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**Exchange**

Intermediaries’

**Traders**

Client-Server (Request-Response) Messaging. Exchange as a main server.  
Between Intermediaries and Exchange (Leaded Lines/High Speed Internet)

Provides trading platform to traders

Market Data Application (MDA Client)

|  |  |  |
| --- | --- | --- |
| 1 | Network Management | TCP, UDP, Unicast, Multicast etc. |
| Session Management | login, Logout Reconnect etc. |
| Protocol Management | FIX, ITCH, TIP, SoupBinTCP and many such |
| Data Formats | Text, Binary, Endian’ness, Compression etc. |
| Messaging | Administrative, Symbols, Status, Trade, News and other types |
| 2 | Decoding | Parse, Demux., Decode, Extract important Fields etc. |
| Recovery | Gap Analysis, Recovery mechanism etc. |
| 3 | Lookup & Enrich | With more Instrument / Reference Data / Symbols / ISIN |
| 4 | Order-book Management | Add, Modify, Delete Ops, Books MBO (Market by order), MBP |
| Market Logic | Based on Business Rules, incoming messages are filtered, enriched |
| Transformation | Resultant Info is transformed in universally consumable data |
| 5 | Publishing | Universally consumable data is published via APIs |

Process, Index for quick Lookup of Reference data

Read Reference data from Exchange

**Market Data (MD) Provider**

Customers, Researchers, Analysts, News Providers

API

MD DB

Produce Analysis, Statistical Reports, News, Forecasts

e.g. brokers, market makers, Investment banks or stock exchanges

Having Financial Products: Stocks, bonds, currencies, commodities, derivatives