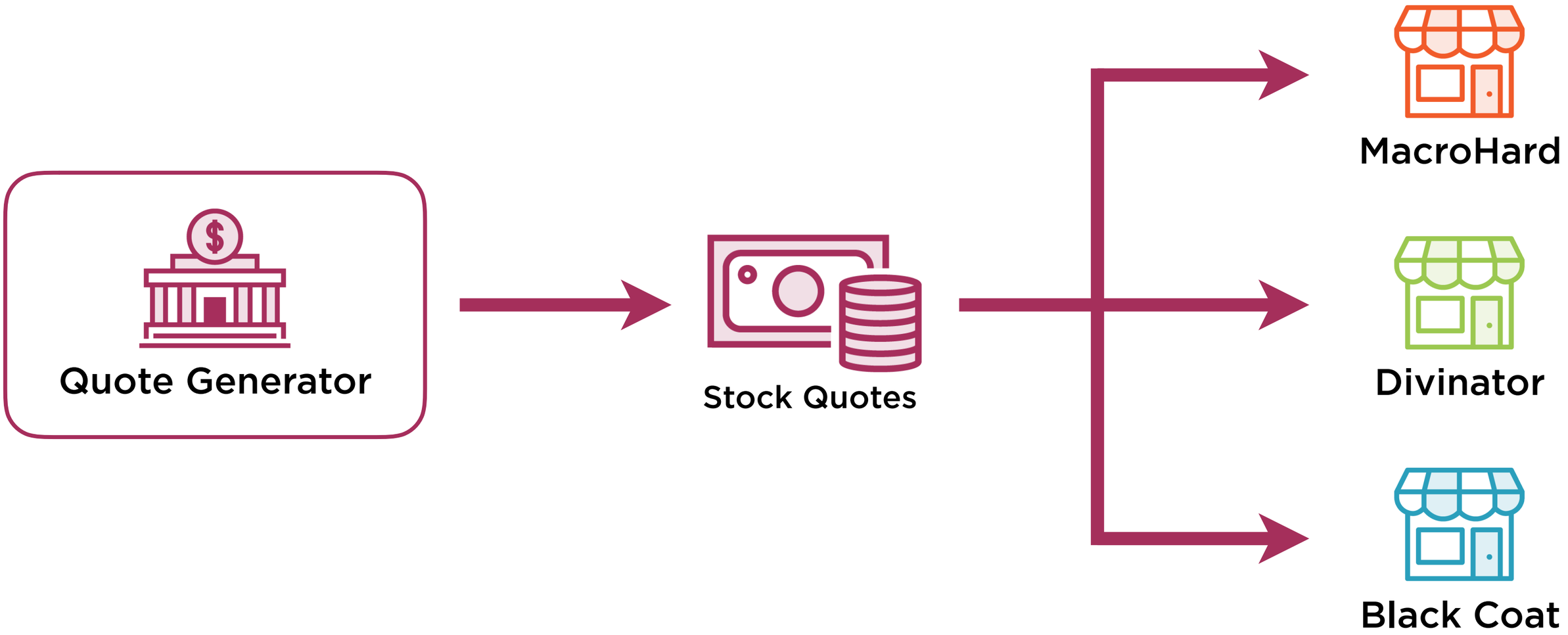
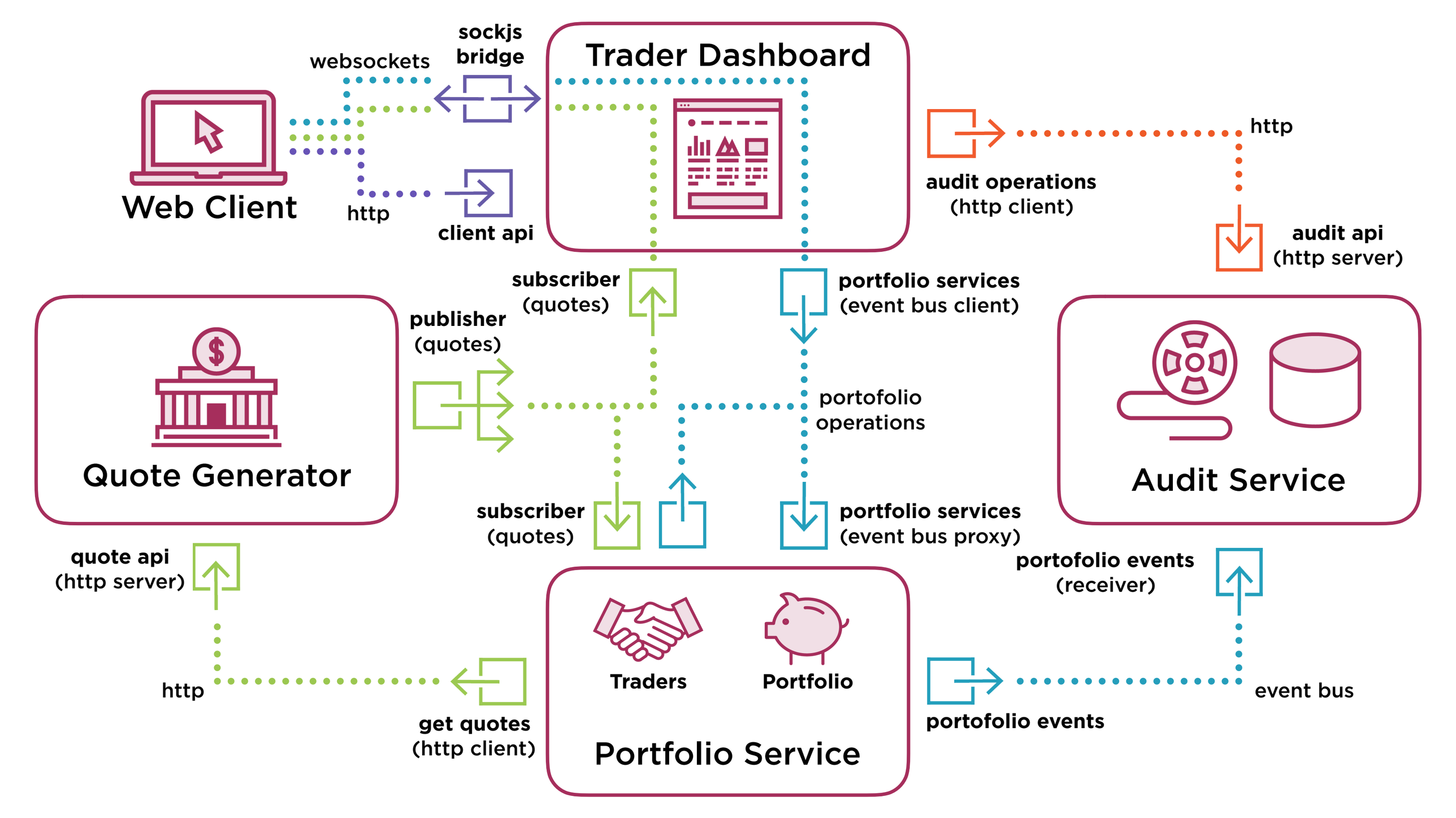

Quote Generator
Stock Quotes
MacroHard
Divinator
Black Coat


Trader Dashboard
sockjs bridge
websockets
Web Client
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client api
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Demo

Application Walkthrough

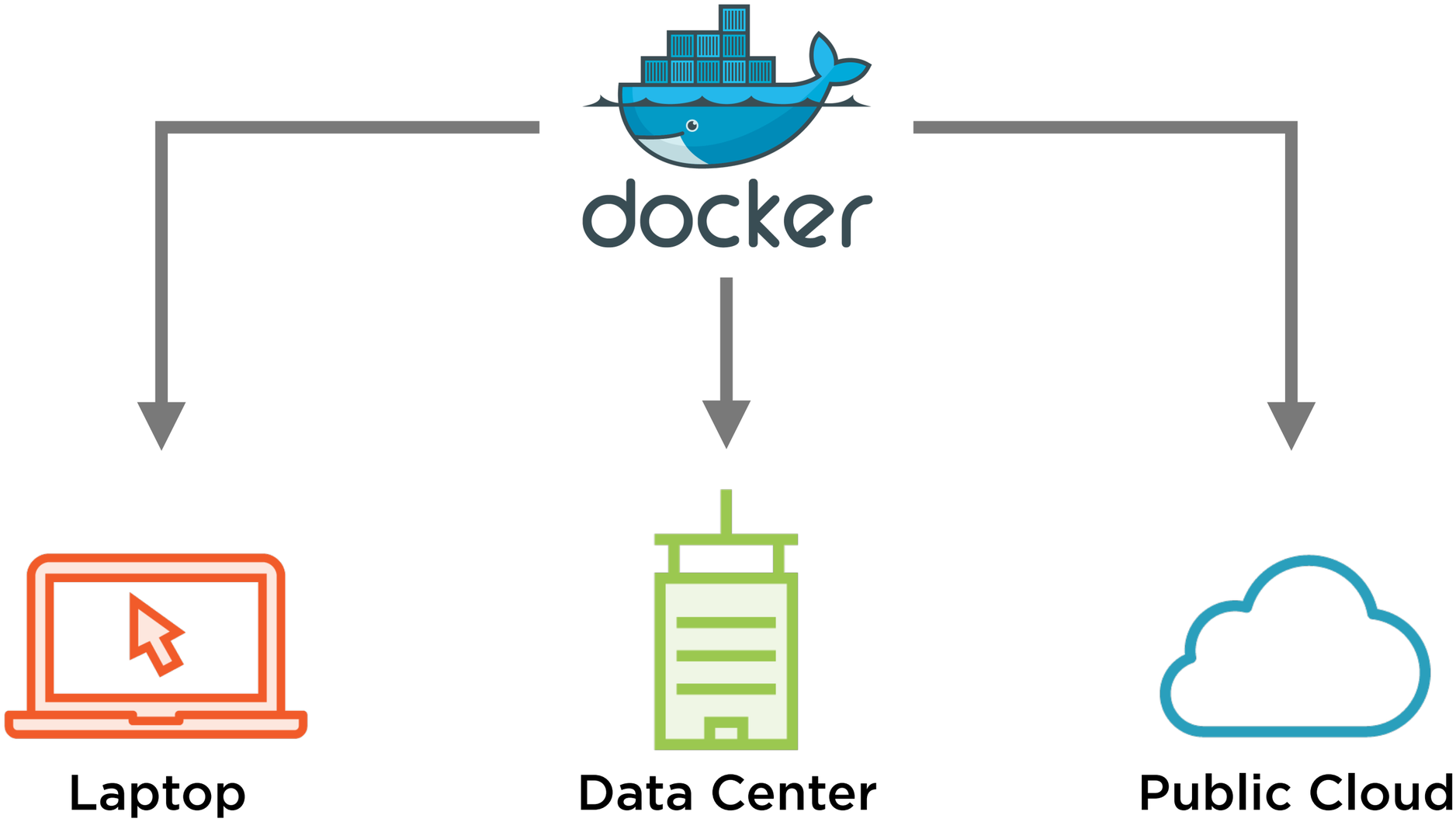
- Installing the application
- Building the application
- Running the application
- Testing the application

Installing the Application

Building the Application

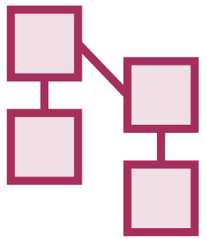
“But it worked on my machine!”

Docker works on any machine...

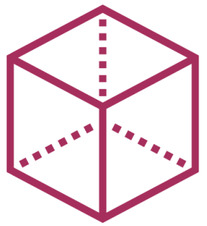


Fat JAR

Application Source



Dependencies



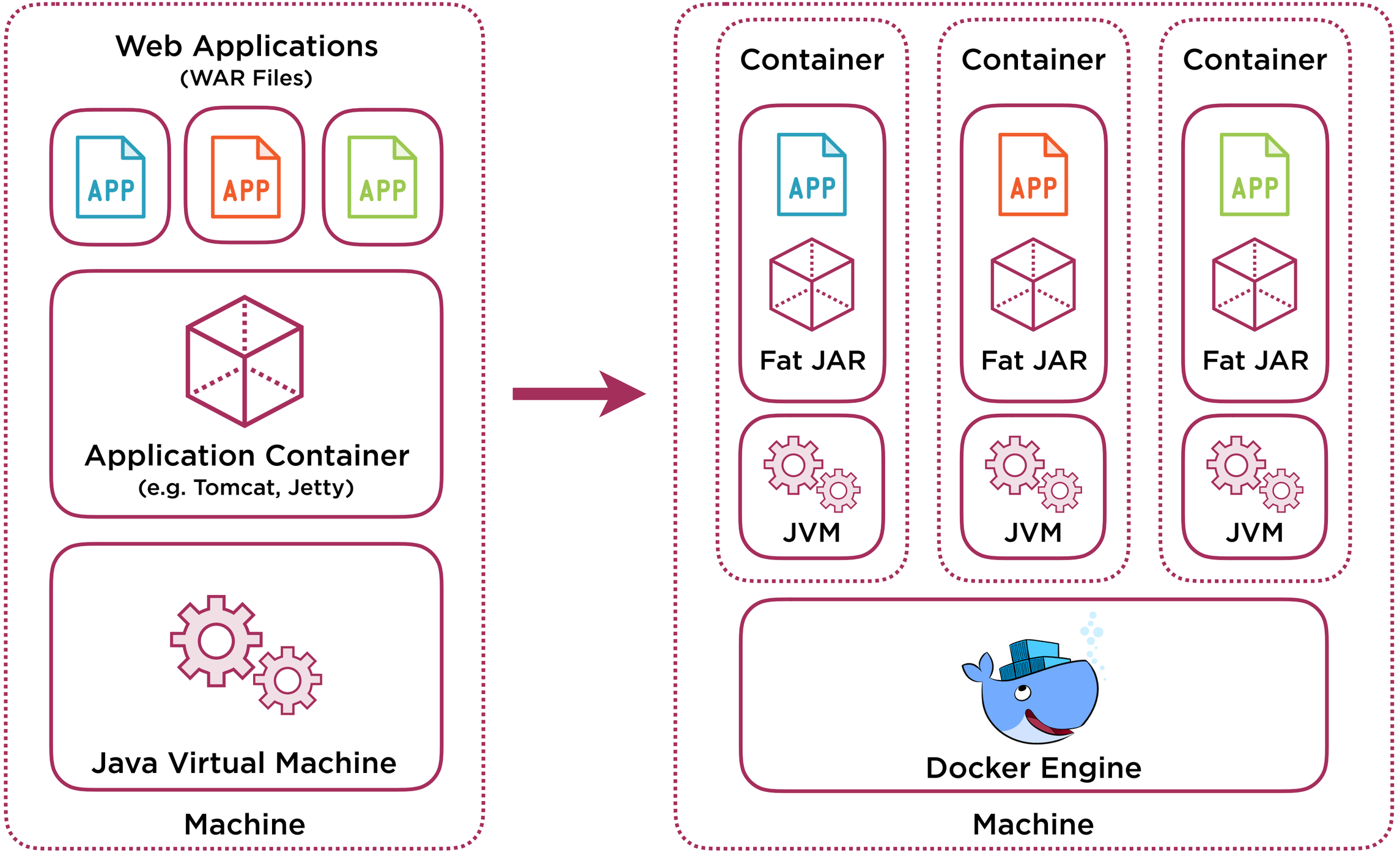
Application Container
(e.g. Jetty)

Packages application and all dependencies

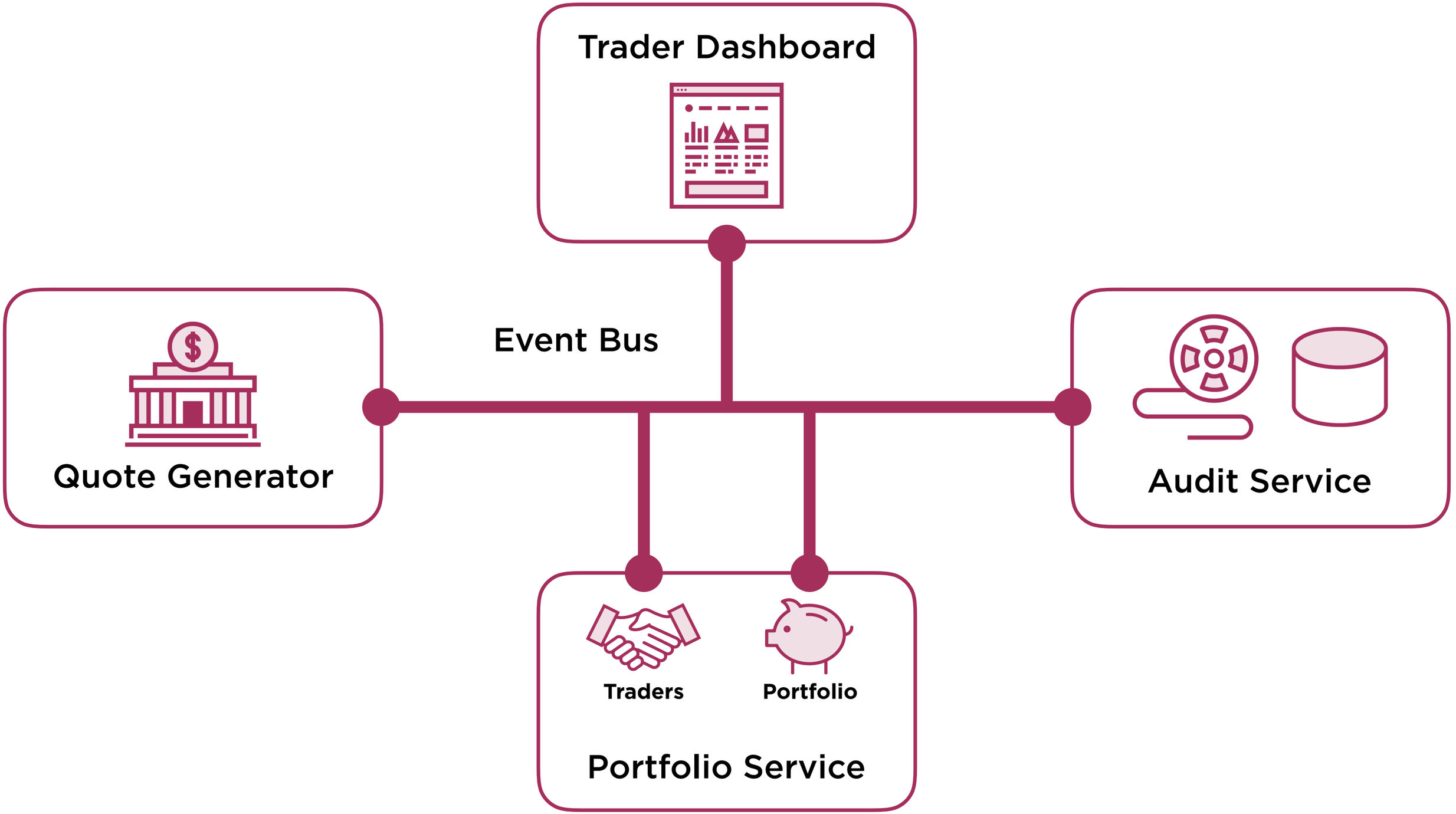
Self contained deployable artifact

Single runnable artifact

- e.g. $ java -jar my-fat-jar.jar


Web Applications
(WAR Files)
APP
APP
APP
Application Container
(e.g. Tomcat, Jetty)
Java Virtual Machine
Machine
Container
APP
Fat JAR
JVM
Container
APP
Fat JAR
JVM
Container
APP
Fat JAR
JVM
Docker Engine
Machine

Running the Application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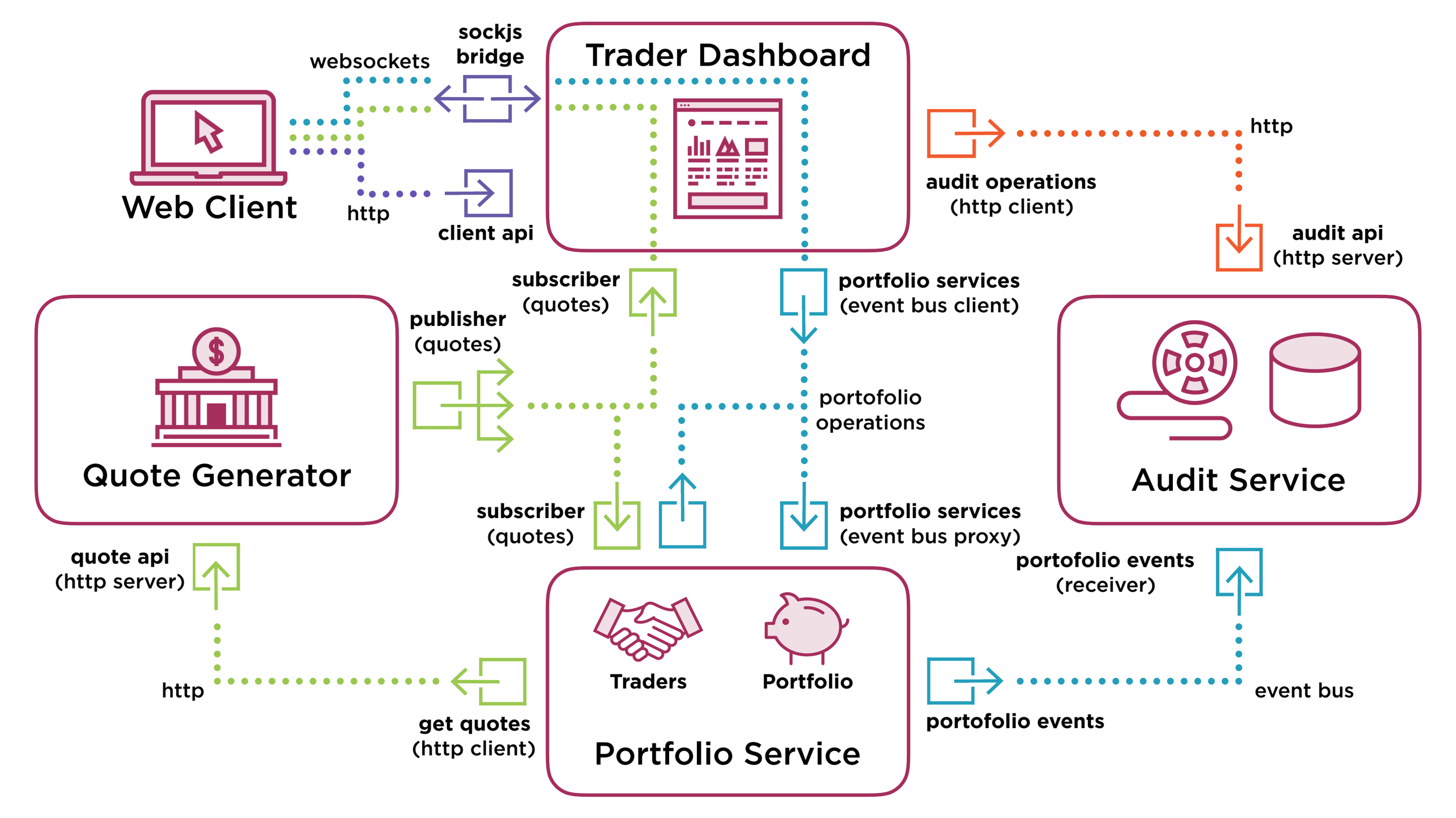
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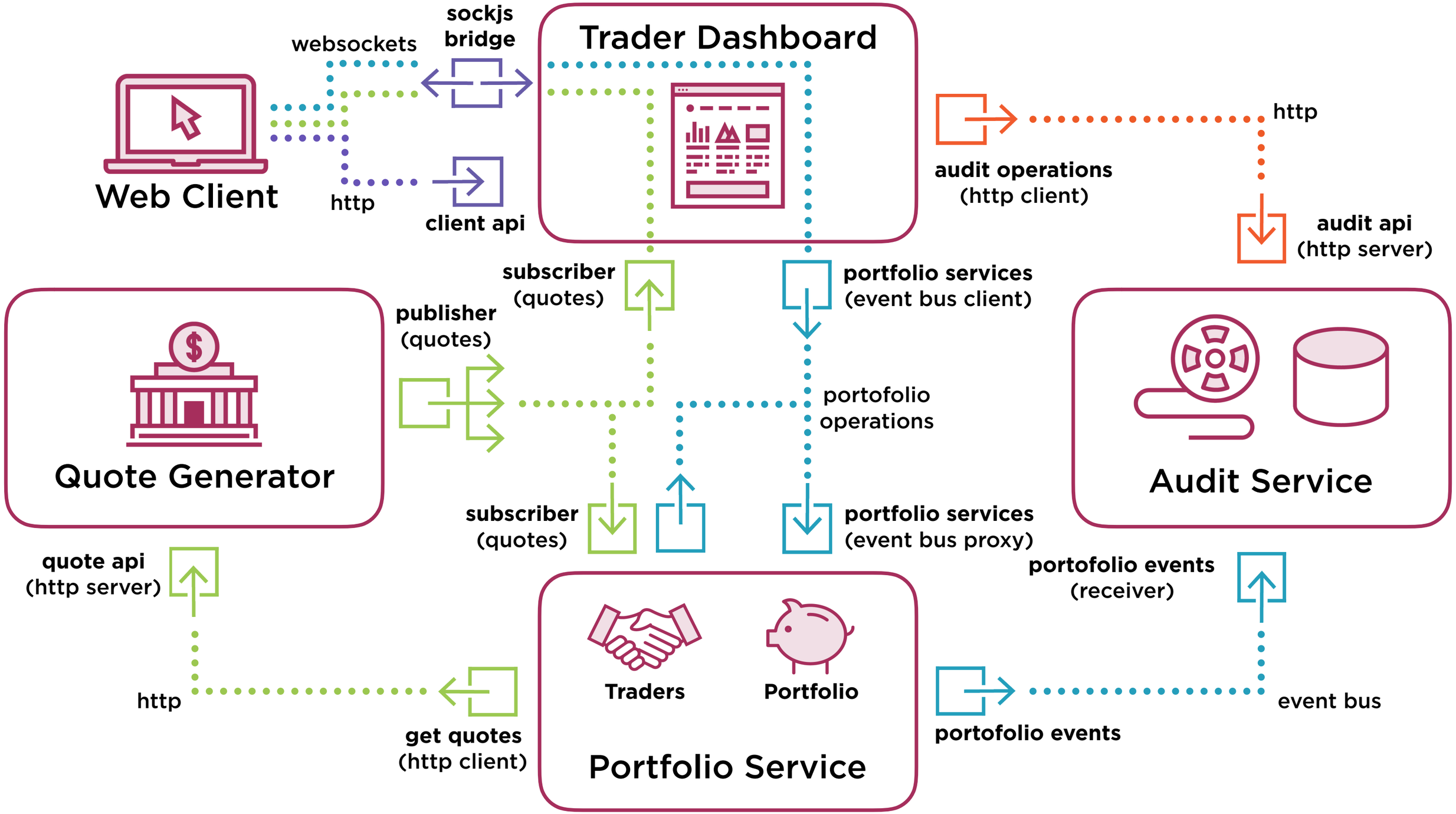
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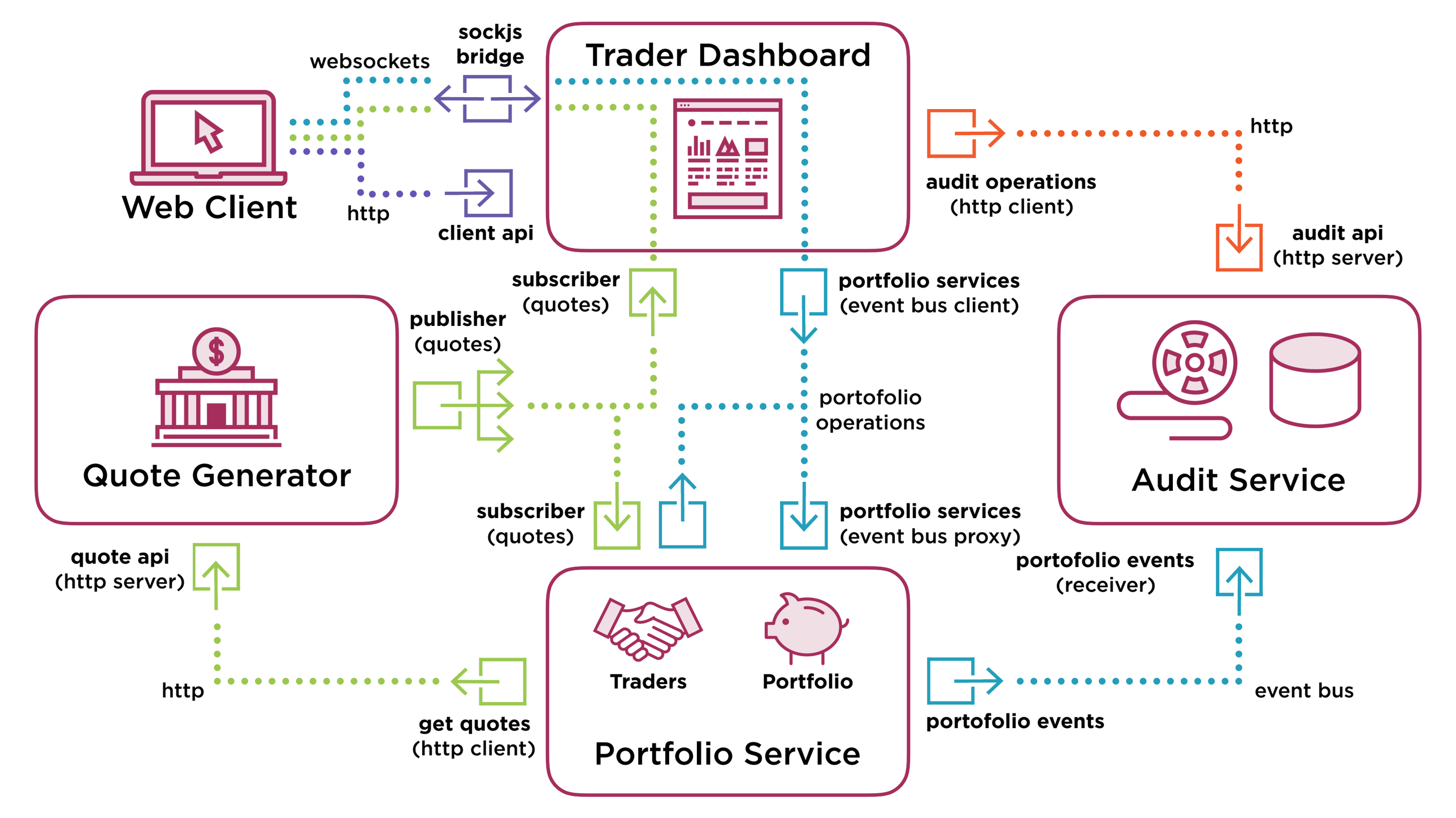
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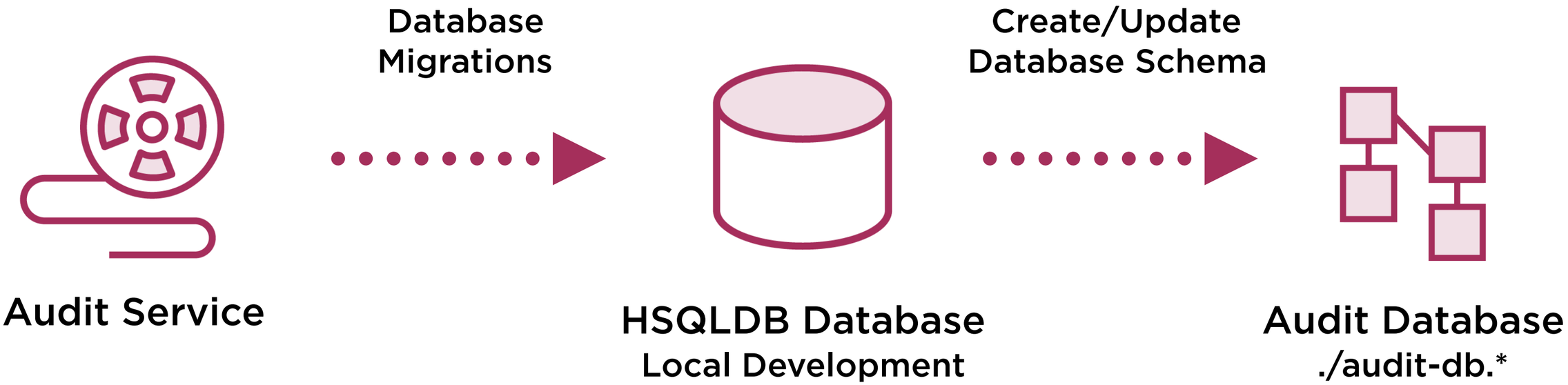
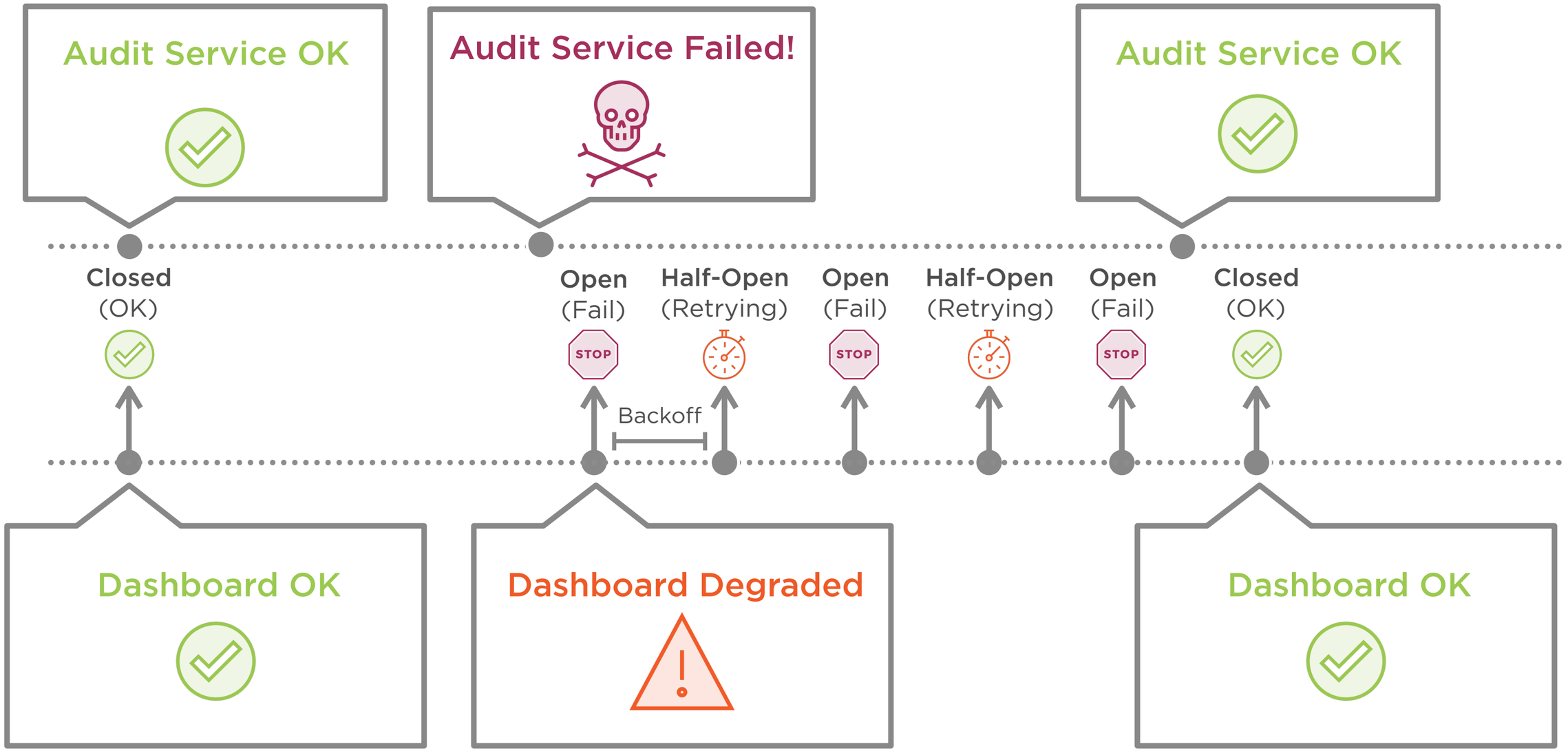
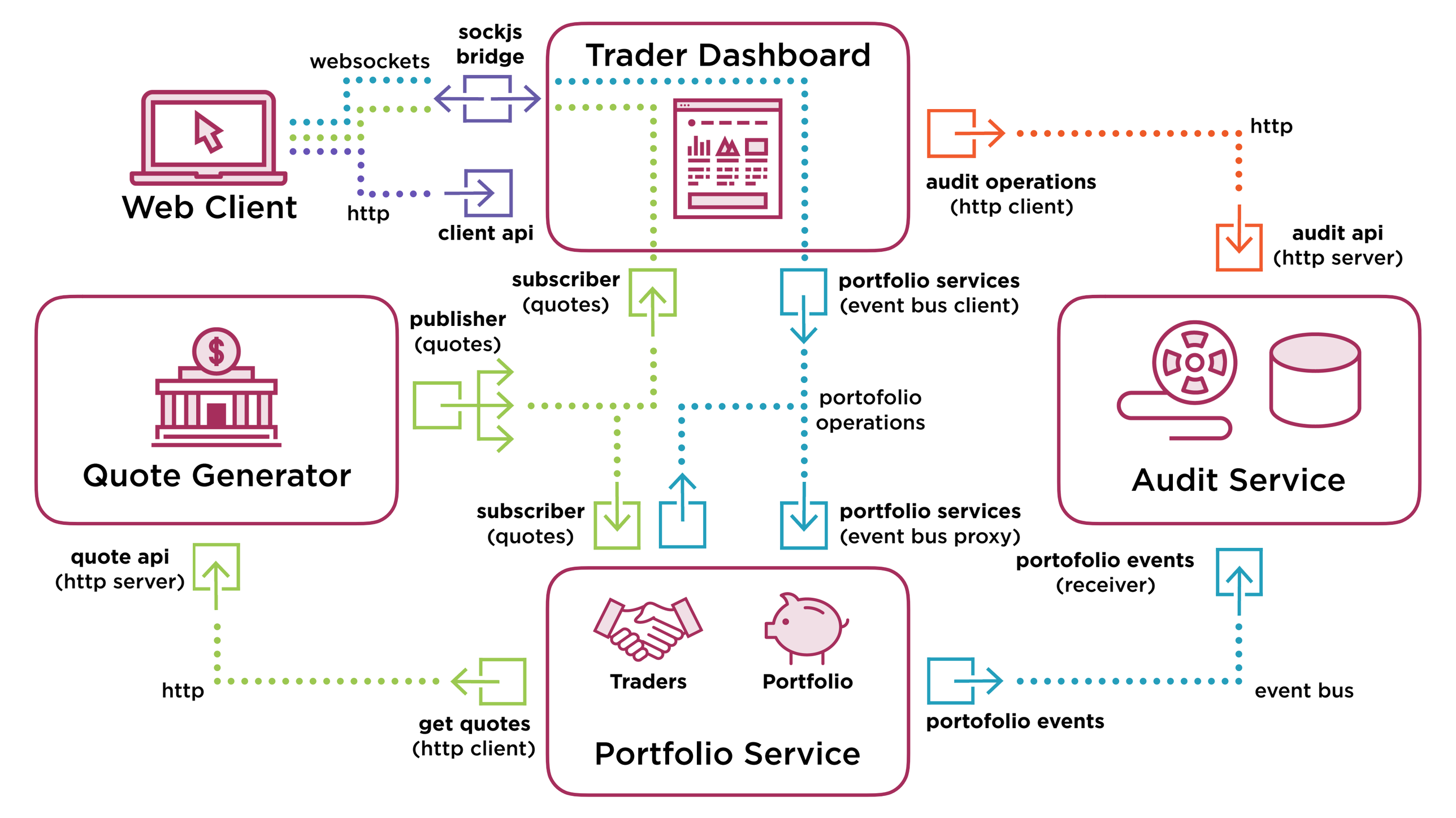
Audit Database Migrations



Circuit Breaker Pattern



Testing the Application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Summary

Creating the Sample Application

- Microservices architecture
- Gradle multi-project build
- Fat JARs for each application service
- Vert.x clustering for distributed communications
- Acceptance tests verify the application as a whole