



WebQoE: Understanding Application performance in WiFi networks

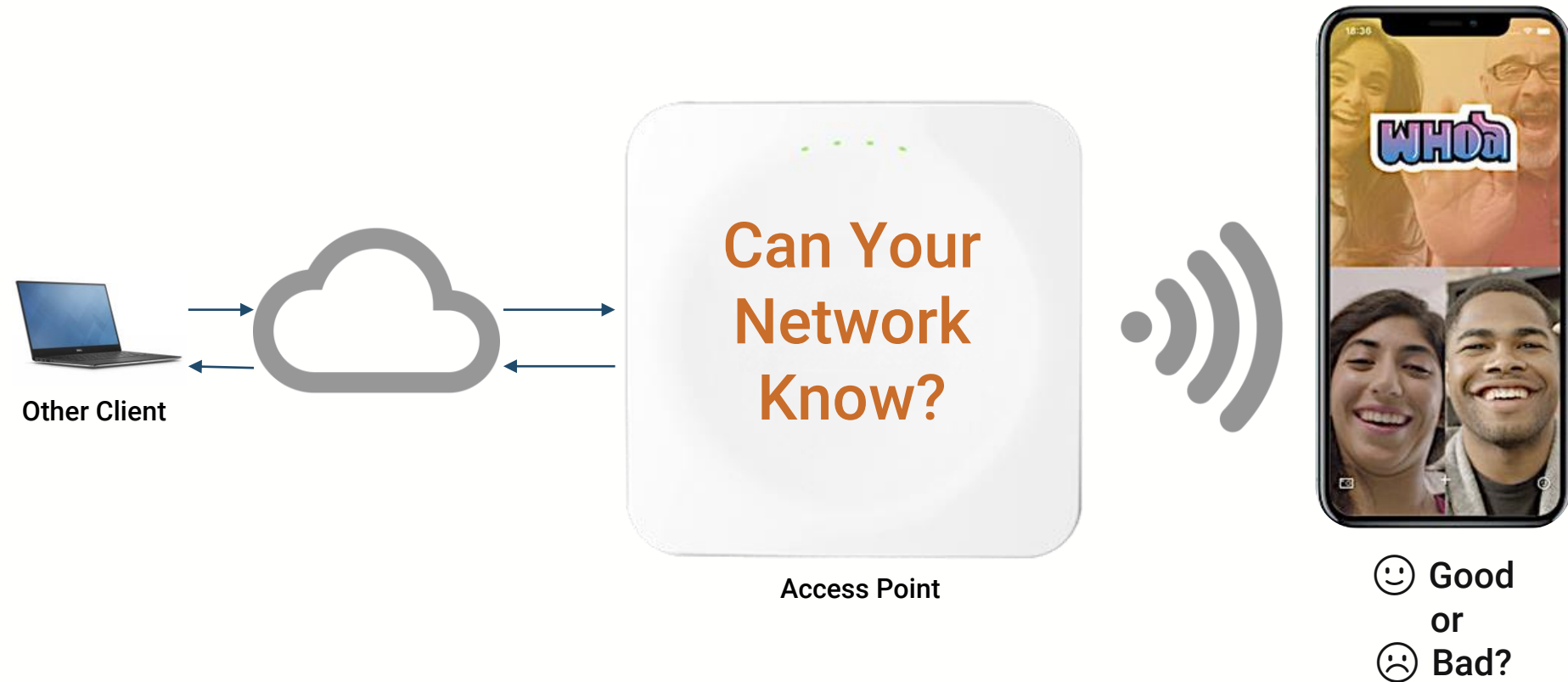
#WiFi-KS, 2021

Rikith Reddy

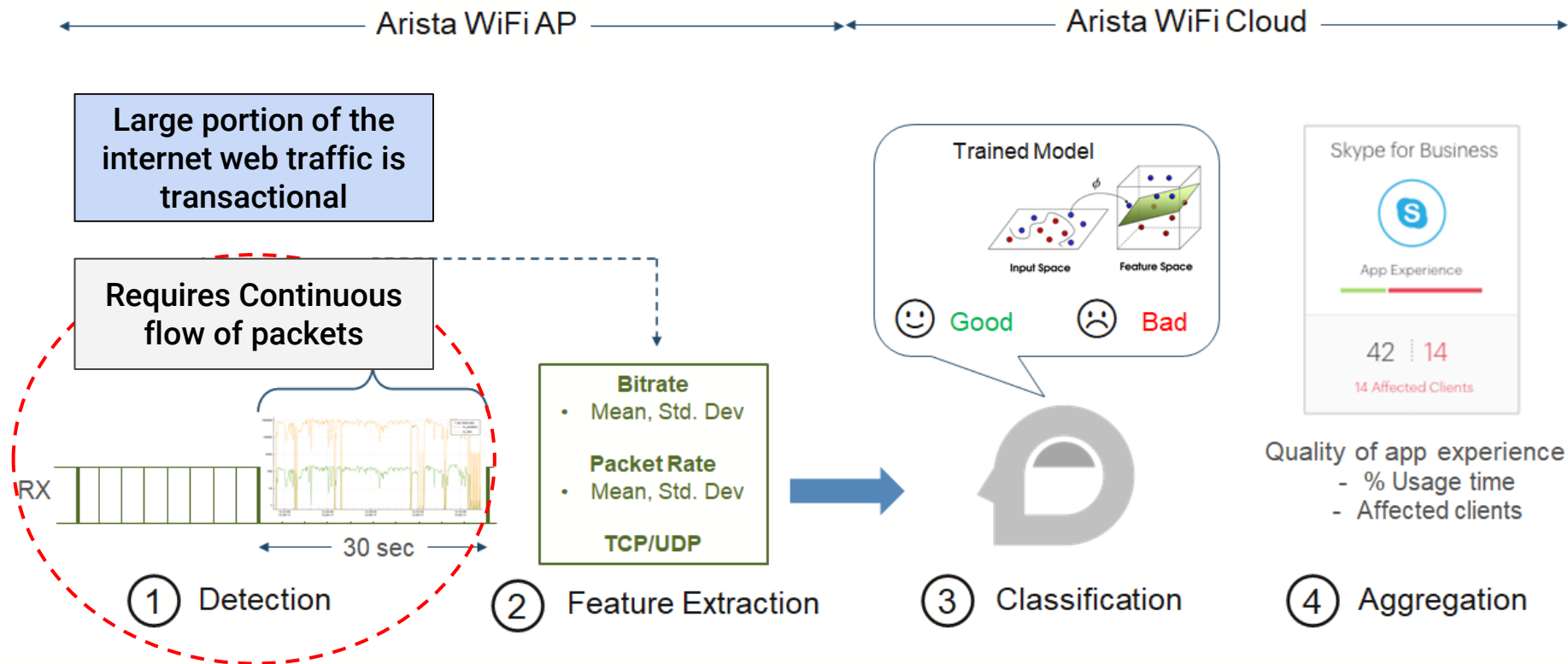
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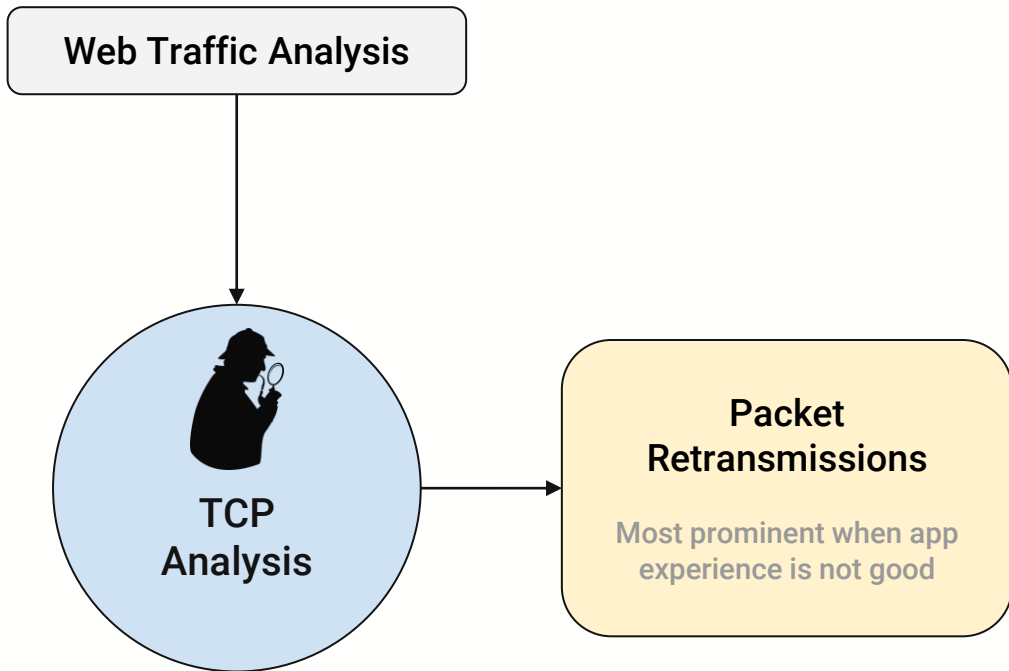
Why Application QoE Important?



Solution For VoIP & Video Conferencing Applications



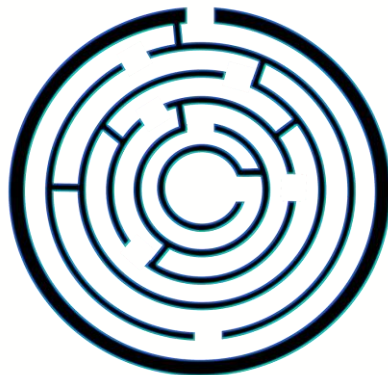
WebQoE: Short Summary



**Detect packet
retransmission events**

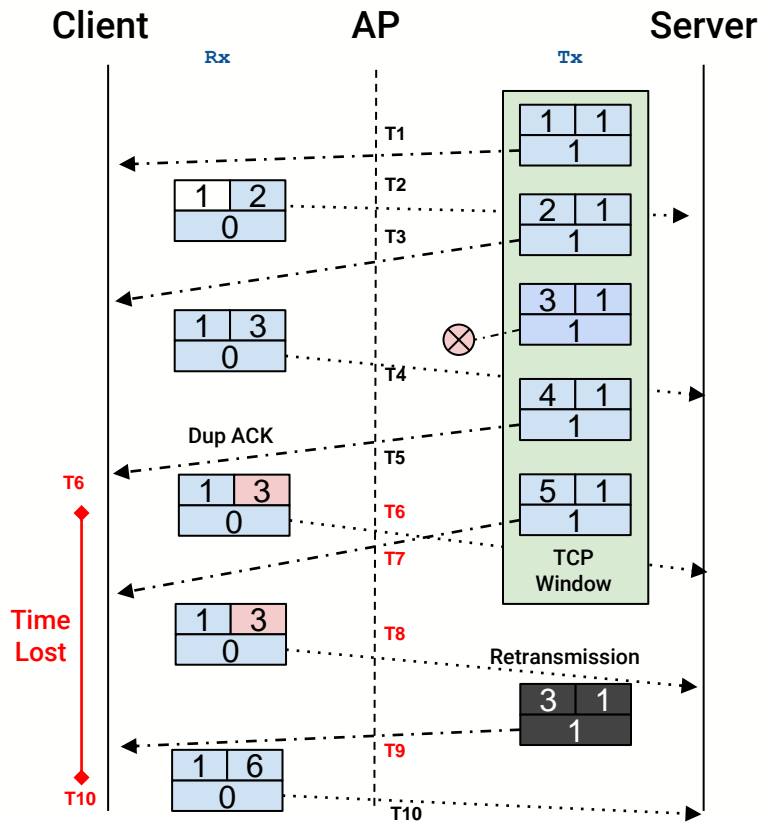
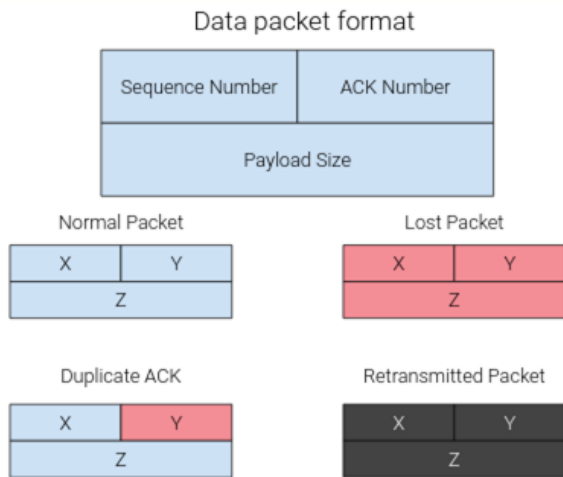
**Simulate TCP state
machine**

**Compute the wait time, due
to packet loss**

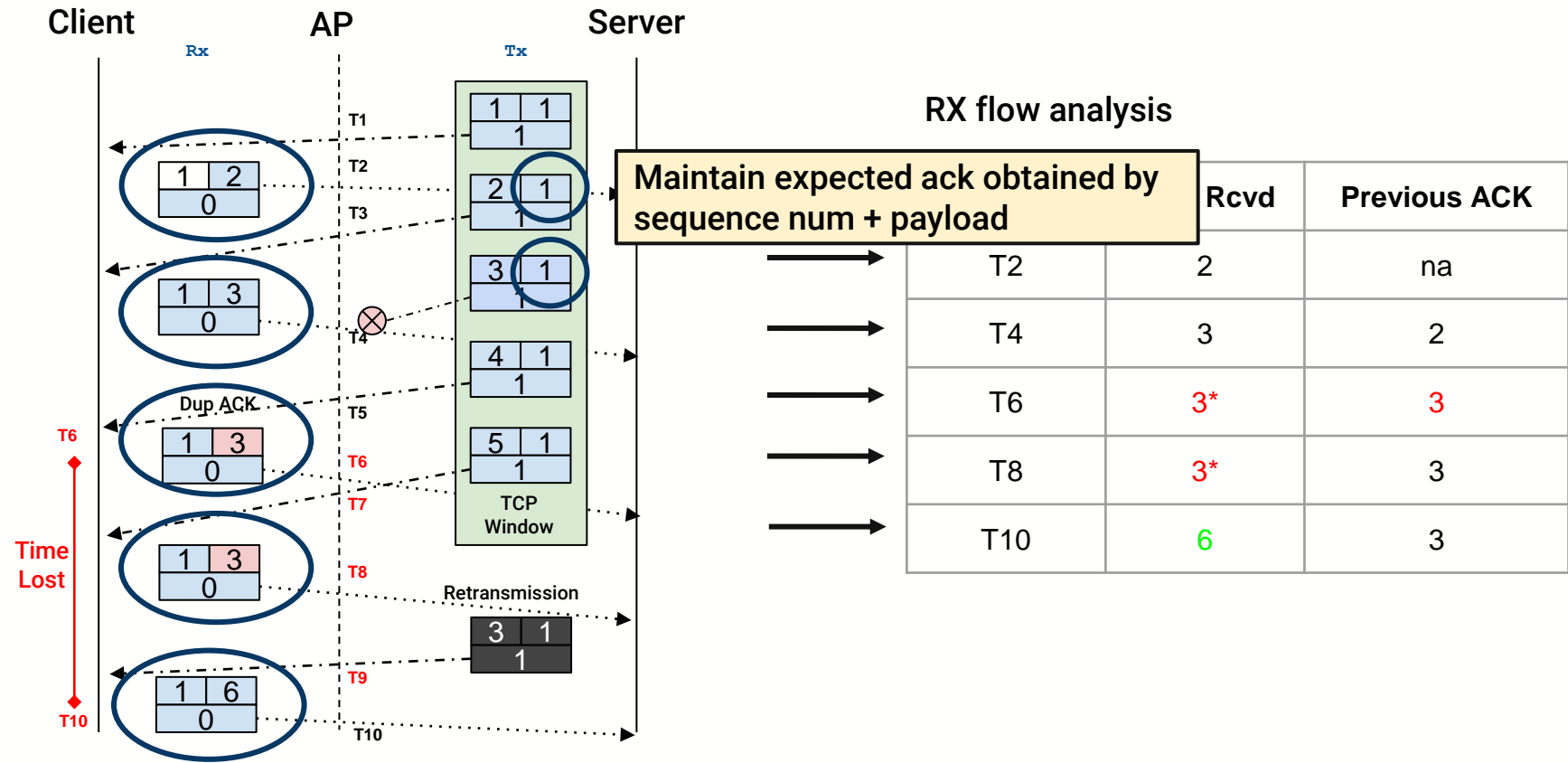


The WebQoE Algorithm

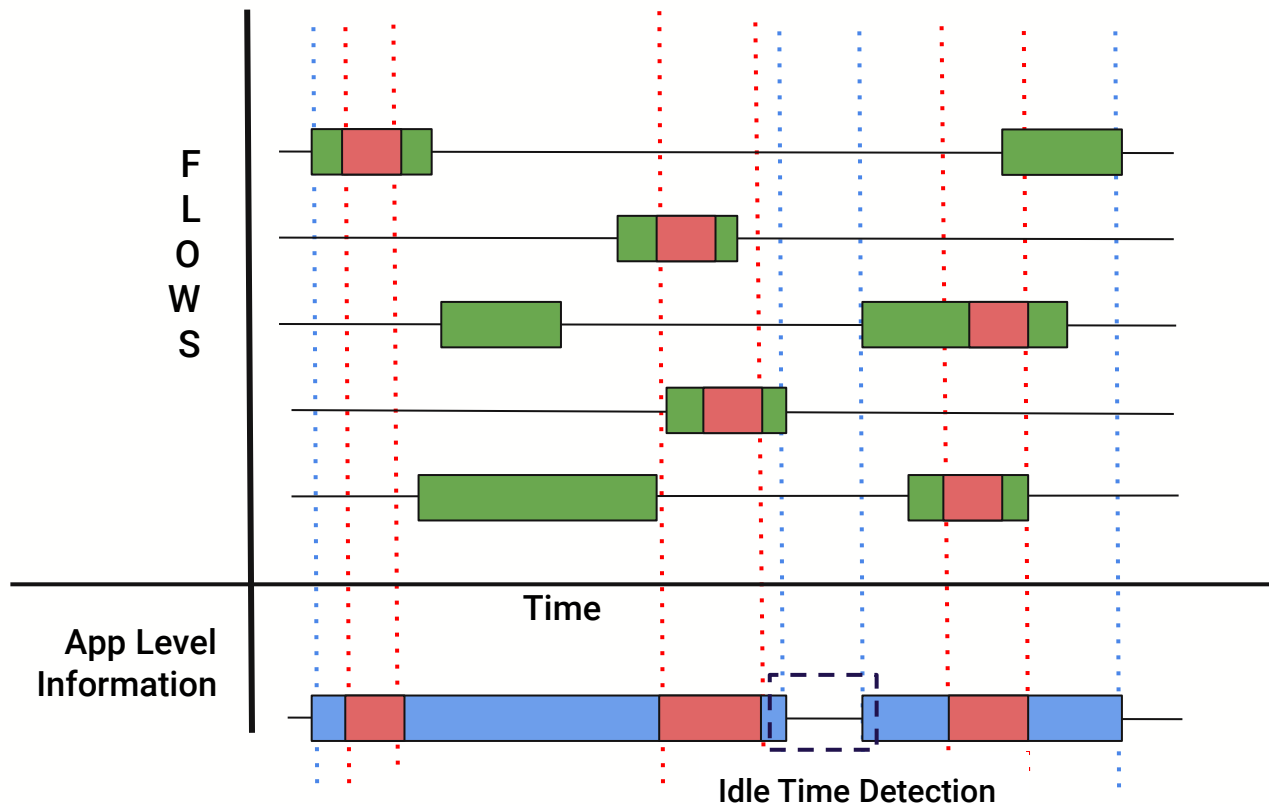
WebQoE Core Logic



State On The AP



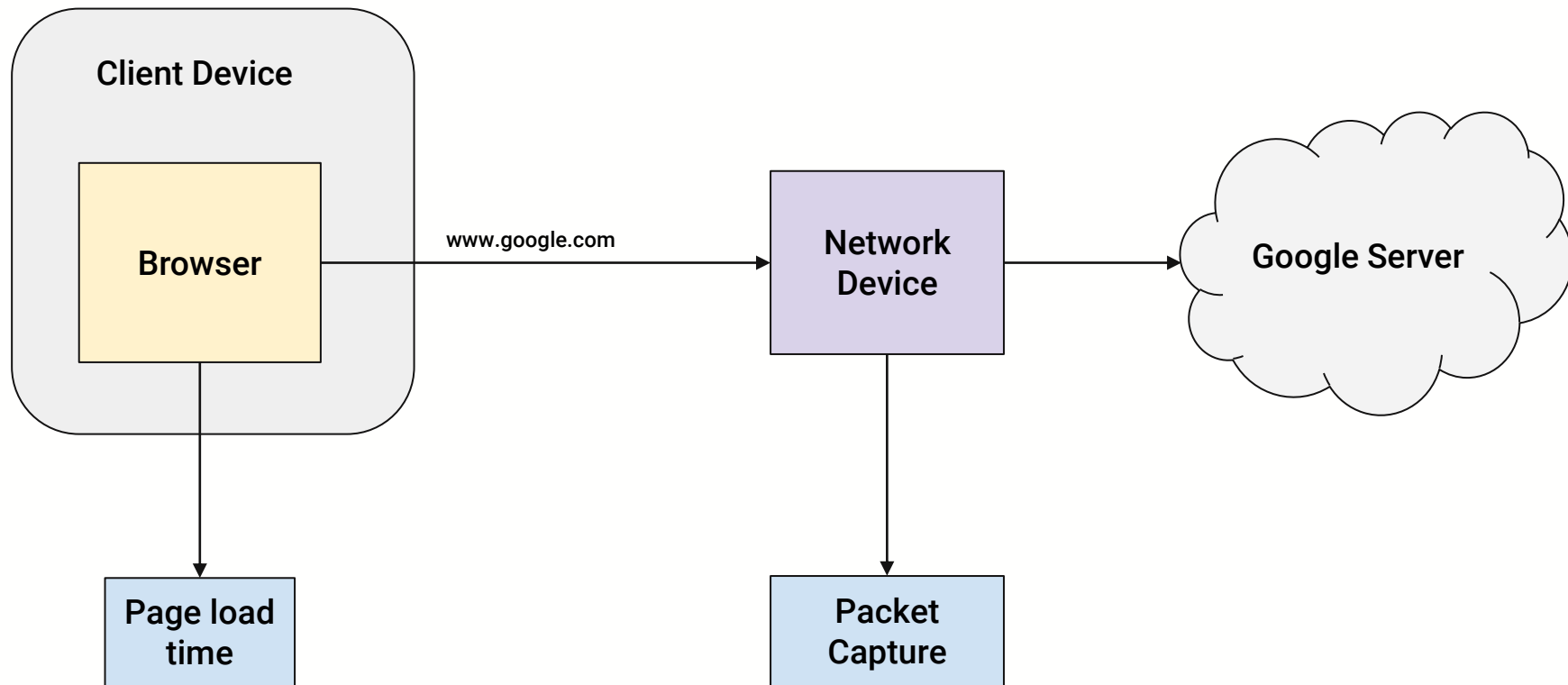
Application Level Inferencing





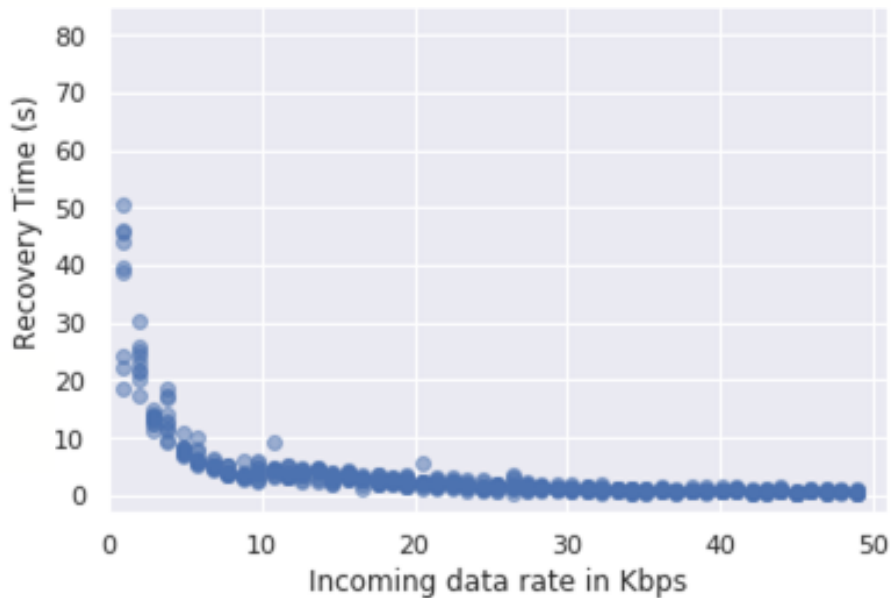
Results

Test Setup

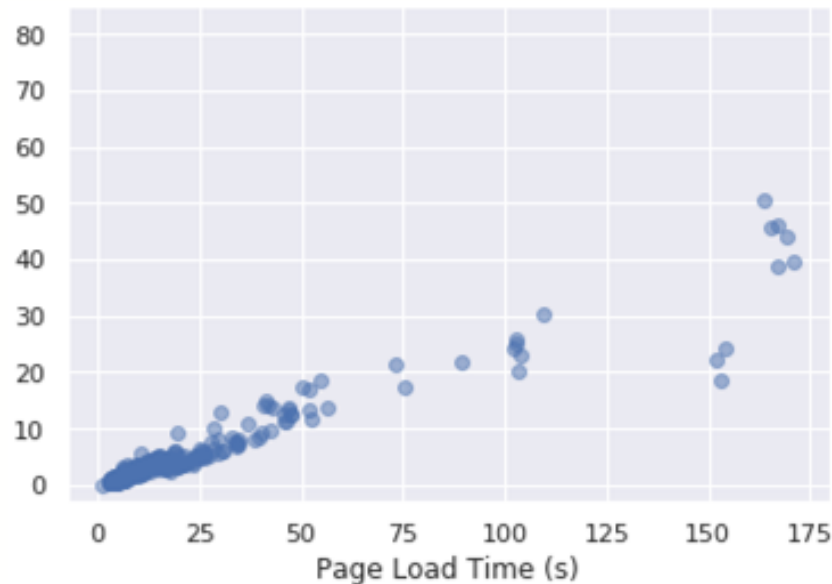


Bandwidth Variation

Recovery Time vs Bandwidth

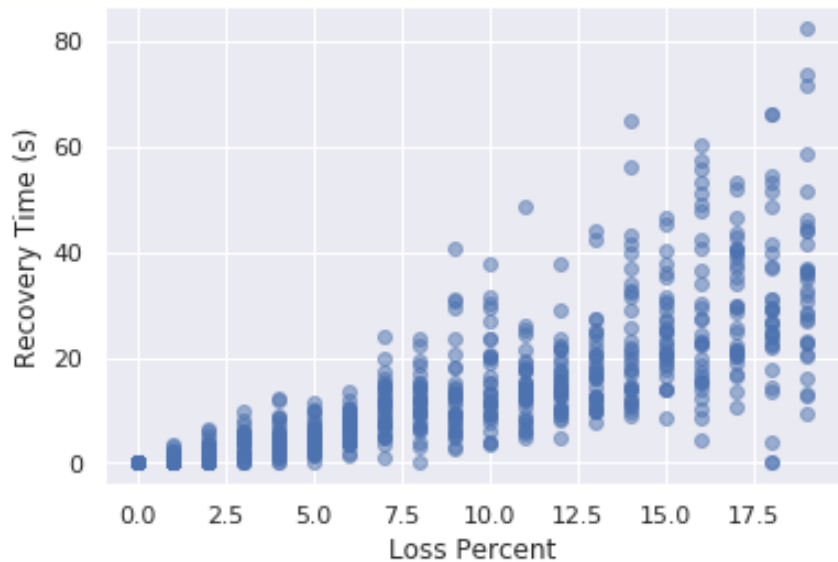


Recovery Time vs Page Load

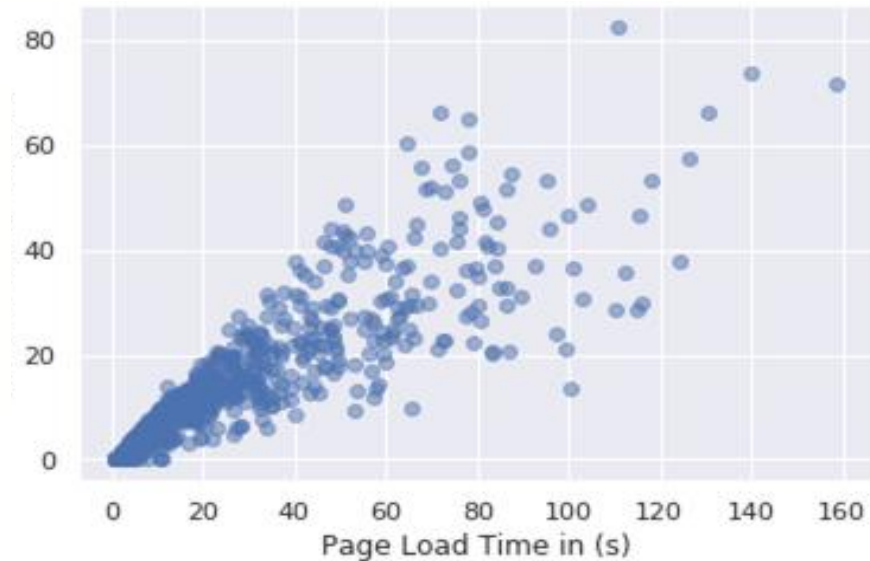


Induced Packet Drops

Recovery Time vs Packet Loss

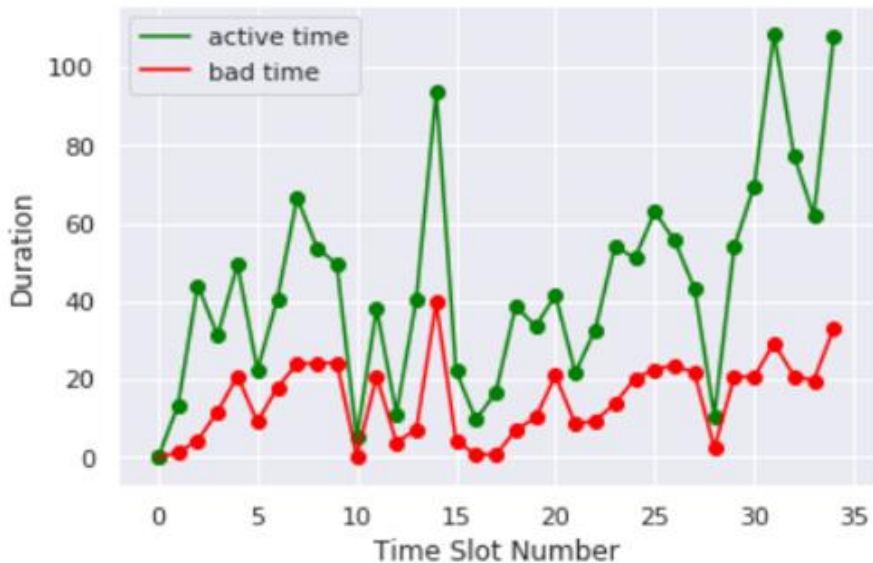


Recovery Time vs Page Load

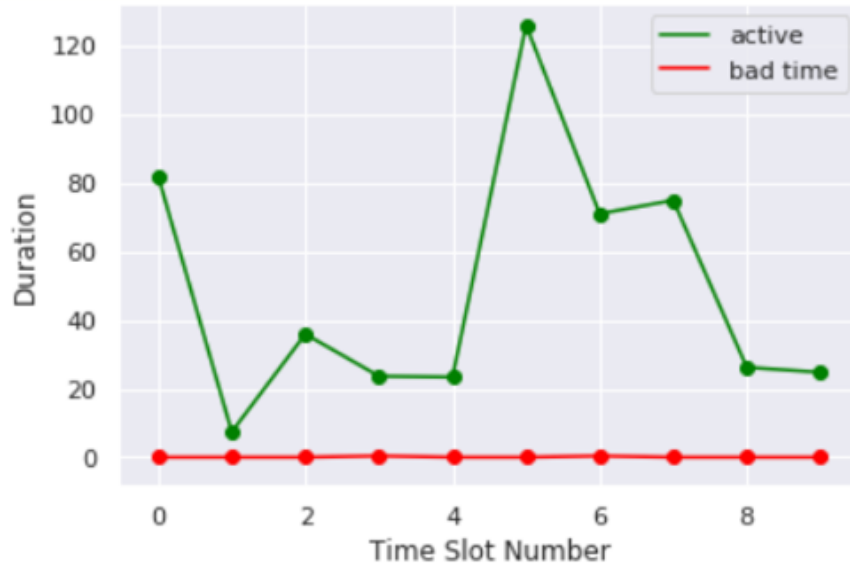


Performance

Recovery Time In A Bad Network

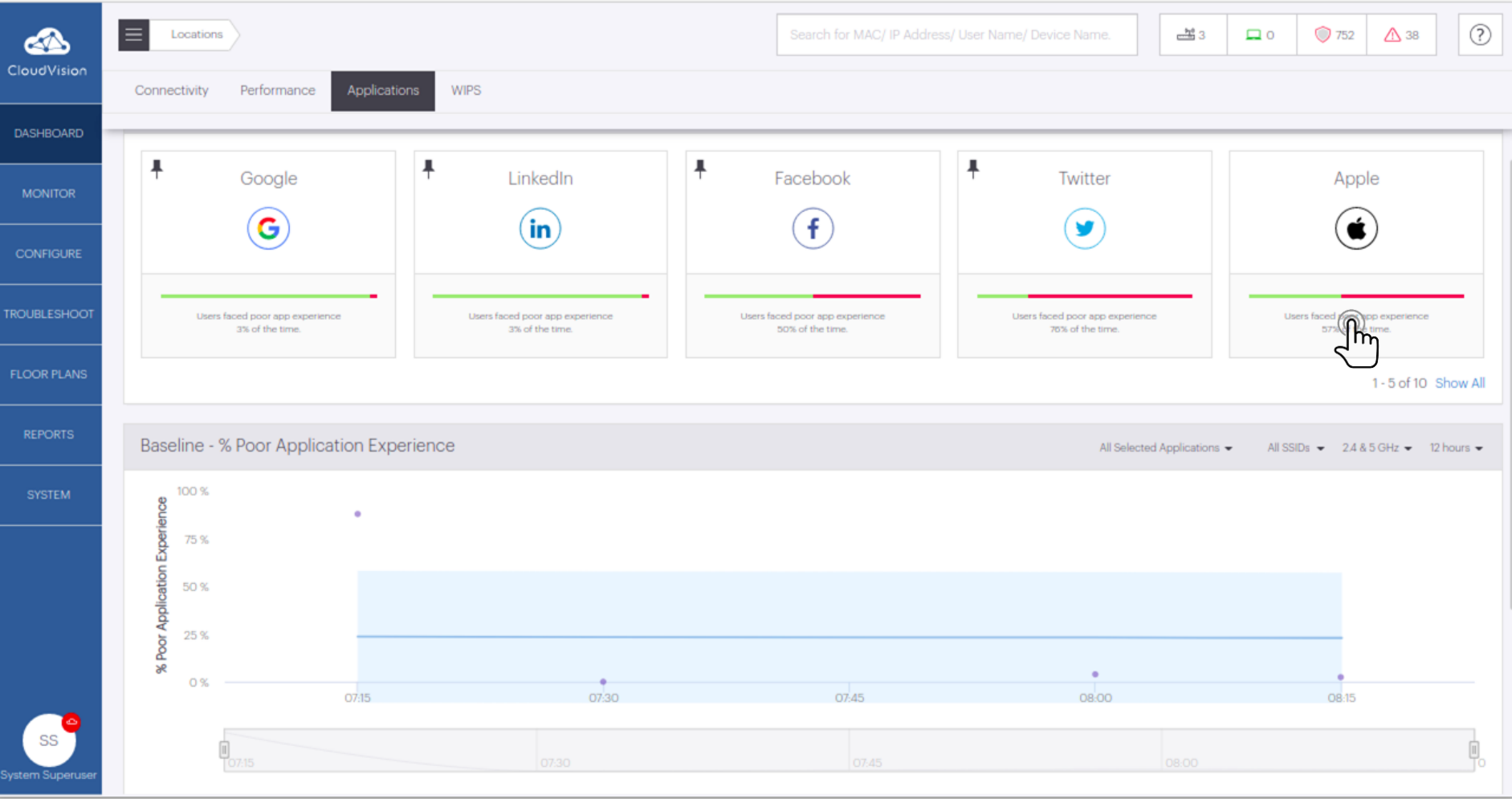


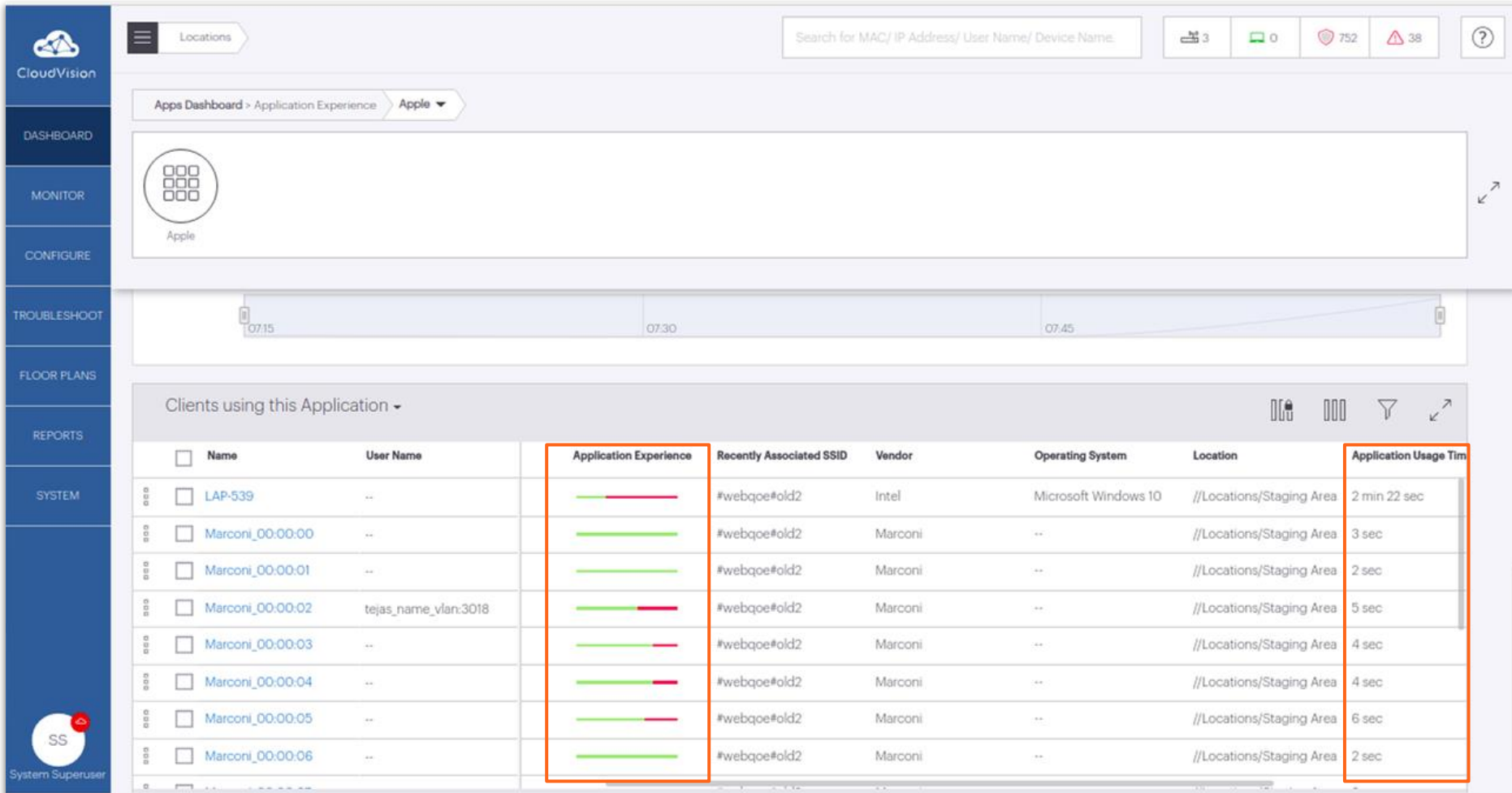
Recovery Time In A Good Network





WebQoE In Action





Thanks!

Questions?



That's all Folks!