

# Communication across networks

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# Sockets

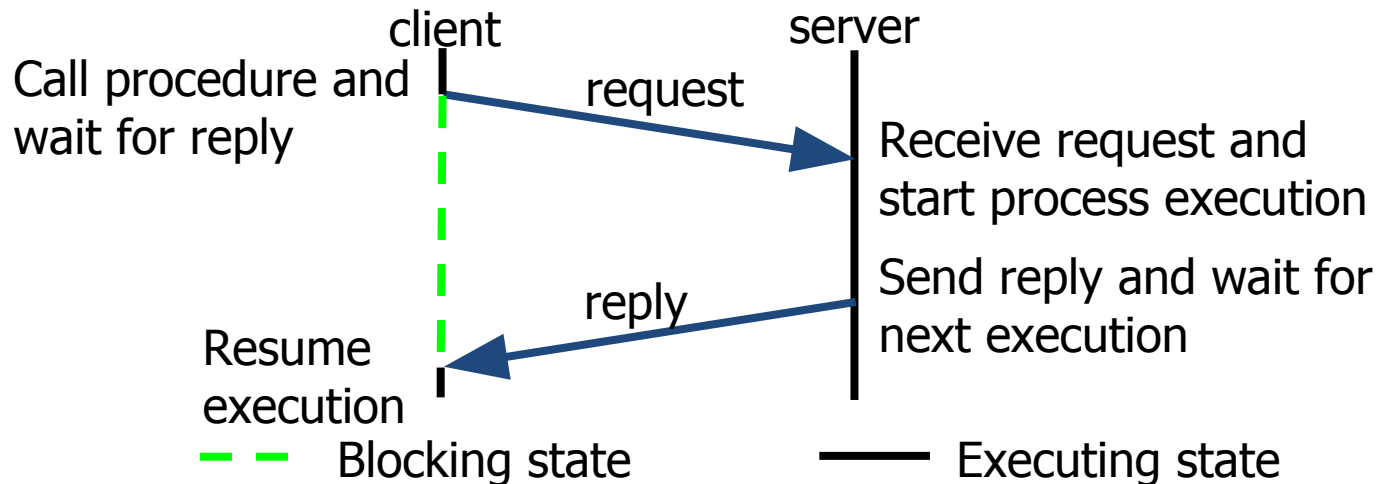
- Purpose
  - Sending/receiving data on network
- Overview
  - Interface between applications and network
  - IP Address, Port #, TCP/UDP
  - Send/receive syntax similar to pipes (Linux)

# Details

- Similar functionality in Windows and Linux/Unix
- Programming Basics
  - Include library
  - Set connection information
  - Create socket
  - Establish connection
  - Send/receive data
- Key options
  - Binding ports
  - Blocking calls
  - TCP/UDP

# Remote Procedure Call (RPC)

- Purpose
  - Most used for distributed systems
  - Making procedure calls on other networked machines
- Easier to implement than socket programming
- Concept:



# Details

- Support built into Windows + Unix/Linux (rpc/rpc.h)
- Address space not shared
  - Data structures must be described with interface definition language for transmission
  - Interface compiler – Handles client/server interactions