

# Super Bowl LIX Streaming Insights

How Fox Delivered Unprecedented Scale,  
Low Latency and Exceptional Quality

**Mayur Srinivasan**

SVP, Digital Video Platform Team @ FOX

**FOX**



A blue-tinted promotional graphic for Super Bowl LVII. In the center, two football players are shown in action, one in a white jersey and one in a dark jersey. They are positioned behind a large, ornate trophy that features the Super Bowl logo and the text 'SUPER BOWL'. The background is filled with confetti and a stylized cityscape. The overall tone is celebratory and high-tech.

**24M**

Unique Viewers

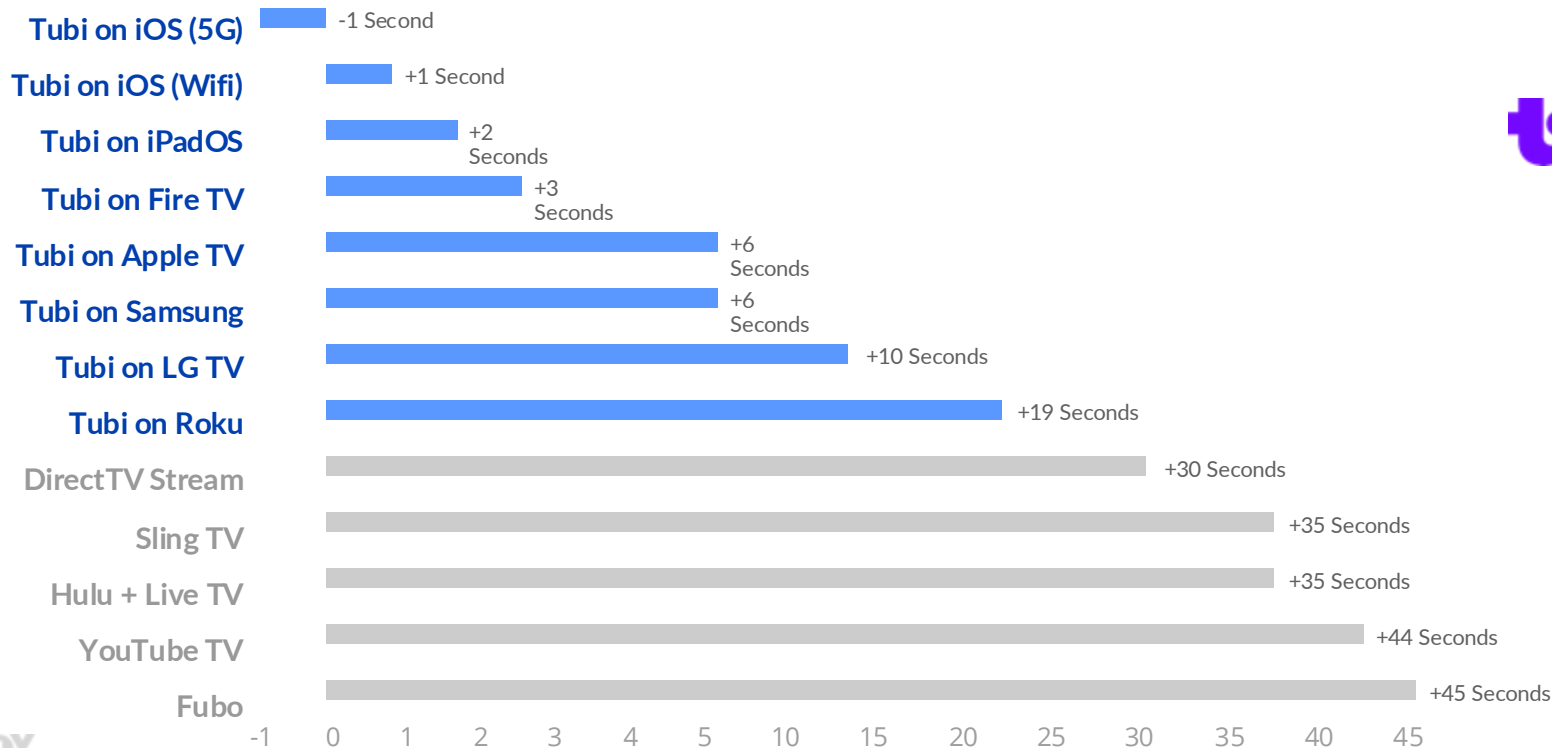
**15.5M**

Peak Concurrents

**1 SEC**

Below OTA Latency

# Faster than Broadcast



tubi

DIRECTV  
stream

sling

hulu

YouTubeTV

fuboTV

FOX

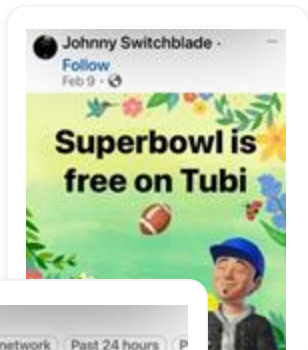
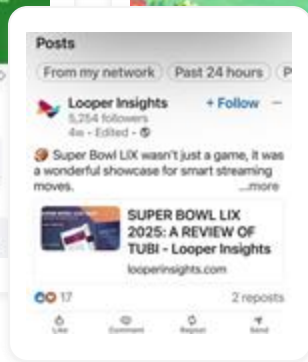
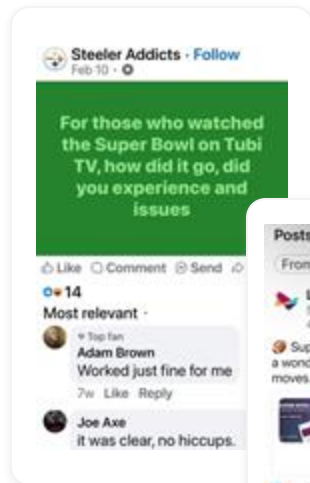
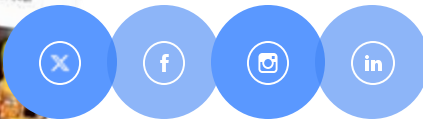
# Super Bowl Stats



|                             | 2020    | 2023    | 2025     |
|-----------------------------|---------|---------|----------|
| <b>Peak Concurrents</b>     | 3.4M    | 7.0M    | 15.5M    |
| <b>CDN Capacity</b>         | 15 tbps | 41 tbps | 135 tbps |
| <b>Rebuffering Rate</b>     | 1%      | 0.8%    | 0.5%     |
| <b>Video Start Up Times</b> | >5s     | >3s     | >1s      |
| <b>4K Viewership</b>        | 14%     | 20%     | 28%      |

Touchdown!

# Everyone is Talking



Surprise!

# **Tubi Will Host Super Bowl**





# Project Sea Lion

## Top 5 FAQs

1. Why "Sea Lion?" Fox uses ocean life as project code names.
2. Will the Super Bowl be on a linear channel? No, it will be a standalone live stream (not on the EPG).
3. Is the Tubi player used? No, we have integrated the Fox video player framework into the Tubi app and work with Fox video infrastructure.
4. Is Tubi inserting ads? No, ads are part of the Fox stream
5. Will we have the halftime show? Yes!

## Guiding Themes

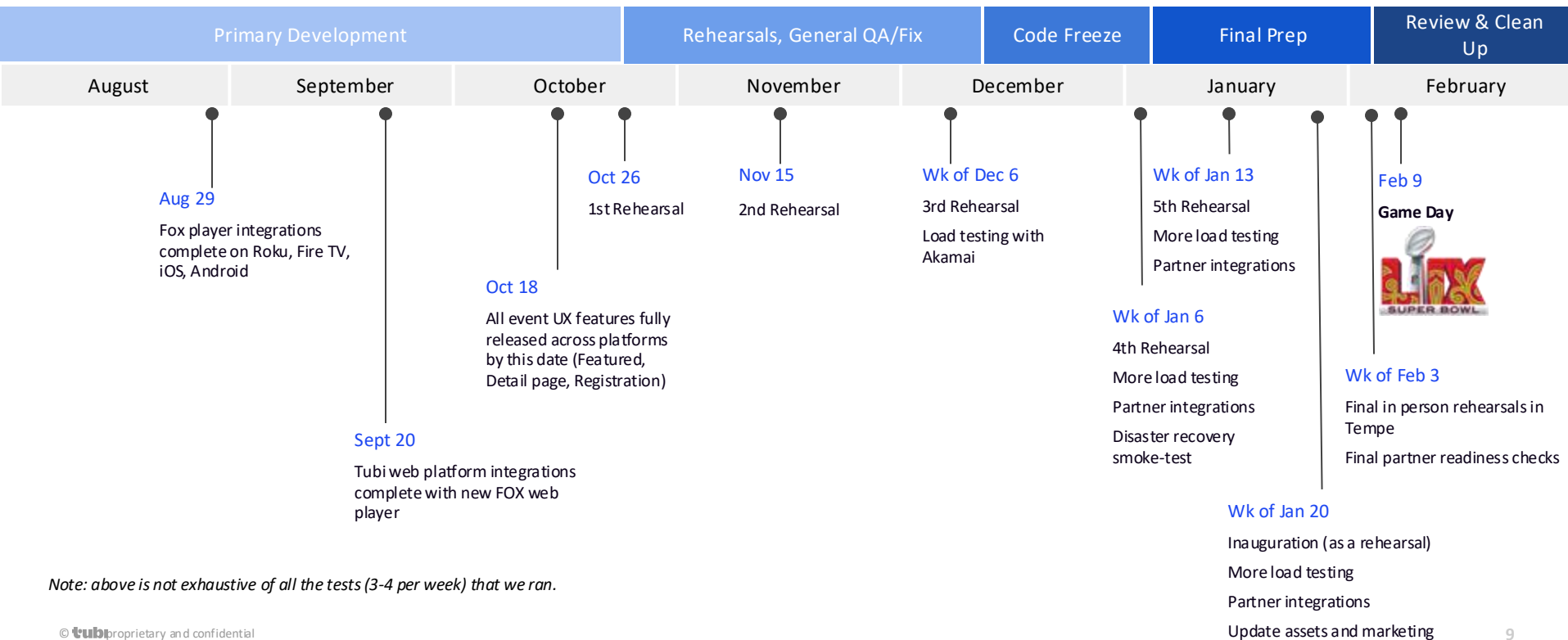
1. Reliability. Ensure tens of millions of users can find and watch the game.
2. Viewer Experience. Provide a delightful experience and positive impression of Tubi as an entertainment platform.
3. Drive Awareness and Long-term Value. Acquire and retain users as part of the game.
4. Operational Readiness. Prepare for conducting a live event at Super Bowl scale.

# New Challenges

| # | Key Component                              | Description  |
|---|--|--|
| 1 | Integrate against Tubi                     | Tubi was brand new to delivering large scale live events at scale                |
| 2 | Register millions of new Tubi uses         | Help Tubi scale their services to register tens of millions of new users         |
| 3 | 29 different connected client integrations | Help Tubi clients integrate Fox Video Player across Android, Apple, Web and Roku |
| 4 | Collective operational excellence          | Live streaming @ scale is hard!!! Zero failures tolerated, no pressure!!         |



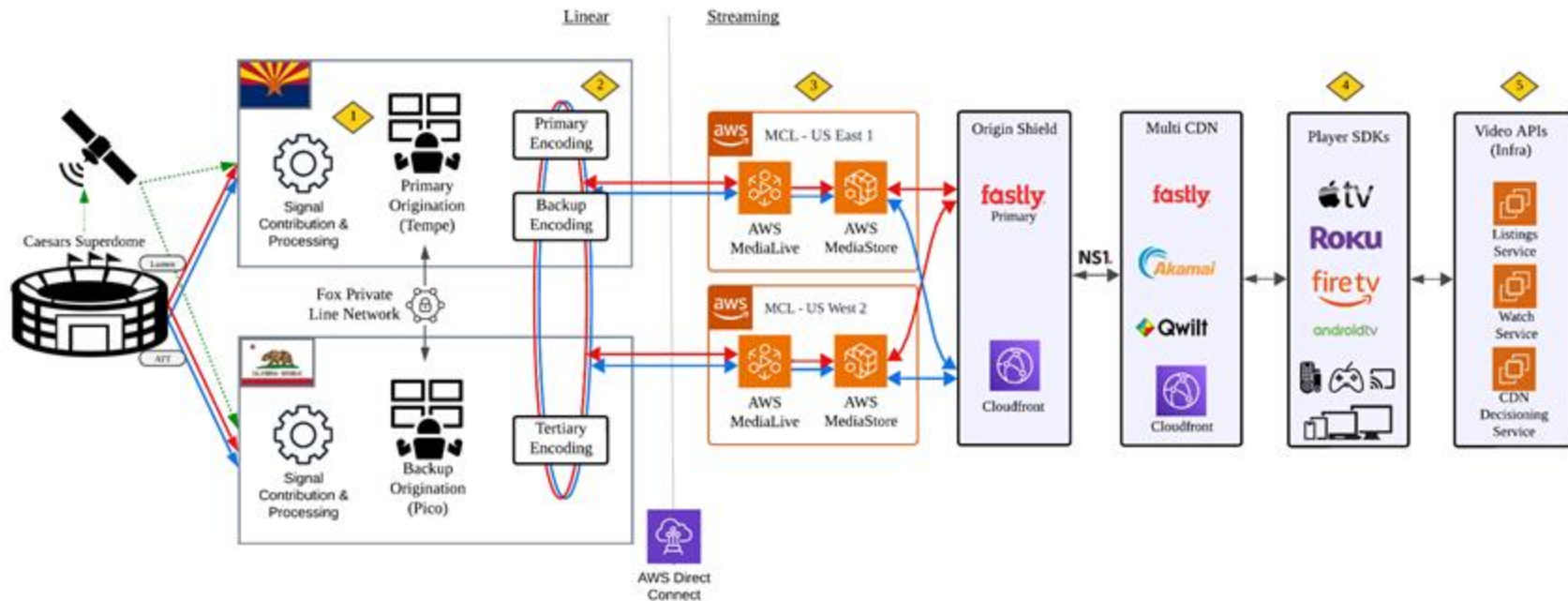
# Tech Readiness Milestones



Super Bowl

**Let's Agree on  
the Tech**

# Video Workflow Architecture



# Top 10 Eng Investments

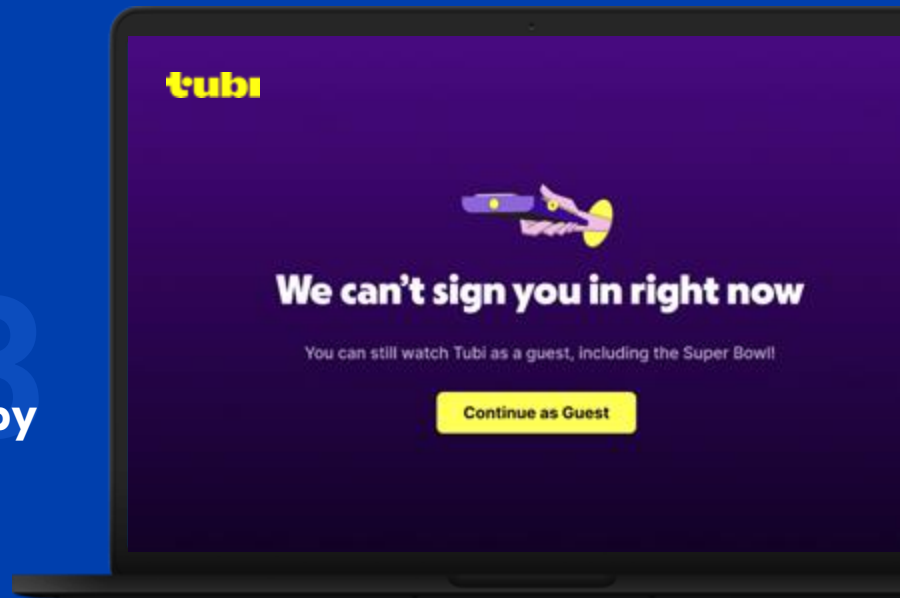
| #  | Key Components                             | Description  |
|----|--|--|
| 1  | "Super Bowl" Mode                          | Pared down, extremely scalable, cached version of Tubi for Super Bowl day                                |
| 2  | Smart Multi CDN Routing                    | Ability to fine grain control % traffic split for every CDN  |
| 3  | Fox Live Player / Tempe Integration        | Integrating Fox Live Player / Tempe live streaming infrastructure into Tubi                              |
| 4  | Viewer Experience (Pre/During/Post)        | Viewer experiences (inc. user acq flows) pre/during/post Super Bowl                                      |
| 5  | CDN Redundancy (small object)              | Adding an extra CDN (Akamai) with failover ability in the event of latency/outage                        |
| 6  | CDN Redundancy (large object)              | Brought in a new CDN vendor (Qwilt) as we lost two (Edgecast and Limelight)                              |
| 7  | Disaster Recovery                          | A last resort remote config that lets Tubi fall back to <u>only</u> Super Bowl if disaster occurs        |
| 8  | Analytics Instrumentation                  | Real time scalable analytics for Super Bowl monitoring (Momento powered beaconing, Hyrolix for CDN logs) |
| 9  | Other Infra Scaling & Security             | 200K RPS min SLA across all APIs in critical path  |
| 10 | Load Testing/Chaos Testing/Live Rehearsals | 10+ dress rehearsals in production to achieve optimal operational excellence                             |

# Three Prong Approach

**01.**  
**Massively  
Scale Up**

**02.**  
**Disaster Recovery  
Switches**

**03.**  
**Resilient by  
Default**

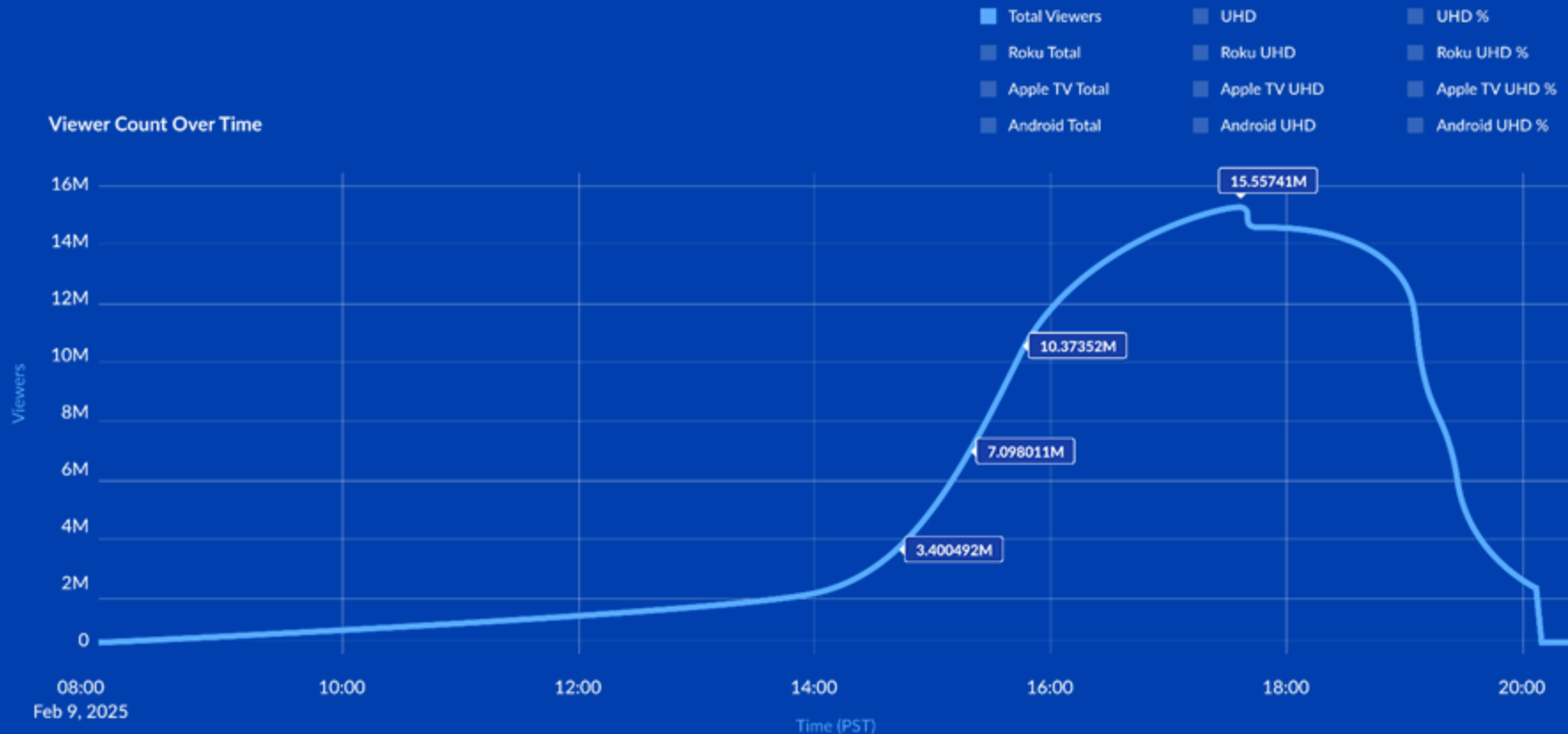


Super Bowl

**D-Day**

# Streaming Analytics

Viewer Count Over Time





# Top 5 “Senses Heightened” Moments on Day Of

| # | Key Component                     | Description   |
|---|-----------------------------------|---|
| 1 | Way before kickoff (2.37 pm PT)   | Hit the first high watermark of 3.4 Mil concurrents (Superbowl 2020 peak) way early |
| 2 | 20 mins before kickoff (T)        | Hit 7 Mil peak concurrents (Superbowl 2023 peak)                                    |
| 3 | T-20 to T+ 20                     | Audience grew rapidly from 7Mil - 12 Mil  |
| 4 | Half time show (around 5.39pm PT) | Audience peaked at 15.56 Mil concurrents  |
| 5 | Real time CDN Routing decisions   | Lots of real time dynamic routing decisions had to be taken                         |

# Hope This Helps You

| # | Key Component   | Description   |
|---|---|---|
| 1 | Simplicity  | Err on the side of simplifying components on the critical path.   |
| 2 | Disable bells and whistles                              | Disable retries, simplify logic in critical path APIs to be bare bones  |
| 3 | Heavily cache, avoid dynamic decisions                  | Use multi CDN for small object delivery too   |
| 4 | Be bold, load test / scenario test / chaos test in prod | You want to be testing prod infra intended for day of   |
| 5 | Time yourself on disaster scenarios                     | Operational excellence should be muscle memory, run books are great, but you won't have time to go read a manual when things go south |





**Thank You**