Microservice Architecture (/index.html)

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# Pattern: Domain event

From Domain-Driven Design (DDD).

## Context

A service often needs to publish events when it updates its data. These events might be needed, for example, to update a CQRS view (cqrs.html). Alternatively, the service might participate in an choreography-based saga (saga.html), which uses events for coordination.

## Problem

How does a service publish an event when it updates its data?

## Solution

Organize the business logic of a service as a collection of DDD aggregates (aggregate.html) that emit domain events when they created or updated. The service publishes these domain events so that they can be consumed by other services.

## Related patterns

- The Saga (saga.html) and CQRS (cqrs.html) patterns create the need for this pattern
- The Aggregate pattern (aggregate.html) is used to structure the business logic
- The Transactional outbox pattern (transactional-outbox.html) is used to publish events as part of a database transaction
- Event sourcing (event-sourcing.html) is sometimes used to publish domain events

## See also

- My book Microservices patterns (/book) describes this pattern in a lot more detail.

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