

Distributed Setting

- Can the **Coordinator** compute a solution without a lot of communication?

$A(1)$



Server 1

$A(2)$



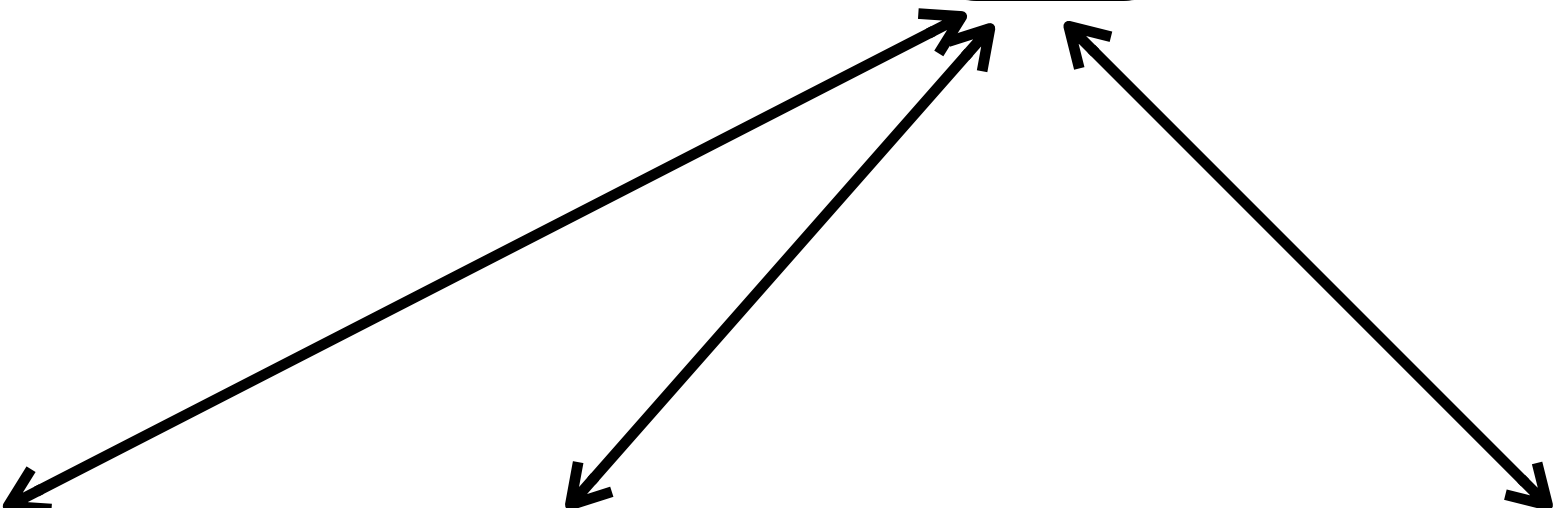
Server 2

$A(s)$



Server s

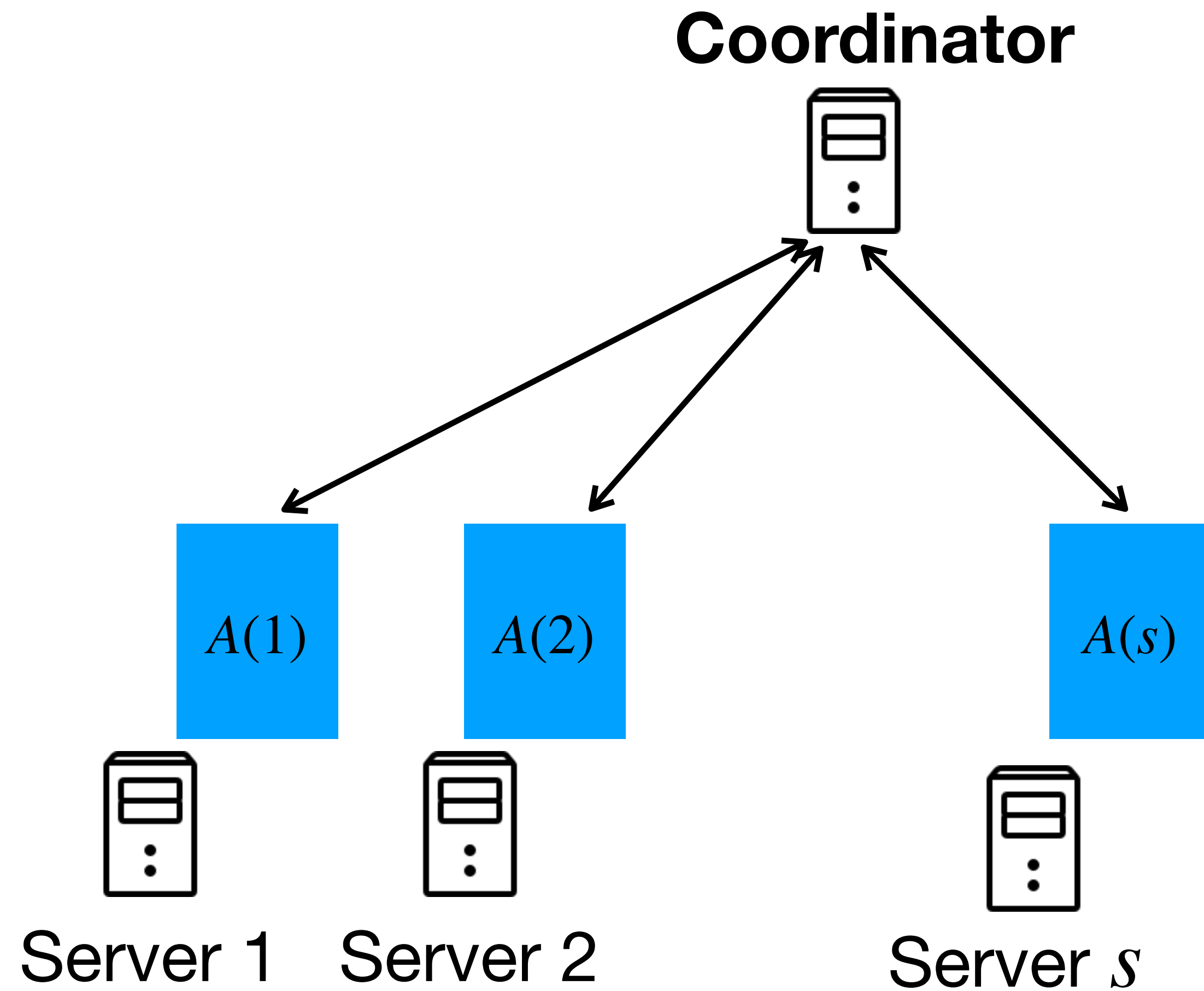
Coordinator

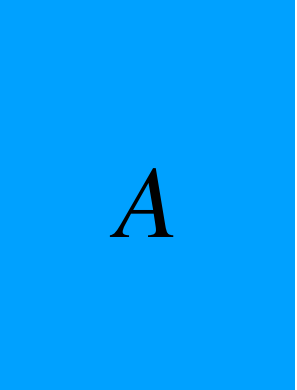


A

$$= A(1) + \cdots + A(s)$$

Distributed Setting




$$A = A(1) + \cdots + A(s)$$

- Can the **Coordinator** compute a solution without a lot of communication?

Challenges

- Classical
 - Algorithms that are fast
- Streaming
 - Algorithms that work in memory-constrained settings
- Distributed
 - Algorithms that use low amount of communication