Lightweight Remote Procedure Call

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LRPC?

- RPC optimized for local communication.
- Why do we want to do local RPC?

Overview

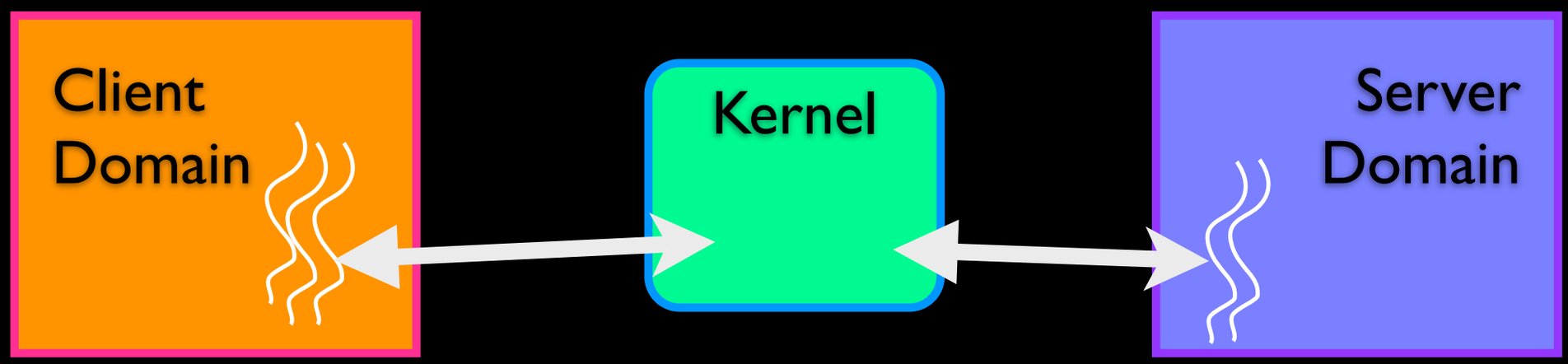
- Why RPC is good.
- Why local RPC is slow.
- How LRPC optimizes RPC.
- Performance of LRPC vs RPC.

RPC: The Good.

- Abstraction
- Encapsulation
- Convenience
- Efficient

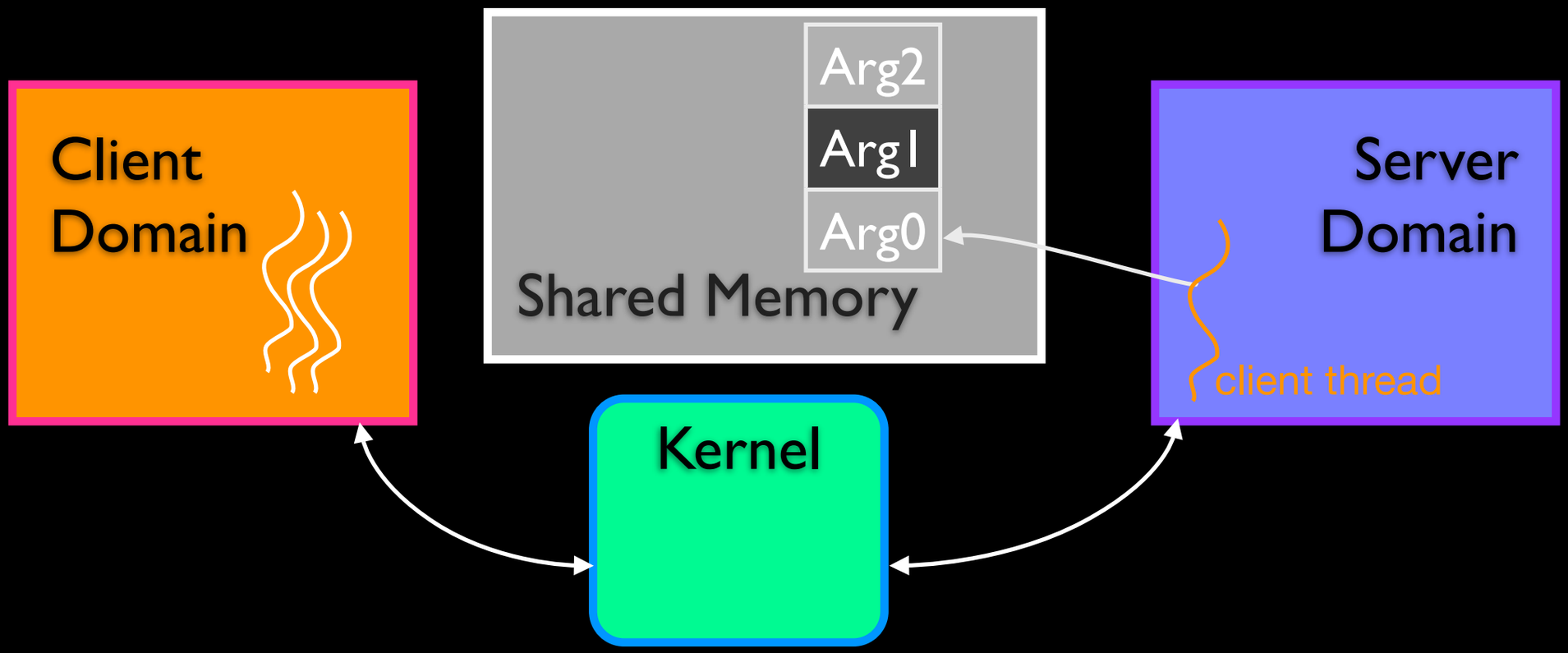
RPC Overhead

- Stubs
- Message copying
- Access validation
- Scheduling
- Context Switching
- Dispatch
- Message transfer



LRPC

- Binding
- Calling
- Stub Generation
- Multiprocessors
- Argument Copying



RPC Overhead

- ✓ Stubs
- ✓ Message copying
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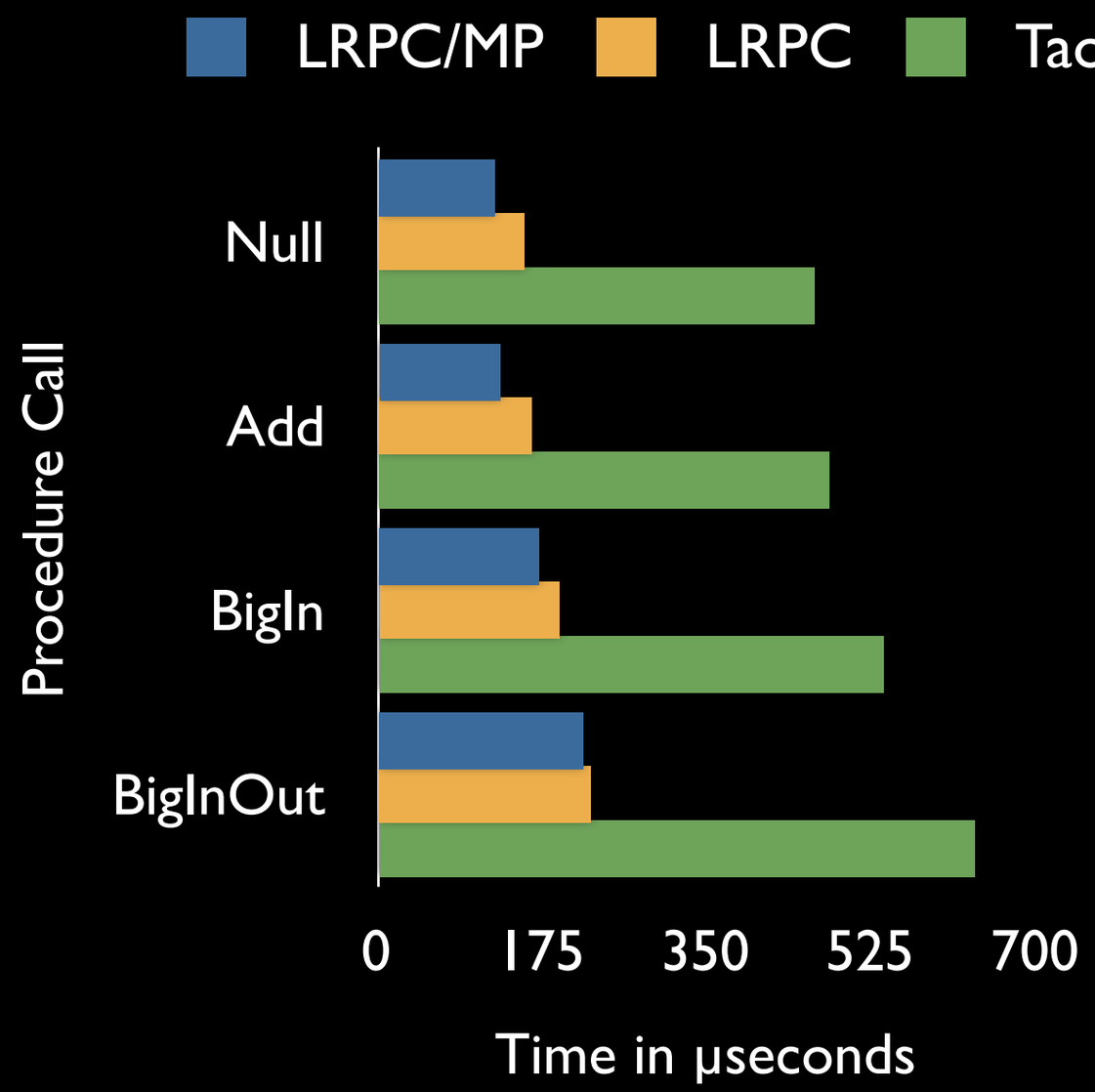
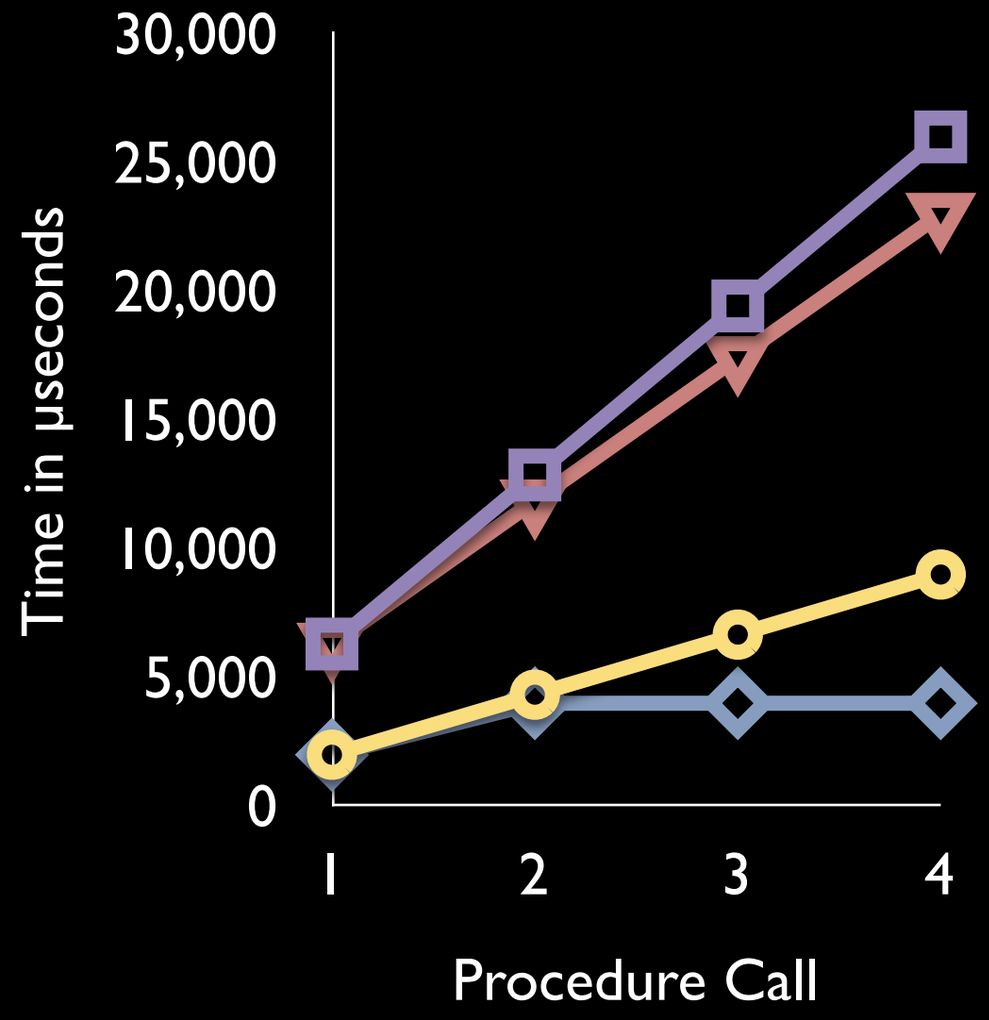
Performance



Performance



Questions?