

Dimp
My

there

Qui suis-je ?

- Hichame EL KHALFI
- Freelance Java Developer



AUSmotive.com

BMW Vision E-Drive (Concept)

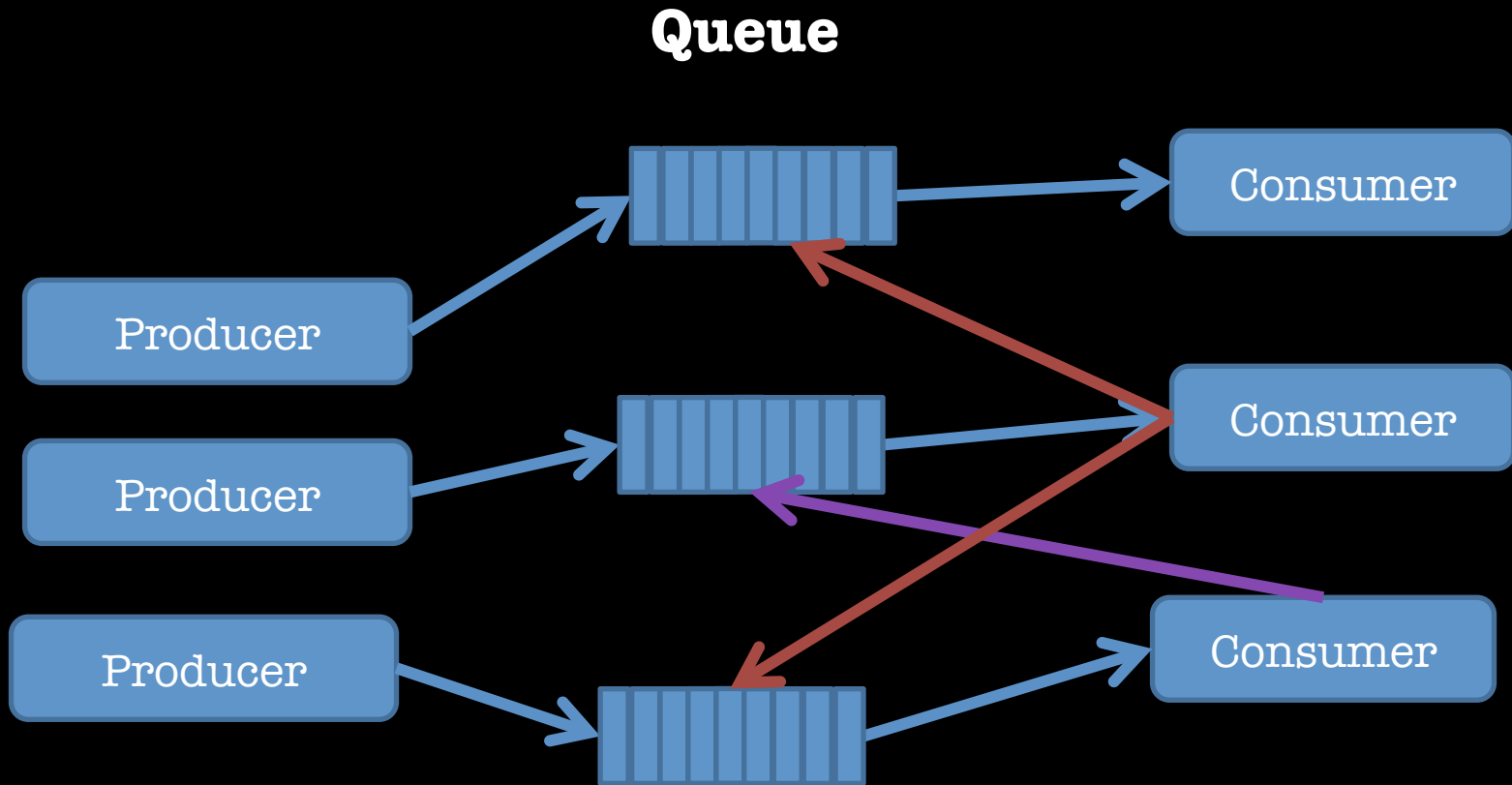


@HELKHALFI

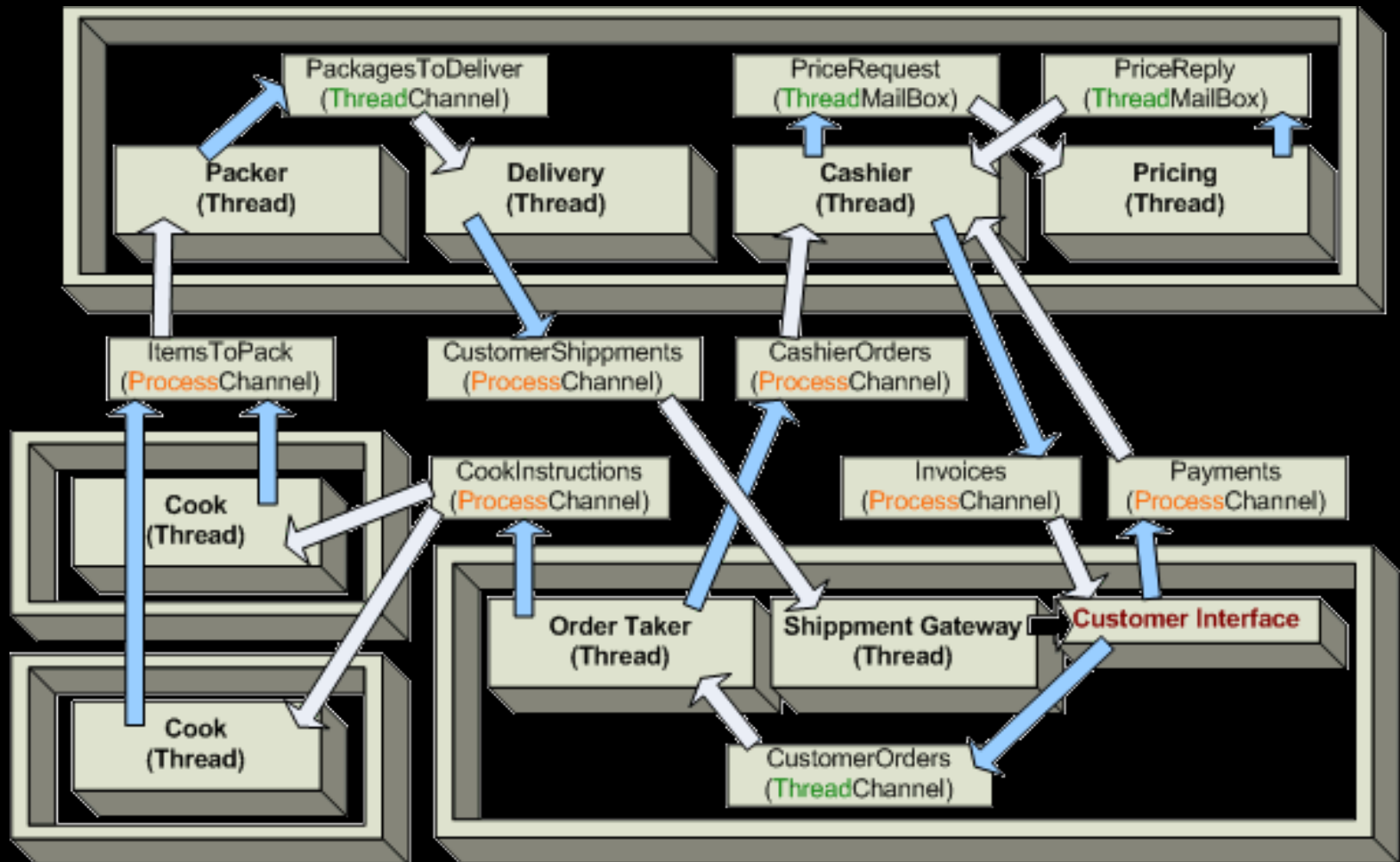


<https://github.com/helkhalfi/disruptor-examples>

Inter-thread messaging



Inter-thread messaging



CAUTION



BIOHAZARD

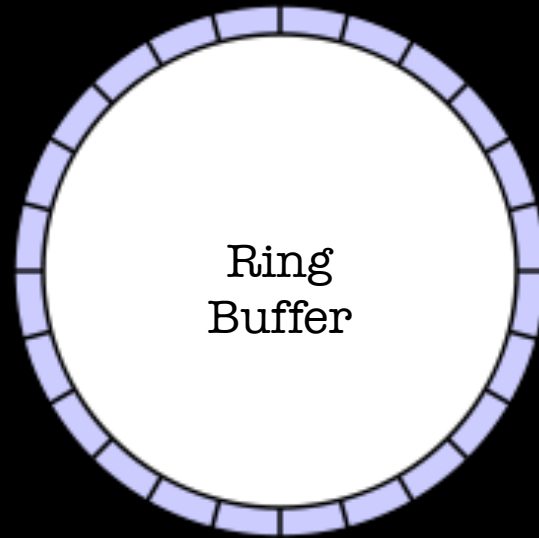


**KEEP
CALM
AND
RELAX**

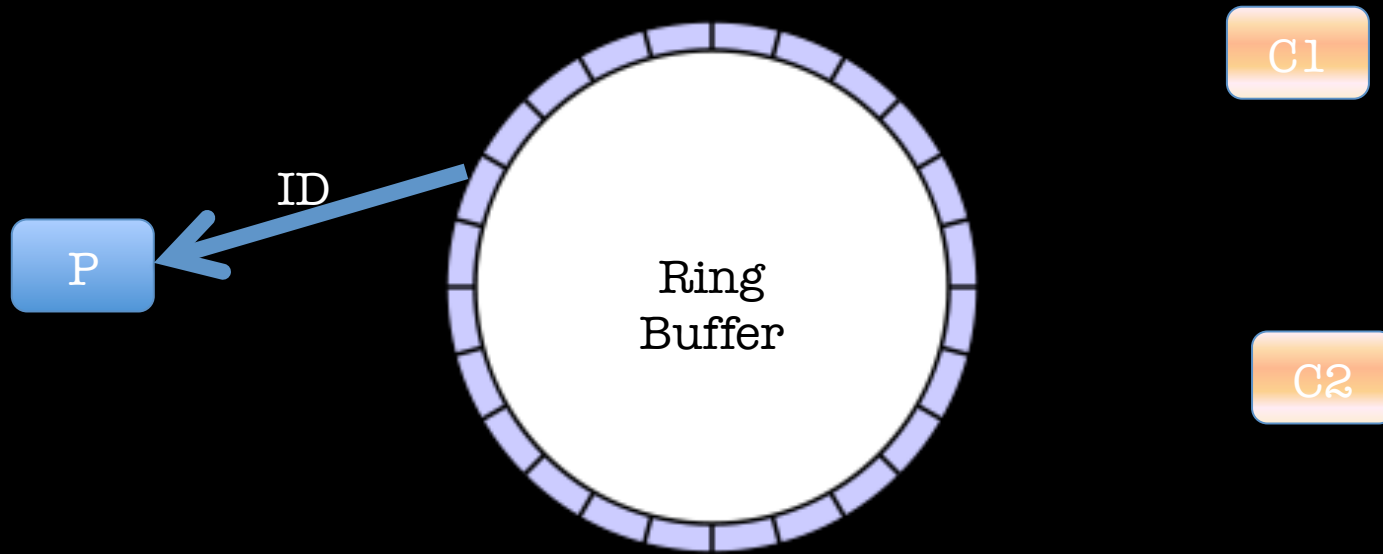
Disruptor

- LMAX : online FX Broker UK
- Context de performance extrême
- Mechanical Sympathy
- Plain Old Jdk
- Open source by LMAX

Disruptor

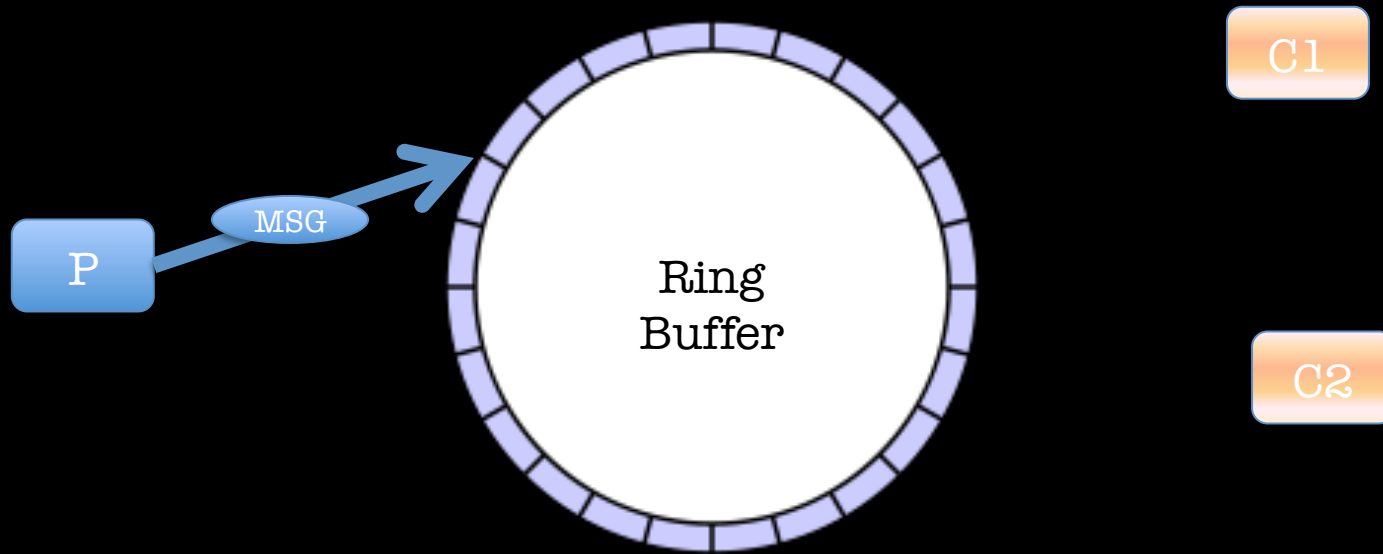


Disruptor



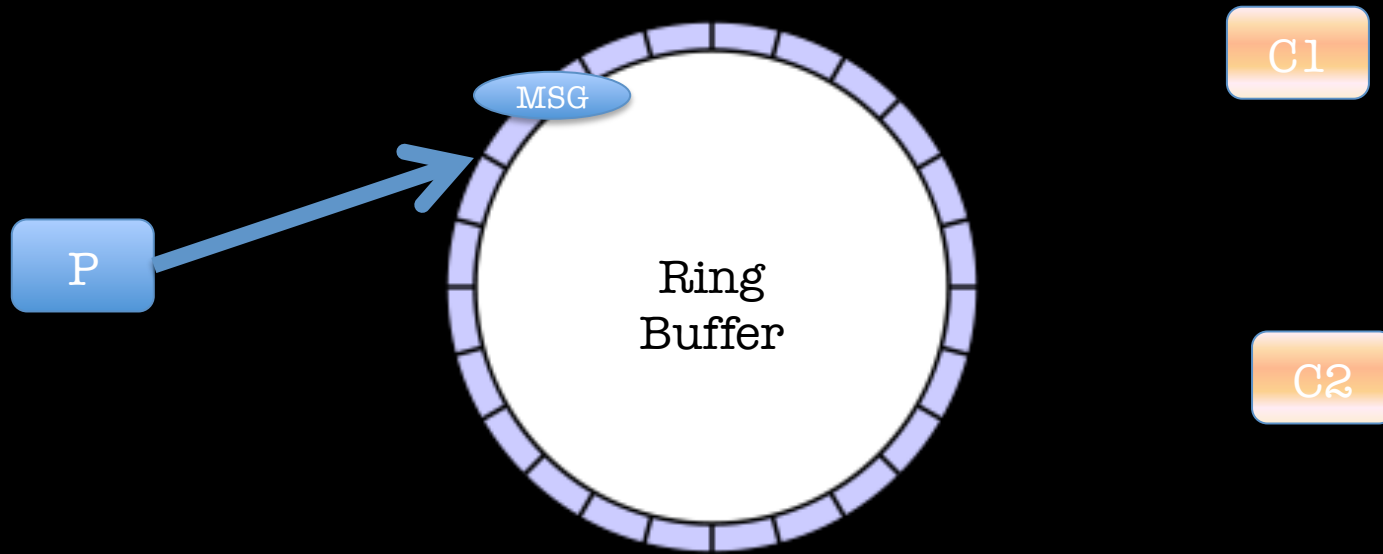
- **P : Get next slot**

Disruptor



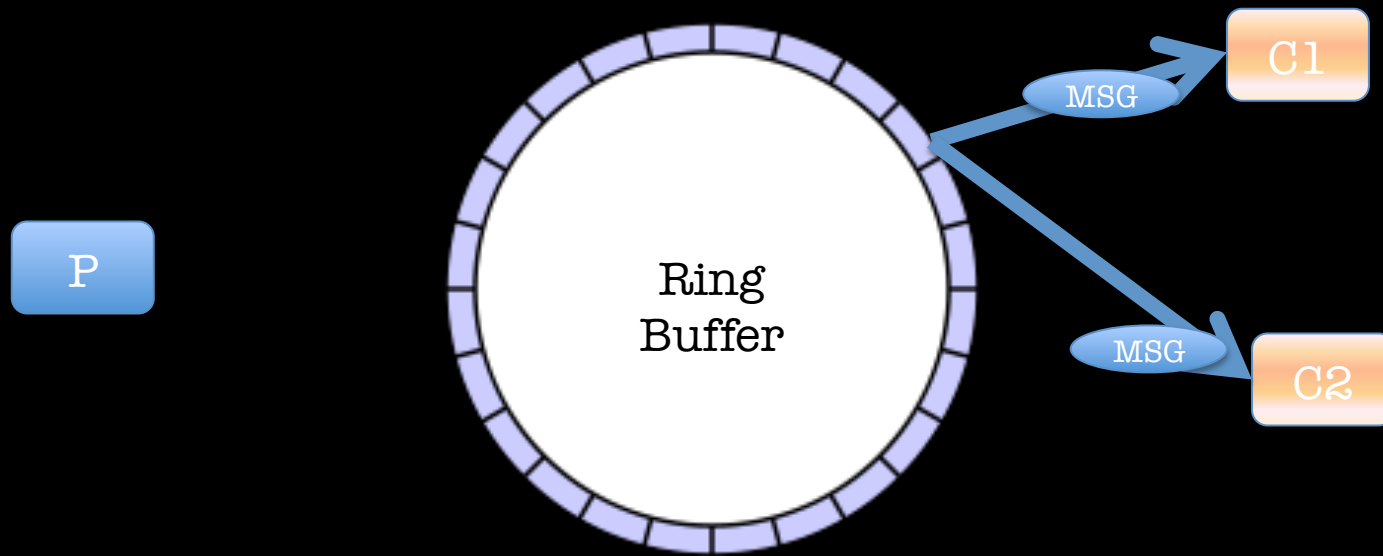
- ~~P : Get next slot~~
- P : Set Value on it

Disruptor



- ~~P : Get next slot~~
- ~~P : Set Value on it~~
- **P : Publish on RingBuffer**

Disruptor



- ~~P : Get next slot~~
- ~~P : Set Value on it~~
- ~~P : Publish on RingBuffer~~
- Cs : Get new message

Da code

```
String uuid = UUID.randomUUID().toString();  
// Two phase commit. Grab one of the 1024 slots.  
long seq = ringBuffer.next();  
ValueEvent valueEvent = ringBuffer.get(seq);  
valueEvent.setValue(uuid);  
ringBuffer.publish(seq);
```

Da code

Multiple Consumers with same message

```
ExecutorService threadPool = Executors.newFixedThreadPool(4);  
Disruptor<ValueEvent> disruptor = new Disruptor<ValueEvent>(ValueEvent.EVENT_FACTORY, RING_BUFFER_SIZE, threadPool);  
disruptor.handleEventsWith(INPUT1, INPUT2);  
  
RingBuffer<ValueEvent> ringBuffer = disruptor.start();  
  
generateEvent(ringBuffer);  
  
disruptor.shutdown();  
threadPool.shutdown();
```

Da code

Multiple Consumers with different messages

```
ExecutorService threadPool = Executors.newFixedThreadPool(4);
Disruptor<ValueEvent> disruptor = new Disruptor<ValueEvent>(ValueEvent.EVENT_FACTORY, RING_BUFFER_SIZE, threadPool);

@SuppressWarnings("unchecked")
WorkerPool<ValueEvent> workerPool = new WorkerPool<ValueEvent>(ValueEvent.EVENT_FACTORY,
    new IgnoreExceptionHandler(),
    workHandler,
    workHandler,
    workHandler,
    workHandler);

RingBuffer<ValueEvent> ringBuffer = workerPool.start(threadPool);

generateEvent(ringBuffer);
```

Da code

Diamond Pattern

```
ExecutorService threadPool = Executors.newFixedThreadPool(4);  
Disruptor<ValueEvent> disruptor = new Disruptor<ValueEvent>(ValueEvent.EVENT_FACTORY, RING_BUFFER_SIZE, threadPool);  
disruptor.handleEventsWith(INPUT1, INPUT2).then(OUTPUT);
```

```
RingBuffer<ValueEvent> ringBuffer = disruptor.start();
```

```
generateEvent(ringBuffer);
```


Tunning

BlockingWait
BusySpinWait
PhasedBackoffWait
SleepingWait
YieldingWait

SingleProducer
MultiProducerSequencer

Tunning

```
new Disruptor<ValueEvent>(ValueEvent.EVENT_FACTORY, RING_BUFFER_SIZE, threadPool);
```

```
new Disruptor<ValueEvent>(ValueEvent.EVENT_FACTORY, RING_BUFFER_SIZE, threadPool, ProducerType.MULTI, new SleepingWaitStrategy());
```

One more thing

- **LMAX : Eat Your Own Dog Food**
- **Used on Storm (@twitter)**



<https://github.com/helkhalfi/disruptor-examples>

@helkhalfi