

WP3 – Data Plane: Extreme Data Connectors

Technologies	KPIs	Description
Lithops	KPI-3: Resource Auto-scaling	Lithops incorporates an extensible storage and compute backend architecture that enables elastic and scalable cloud solutions.
Pravega	KPI-1: Throughput Improvements	Pravega shows the highest throughput (350MBps) compared to Kafka (330MBps) and Pulsar (250MBps) when using multiple segments.
	KPI-2: Data Speed Improvements	The Pravega reader achieves both low end-to-end latency and high throughput compared to Kafka and Pulsar for the cases tested.
	KPI-3: Resource Auto-scaling	Pravega is the first streaming storage system that provides elastic streams.
	KPI-5: Simplicity and Productivity	Pravega can seamlessly handle streaming and batch serverless workloads with the same API.



WP3 – Data Plane: Extreme Data Connectors

Technologies	KPIs	Description
SCONE	KPI-4: Confidential computing	SCONE supports confidential execution aided by TEE (hardware enabler) of both Lithops and Flower ML.
Dataplug	KPI-1: Throughput Improvements	Dataplug offers data transfer reduction by 200% and data throughput improvements in preprocessing tasks (x2,9 faster in FASTQZip indexing and x3,7 faster in FASTQZip fetching partitions).
HPC Data Connectors	KPI-1: Throughput Improvements	MDR use-case has applied the HPC Data Connector and shows a speed-up improve of 5x times respect cloud-based version (Apache Spark)
	KPI-3: Resource Auto-scaling	Integration of the HPC Data Connector into the Lithops framework.

