

FIXEdge

Overview

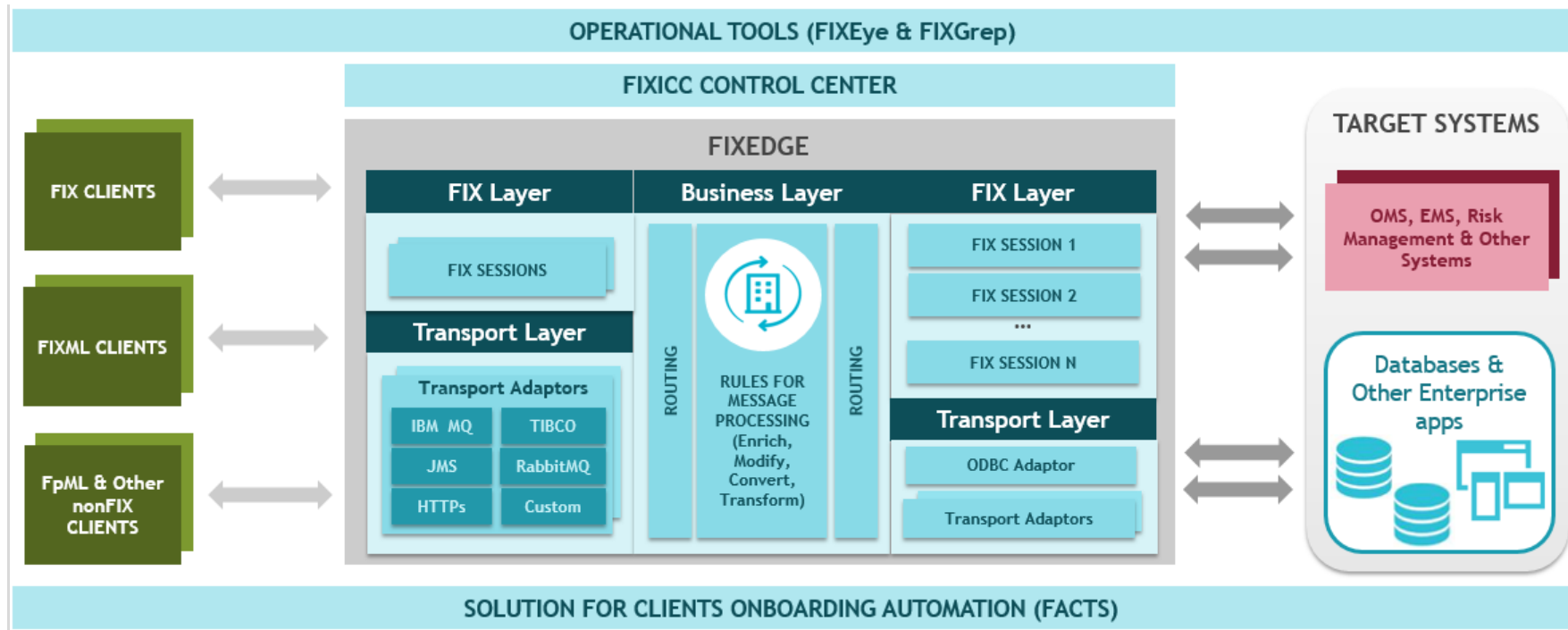


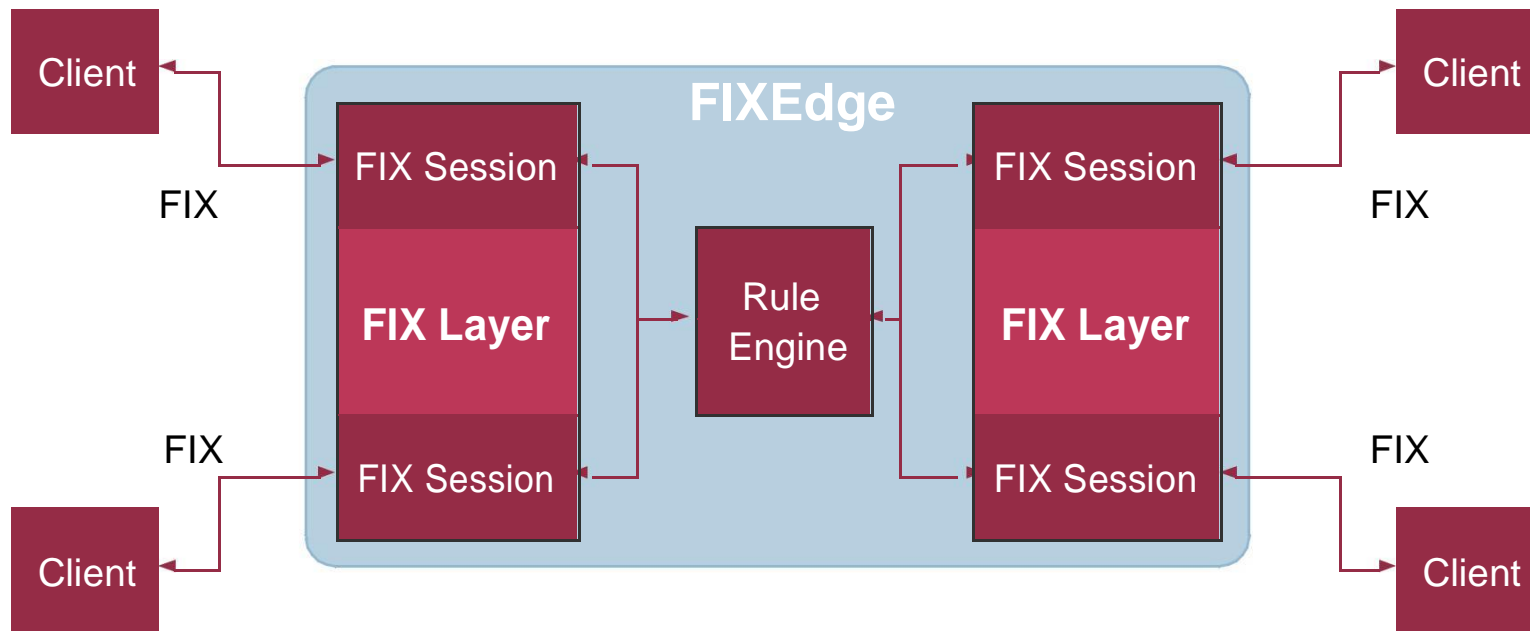
FIXEdge features

- 100% FIX standard compliance:
 - FIX 4.0 - 5.0SP2 and FIXT 1.1 including Extension Packs
 - FAST 1.1
- Guaranteed delivery
- Integration with non-FIX transports: IBM MQ, RabbitMQ, etc.
- CRON based scheduler for major session events (start, stop, backup, etc.)
- Work in High Availability cluster
- ODBC-based direct access to databases for data integrity, storage, management
- Built-in powerful rule engine to store, modify and route FIX messages
- JavaScript and XSLT scripting to smart routing customization and messages enrichment
- Open interface for plug-ins on transport and business level (C++ or Java SDK)
- Secure authentication: SSL/TLS/LDAP
- Protection from abnormal user behavior
- Multi-platform: Windows, Linux

FIXEdge is a FIX router

FIXEdge is mostly used as a generic smart router, common FIX connectivity service to delegate all FIX connectivity related tasks in the enterprise architecture.

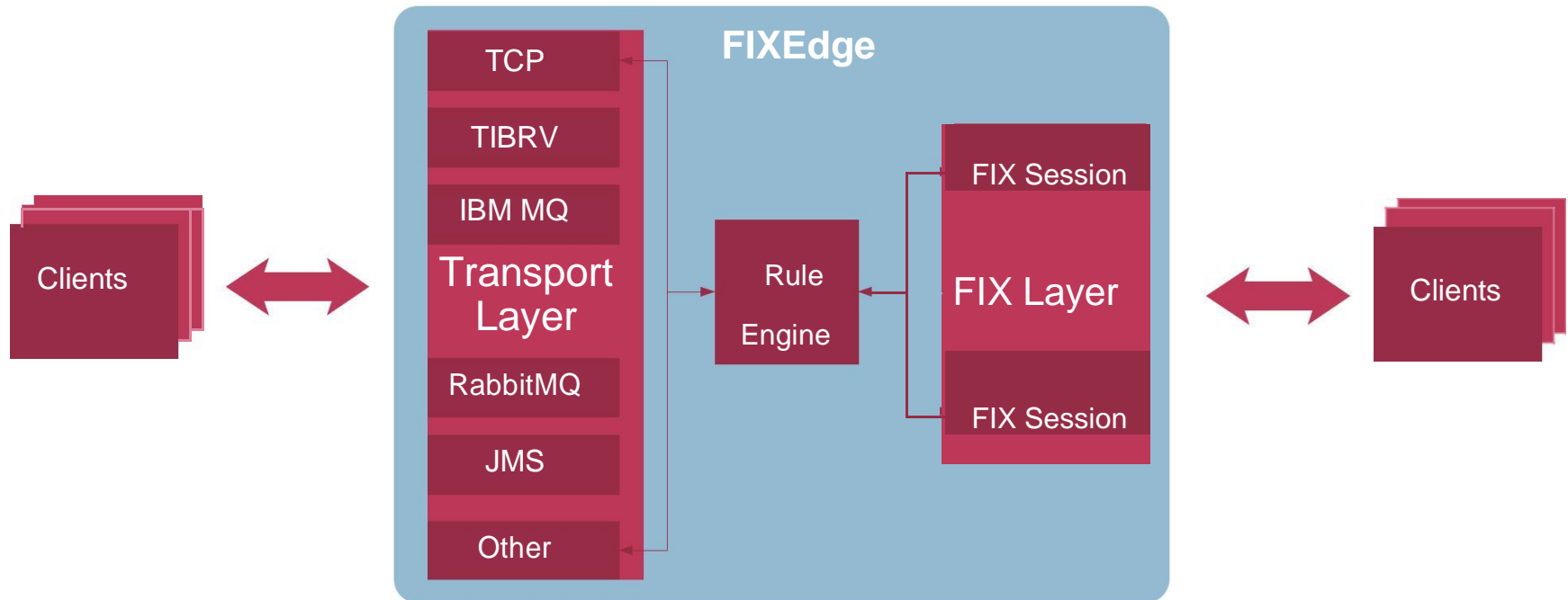




- One-to-one, Many-to-many routing
- Context based routing rules
- On the fly message conversion
- Multiple session management
- Conversion from/to FIX/FIXML

- FIX 4.0 - 5.0 SP2
- FIXT1.1
- FIX Dialects
- FAST 1.1
- FIXML 4.0 - 5.0 SP2

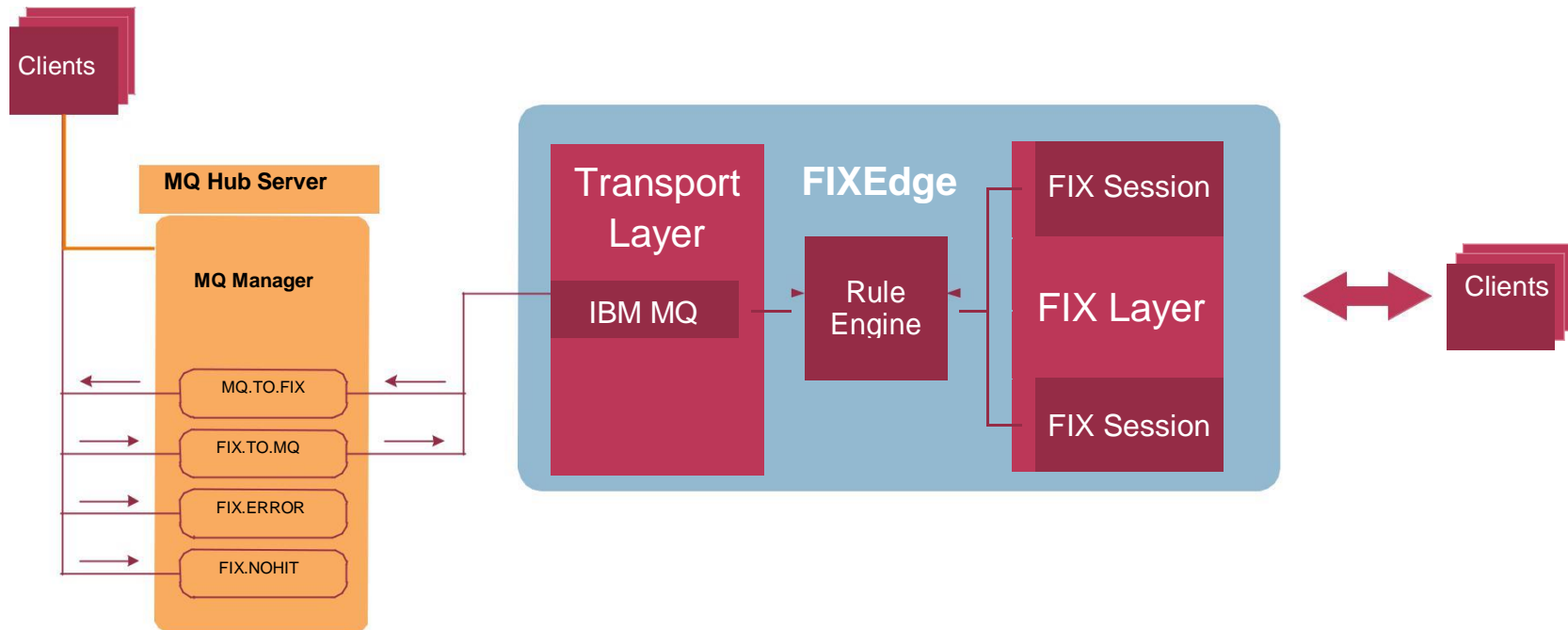
FIXEdge is a connector



- TCP Adaptor
- HTTPs Adaptor
- TIB RV Adaptor
- IBM MQ Series Adaptor

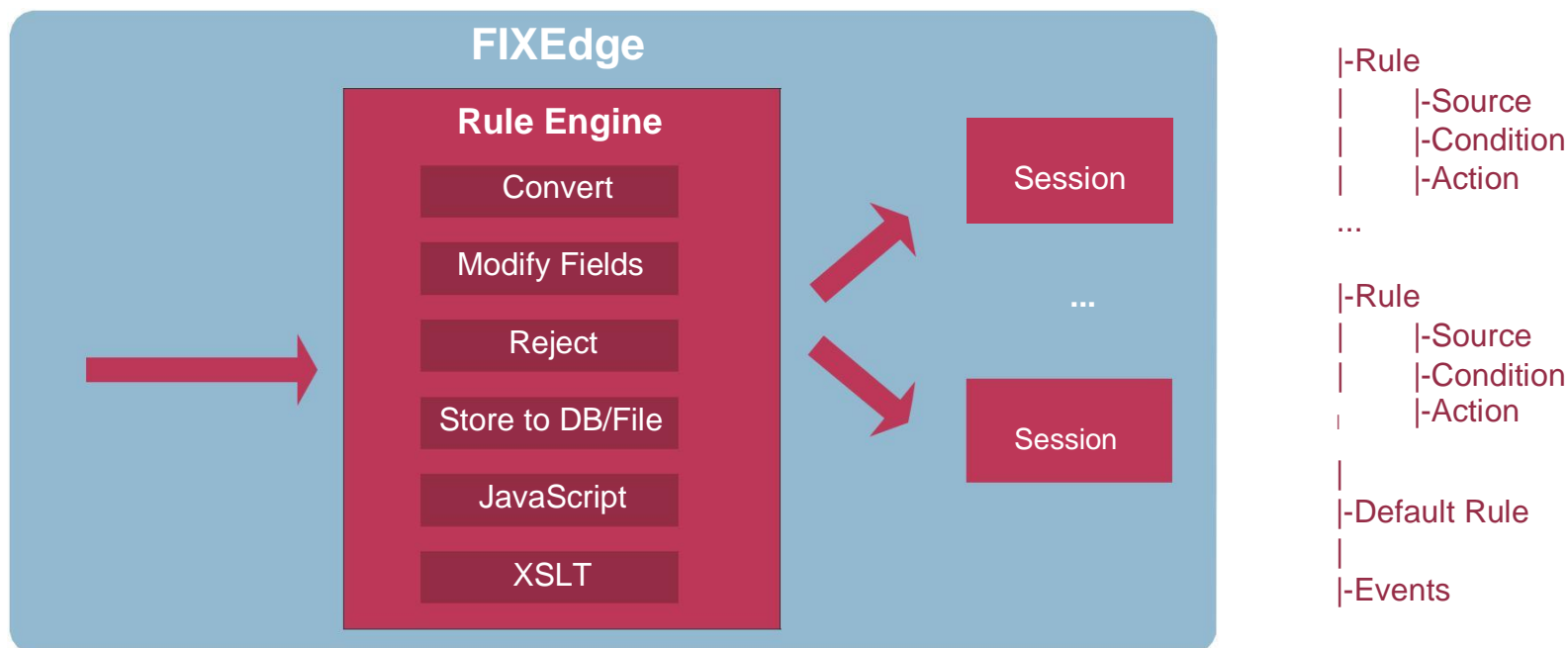
- RabbitMQ Adaptor
- JMS Adaptor
- Java (Universal) Adaptor

FIXEdge and IBM MQ



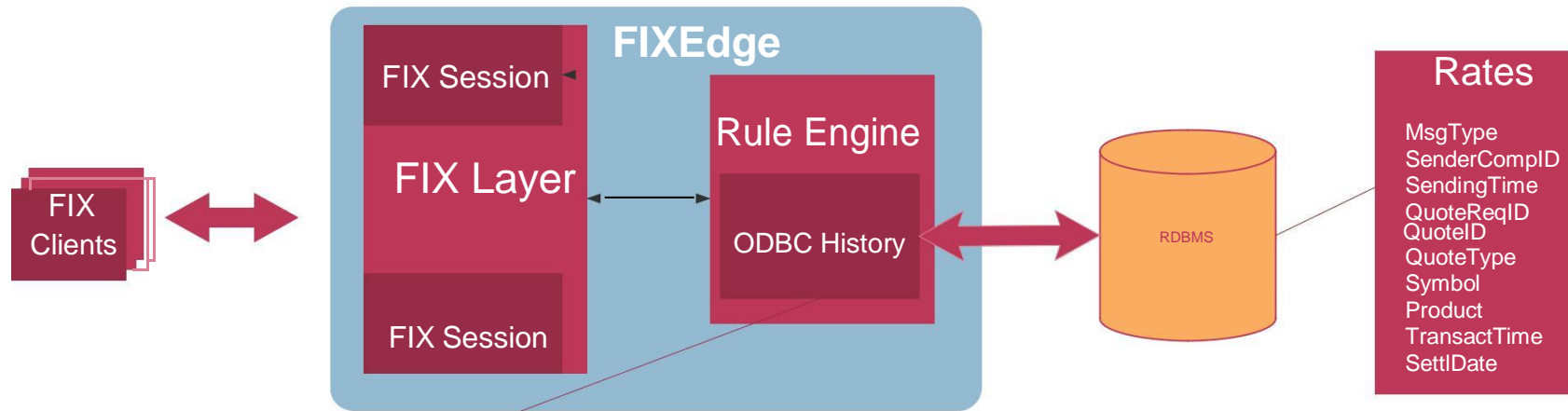
- `TransportLayer.MQAdaptor.SessionNumber = 1`
- `TransportLayer.MQAdaptor.Session.1.ClientID = MQHub`
- `TransportLayer.MQAdaptor.Session.1.FromClientQueue = FIX.TO.MQ`
- `TransportLayer.MQAdaptor.Session.1.ToClientQueue = MQ.TO.FIX`
- `TransportLayer.MQAdaptor.Session.1.ErrorQueue = FIX.ERROR`

FIXEdge rule engine



- XML Rules
- Scripting languages
- Regular expressions
- Create custom rules for smart order routing
- Modify message (set/remove field)
- Convert message (FIX-to-FIX & FIX-to-FIXML)
- Send to multiple sessions
- Change rules on the fly

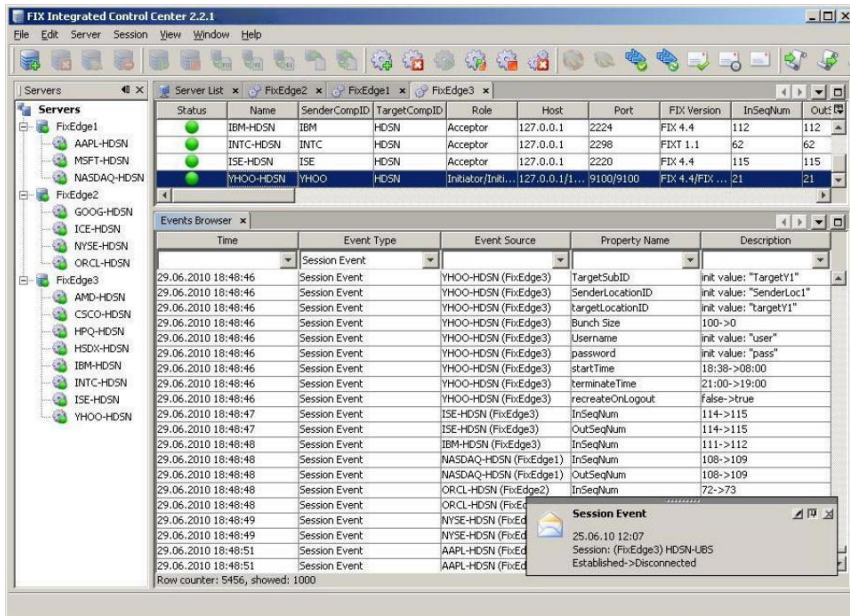
Example: ODBC History



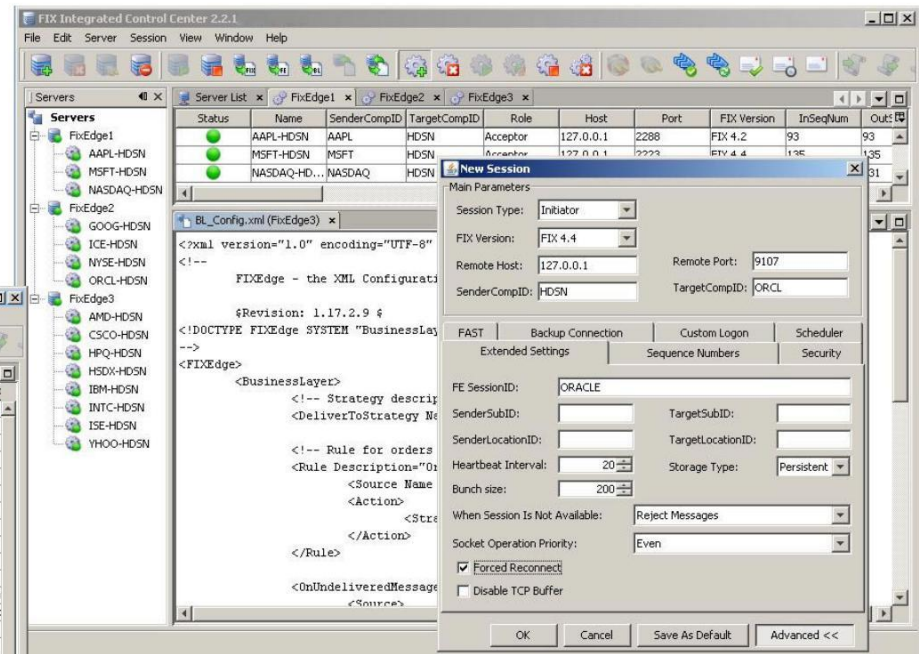
```
<History Name="Quotes"
  StorageType="ODBC"
  ColumnSize="256"
  TableName="Rates"
  ConnectionString="DSN=Cmp;UID=cmp;PWD=cmp321;"
  <Field ColumnName="MsgType" ColumnSize="4">35</Field>
  <Field ColumnName="SenderCompID" ColumnSize="40">49</Field>
  <Field ColumnName="SendingTime" DataType="Datetime"
  ColumnSize="20">52</Field>
  <Field ColumnName="QuoteReqID" ColumnSize="40">131</Field>
  <Field ColumnName="QuoteID" ColumnSize="64">117</Field>
  <Field ColumnName="QuoteType" DataType="Int" ColumnSize="10">537</Field>
  <Field ColumnName="Symbol" ColumnSize="12">55</Field>
  <Field ColumnName="Product" DataType="Int" ColumnSize="10">460</Field> <Field
  ColumnName="TransactTime" DataType="Datetime" ColumnSize="20">60</
  Field>
  <Field ColumnName="SettlDate" DataType="Date"
  ColumnSize="10">64</Field> </History>
```

```
BL Config.xml
<Rule Description="Save Quote to DB">
  <Source>
    <FixSession SenderCompID="FIXEdge" TargetCompID="Client1"/>
  </Source>
  <Condition>
    <EqualField Field="35" Value="S"/>
  </Condition>
  <Action>
    <SaveToHistory
      Name="Quotes"/> </Action>
</Rule>
```

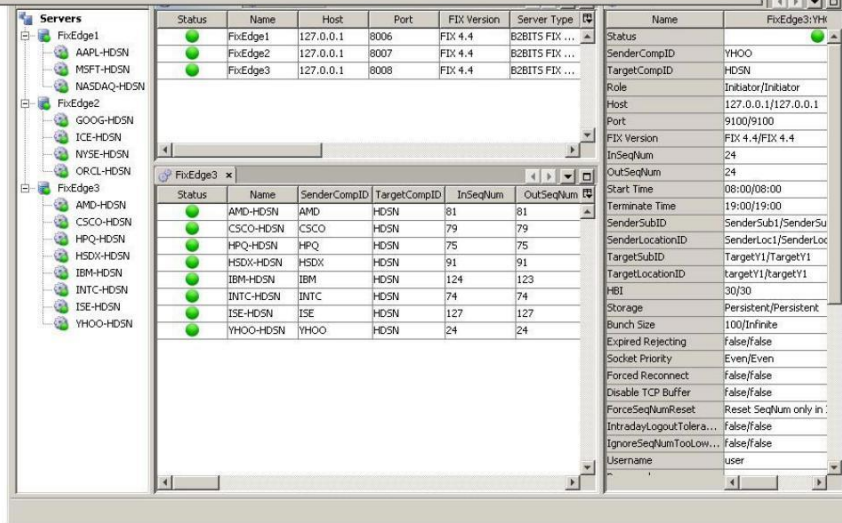

FIXEdge Control Center



FIX Integrated Control Center (FIXICC) allows to monitor status, maintain configurations, and review FIX logs of multiple FIX Edge instances.

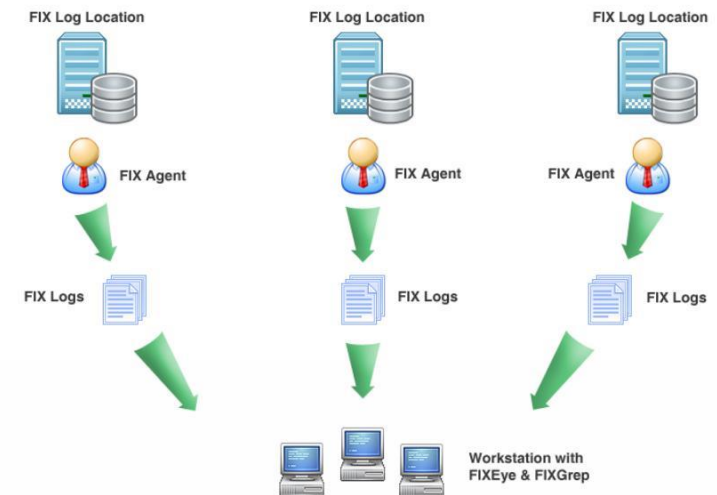
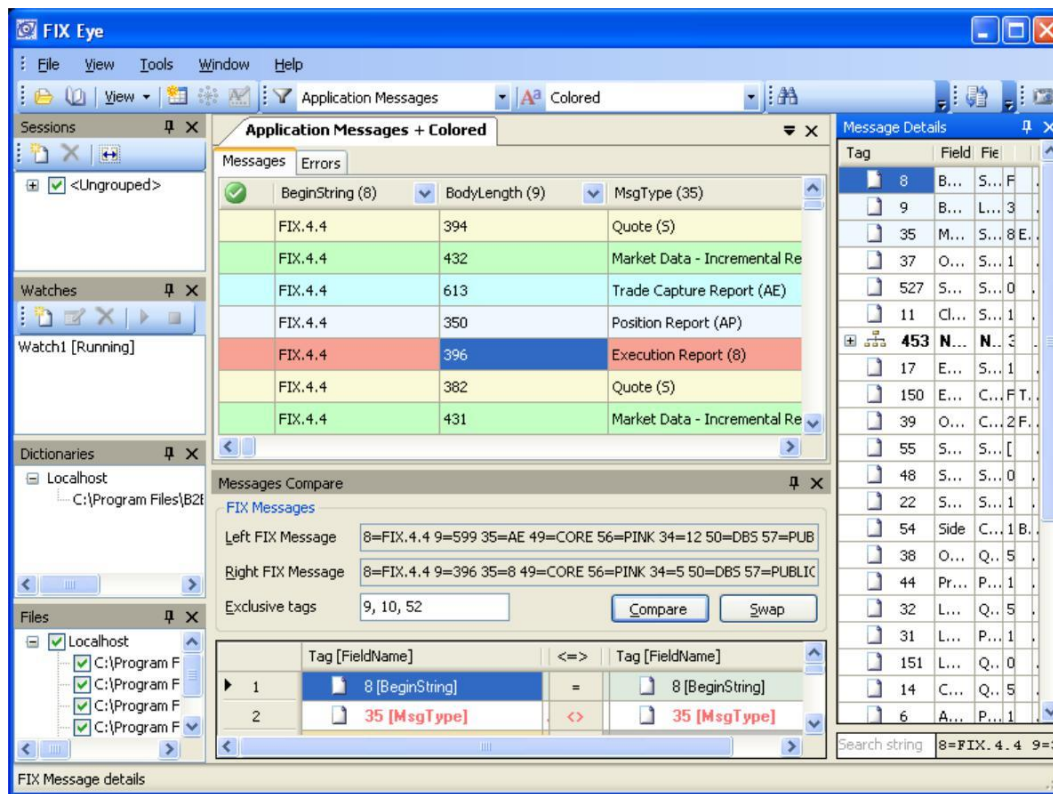


FIXICC sends commands and receives information via a special FIX session, has an open architecture, is extendible and customizable.



FIX Log Analyzer

FIX Eye is a powerful log analyzer allowing to monitor FIX Edge logs in both real-time (from machine where FIXEdge is deployed or from remote one) and non-real-time.



FIXEdge customization

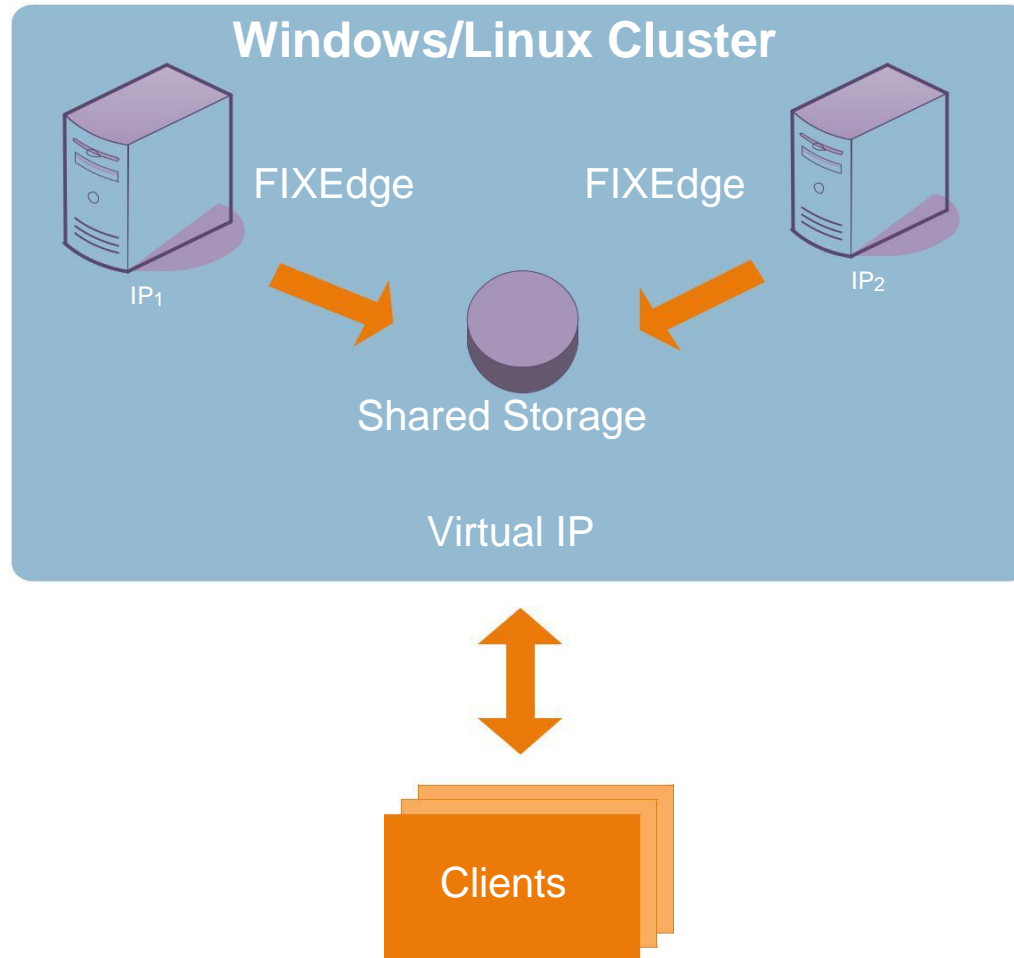
Custom Business Layer Handler

- Write your own library
- Implement Handler interface
- Override: process method
- Work with FIX message using B2BITS API
- Use MessageSender to queue message for sending
- Describe you handler in Rule Engine configuration
- Call you handler from Action section

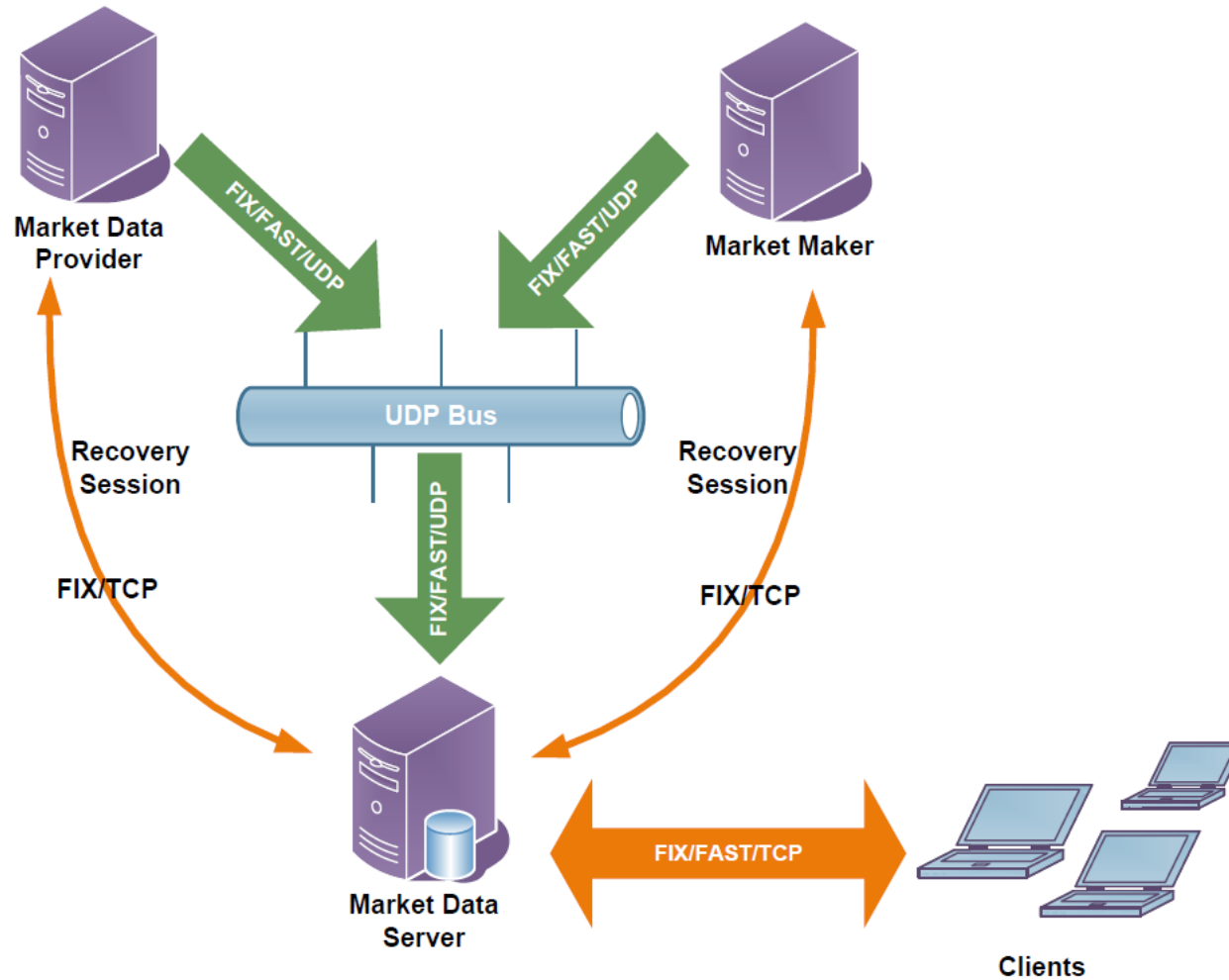
Custom Transport Adaptor

- Write your own library
- Implement TransportAdaptor interface
- Override: sendToClient method
- Use observer to upload incoming messages to FIXEdge
- Implement Administrable and Monitorable to add adaptor to Control Center
- Configure Adaptor in FIXEdge.properties

FIXEdge cluster

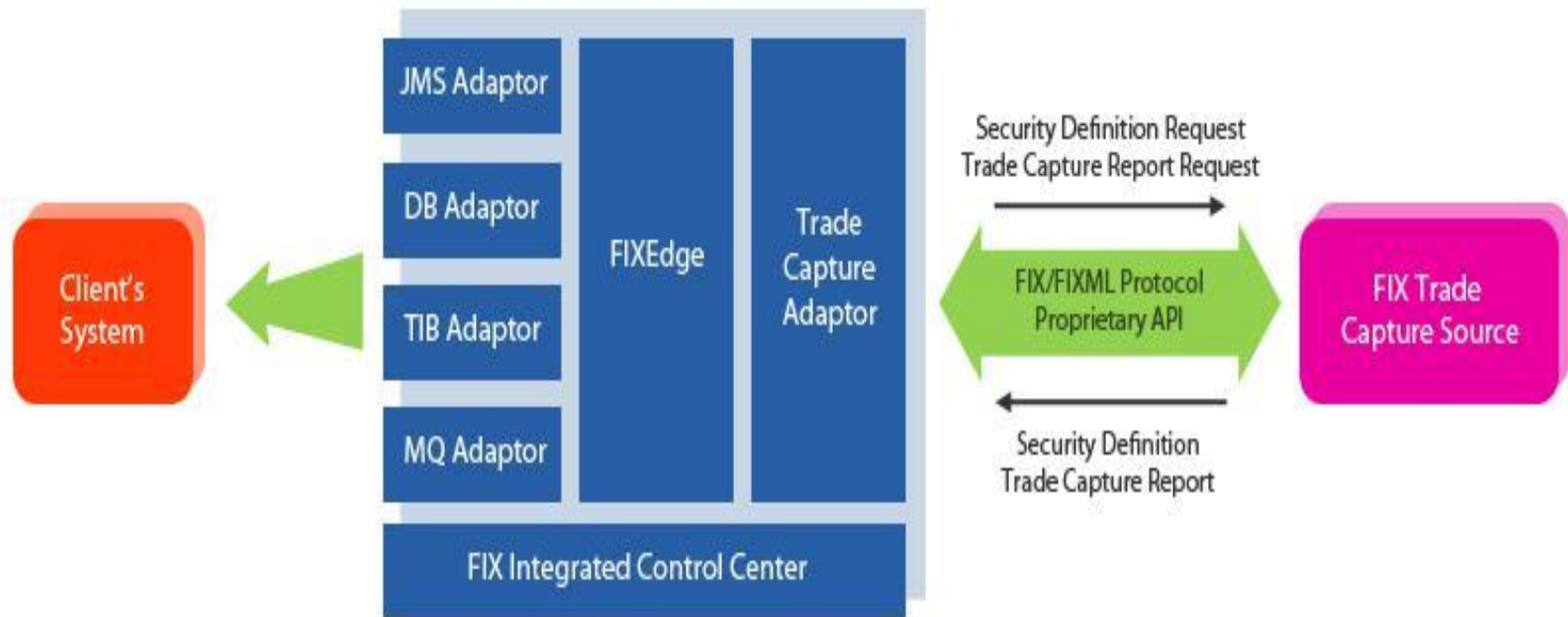


FIXEdge for market data



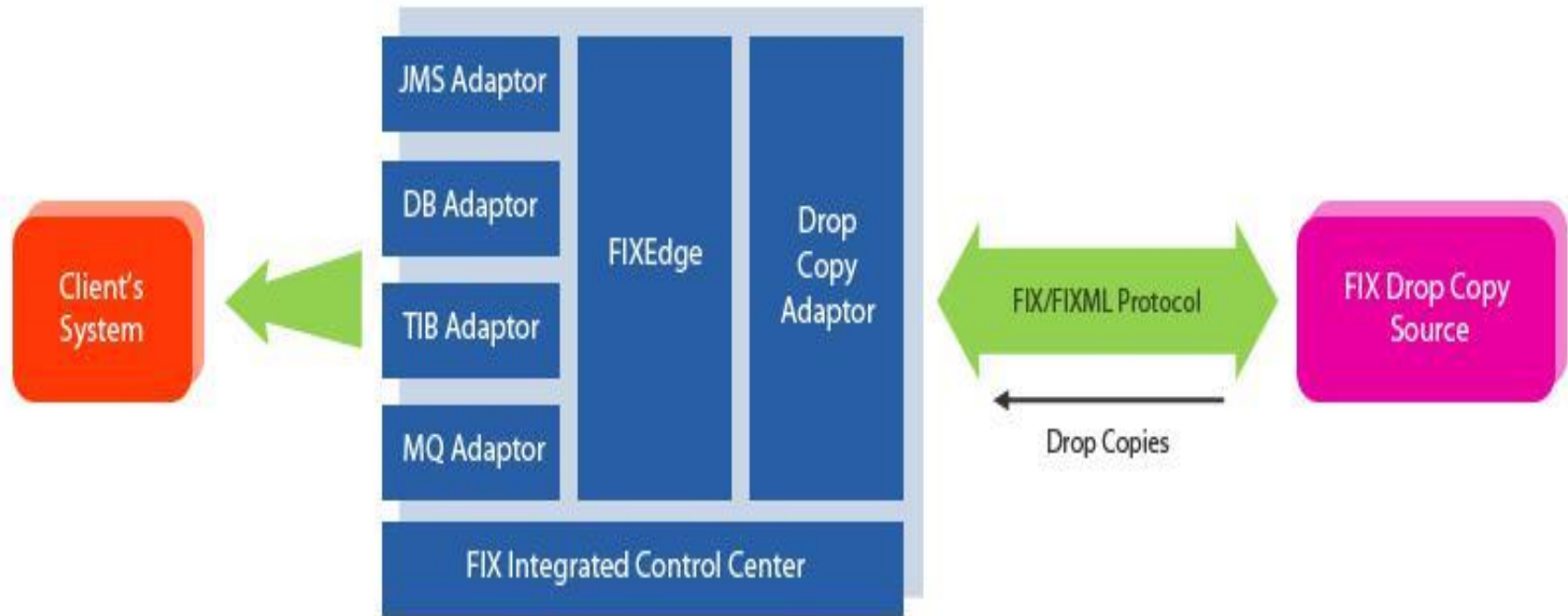
FIXEdge for Trade Capture

The process of capturing trades and/or security definitions is fully automated, while all the specifics of the connectivity are completely encapsulated and hidden from the client. In addition, FIXTCap package includes recovery tools, which allow requesting missing trades in case of failures.



FIXEdge for Drop Copies

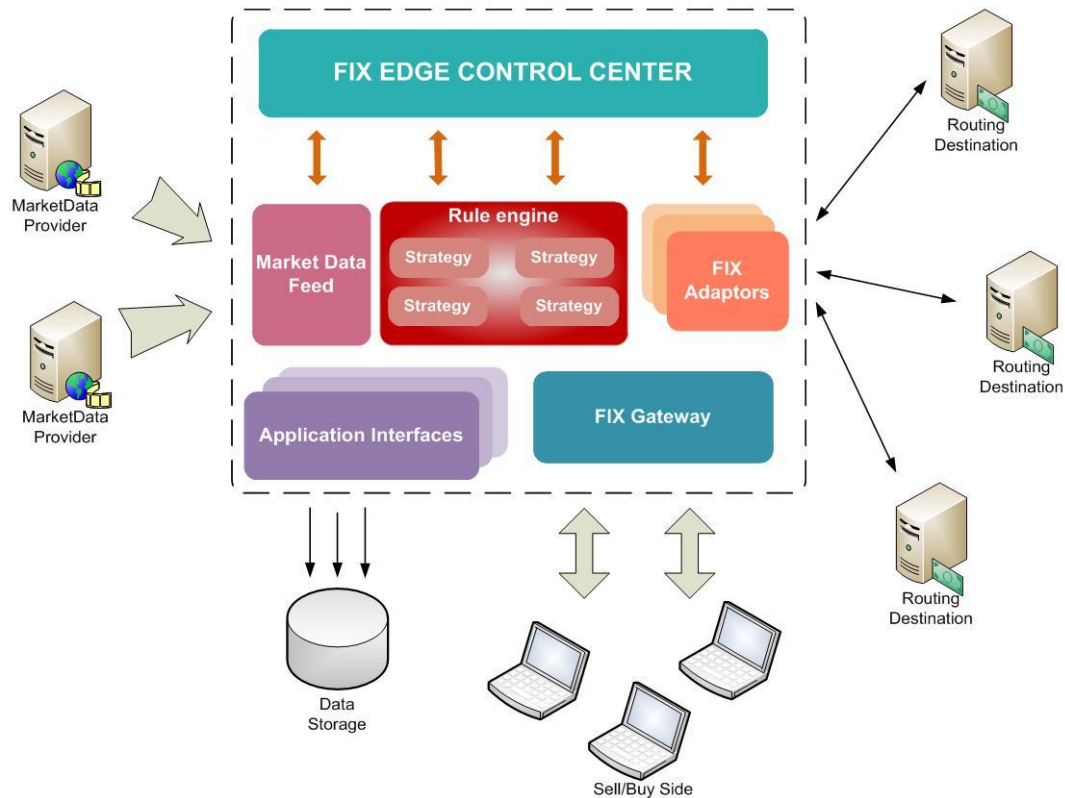
FIX Drop Copy Solution allows retrieving drop copies of trades from FIX-compliant drop copy sources, includes recovery tools, which allow requesting missing data in case of failures. The process of capturing drop copies by server is fully automated, while library FIXDCap can be easily integrated with client's trading platform.



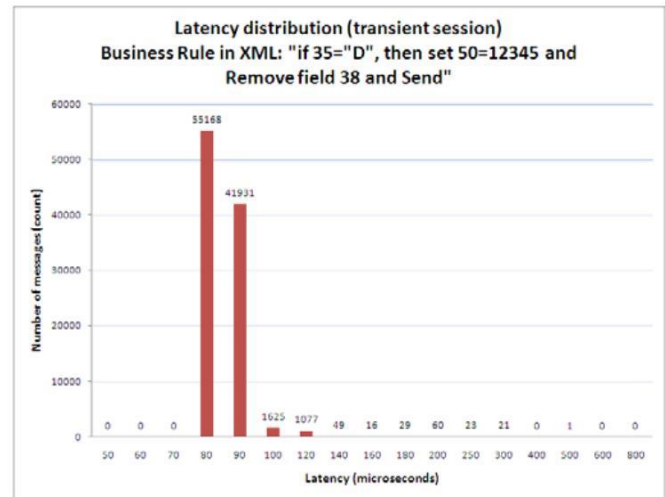
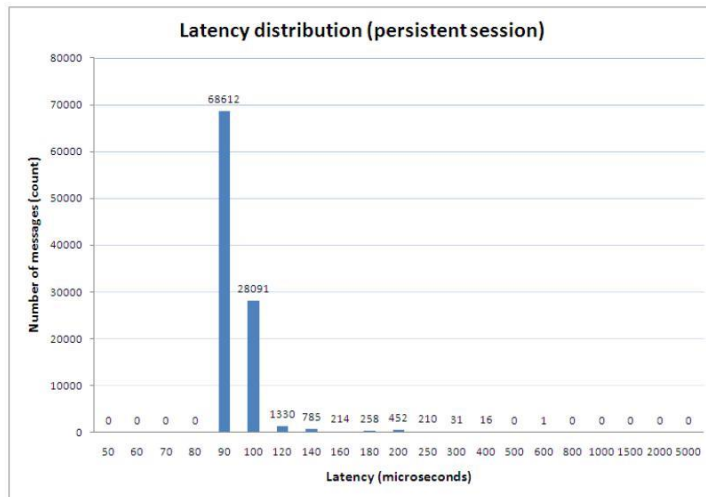
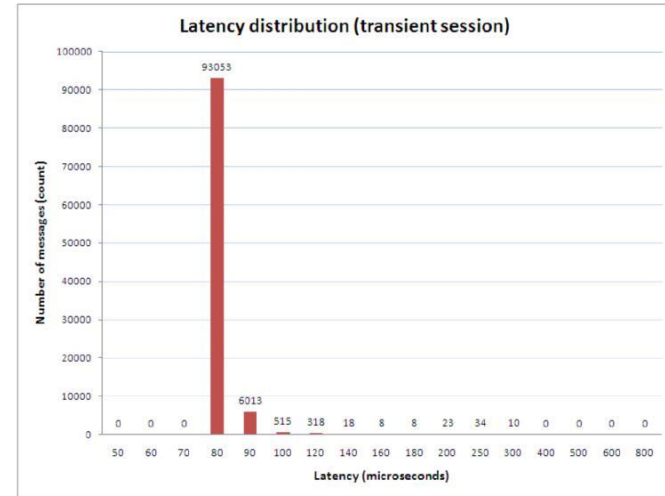
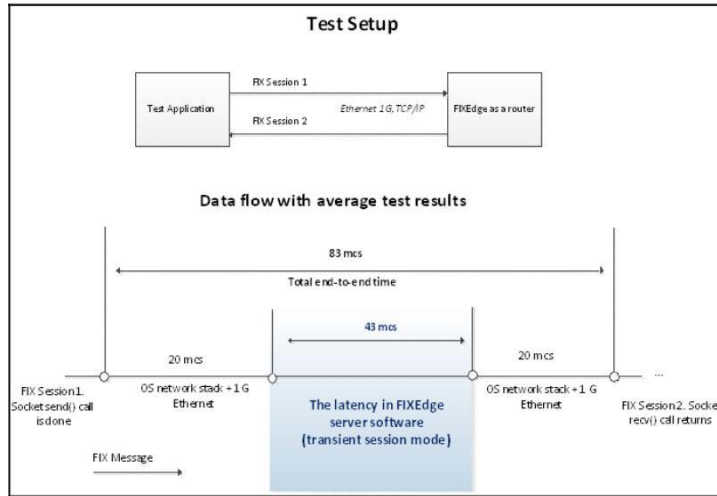
FIXEdge for Smart Order Routing

FIXEdge-based Smart Order Router allows receiving and routing orders according to predefined rules and market conditions, fees tables, securities based preferences, accounts based preferences and ranking of preferred venues.

It allows connecting to as many destinations as required for one or more asset classes.



FIXEdge benchmarks



FIXEdge Overview

Further information on the product is available at:

www.b2bits.com

<https://kb.b2bits.com>

Contact manufacturer: sales@btobits.com