Quant → α seeking strategy

① Traditional Architecture

Application	Server	Exchange
Trader's tool	Market Data	Exchange
Main Centre of operations – analyzing market data wrt to historical data in operational data store and generating orders	Operational Data Store	Data Warehouse / Storehouse of historical data
Order Manager		Data Vendor
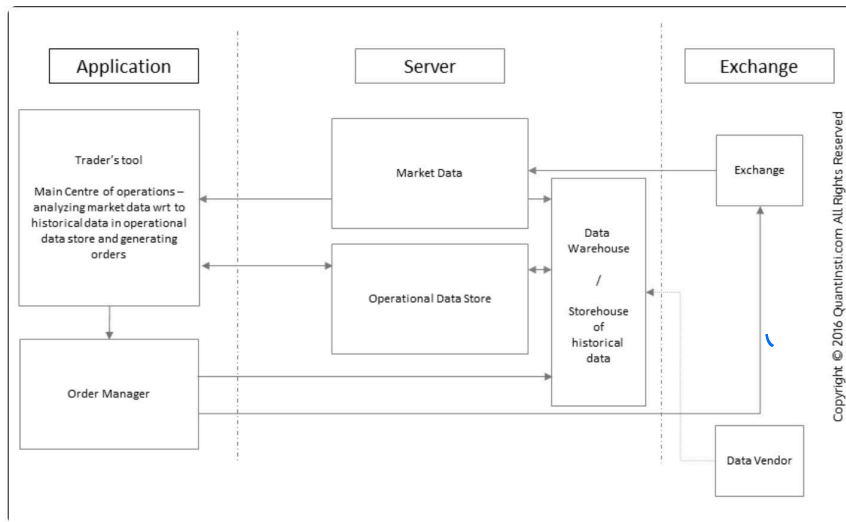
- couldn't scale up with DMA.
  ⇒ Latency Issue.
          - (ms)

② Complex Event Processing
 ① Market Adaptor send data in their own format.
 ② Complex Event Processing Engine.
       ↳ operations can include detecting complex pattern
         building correlation & relationship
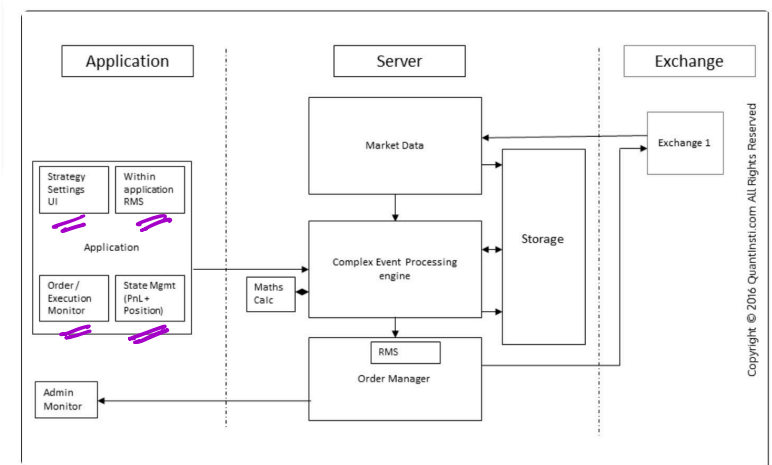
 CEP ⟶ engine
     ⟶ rule
     ⟶ WS
     ⟶ result interface

③ Order Routing System

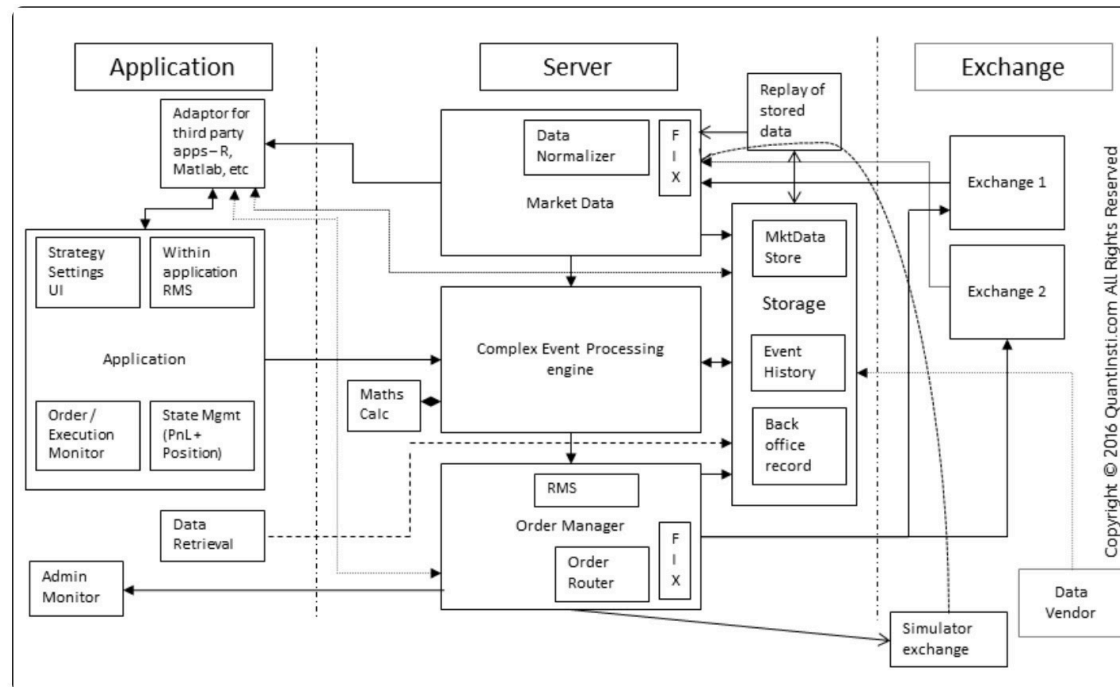   2 kind of API provided by exchange

        1. Native API
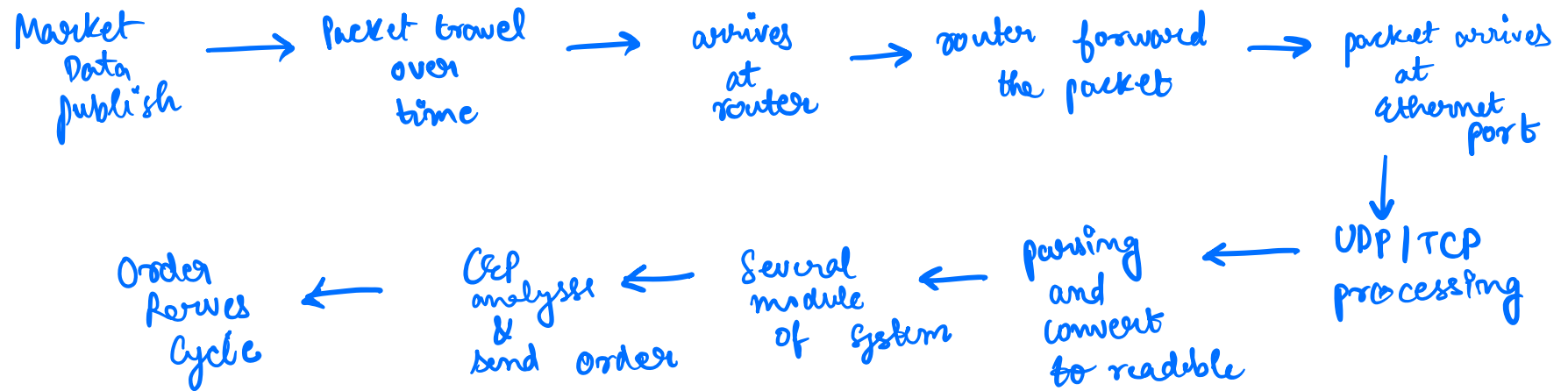   2. FIX API

    Order Management System

Risk Management in Automated Trading System

    → Within the application
    → Before generating an order in OMS.

Focus in Now Majorly on Low Latency Environment.

Market Data publish → Packet travel over time → arrives at router → router forward the packet → packet arrives at Ethernet port ↓

Order Parses Cycle ← CEP analysis & send order ← Several module of System ← parsing and convert to readble ← UDP|TCP processing

Propogation Latency

Network Processing Latency

Saivalization Latency

Interrupt Latency

Application Latency

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① Ideation | Strategy Hypothesis.

② Get the required Data

③ Strategy Writing

④ Backtesting

⑤ Paper trading

⑥ Strategy Live