Event Sourcing on the JVM

QCon San Francisco 2007

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Presentation: "Scaling Domain Driven Design"
Track: Architecture Quality (day 2)

Time: Thursday 16:00 - 17:00

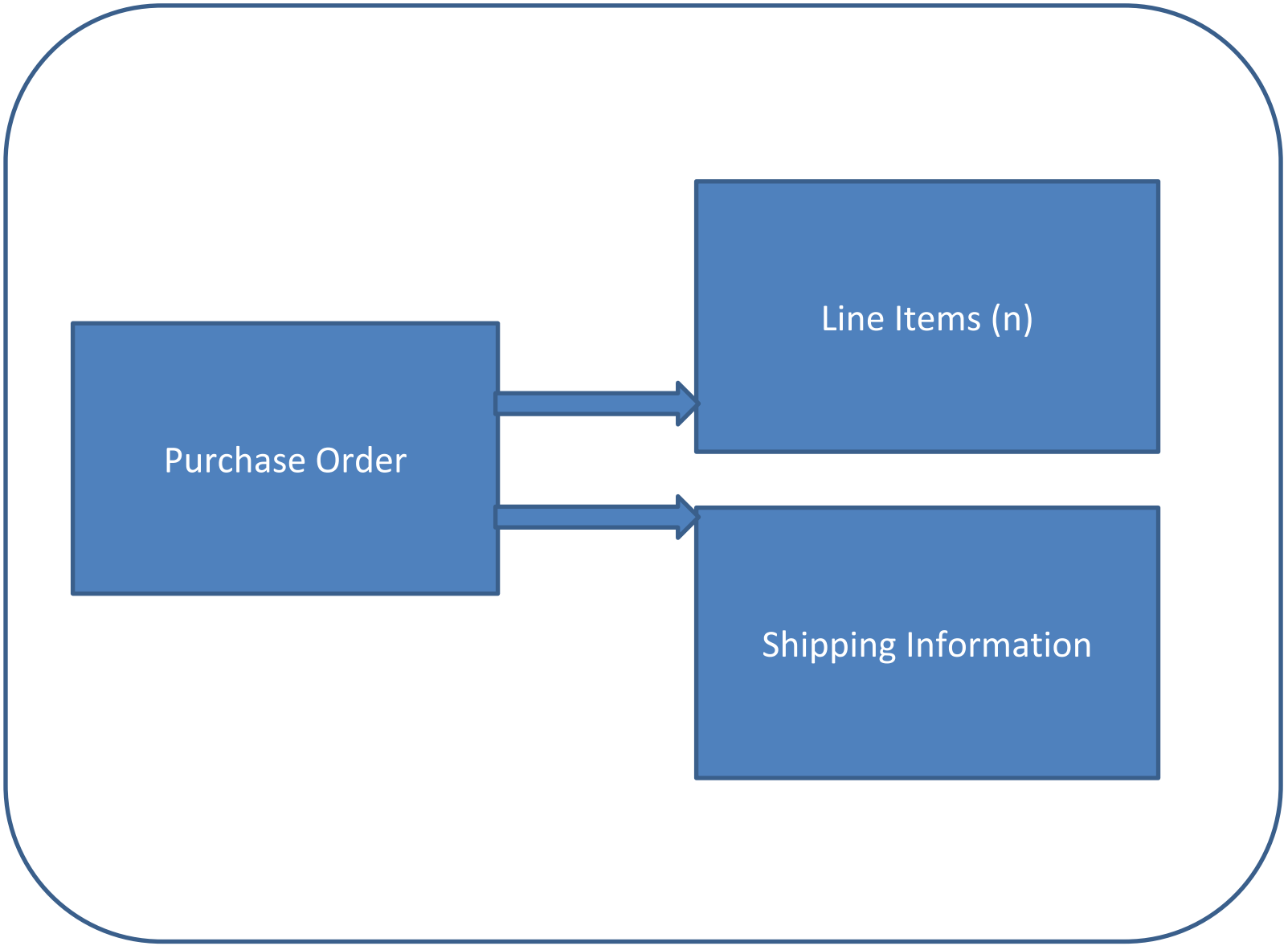
Location: Metropolitan I

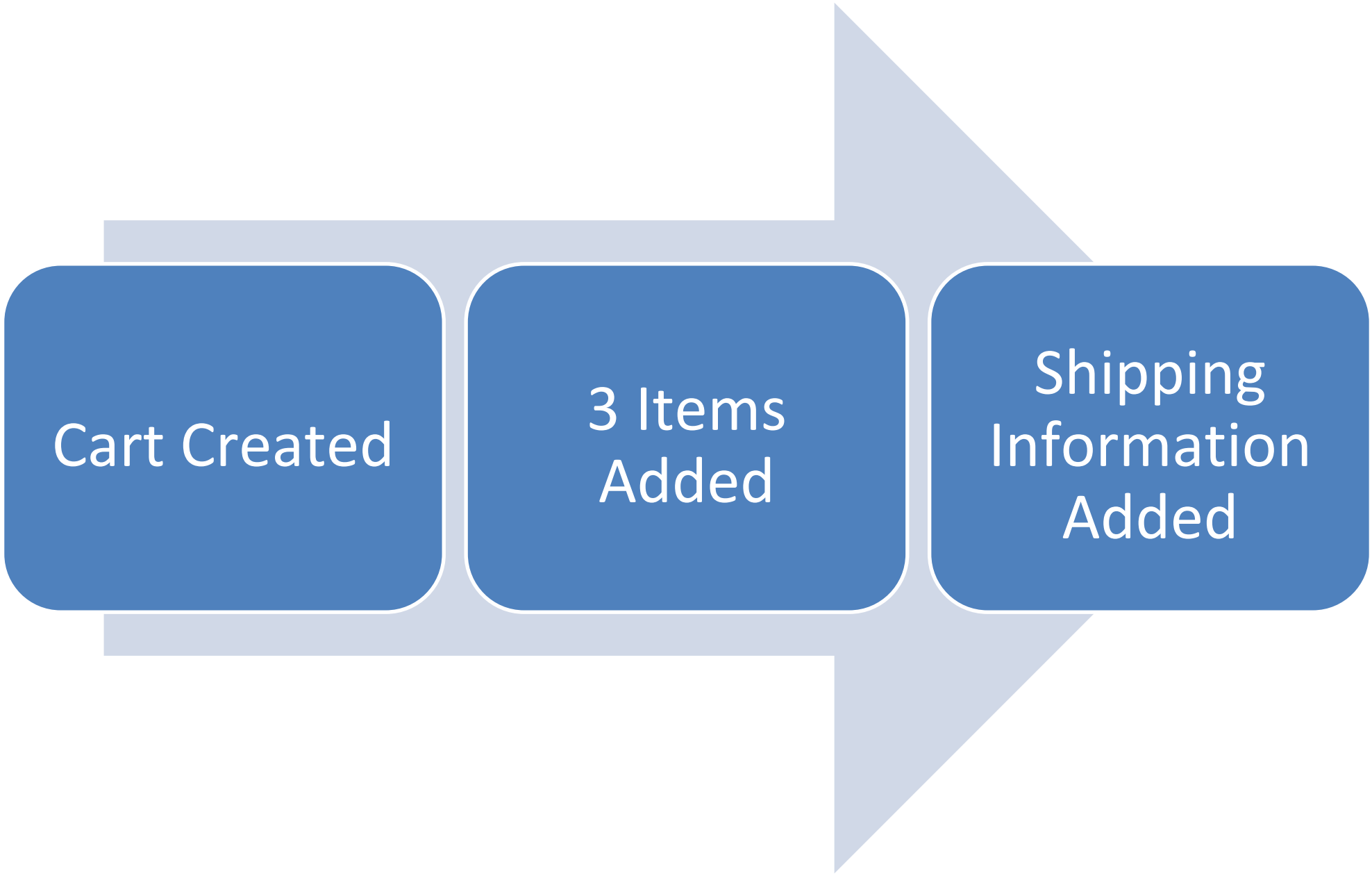
Abstract: We've all heard about Domain Driven Design (DDD), but have you seen it applied in a large system? In the session you'll see how DDD was put to work to help design a high performance application processing 2000 sustained transactions per second with over 30GB of data added daily! It was DDD and the new 'Asynchronous Context Mapping' pattern that made this system possible with near linear scaling. Learn how to apply these techniques in your applications and how to overcome the challenges of DDD, such as reporting. This session makes large scale DDD make sense.

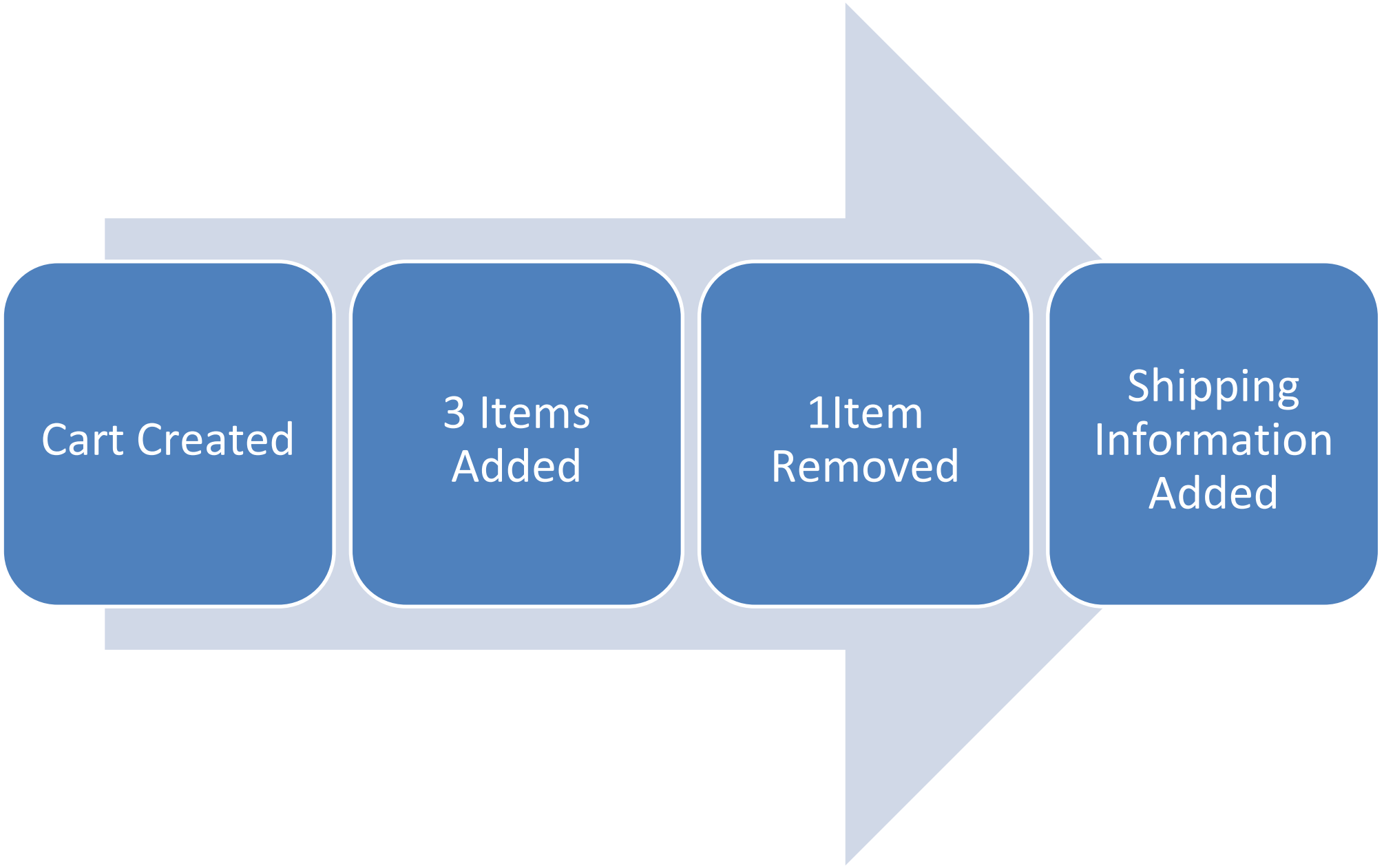
Download slides

Greg Young, IMIS

writing articles for InfoQ throughout the south ea northwest, or floating u kayak.

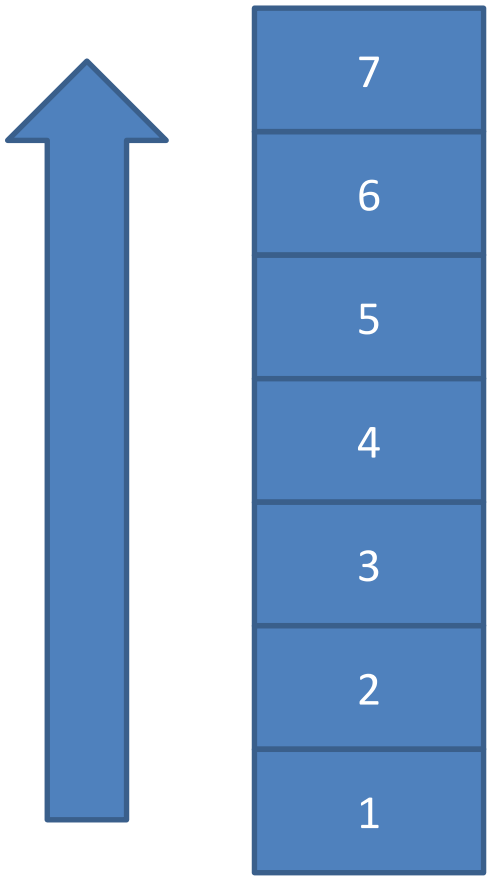

Purchase Order
Line Items (n)
Shipping Information

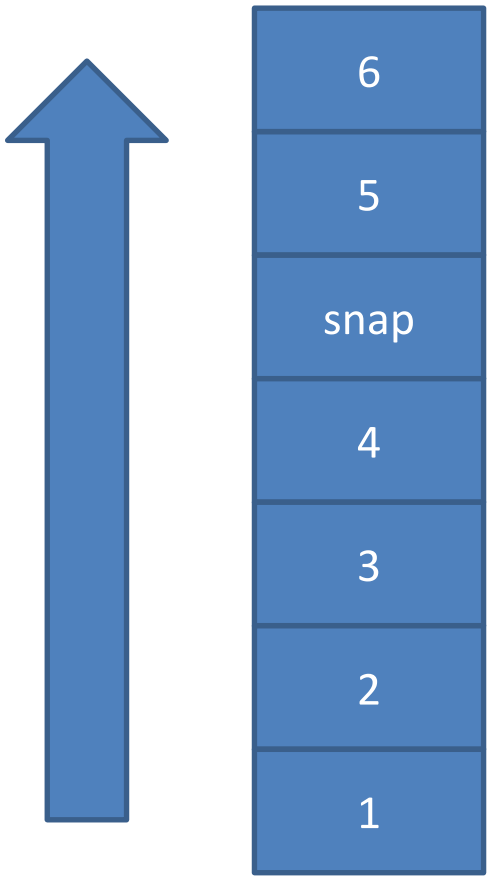

Cart Created
3 Items Added
Shipping Information Added


Cart Created
3 Items Added
1Item Removed
Shipping Information Added


Replay
Skip

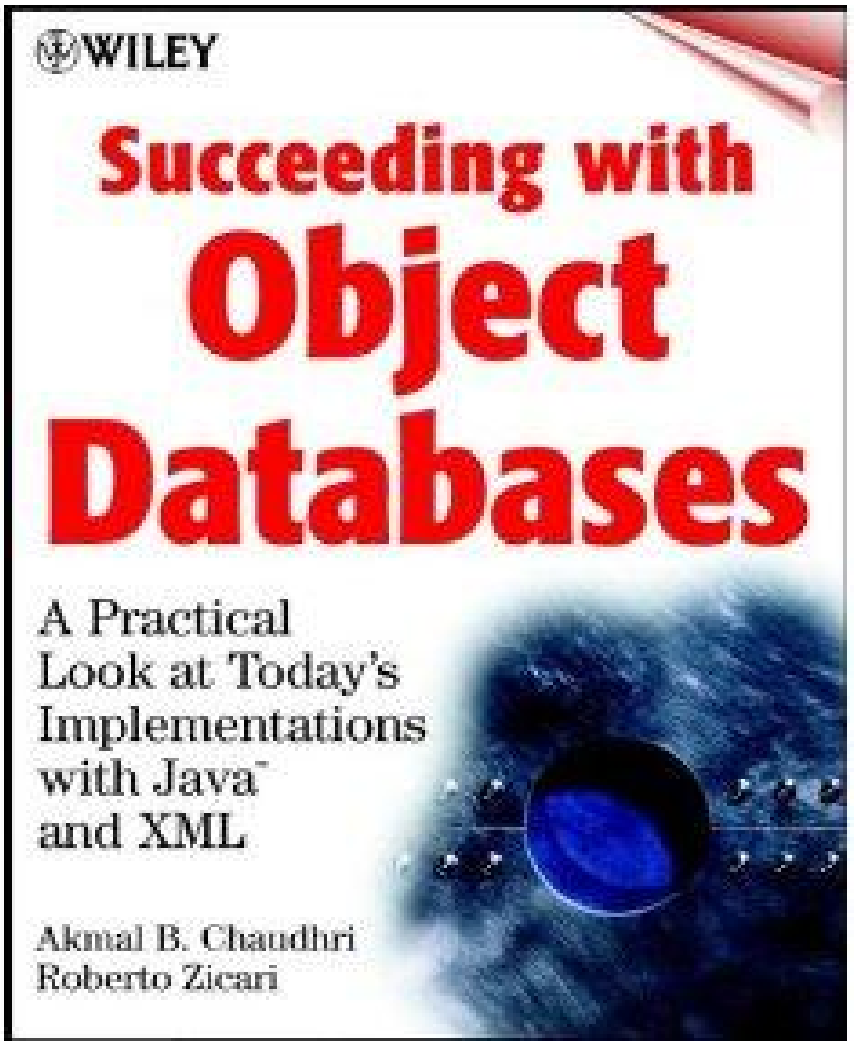
Just functional code.


7
6
5
4
3
2
1

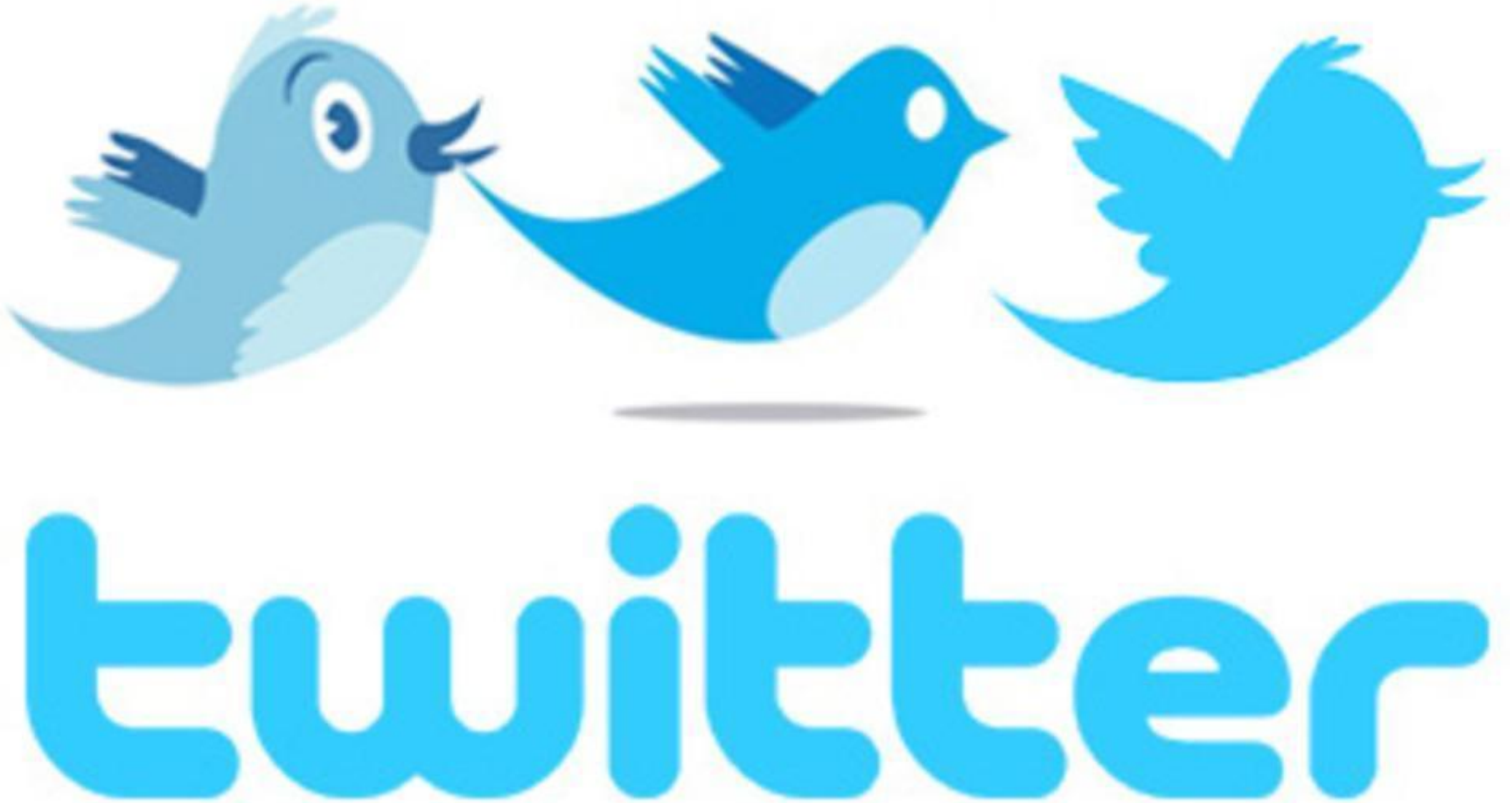

6
5
snap
4
3
2
1


mongoDB
Cassandra
Redis
riak
CouchDB
relax

There is no “best” storage.


WILEY
Succeeding with
Object
Databases
A Practical
Look at Today's
Implementations
with Java™
and XML
Akmal B. Chaudhri
Roberto Zicari

A single data model is almost never appropriate. 3+ is common!

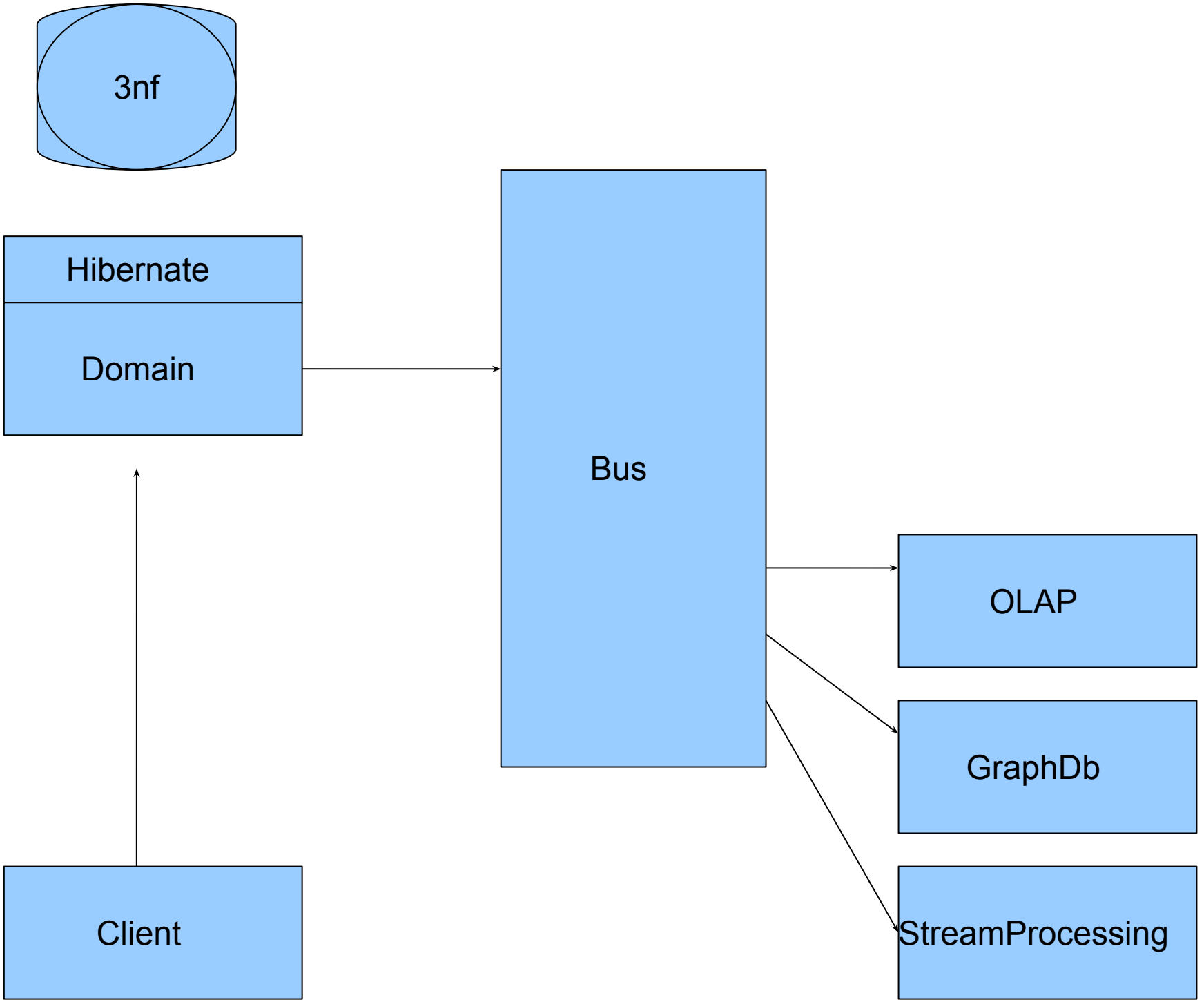

twitter

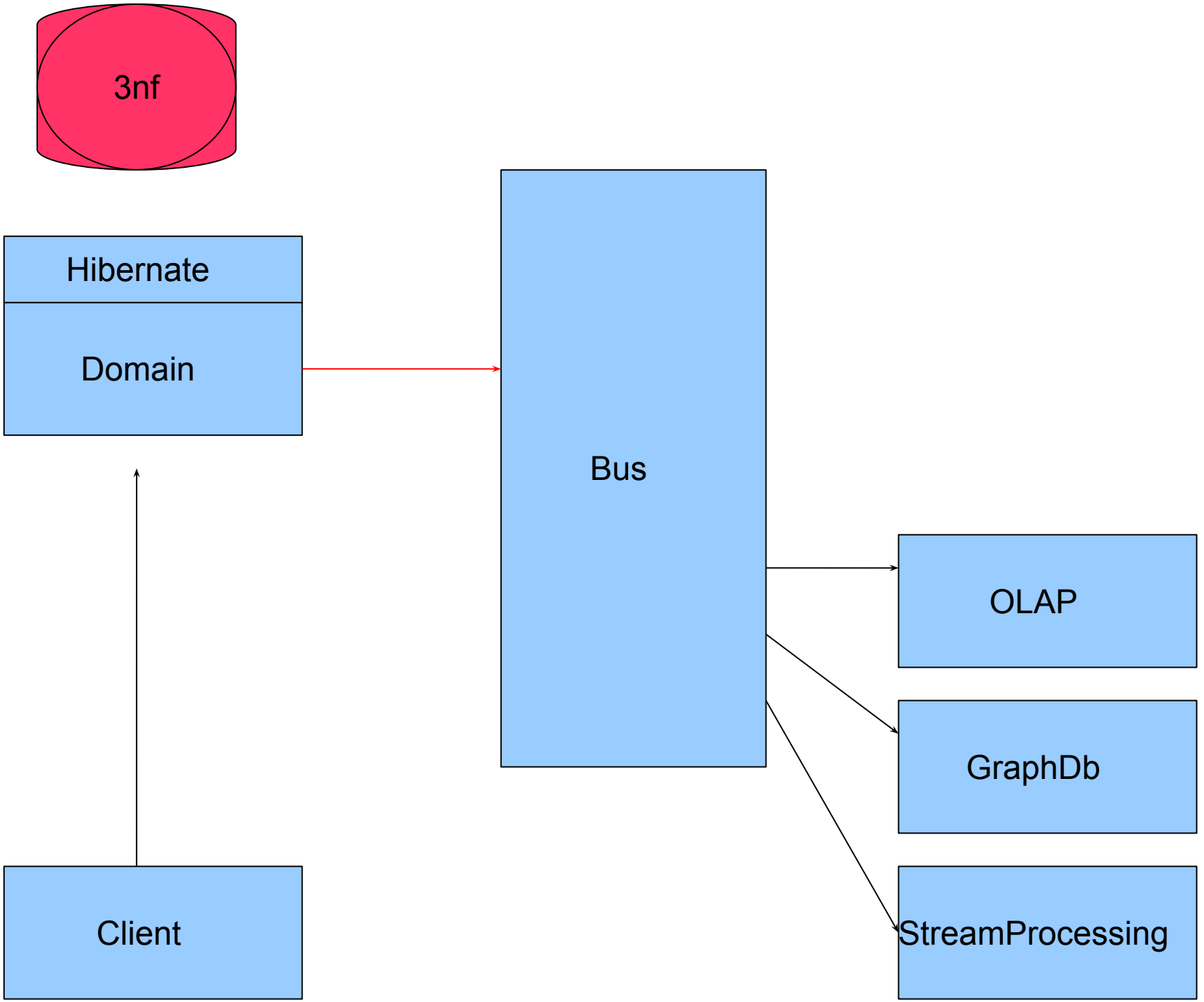
Id	ParentId	Data
1	0	Parent
2	1	Child1
3	1	Child2

Id	ParentId0	ParentId1	ParentId2	ParentId3	ParentId4	Data
1	0	0	0	0	0	Parent
2	1	0	0	0	0	Child1
3	1	2	0	0	0	Child2

Wrong models cause massive accidental complexity

A queue with ‘infinite history’ allows new models to easily be brought online and to sync


3nf
Hibernate
Domain
Bus
OLAP
GraphDb
StreamProcessing
Client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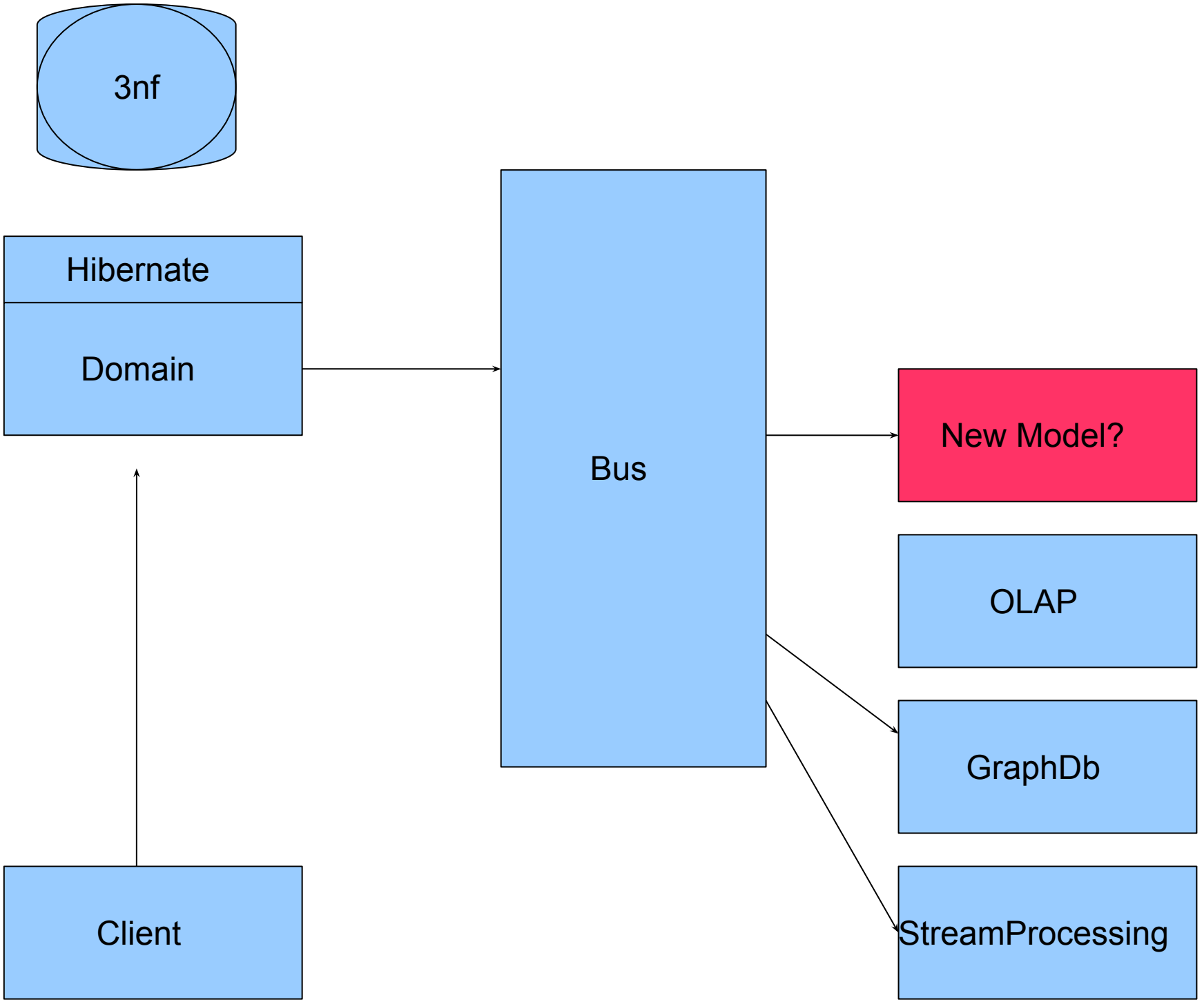
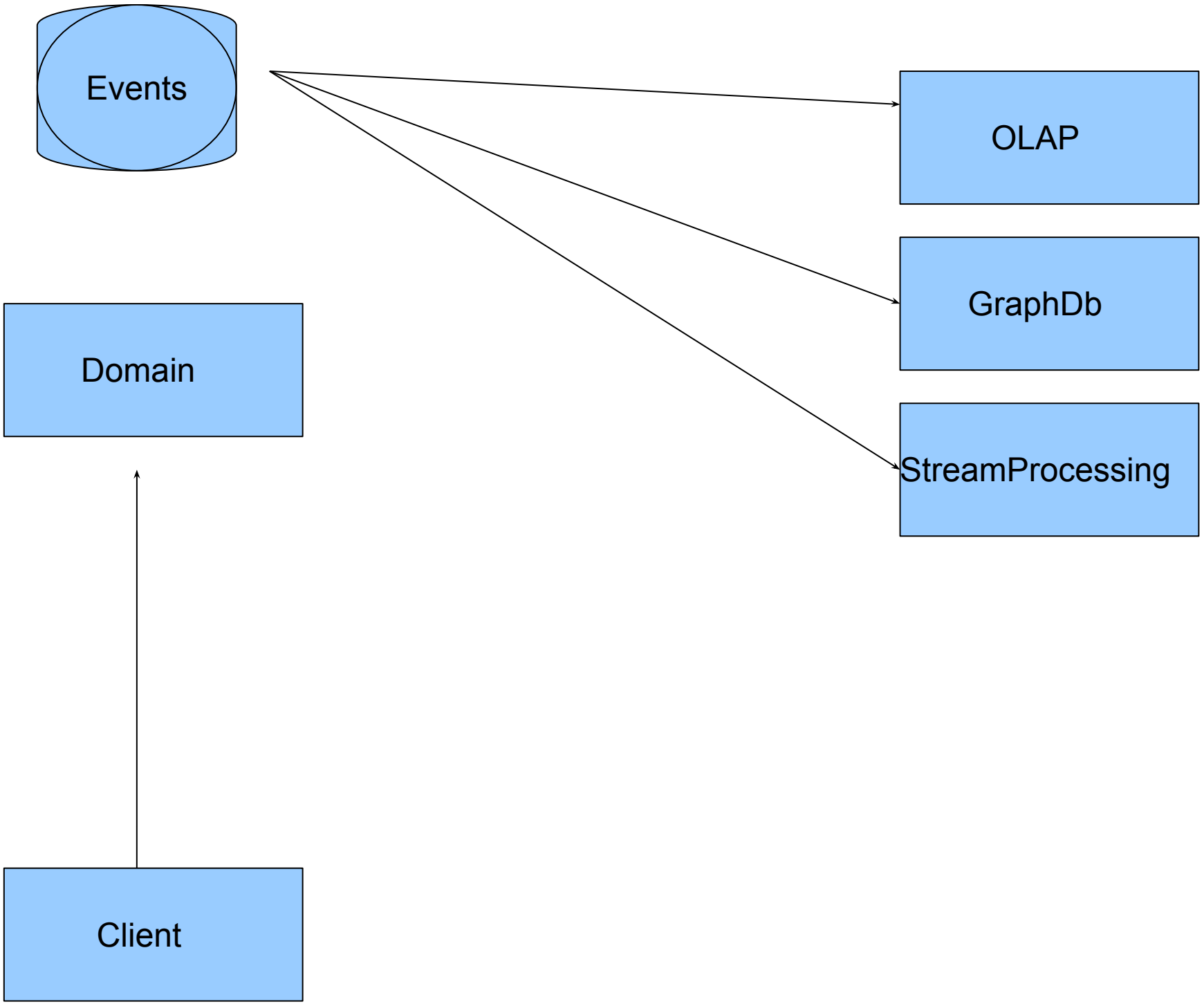

3nf
Hibernate
Domain
Bus
New Model?
OLAP
GraphDb
StreamProcessing
Client


Events
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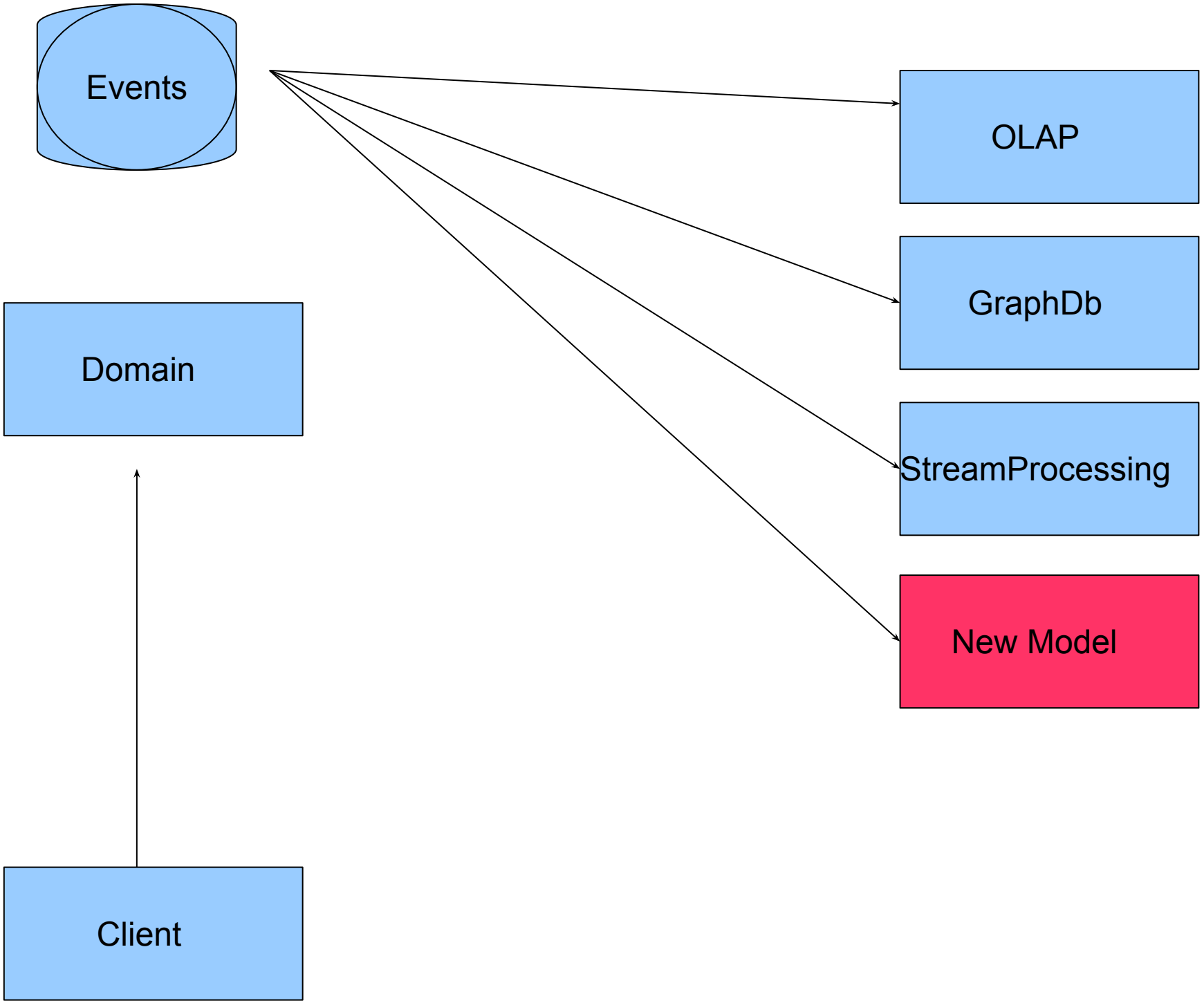
GraphDb
StreamProcessing
Domain
Client


Events
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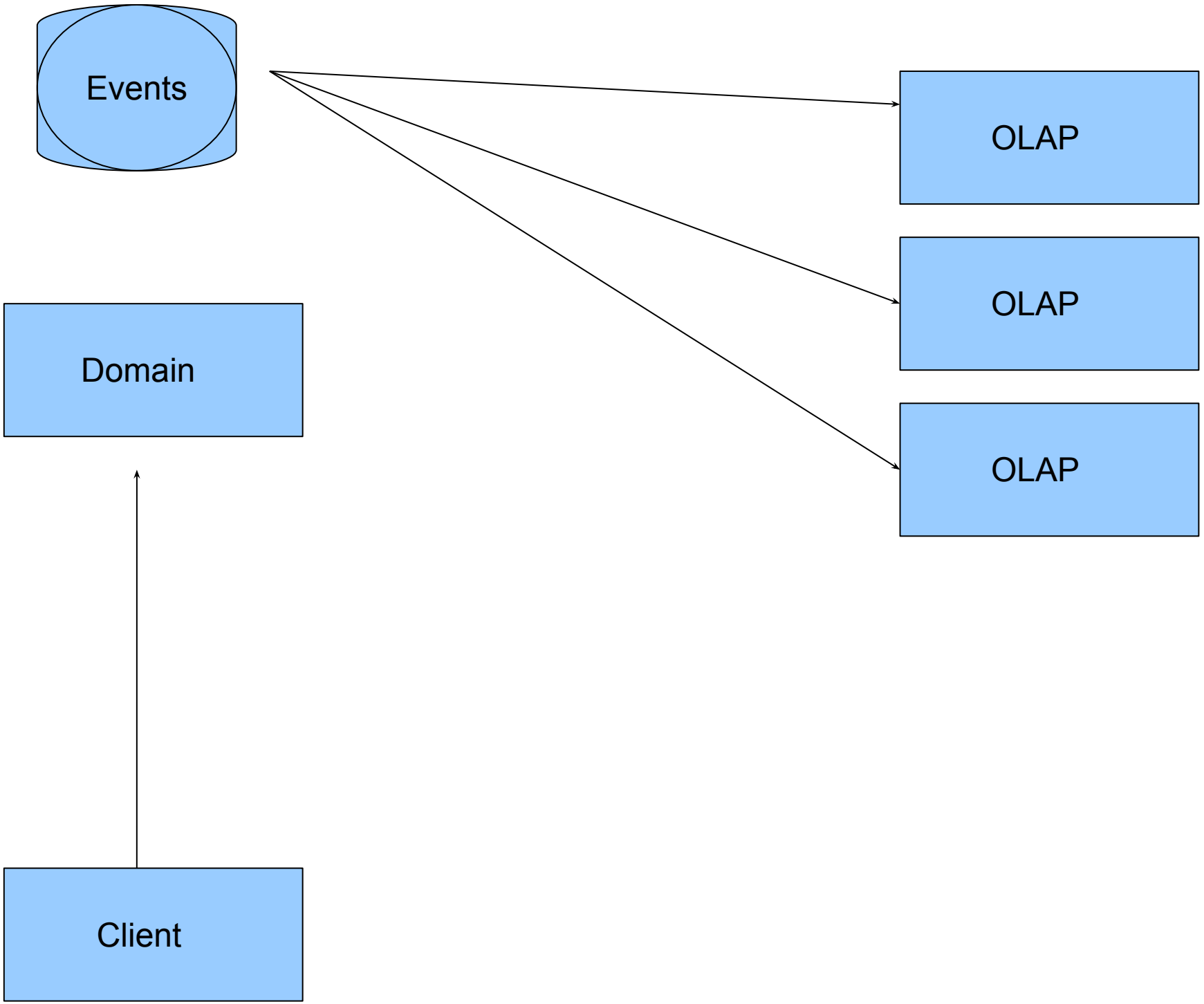
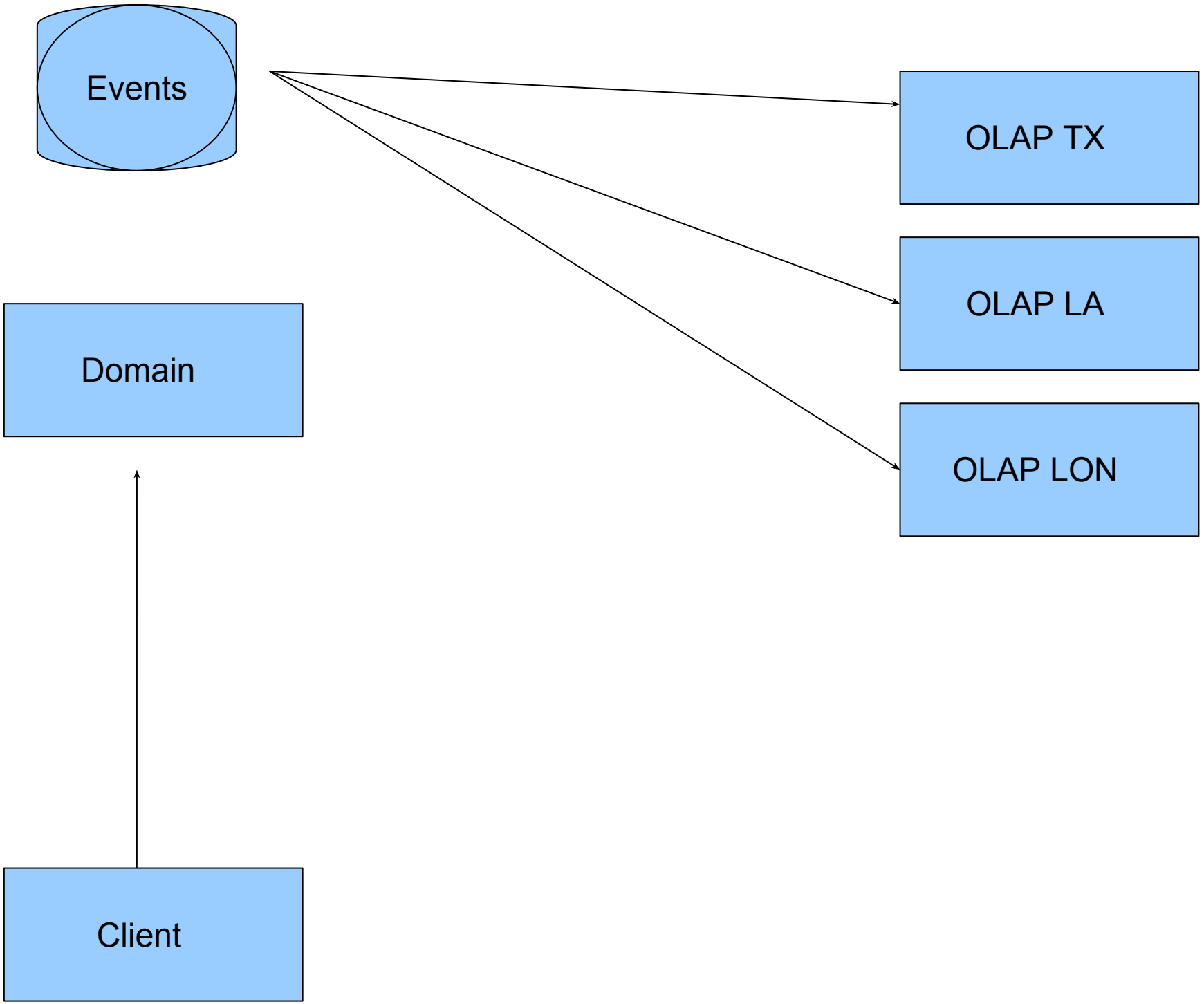
GraphDb
StreamProcessing
New Model
Domain
Client

Multiple models simplify many things!


Events
OLAP
OLAP
OLAP
Domain
Client


Events
OLAP TX
OLAP LA
OLAP LON
Domain
Client

Projection : Handles<Message1>,
Handles<Message2>

The framework/tool space is confusing.

Kafka

EventStore (GetEventStore)

Axon event stores

Eventuate

Axon framework

Akka.Persistence

Axon framework

Concurrency?

Reactive Streams?

Prediction: More to come

Lots of choices!

Questions?