

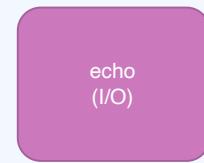
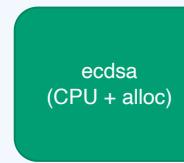
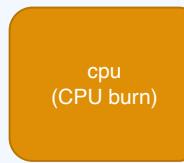
Benchmark Architecture - Overhead Measurement Strategy

Pure Workloads (Baseline)

Benchmark: View (BenchmarkECDSASign, etc.)
Measures: Raw workload TPS without any overhead

Workload Characteristics:

ecdsa: CPU + heavy allocations cpu: Pure CPU cycles



Add gRPC Stack

Workloads + gRPC Stack

Benchmarks: BenchmarkGRPCBaseline, BenchmarkGRPCImpl, BenchmarkRemote
Measures: gRPC overhead (serialization, RPC, network)

Local (Baseline gRPC)
Go microbenchmark

Local (FSC gRPC Impl)
Go microbenchmark

Remote (Client-Server)
Network overhead

All workloads (noop, cpu, ecdsa, echo) invoked via gRPC client

Compare: Baseline vs FSC Impl
Measure: gRPC implementation overhead

Compare: Local vs Remote
Measure: Network overhead

Add FSC Node Runtime

Workloads + gRPC + FSC Node Runtime

Benchmarks: BenchmarkAPI, BenchmarkAPIGRPC, BenchmarkAPIGRPCRemote
Measures: FSC node runtime overhead (view execution, session mgmt, identity)

Direct View API (No view factory)
Go microbenchmark

gRPC View API (Local) (with view factory)
Go microbenchmark

gRPC View API (Remote) (Client-Server)
Network overhead

All workloads executed through FSC node runtime (view runtime)

Compare: API vs gRPC
Measure: gRPC overhead in FSC context

Compare: Local vs Remote
Measure: Network + FSC overhead