



Streaming Analytics Tools on FabricXpress

Changing Performance in the Financial Sector

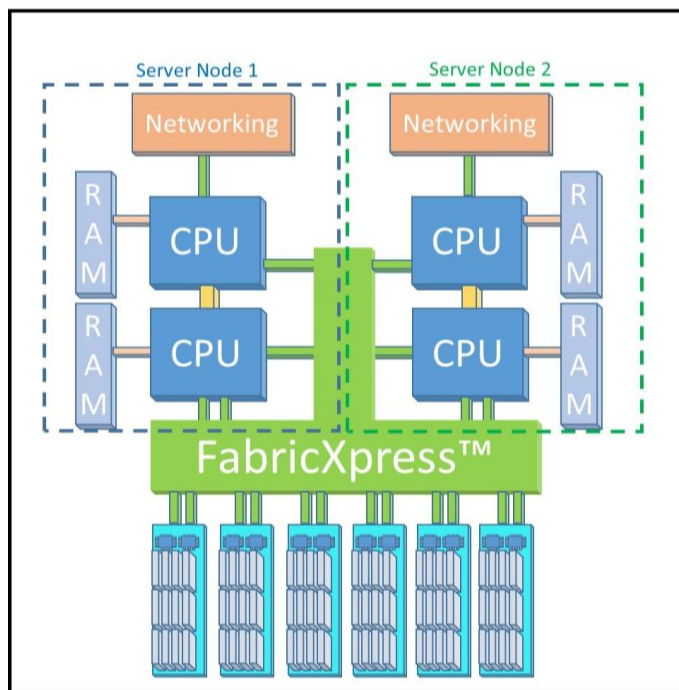
Presented By: Hollis Beall
Director, Technical Marketing at Axellio Inc.



Deployable | Affordable | Secure

2U Form Factor

>12M IOPs & 60GB/s Throughput



Up to 72 Dual Port NVMe

88 Intel CPU Cores

Holds 5/17 records across all STAC-M3 benchmarks

- 88 Cores
- 1TB RAM
- 70 NVMe SSDs
- CentOS 7.3
- kdb+ 3.5 Time Series Database
- SUT ID: KDB171020



STAC-M3 Audited Configuration:

One 2U Axellio Edge Computing Platform with

Continuous Computing

- Continuous Risk Management (Credit, Market, Operational, Liquidity, Fraud)
- Continuous Customer Engagement
- Continuous Market Monitoring

Trade Execution efficiency

- Perform real-time pre-trade analytics
- Build real-time transaction cost models to decrease execution costs
- High speed message routing
- Best execution monitoring & reporting for MiFID II compliance

Fundamental Review of the Trading Book (FRTB)

- More Models, More Sophistication, with greater accuracy and quality
- Implications for Rates, Credit, FX, Equity, and Commodity asset classes
- Combined Time-Series market data, Reference, and “real” price data (Internal Capital Models)
- Reporting by the end of 2019



redis



kafka

Platform designed around high performance data architecture

- High speed connection between CPU, RAM, and Storage
- Get to the answer faster, with less hardware

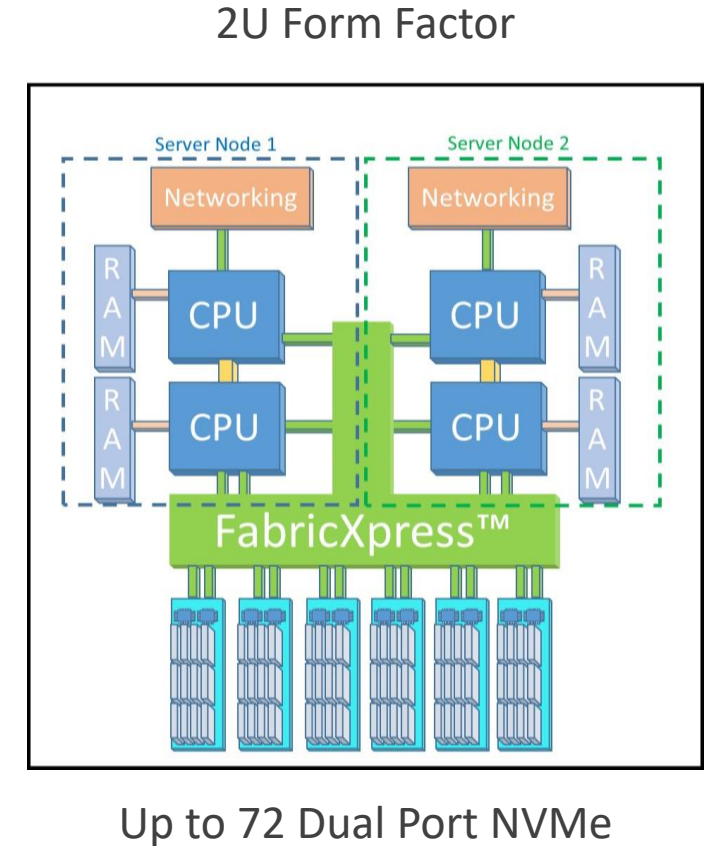
Customizable platform for the application

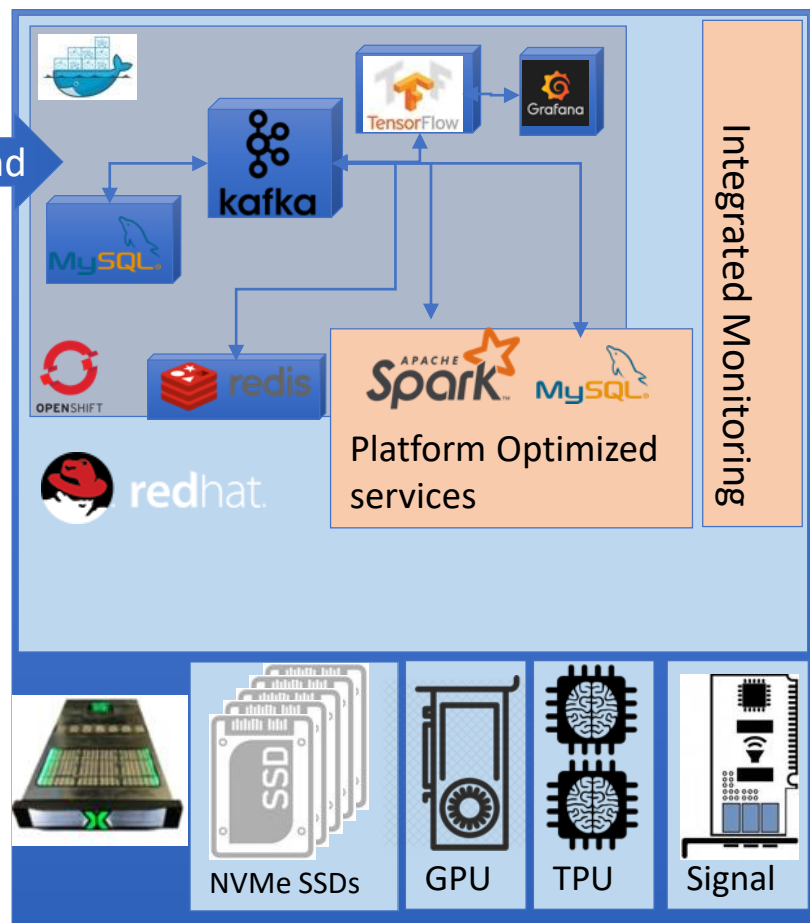
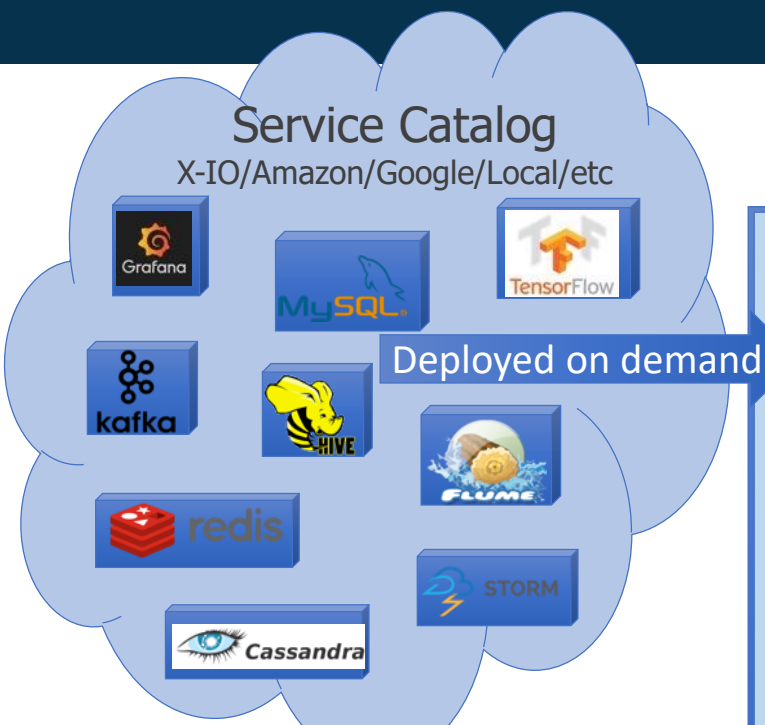
- CPU, RAM, and SSD are completely configurable
- Support for Add-in cards (GPU, TPU, FPGA)

Flexible deployment options for different software stacks

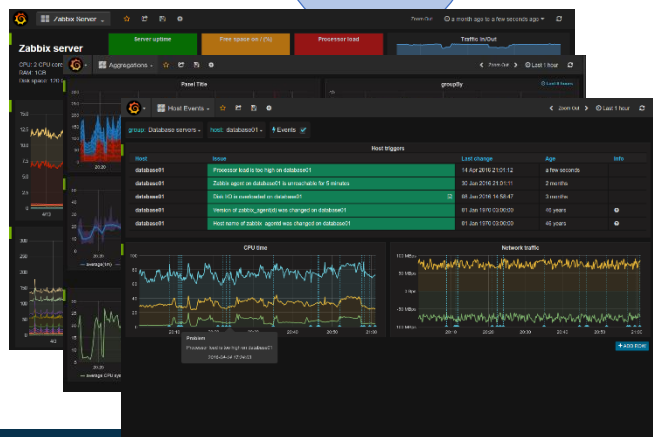
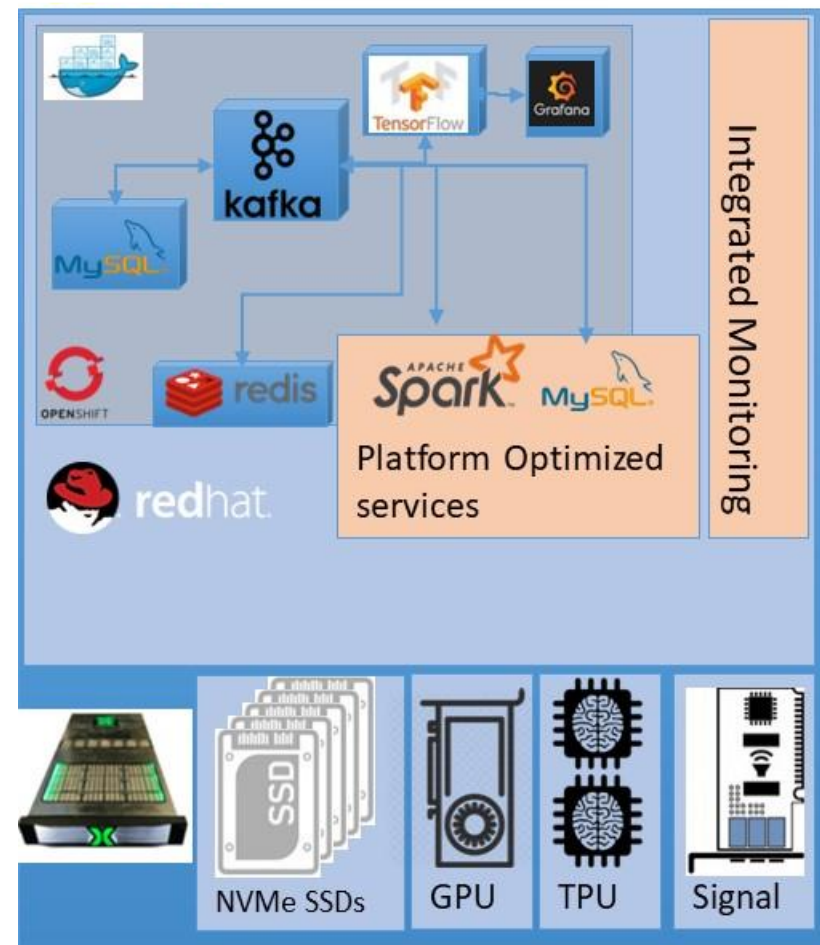
- MicroCloud / MicroDataCenter
- Hyper Converged Infrastructure (HCI)

>12M IOPs & 60GB/s Throughput





1 to N
Nodes...



Containerized Yahoo Streaming Benchmark

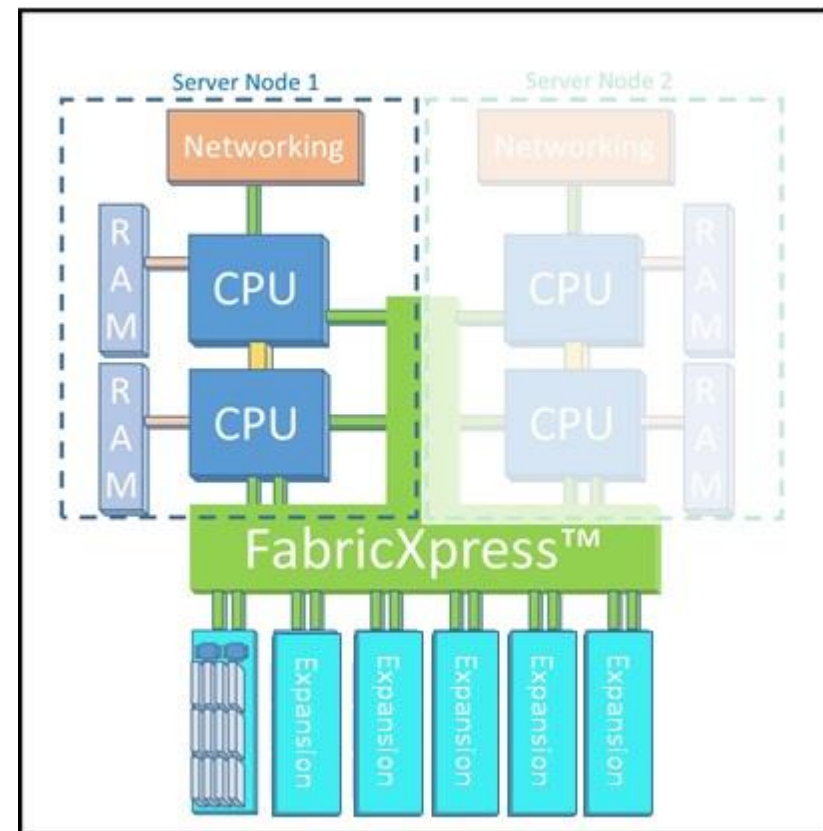
- Benchmark Application
- Streaming Data Infrastructure
- Monitoring Infrastructure

FabricXpress

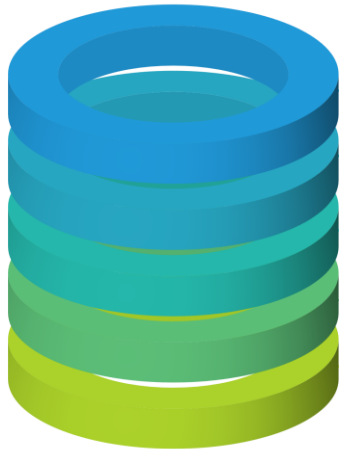
- 1 Server Node
- 2 Processors
- 16 Cores
- 128GB RAM

	Yahoo	Axellio
Number of Nodes	25	1
Number of Processors	50	2
Total Number of Cores	200	16
Rack Units	25U	2U
Power Required	7500w	700w
Max Number Messages/Sec	170,000	200,000

Not STAC Benchmarks



- Unparalleled compute and storage bandwidth
- Up to 500TB and up to 2 NVIDIA Tesla GPUs (up to 42Tflops) , in a single 2U platform
- High performance SQL database and storage with linear scalability
- Advanced storage engine and I/O reduction techniques including on-the-fly compression and smart metadata collection



FX-WSSD Appliance Specifications

Software	Microsoft Windows Server 2019 Datacenter Edition	
Processors	Intel® XEON® E5-26xx V4 family	
Network	10/25/40/50/100GbE	
Configurations	4 Node	
Memory	512GB to 4TB RAM	
Scalable NVMe Storage*	12.8TB to 920TB	
Form Factor	4U	

* Increased capacity supported as higher capacity SSDs become available

Up to 176 Processor Cores

352x Hyper Threaded Cores

Up to 4 TB RAM

Up to 920 TB of Capacity**

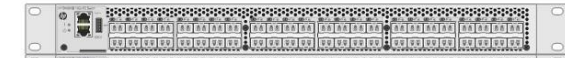


Up to 704 Processor Cores

1,408x Hyper Threaded Cores

Up to 16TB RAM

Up to 2,928 TB Usable Capacity**



** Before Dedupe/Compression

Address more data in real time

- Streaming Analytics close the loop on observations found in the data lake
- Detect Fraud in real-time, not batch processes
- Manage risk with a broader view of the landscape
- “Focused” customer services

Drastically reduced hardware

- Greatly simplified environment
- Less Power costs
- Less Rackspace
- Less Management Costs
- Less CapEx/OpEx and Software licenses

High Performance for faster decision making

- Leverage more data for better fidelity results
- Create more valuable (and complex) reports in real-time
- Support Stream, Transact, and Load (STL) operations in front of the data lake
- Generate and report on more KPIs with less costs





WHERE SPEED MEETS NEED

REAL-TIME
DATA | INSIGHT | RESULTS

For more Information:
☑ for Axellio Inc.

