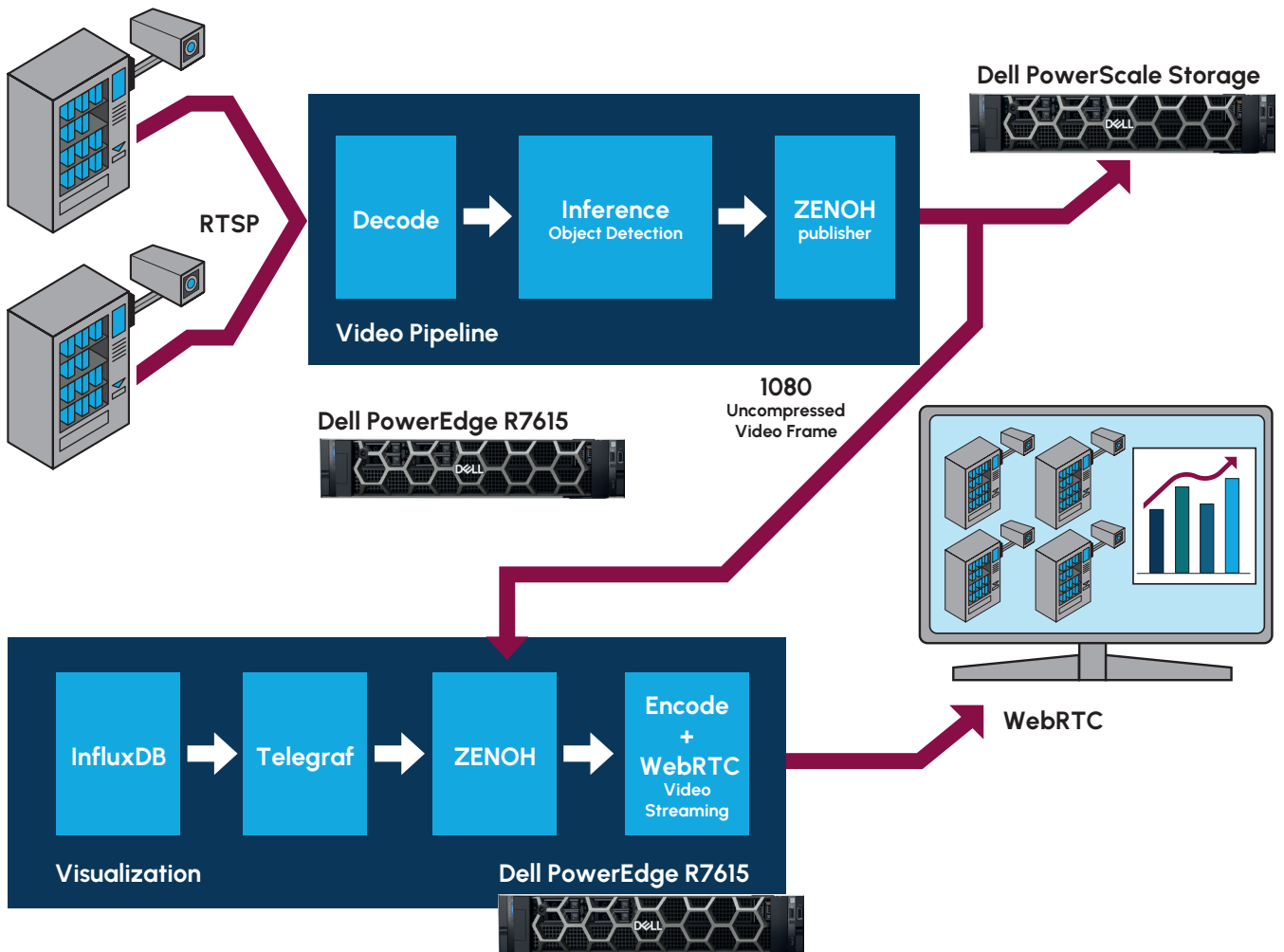


Dell Delivers CPU-Based AI PoC for Retail

Built on readily available Dell™ hardware, the retail inventory management proof-of-concept solution showcases a practical AI application for retail environments. The solution captures live video data from in store cameras to monitor items, track inventory count, and raise alerts for low inventory. The solution was deployed on standard CPU-based hardware and designed to scale to support a wide range of retail environments. Showcasing how AI can be used to optimize retail inventory management and address a common retail challenge of inventory distortion.



No Specialized Hardware

The retail inventory management solution leverages readily available, off the rack solutions from Dell. The solution utilizes Dell PowerEdge servers featuring 32 core 4th Generation AMD™ EPYC processors, Dell PowerScale NAS storage, and Dell PowerSwitch. No specialized hardware or GPUs are required.

1.5x Throughput Improvement

Testing of the solution achieved a 1.5x throughput improvement over a default configuration by utilizing AMD's ZenDNN optimization library and node pinning, showcasing the performance and optimization achievable on a 32-core CPU system.

Secure On-premises Deployment

By deploying a fully on-premises AI solution and leveraging secure Dell PowerEdge servers, the retail inventory management deployment prioritizes data privacy, compliance, and security.

Highly Scalable Solution

The PoC solution is designed with future scalability in mind. Separate nodes were used for inferencing and data visualization to provide a scalable design architecture. Dell PowerEdge Servers, Dell PowerStore storage, Dell PowerSwitch, and Broadcom™ NetXtreme-E NICs were chosen to provide highly scalable hardware solutions to expand the PoC solutions to individual retail needs.