

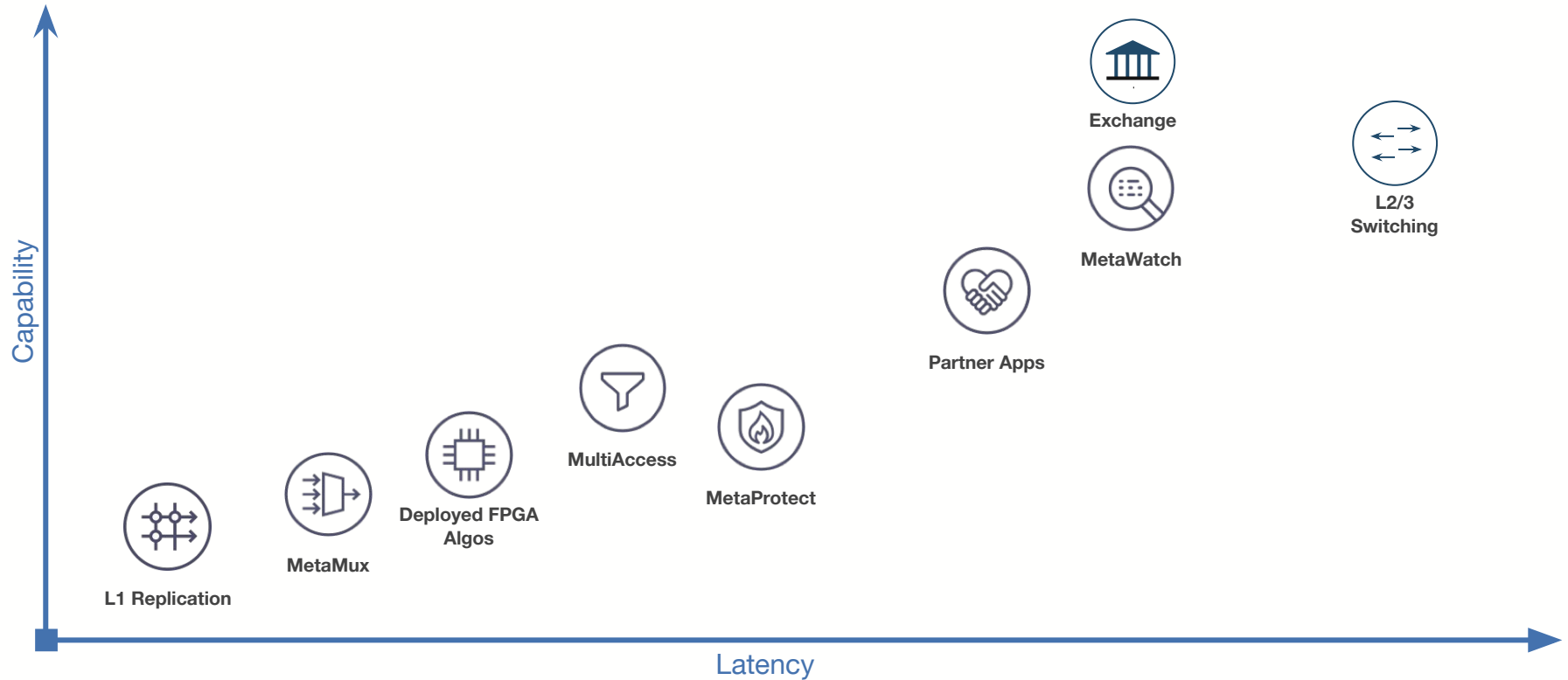


Arista Innovations

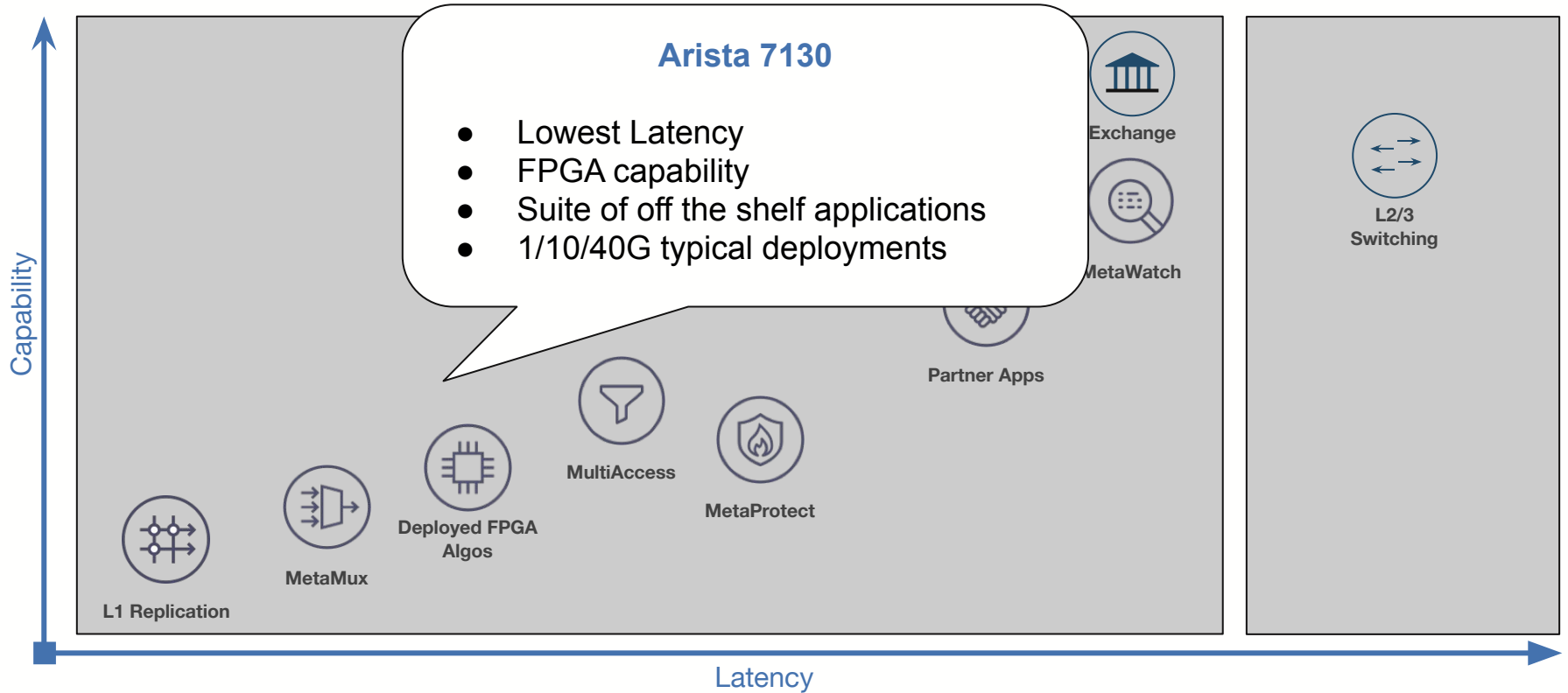
Application Innovations

Ciaran Kennedy

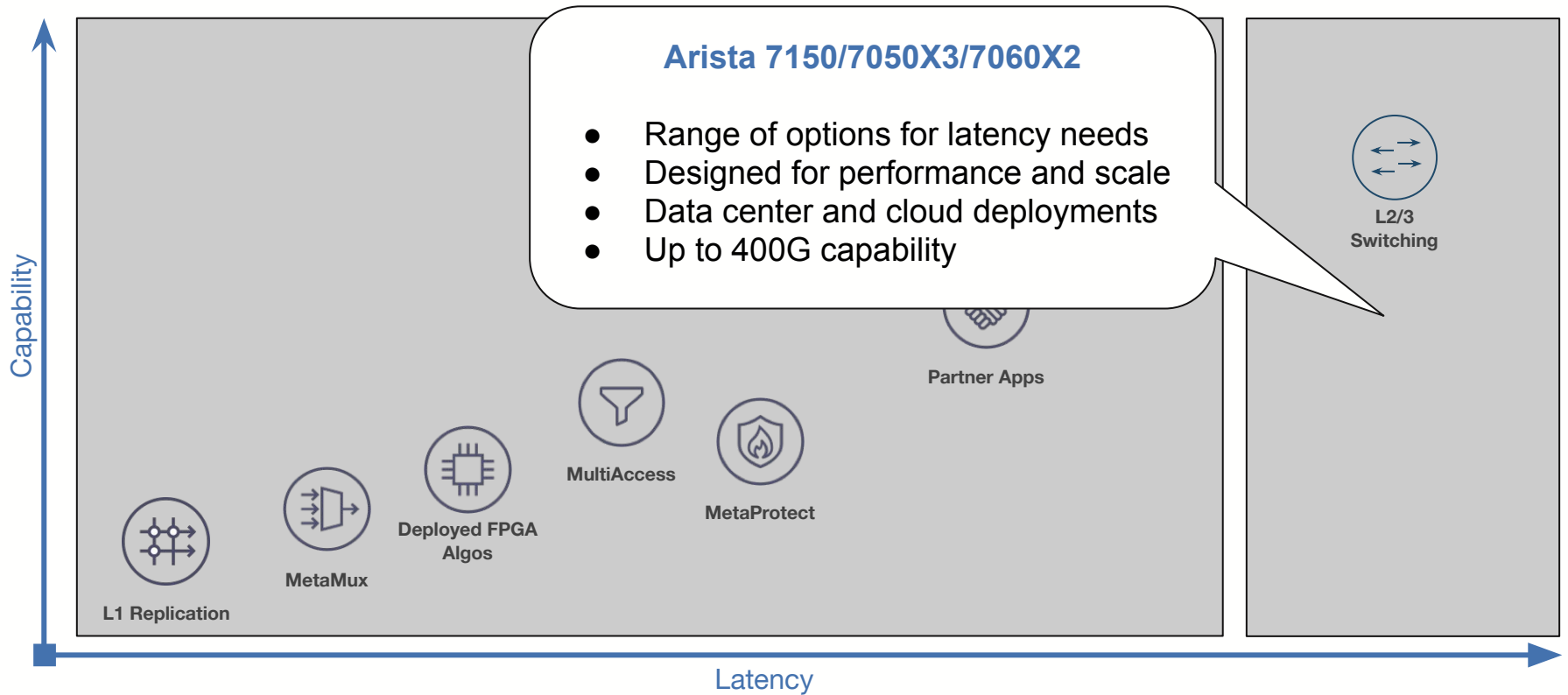
Arista: Full suite of solutions for trading



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Application Innovations: MetaMux

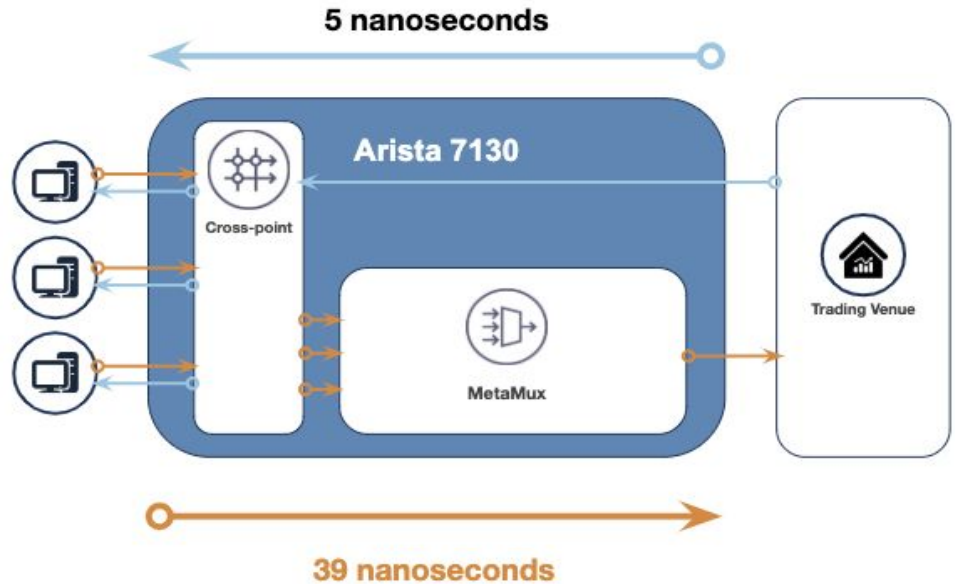


What is it?

- Lowest latency exchange facing trading solution
- Allow multiple trading servers to connect to a single trading venue

New Innovations

- Additional mux modes
- Support for leaf FPGA's
- 'show latency' command
- Latency lowered on 7130L Series



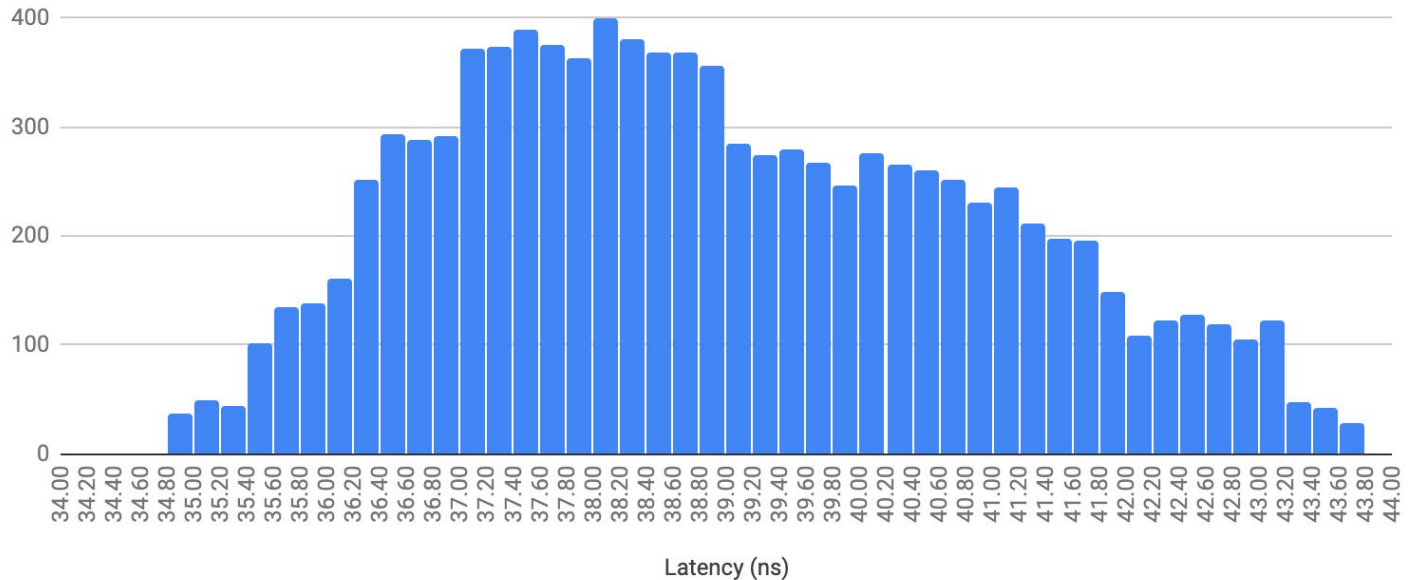
Not STAC Benchmark

Application Innovations: MetaMux



- Latest 7130LB devices (launched March 2019) allow for **39ns** latency
- **Real life, average latency** - not minimum!

Histogram of ap43 to ap44 for 16 to 1 Mux



Not STAC Benchmark

Application Innovations: MultiAccess

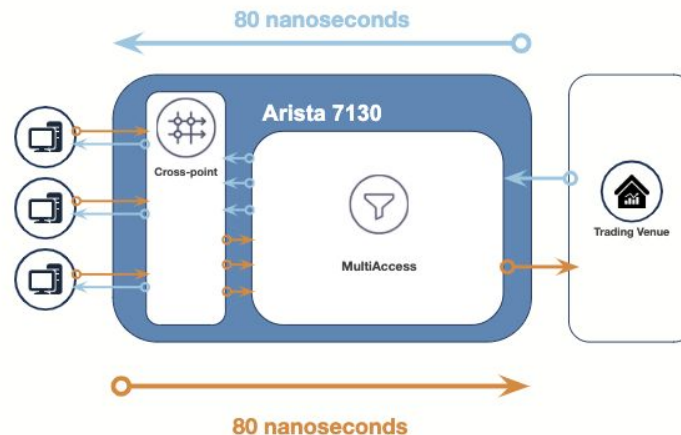


What is it?

- Application specifically designed for:
 - Managed service providers
 - Brokers providing client access
- Allow multiple trading servers to connect to a single trading venue
- Maintain privacy between end users

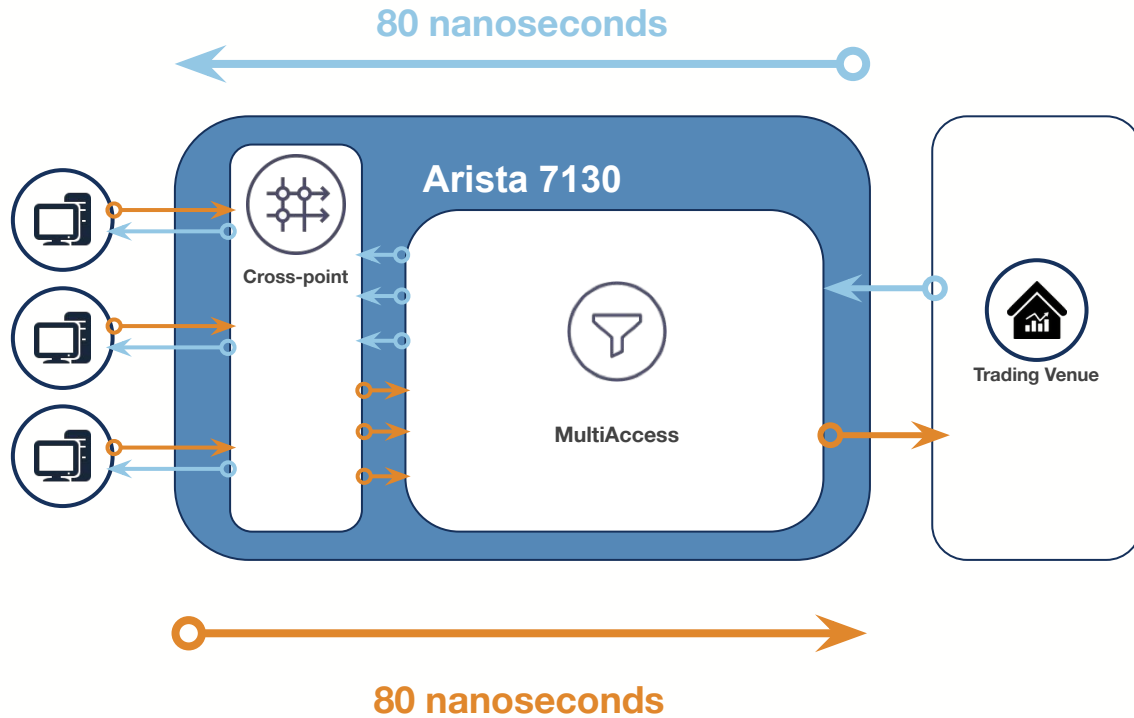
New Innovations

- Significant reduction in latency: 80ns
- Additional modes + filters
- VLAN tagging support
- Support for 7130L Series



Not STAC Benchmark

Application Innovations: MultiAccess



4x11 mode with inhibit delay on 7130L

Not STAC Benchmark

Application Innovations: MetaWatch

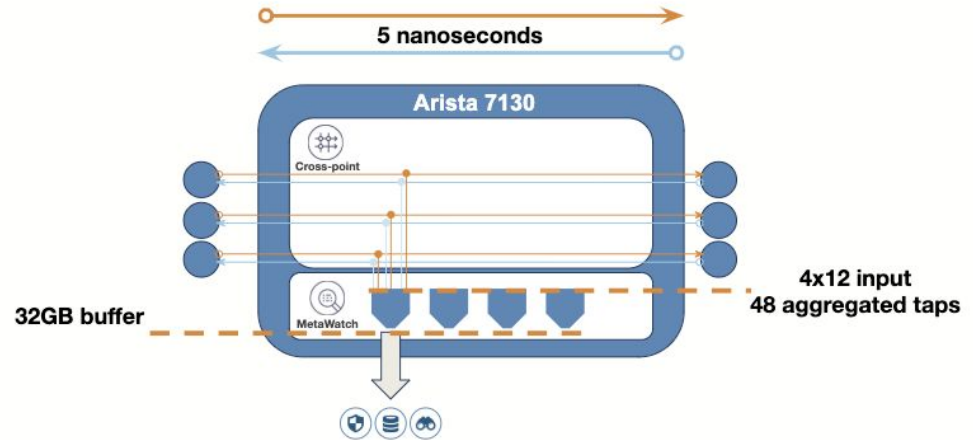


What is it?

- Tap, aggregate and timestamp on a single device
- Deep buffers to seamlessly manage market bursts

New Innovations

- 1G capability for 7130L
- 40G capability for 7130L
- Improved accuracy on 7130L Series

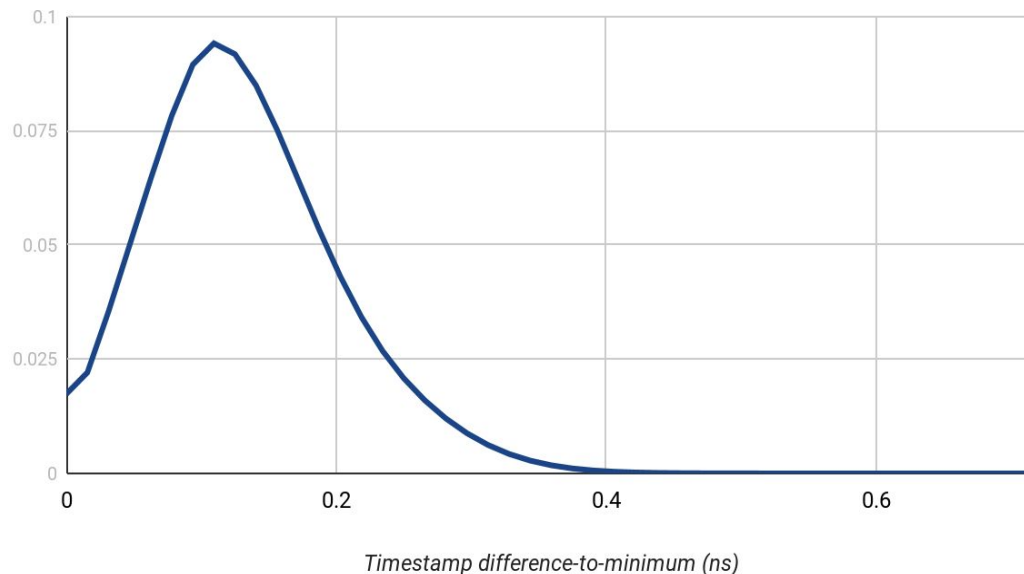


Application Innovations: MetaWatch



- Two devices, sync'd via PPS.
- Replicate a packet to all 96 ports.
- For each packet, measure the difference to the min timestamp.
- **Max difference: 0.719 ns**

Arista 7130L - Two switches, PPS sync
Timestamp PDF, 2 Devices, 48 ports per device, 10G



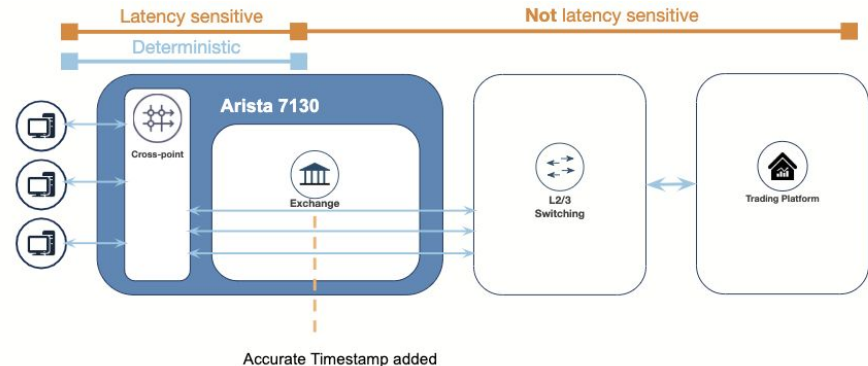
Not STAC Benchmark

Application Innovations: Exchange



What is it?

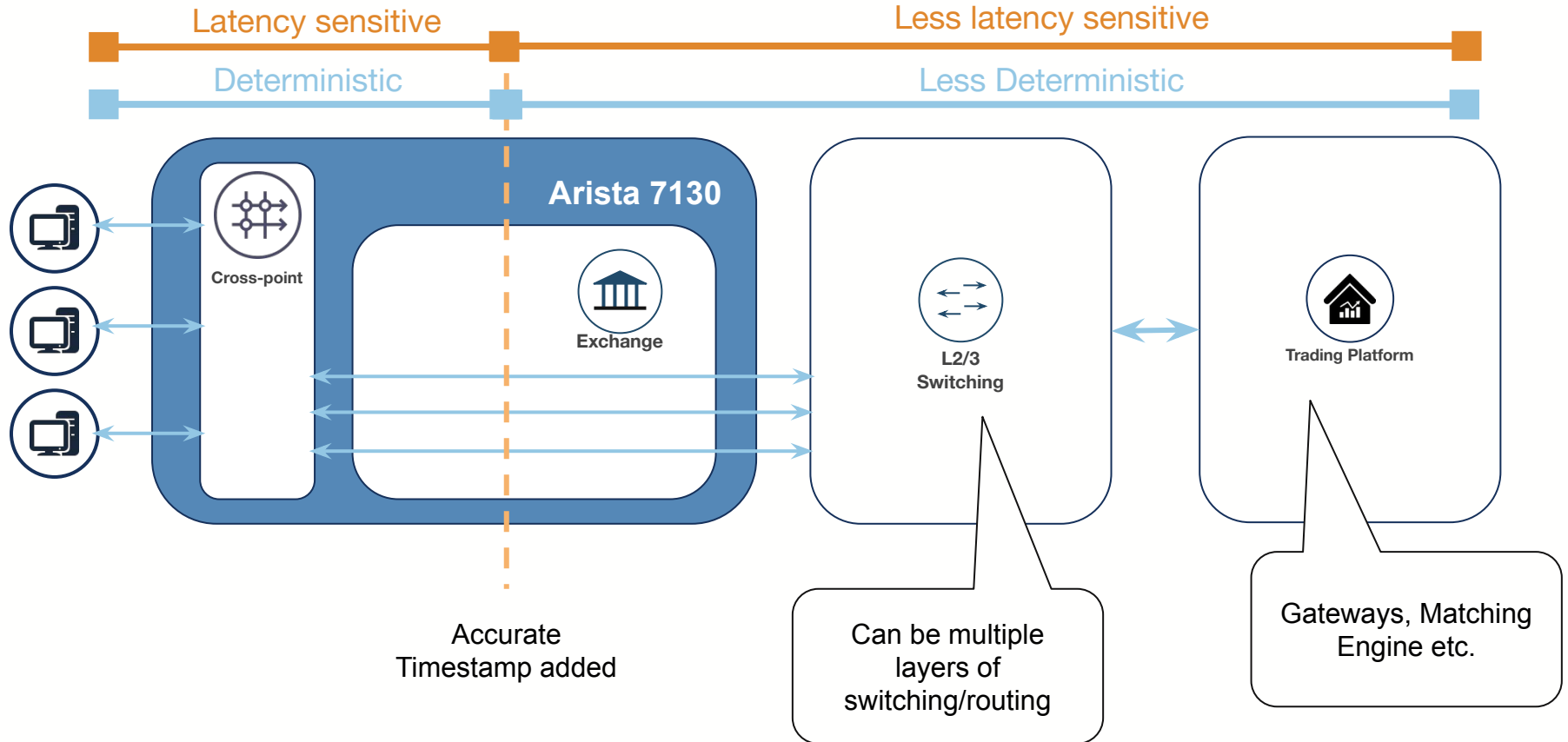
- Timestamp at the edge of trading venue networks
- Enabled by reliable accuracy
- Time/latency in the venue implementation becomes less relevant
- Reason about time in software instead
- Use jittery-but-better technology to implement trading venue:
 - Store-and-forward switches
 - VMs/Containers
 - Cloud
 - Garbage collection



New Innovations

- Alpha version available for testing now!

Application Innovations: Exchange





Thanks

Check the Arista Networks box for more info