



VideoSync

A screen sharing application

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Workflow

Server

1. Take screenshots
2. Compose each group of screenshots to a 1 second video
3. Compress the video (optional)
4. Send video to all clients

Client

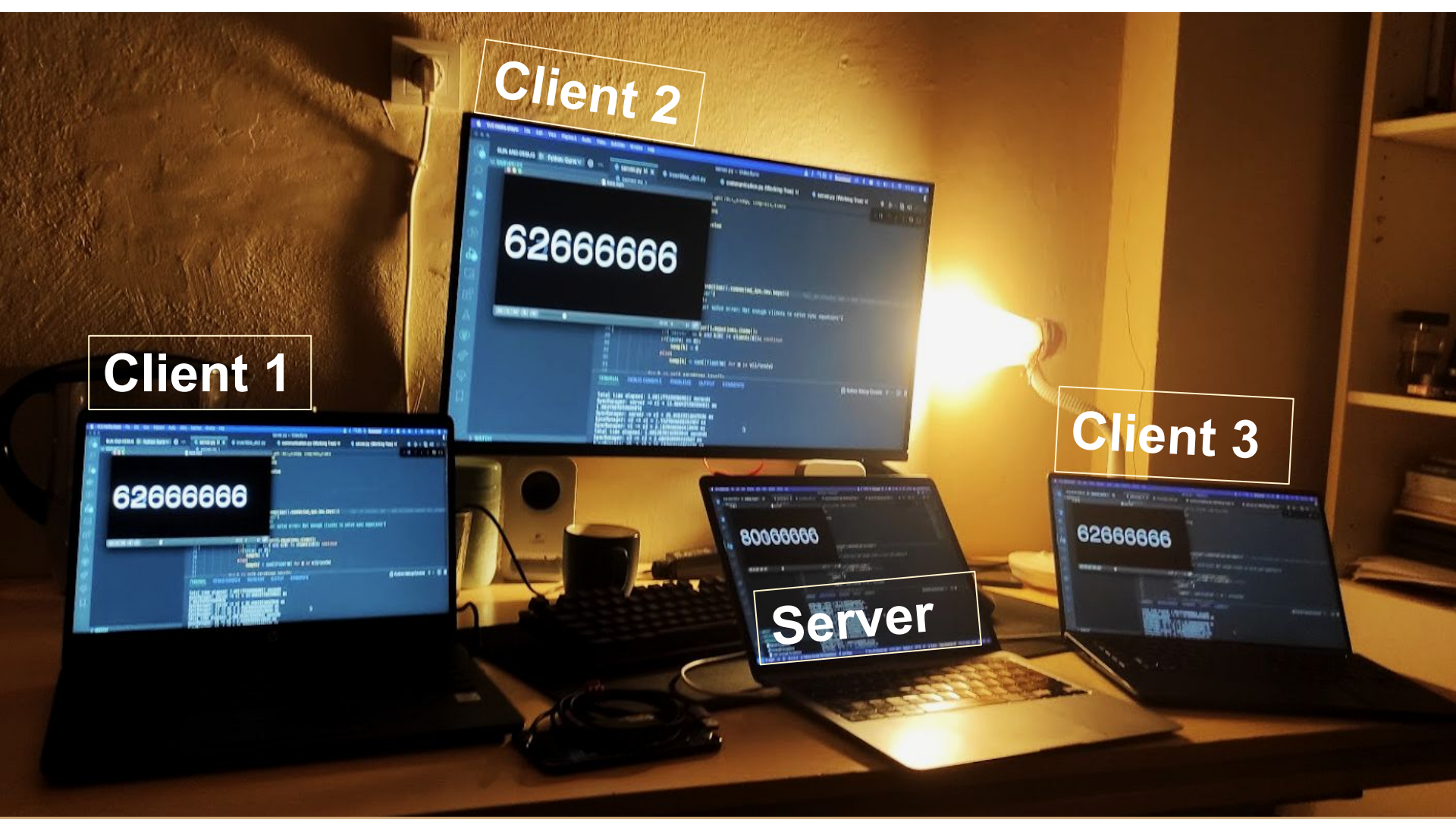
1. Connect to the server
2. Download incoming videos
3. Play videos sequentially

Client 2

Client 1

Client 3

Server



Synchronization

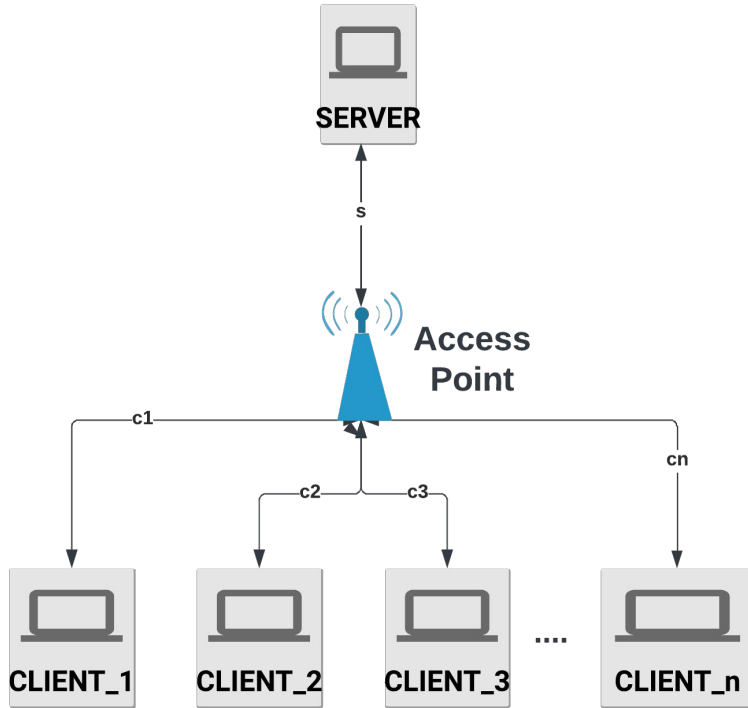
Client

- Measure end to end delay to every other client
 - Send control packets and wait for ACK
 - Measure the interval
 - Repeat 5 times and take average
- Send results to the server

Server

- Measure end to end delay to every client
- Waits for delay data from clients
- Solve the sync equation to find link delays

Architecture



$$c1 + c2 =$$

$$c1 + c3 =$$

...

$$c2 + c3 =$$

...

$$s + c1 =$$

$$s + c2 =$$

...

Find: $s, c1, c2, c3 \dots$

For example:

$$c1 = 5$$

$$c2 = 100$$

$$c3 = 20$$