

VISUAL DATA DISCOVERY THROUGH**STREAMS SERVER**

Stream Processing including:

- Real Time Data Prep
- Aggregation Engine
- Calculation Engine
- Alerting Engine.

VISUAL ANALYTICS SERVER

Allows users to analyze fully interactive dashboards via web browsers.

Also provides:

- Data Shaping and data aggregation
- Data Caching
- PDF Report Generation
- Restful APIs
- Scheduling of Reports & Data Extracts
- Security including integration with external directories and SSO

DESIGNER

Allows users to build analytical real time HTML dashboards, connect to data and publish to the web.

ANALYST

HTML delivery for desktop and mobile applications.

DEPLOYMENT OPTIONS**DESKTOP**

Standalone dashboard design and analysis tool, with design and analysis modes.

ENTERPRISE

The Server components enables stream processing, large scale delivery via the web client, plus report generation and scheduling.

SYSTEM REQUIREMENTS**STREAMS SERVER**

Apache Tomcat 8.5.x

Java JRE 8. (64-bit)

MS Windows OS (7, 10, 2012) (64-bit)

LINUX Redhat/SUSE (64-bit)

8 CPU Cores (Minimum for Production Usage)

16GB free disk space and at least 16GB available RAM

Confluent 4.11 Kafka Distribution including:

Zookeeper, Schema Registry, Kafka

VISUAL ANALYTICS SERVER

Apache Tomcat 8.5.x

Java JRE 8. (64-bit)

MS Windows OS (7, 10, 2012) (64-bit)

LINUX Redhat/SUSE (64-bit)

8 CPU Cores (Minimum for Production Usage)

4GB free disk space and at least 16GB available RAM

In Memory Caching / Data Extracts limited to available Server RAM

DESIGNER

MS Windows OS (7, 10, 2012) with .NET 4.5

2GB free disk space and 4GB available RAM

ANALYST (WEB CLIENT)

MS IE 11+, Chrome 40+, Safari 8+

2GB available RAM

Certified for MS Windows, iOS & Android

MAJOR STREAM PROCESSING FEATURES**STREAM INPUT**

- Producing Topics, Tables & Global Tables
- Kafka Topics
- Alternative Streaming Sources
- Polling Reference and Historical Sources

STREAM OUTPUT

- Kafka Topics
- Email
- Kdb+
- InfluxDB
- SQL JDBC Databases

REAL TIME DATA PREP

- Join
- Branch
- Union
- Pulse
- Filter
- Conflate
- Pulse

AGGREGATION

- Windowed
- Min, Max, Avg, Count, Samples, First, Last, StdDev, Var, Sum

CALCULATE

- Add / Replace / Remove Fields
- Conditional Functions
- Casting of Fields
- Numeric Functions
- Time Functions
- Text Functions

MAJOR VISUAL DESIGN & ANALYSIS FEATURES**REAL TIME STREAMING & REAL TIME UPDATES**

- Display Real Time Streaming Dashboards
- Push Subscribe for Streaming Sources
- Automatic Pull for non-Streaming Sources
- Pause Data Updates as required
- Alert on Outliers
- Investigate by jumping from real time to historic data
- Throttle Subscriptions to minimize CPU & Memory
- Show latest or scrolling time windows
- Process Full or Filtered Data Requests & Subscriptions

INTRA DAY & HISTORIC TIME SERIES

- Display Time series from Years down to Nanosecond
- Playback through time
- Select Tick time, or calendar time to playback
- Resample from barred down to transaction level
- Fill forward (interpolate)

VISUAL ANALYSIS

- Pre-Attentive Techniques
- High density displays
- Peer Comparisons
- Hierarchical displays
- Dynamic selection of visible detail level (Depth)
- Trend, Clustering & Outlier detection
- Numeric & Categorical Correlations
- Relationships
- Cross Tabbing
- Brushing & Visual Filtering

HIERARCHY ANALYSIS

- Hierarchical displays
- Dynamic hierarchy rearrangement
- Multiple concurrent hierarchies
- Aggregation (Additive) with over 25 aggregates supported
- Non-additive external aggregate retrieval for complex risk scenarios

CUSTOM UI BUILDING

- Various UI Form Controls
- Parameterization
- Data Entry
- Actions – Navigation, URL & Script
- Web API for integration into larger web Portals

DATA CONNECTIVITY**TICK DATA CONNECTIVITY**

- OneMarketData OneTick
- Kx kdb+
- InfluxDB
- Native Connectivity
- Request / Response
- Subscriptions

MESSAGING STREAMING CONNECTIVITY

- Apache/Confluent Kafka (Subscribe / Publish)
- JMS (e.g. Active MQ)
- Solace
- 60East AMPS
- RabbitMQ
- Thomson Reuters TREP-RT
- Web Socket
- JMX
- Google Analytics Streaming

EVENT PROCESSING CONNECTIVITY

- kx kdb+Tick
- OneMarketData OneTick CEP
- Tibco Streambase CEP
- Tibco LiveView DataMart
- SAP Sybase ESP
- Panopticon Streams

BIG DATA CONNECTIVITY

- Apache Hadoop Hive
- Cloudera Impala
- Apache Spark SQL
- Apache / Datastax Cassandra
- Elasticsearch 5.x and Elasticsearch 6.x
- Livy Spark (PySpark)
- IBM Cloudant
- Splunk
- XMLA such as ActivePivot

GENERAL CONNECTIVITY

- MS Excel
- Text, XML & JSON
- Restful Web Services (Returning Text, XML or JSON)
- ODBC / JDBC Databases including: Cloudera Impala, MySQL, Oracle, PostgreSQL, Spark SQL, IBM DB2, Greenplum, MS SQL Server, Sybase IQ, Sybase ASE, Teradata, Vertica)
- SAP Business Objects Universe
- Google Analytics

PREDICTIVE**PYTHON & R**

- Python 2.7 & Python 3.x
- R
- Embedded as part of the data pipeline
- Additionally, act as a separate data source
- Dynamically change script execution

DATA VISUALIZATIONS**TIME SERIES**

- Candlestick / OHLC Graph
- Horizon Graph
- Line Graph
- Needle Graph (Standard / Stacked / Grouped)
- Order Book
- Price Band
- Spread Graph
- Stack Area Graph
- Table with Micro Charts
- Timeseries Combination Graph
- Timeseries Scatter Plot
- Timeseries Surface Plot

SNAPSHOT & TIME SLICE

- Bar Graph (Horizontal / Vertical)
- Bullet Graph (Horizontal / Vertical)
- Categorical Line Graph
- Circle Pack
- Donut Chart

- Donut Gauge
- Dot Plot (Horizontal / Vertical)
- Funnel Chart
- Heat Matrix
- Map Plot
- Network Graph
- Numeric Line Graph (Horizontal / Vertical)
- Numeric Needle Graph (Standard & Stacked)
- Pareto Chart
- Pie Chart
- Scatter Plot
- Shapes / Choropleth
- Surface Plot
- Surface Plot 3D
- Table with Micro Charts
- Ticker Tile
- Treemap (Classic, Cluster & Window)
- Waterfall Chart

FILTERING & DATA CAPABILITIES

- Casting, Renaming & Setting Display Formats
- Calculations including Time Series
- Time & Numeric Bucketing
- Custom Groups
- Visual Filtering
- Categorical filtering via check list, radio list & free text entry
- Numeric Range & Percentile Distribution Filters
- Time Window Filtering & Snapshot Time Selection
- Parameterization