

FIX Edge

Overview

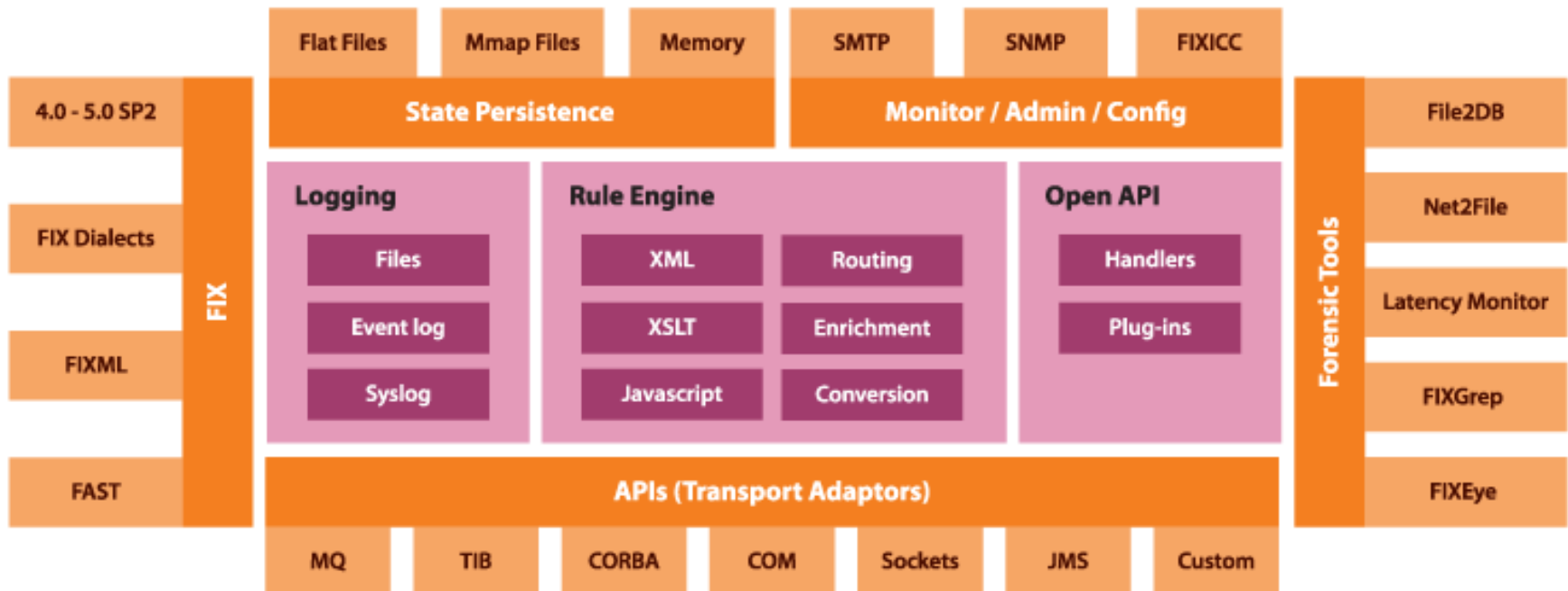


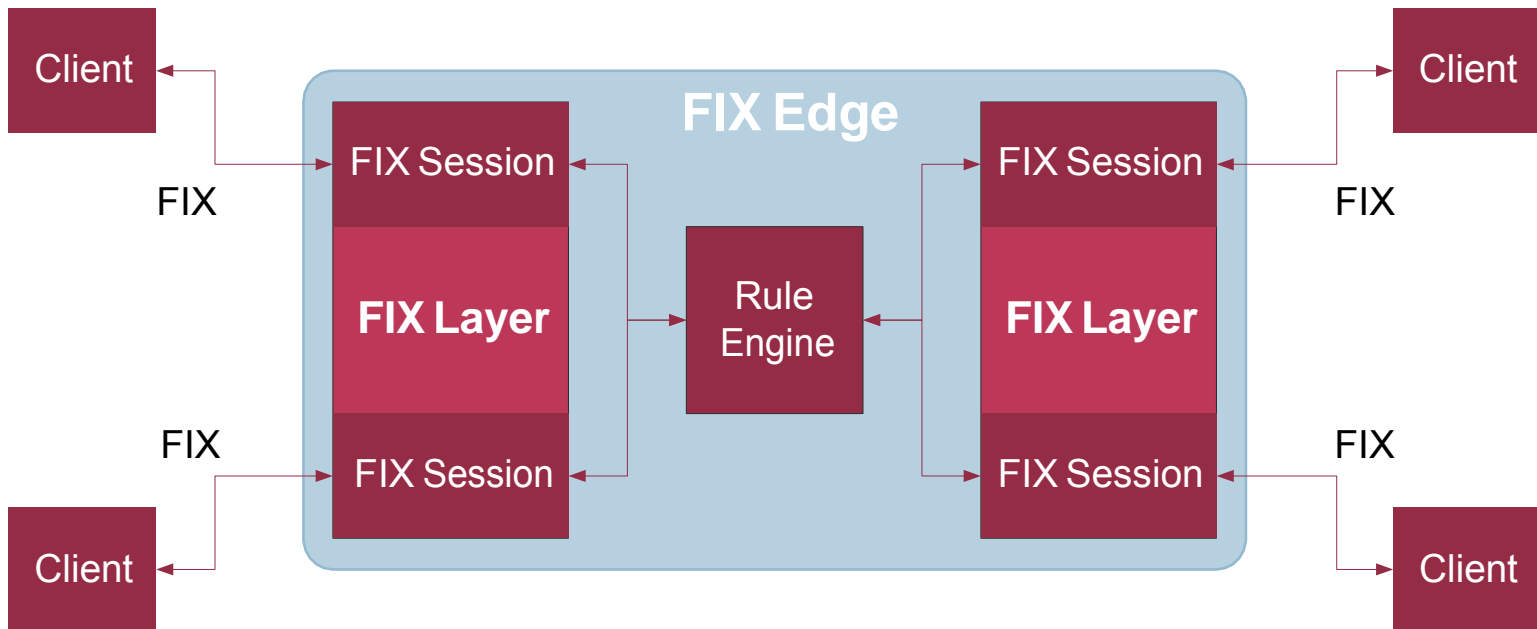
FIX Edge features

- Multiple FIX sessions
- FIX 4.0 - 4.4, 5.0, 5.0 SP1, 5.0 SP2
FIXT1.1
- FIX Dialects
- FIXML 4.0 - 5.0 SP2
- FAST
- Non-FIX API: ITCH, OUTCH
- *Route* FIX messages between FIX sessions
- Various remote access methods (sockets, MQs, TIB, COM/DCOM, etc.)
- Back-up connections
- *Persistent and transient* sessions
- XML-based business level rules for routing and transformation
- *Convert* messages between FIX protocol versions
- Support Javascript and XSLT in business level rules
- *Open interface* for plug-ins on transport level
- *Open interface* for plug-ins on business level
- High availability
- Multi-platform: Windows, Linux; 32-bit, 64-bit

FIX Edge is a FIX router

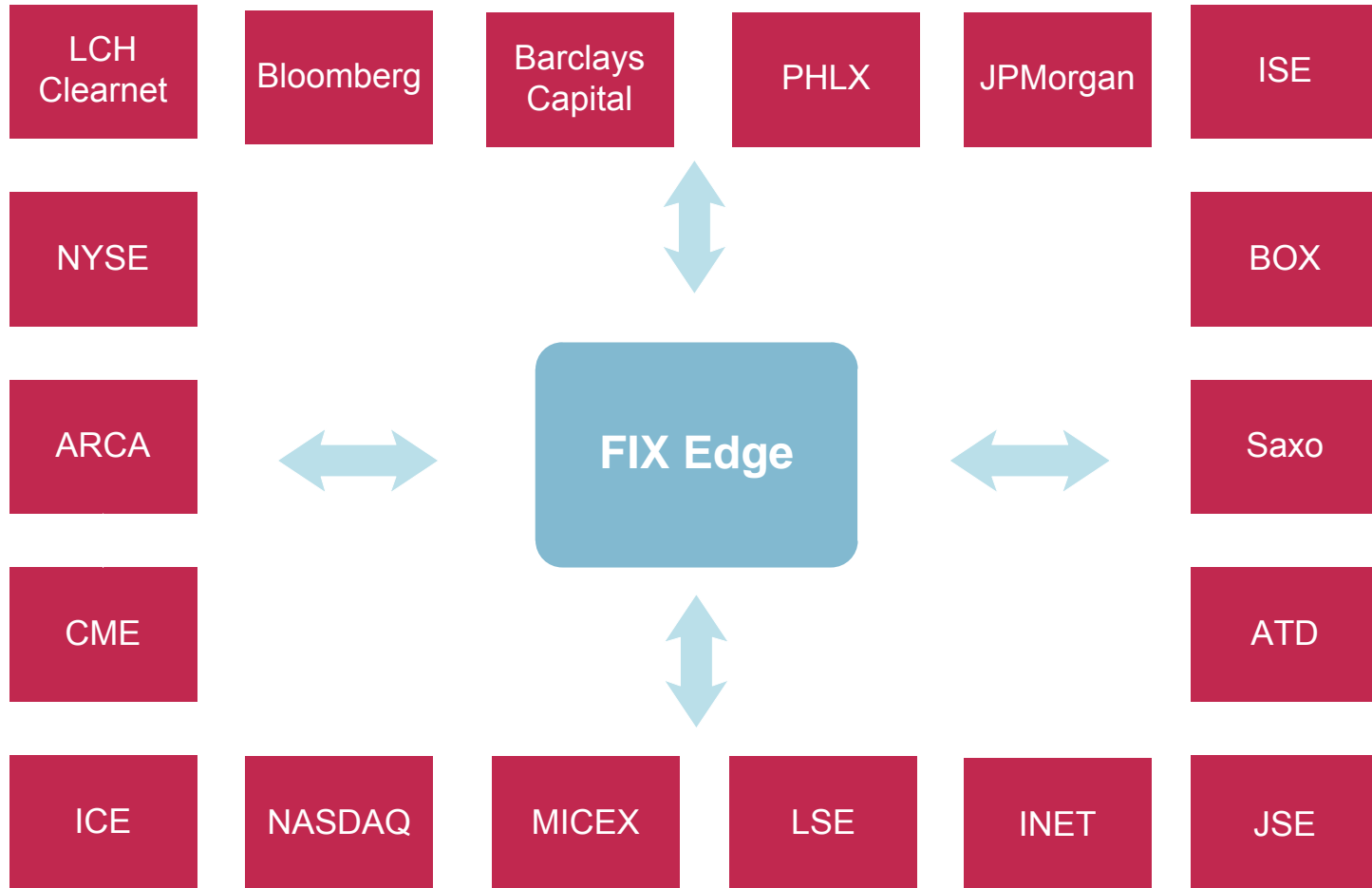
FIX server FIXEdge is mostly used as a generic smart router, common FIX connectivity service to delegate all FIX connectivity related tasks in the enterprise architecture.



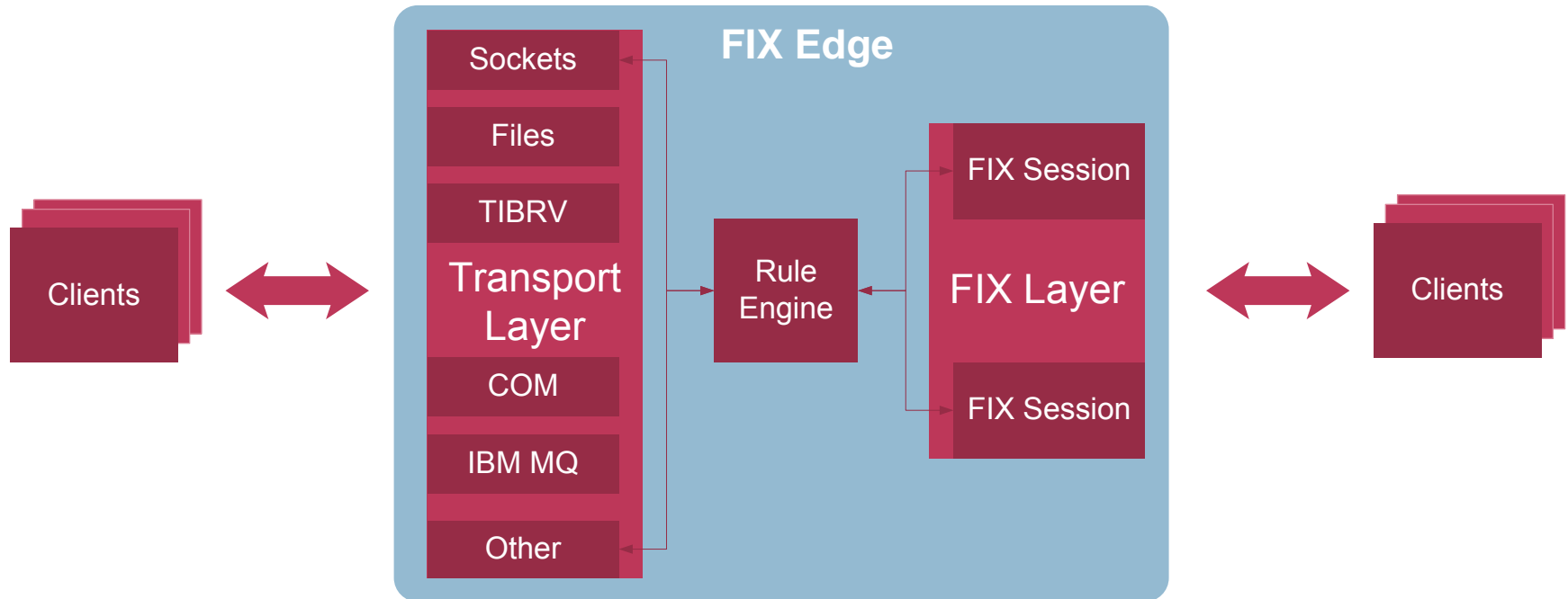


- Many-to-many routing
- Context based routing rules
- On-fly conversion
- Multiple FIX sessions
- Conversion from/to FIX; to/from FIXML
- FIX 4.0 - 4.4, 5.0, 5.0 SP1, 5.0 SP2
- FIXT1.1
- FIX Dialects
- FAST
- FIXML 4.0 - 5.0 SP2

FIX Edge is not just a FIX



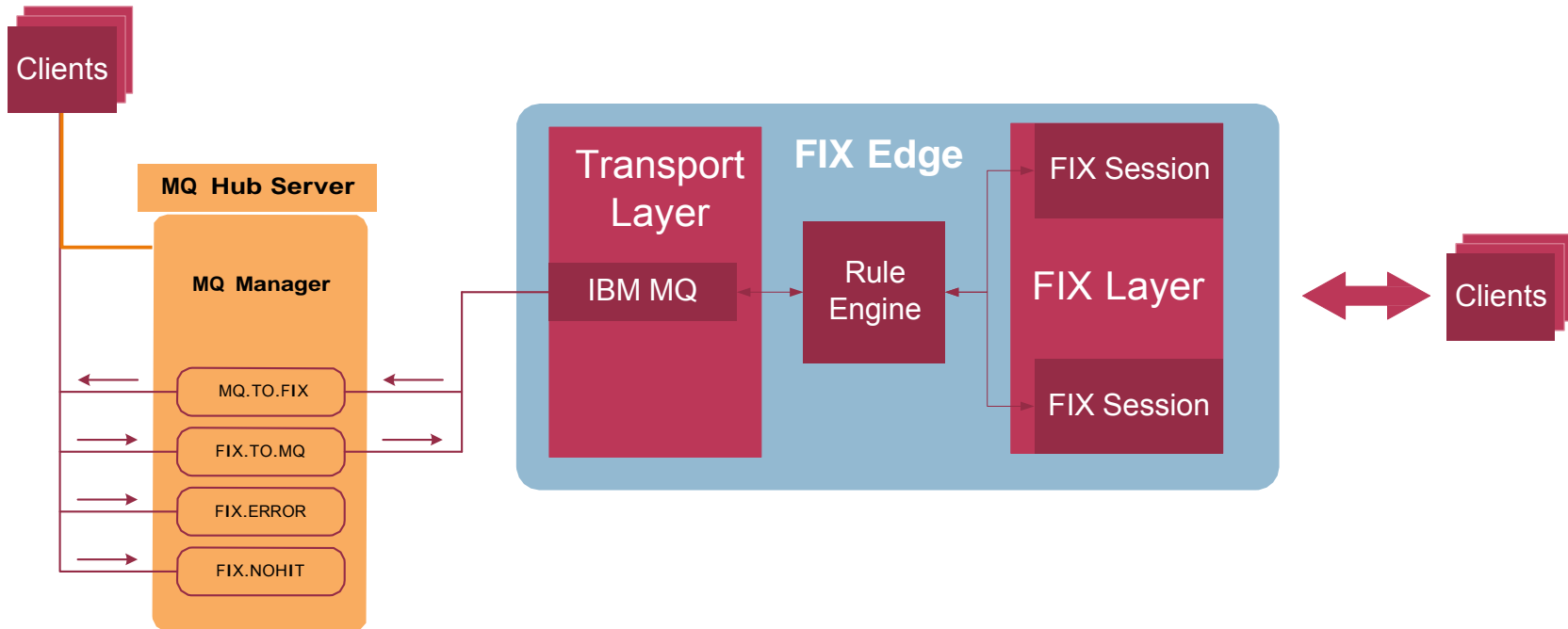
FIX Edge is a connector



- TCP Adaptor
- UDP Adaptor
- File Adaptor
- TIB RV Adaptor
- JMS Adaptor

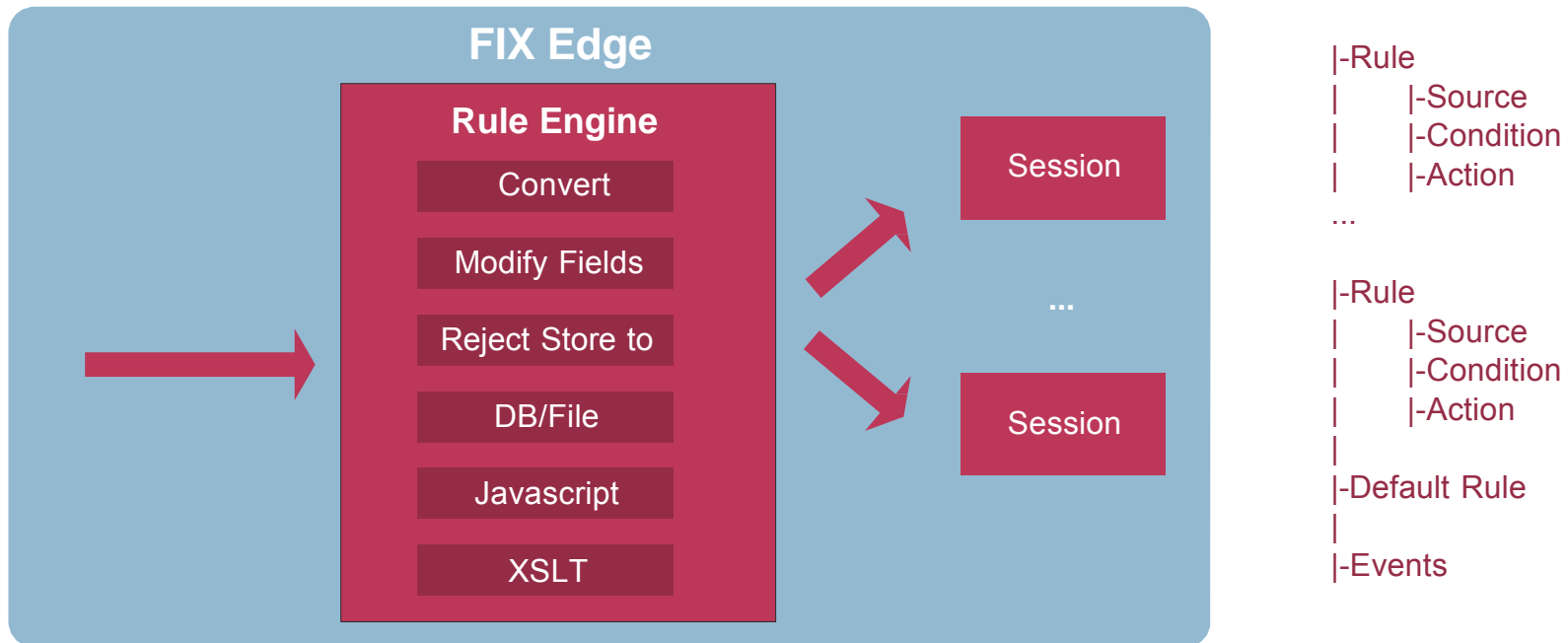
- CORBA Adaptor
- COM/DCOM Adaptor
- Named Pipe Adaptor
- IBM MQ Series Adaptor
- HTTPs Adaptor

Example: FIX Edge and MQ



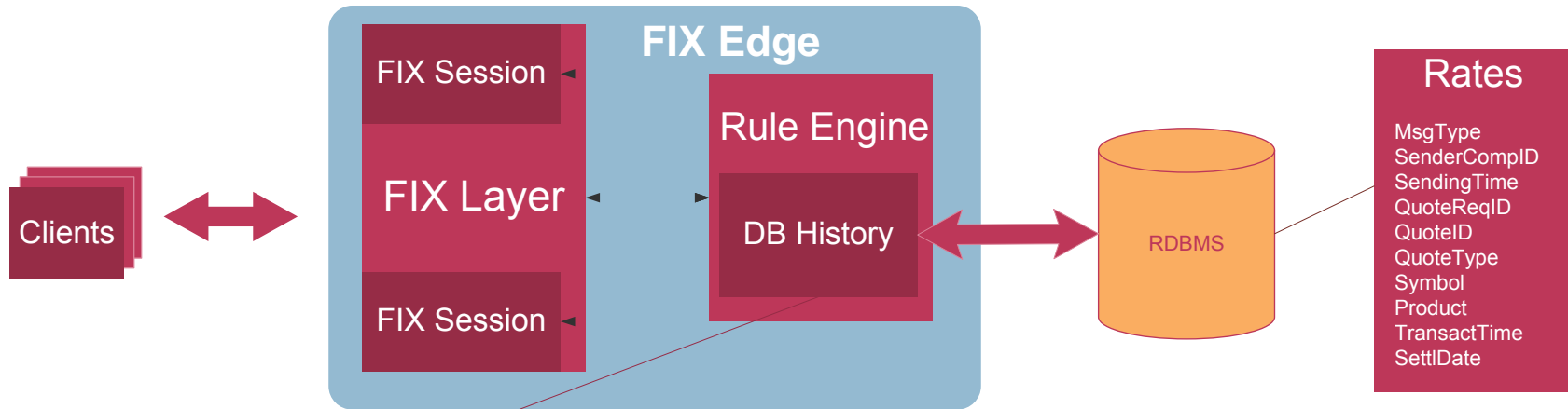
- `TransportLayer.MQAdaptor.SessionNumber = 1`
- `TransportLayer.MQAdaptor.Session.1.ClientID = MQHub`
- `TransportLayer.MQAdaptor.Session.1.FromClientQueue = FIX.TO.MQ`
- `TransportLayer.MQAdaptor.Session.1.ToClientQueue = MQ.TO.FIX`
- `TransportLayer.MQAdaptor.Session.1.NoHitQueue = FIX.NOHIT`
- `TransportLayer.MQAdaptor.Session.1.ErrorQueue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

FIX Edge rule engine



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

Example: DB History



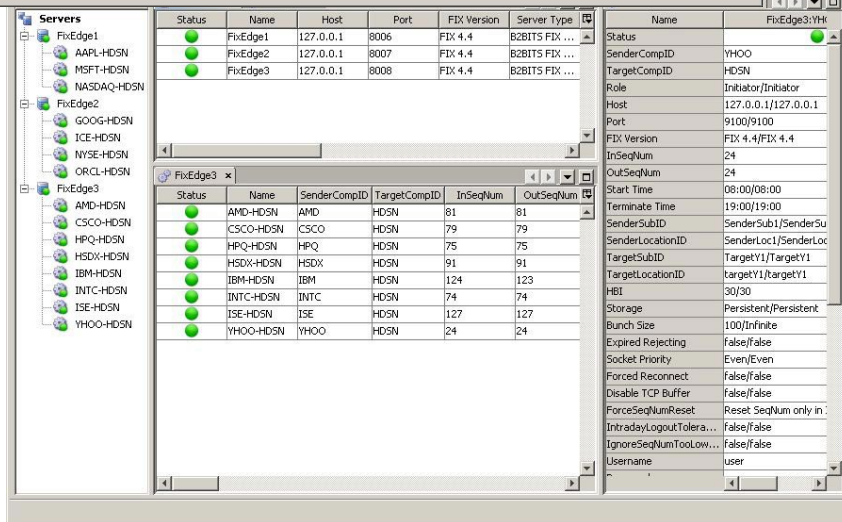
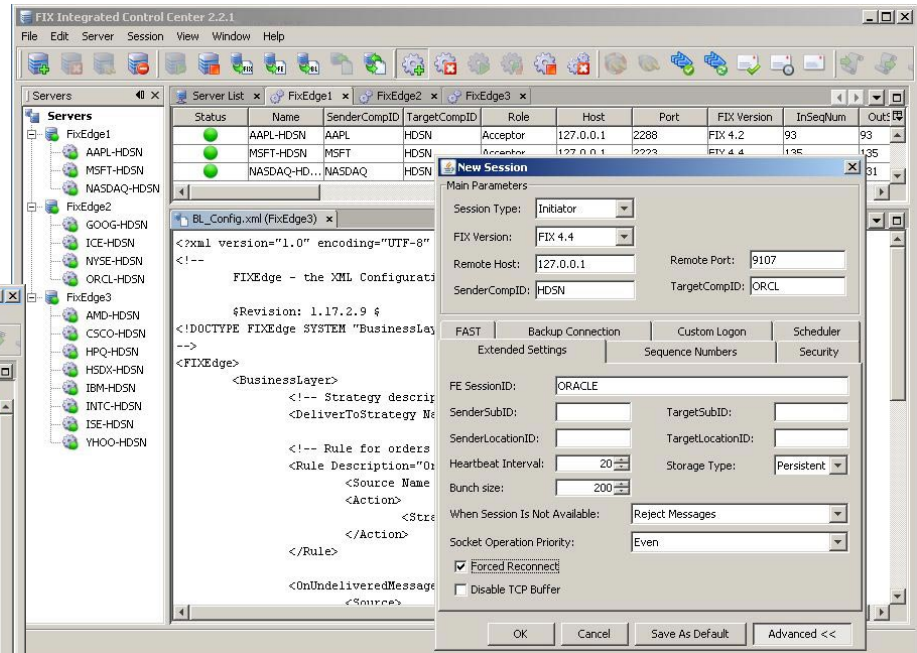
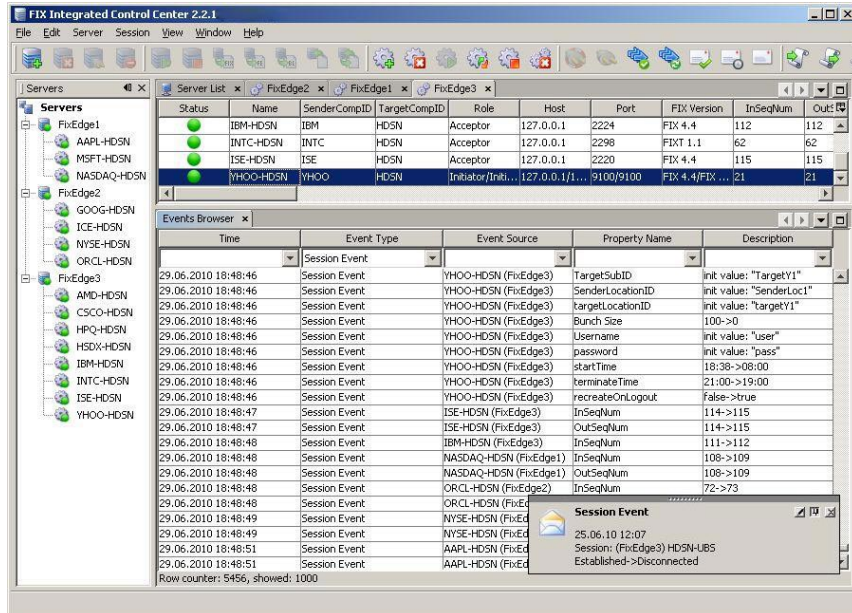
```
<History Name="Quotes"
  StorageType="ODBC"
  ColumnSize="256"
  TableName="Rates"
  ConnectionString="DSN=Cmp;UID=cmp;PWD=cmp321;">
  <Field ColumnName="MsgType" ColumnSize="4">35</Field>
  <Field ColumnName="SenderCompID" ColumnSize="40">49</Field>
  <Field ColumnName="SendingTime" DataType="Datetime" 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>
```

FIX Edge ControlCenter

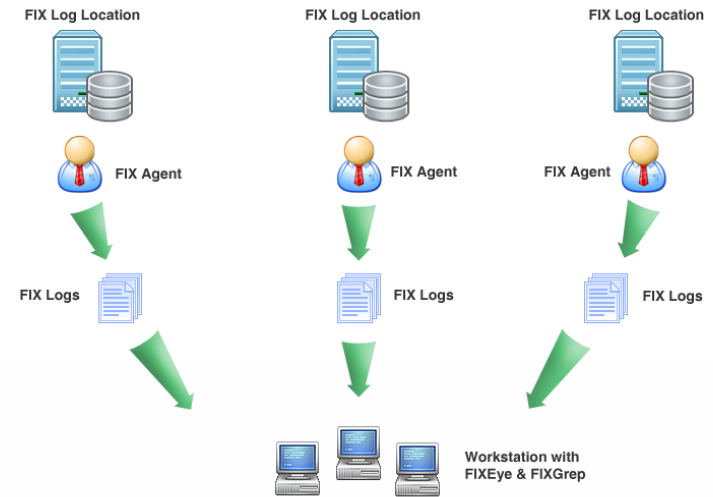
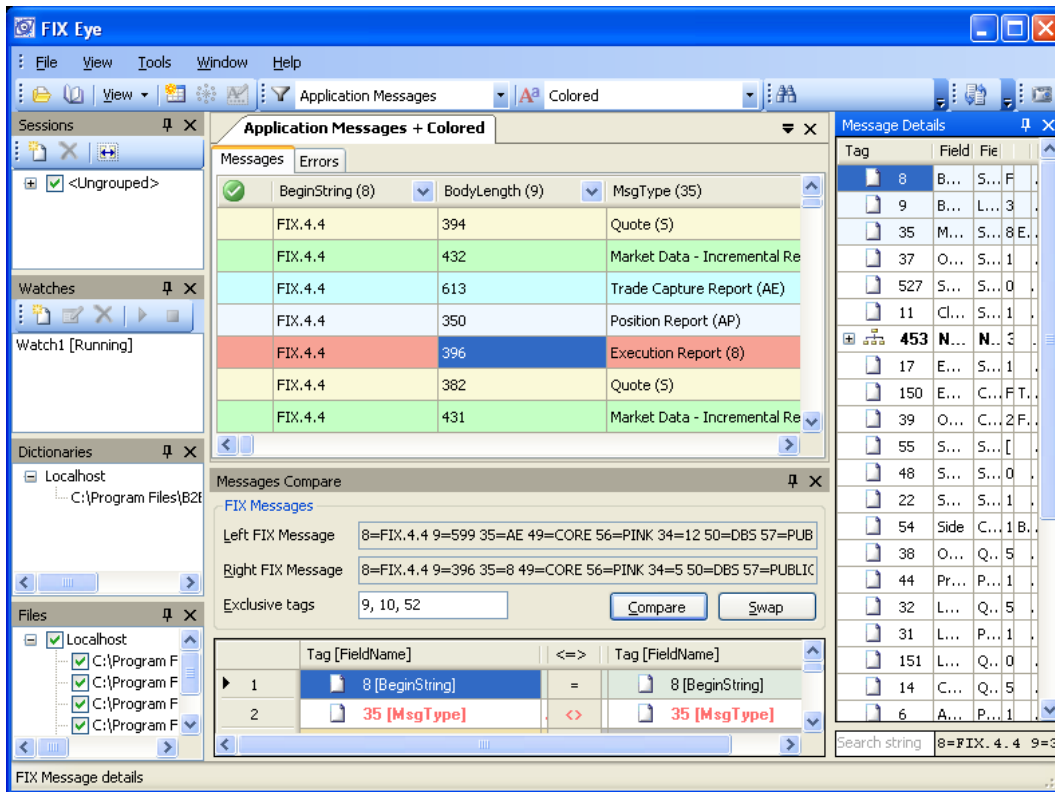
FIX Integrated Control Center (FIXICC) allows to monitor status, maintain configurations, and review FIX logs of multiple FIX Edge instances.



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.



FIX Edge and SNMP

- Native SNMP support
- Monitor server availability
- Monitor sessions status
- Use names (MIB)

Trap Time	IP Address	Community	Device Type	Trap Details
15-Oct-08 10:58 AM	127.0.0.1	public	software.7.319038...	sysUpTime = 179528 snmpTrapOID = software.7.319038032.3000.31789C fixedge.1.1 = FIXADMINOSNMPAgent_1 fixedge.1.1.1 = Established fixedge.1.2 = BloombergDB2Bits fixedge.1.2.1 = Established experimental.1057.1 = 127.0.0.1
15-Oct-08 10:58 AM	127.0.0.1	public	software.7.319038...	sysUpTime = 179526 snmpTrapOID = software.7.319038032.3000.31789C fixedge.1.1 = FIXADMINOSNMPAgent_1 fixedge.1.1.1 = Established fixedge.1.2 = BloombergDB2Bits fixedge.1.2.1 = Established experimental.1057.1 = 127.0.0.1
15-Oct-08 10:58 AM	127.0.0.1	public	softw	sysUpTime = 176867 snmpTrapOID = software.7.319038032.3000.31789C

MIB Viewer

Hostname or IP Address: localhost

Community String: public

MIB Table to download: 1.3.6.1.4.1.26775

MIB Viewer will download, format, and display any SNMP MIB Variable. Simply enter the name of the MIB variable, a MIB Table name, or an OID sequence (1.3.2.6.1... etc). The MIB Viewer uses SolarWinds extensive MIB database to automatically determine details about each SNMP MIB Variable.

You can also use SolarWinds MIB Browser to find the specific MIB variable that has the information you are looking for.

[More Details](#)

BTOBITS-MIB:b2bits on localhost

MIB	OID Name	Value
	fixedge.1	FixEdge1
	fixedge.1.1	FIXADMINOSNMPAgent_1
	fixedge.1.1.1	Established
	fixedge.1.2	BloombergDB2Bits
	fixedge.1.2.1	Established
	fixedge.2	FixEdgeAgent: Service is started.
	fixedge.3	0
		0

BTOBITS-MIB

fixedge.1.1

iso.org.dod.internet.private.enterprises.b2bits.software.fixedge.1.1

OID Type Units

1.3.6.1.4.1.26775.0.0.1.1

- ← Service Name
- ← Session Identifier
- ← Session State
- ← Session Identifier
- ← Session State
- ← Service State

FIX Edge customization

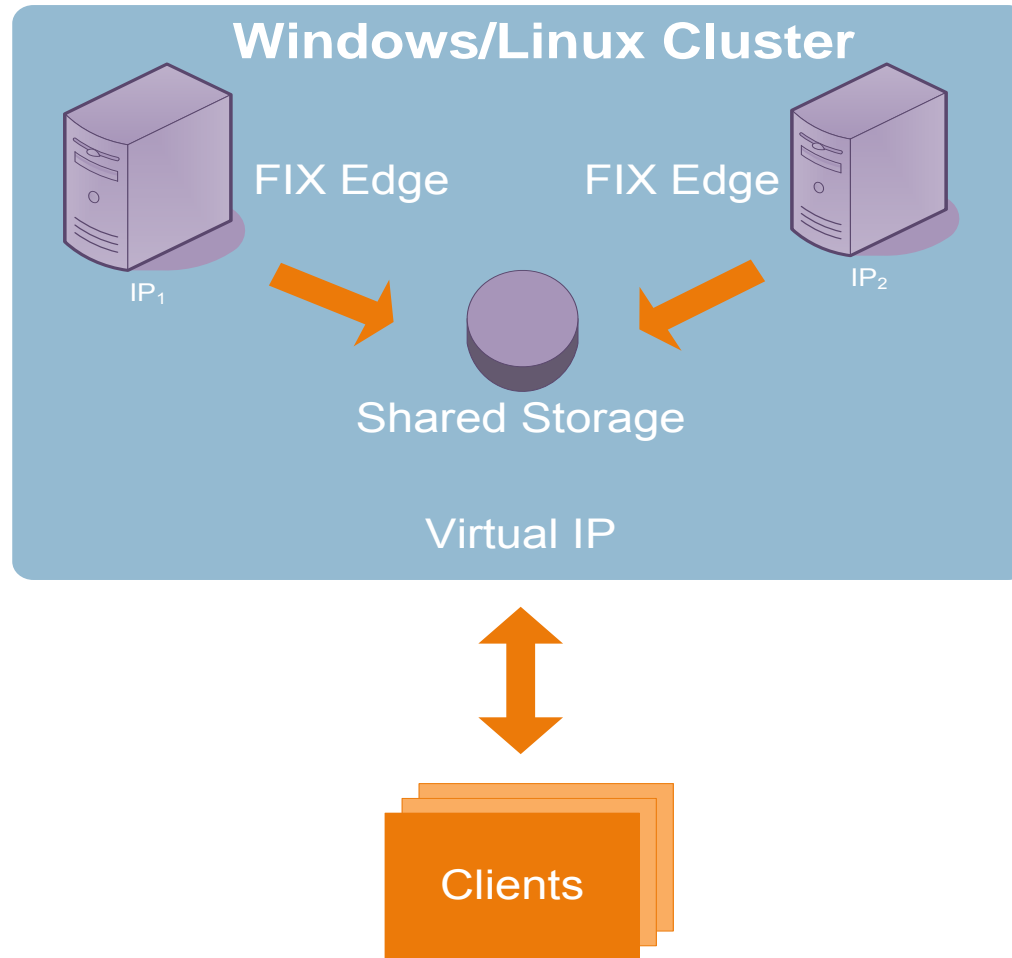
Custom Business Layer Handler

- 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 your handler in Rule Engine configuration
- Call your handler from Action section

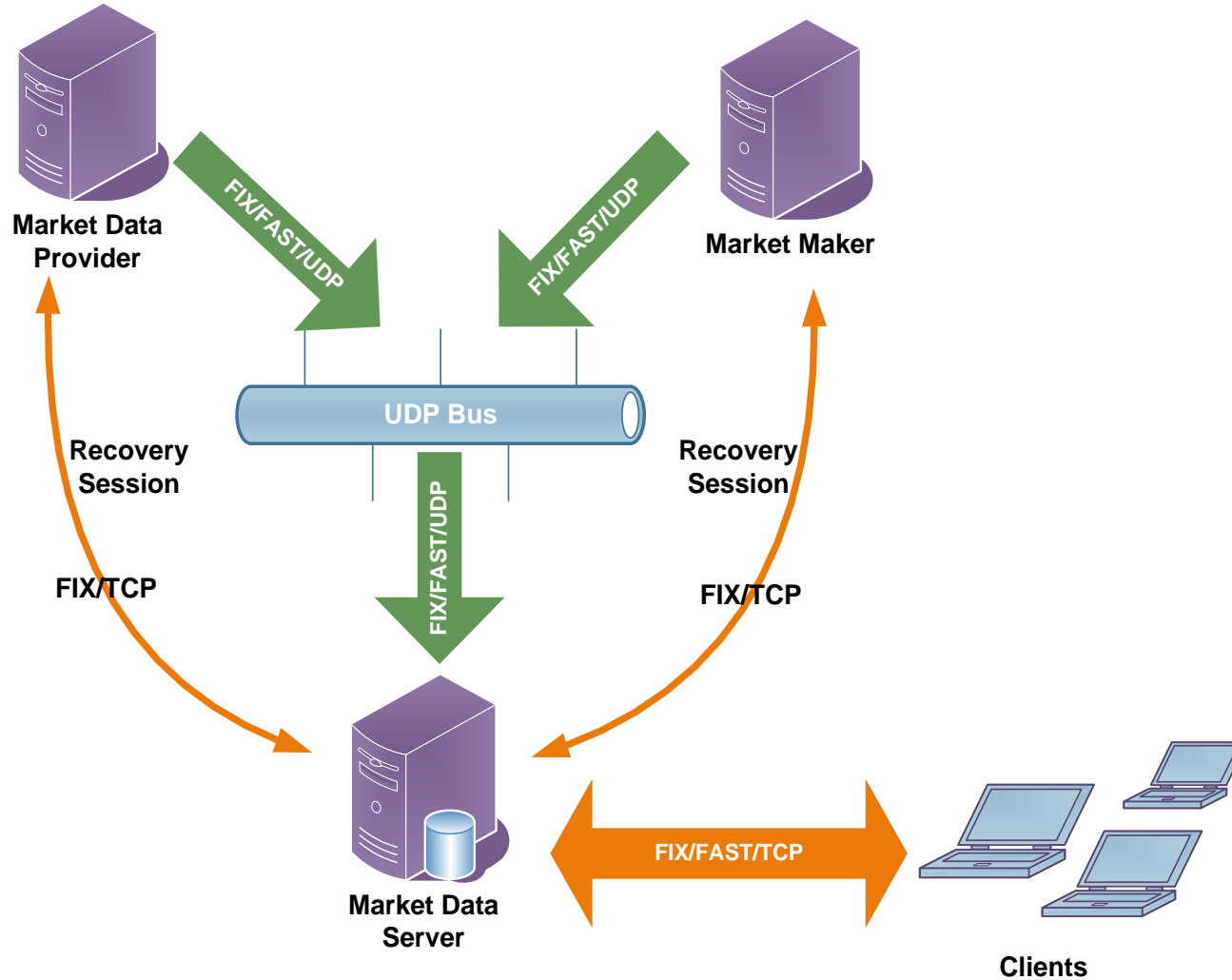
Custom Transport Adaptor

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

FIX Edge cluster

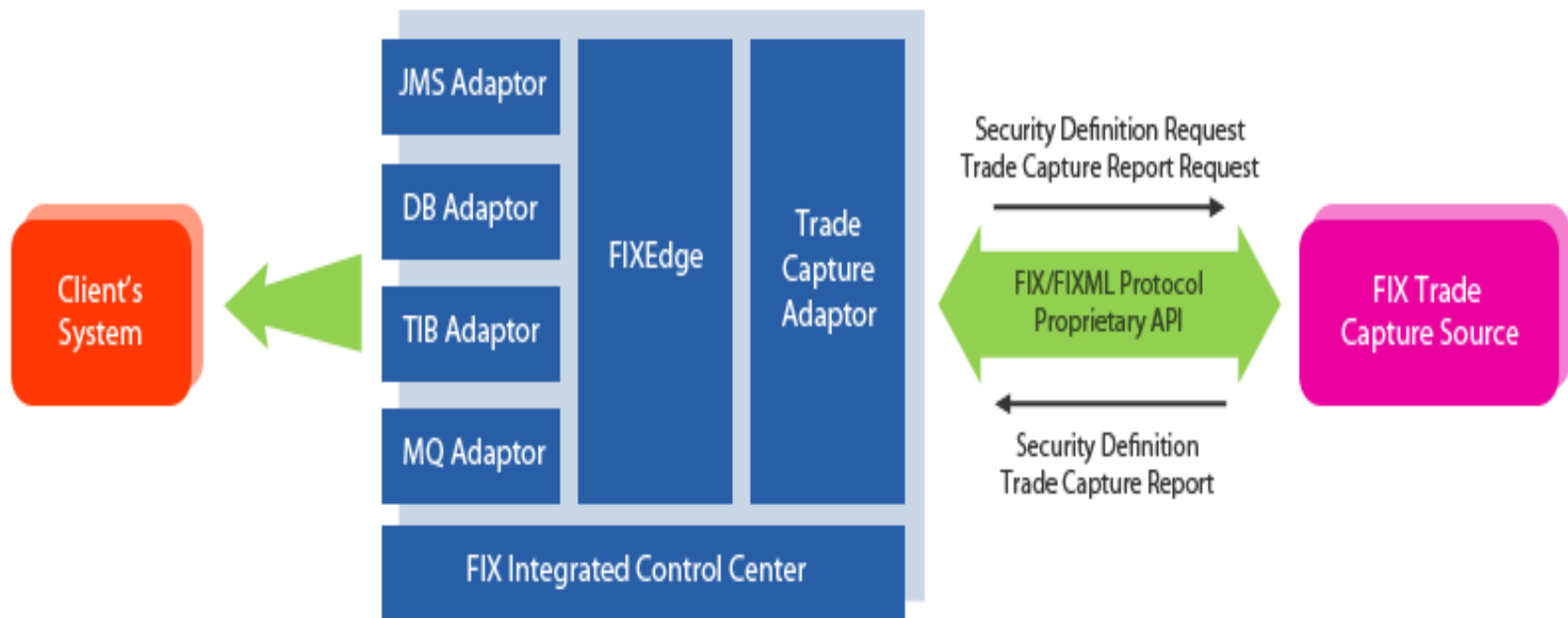


FIX Edge for market data



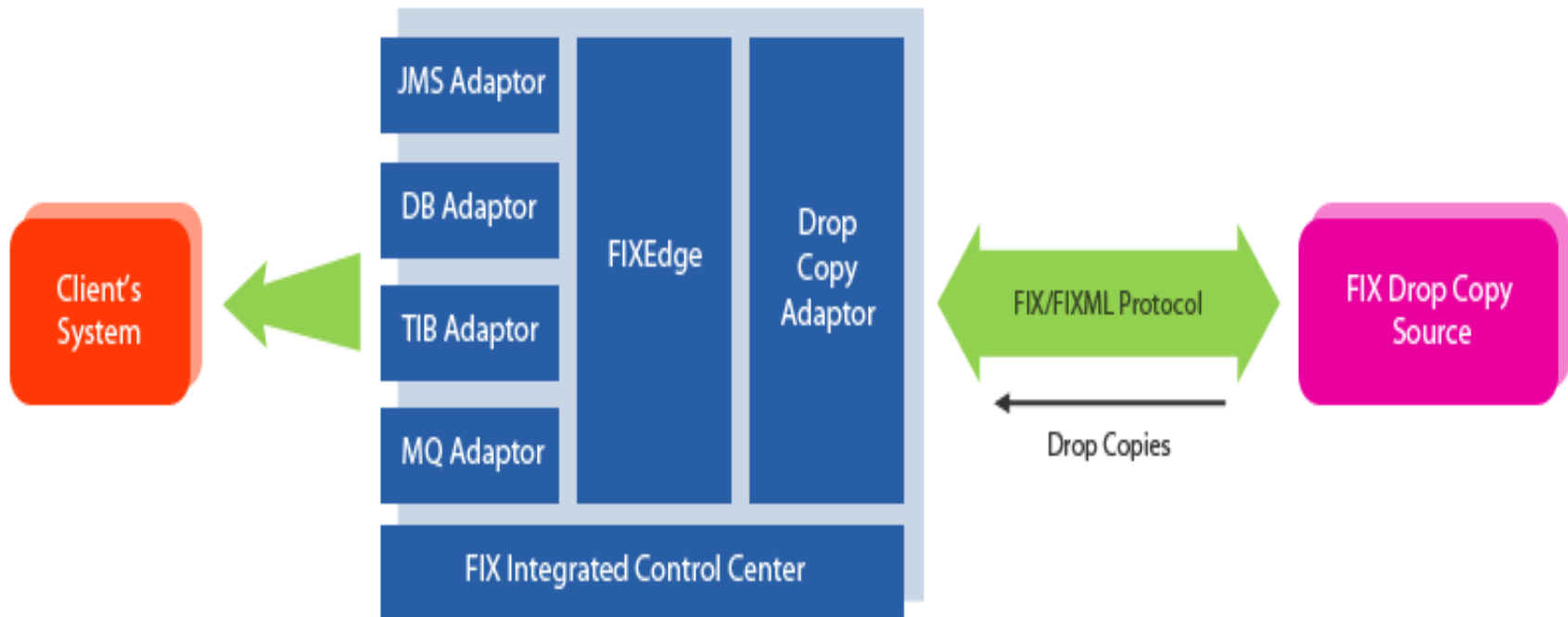
FIXEdge for Trade Capture

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

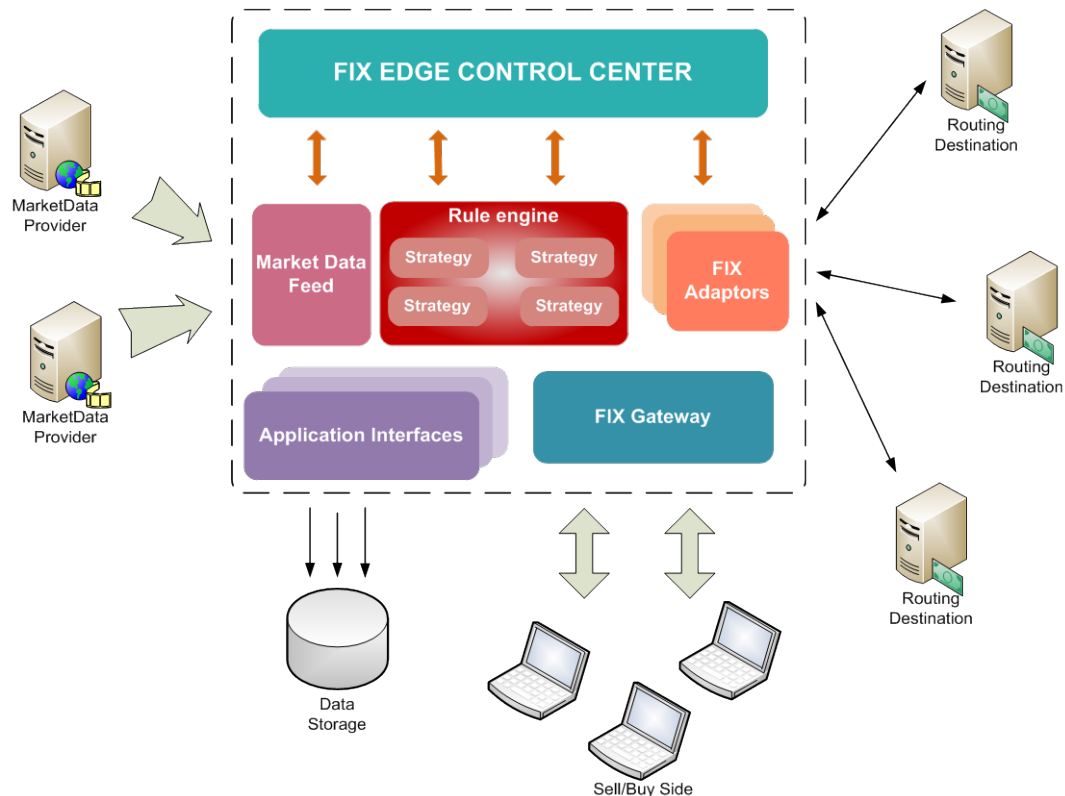
FIX Drop Copy Solution allows retrieving drop copies of trades from FIX-compliant drop copy sources, includes recovery tools, which allow requesting missing data in case of failures. The process of capturing drop copies by server is fully automated, while library FIXDCap can be easily integrated with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



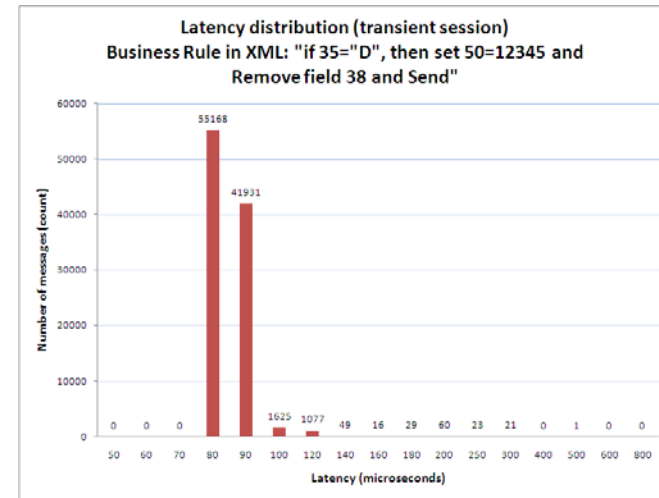
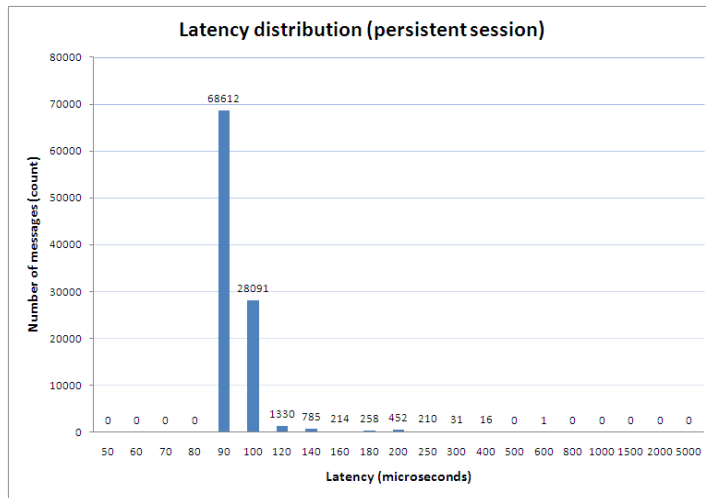
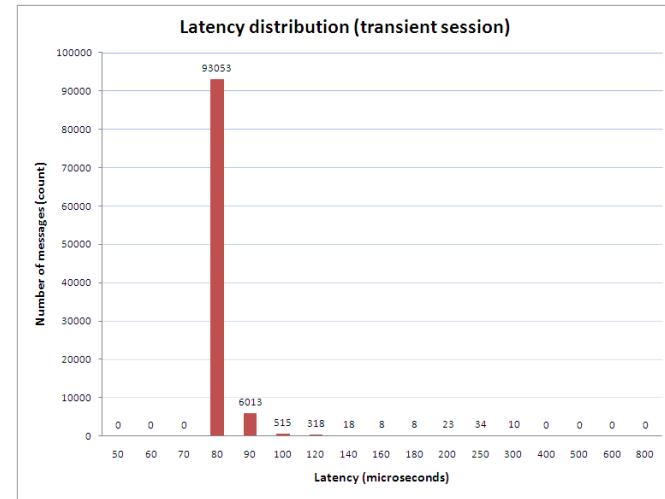
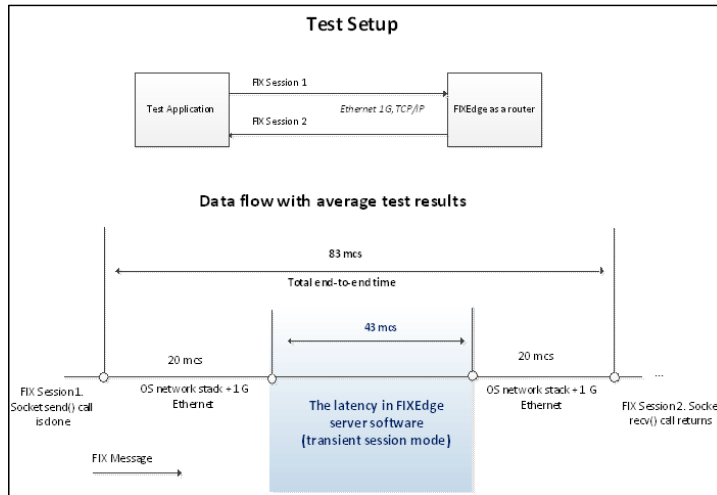
FIX Edge for Smart Order Routing

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.



FIX Edge benchmarks



FIX Edge Overview

Further information on the product is available at:

www.b2bits.com

<http://forum.b2bits.com>

Contact manufacturer: sales@b2bits.com