Both cord cutters and those that never had the cord are consuming streaming content on their big, high resolution TVs now more than ever.

According to Comscore, OTT viewing has a reach of “66% of homes with wifi.” Since it’s more than just occasional viewing on a mobile device, tablet or laptop, high quality streams aren’t just a nice-to-have anymore — they’re the norm. “OTT is projected to reach $332.52 billion by 2025, growing at a CAGR of 16.7% from 2018 to 2025”, according to a recent report published by Allied Market Research. Viewers expect their OTT experience to be just as good if not better than cable TV or free-to-air broadcast. Just look at this year’s Super Bowl, a large live-streamed event with 3.4 million viewers. Events like football, soccer, rugby and cricket can be a boon or a bust for those planning them. Inplayer says “OTT video lowers the barrier to entry to near-zero and let’s geographically dispersed fans unify in one place.” But having the right live streaming event strategy in place can get you the right kind of attention.

When planning a high profile, large live streaming event like a sporting event, an e-sporting event, corporate announcement, or a political event, you want to ensure that it gets delivered to your audience without excessive latency, quality degradation or interruption. Delivering a poor experience can lead to upset customers, advertisers asking for credits, in some cases refunds and potential social media backlash. Some teams spend up to a year or more in the planning of the event, making it even more important that it goes off as smoothly as possible. Here are some tips to think about as you are planning and designing your delivery network.

**How to prepare for your live streaming event**

Traffic spikes can strain your company’s infrastructure and bring to light problems that aren’t present under a typical load. The first step to ensuring a high quality live streaming experience is to conduct an assessment of what you have and what you need — identify the origins and edge clouds who could play a part in delivery and review ways to simplify your infrastructure. Leading edge cloud providers may help you reduce the volume of requests that impact your origins and reduce the risk of overburdening your origin environments.
Thundering herds should be expected and planned for. With the high quality of experience (QoE) expectations, no content owner can afford not to have the right plan in place. Here are the crucial steps to take in the planning stages of your event. According to the American Express 2017 Customer Service Barometer, “33% of Americans say they’ll consider switching companies after just a single instance of poor service.”

Conduct an initial tech stack assessment.
Take stock of what you have and what you need. For example:

- What do you have currently in your end-to-end technology stack?
- Can you identify the capacity limitations of the components in your stack?
- Do your vendors require a heads up or capacity reservations for big spikes in traffic?
- Where are the gaps in your current technology stack?
- Who are your supporting personnel and vendors?
- Will your vendors provide real-time support during the event?
- What analytics capabilities do you have ready?

Scope your event.
Put together a best case and most likely numbers for your event:

- What is the expected number of peak and concurrent viewers?
  - What is the expected geographic distribution of your users?
  - Do you expect waves of users coming and going or staying on for most of the event?
- What will your Bandwidth and Request volume expectations be based on
  - Highest resolution?
  - Bitrates?
  - Segment length?
- What is your event duration?
- Create contact lists and escalation points.
- What happens if the event is more successful than you expect?
- What are the limitations of the infrastructure and what is the backup plan?
Once your delivery pipeline is set up, test a config change to see how long it takes to take effect and test your backup plans as well. This will ensure that it works if needed during the live event. You’ll also want to establish a multi-vendor communication plan for how you’ll relay information to the various vendors during the live event.

**Move everything you can to the edge.**
You’ll improve your overall user experience by having everything closer to your viewers — not to mention saving money on origin trips. This includes Geofencing, VPN/Proxy detection, Device Detection/device specific logic, authorization, DDoS, TLS and more. Look for solutions that complement your existing infrastructure investments.

**Decide on the metrics that matter during the event.**
You want to know more than just the number of eyeballs glued to the screen. In order to troubleshoot effectively or optimize performance, you need insightful and actionable data — metrics that allow you to identify problems and understand business metrics of the stream (e.g. the number of concurrent streams, QoS metrics, etc).

Don’t forget about after the event too. What will you want to know then? How will you log during the event? Do your vendors provide you with a detailed report after the event or will you need to do this yourself?

**Empower your team.**
Now is not the time to bottleneck. When troubleshooting on the fly, agility is key. Create onsite decision-making trees and empower those onsite to make decisions. Make sure you have the ability to rollout or roll back configs as needed.

This might go without saying, but ensure you are actually delivering content. And execute on that multi-vendor communication plan you put in place.

Any time sensitive event needs a good backup plan for not only technology, but for people as well.

Plan for kick off meetings, and understand the roles and responsibilities of each individual. Make sure you have a backup person for all critical roles.

**Foolproof your plan, and conduct a dry run.**
Create a team who knows your config and is available to quickly respond during the event. You don’t want to wait on hold or have to go through various tiers of support when every minute counts. Instead, you’ll want both proactive notifications both of everything going smoothly and of problems – complete with context of whether it’s an issue unique to you or of internet weather.

Conduct a full dry run with the technology and the services that you expect
to run with a smaller event prior to your large live streaming event. Make sure this includes all components, like:

- Your delivery pipeline
- Meaningful logging - both for troubleshooting and for post-event measurements
- Request collapsing/mid-tiers — Verify that origin offload is good enough or add an additional layer like a shield.
- Your connectivity — If you're using a public cloud, ensure your edge delivery has the connectivity you need to your origin or if you have your own bare metal origin consider doing interconnects/peering.
- Test for what could go wrong to ensure your resilience plan works as intended
- Your live event monitoring services
- Post event review, summary and learnings

Finally, estimate the amount of traffic, including any spikes, to ensure that you have the capacity reservation in place needed. Estimate high. Better safe than sorry.

How to run your live streaming event
You've put so much work into getting your big event going, and the day is here. Now what? There is plenty to do to ensure the quality of experience and resiliency your end viewers demand.

Monitor your stats.
Are you overwhelming your origin? Communicate with your vendors. In addition, you can choose to use an application or cloud service that will give you at-a-glance insights into your stats (e.g. Sumo Logic, Datadog, Kafka, Openstack, Splunk, BigQuery, Conviva, Mux and more). Monitor analytics from your vendors, but also make sure you have visibility into your end-viewer stats.

Get help where you need it.
Is your team overloaded at this point? Consider augmenting your own team with a vendor's support teams for real-time monitoring, alerting, and troubleshooting during high-profile events. Set up a communication channel for success and failures, and leverage vendors' support teams to help you triage problems – and identify the ones you can fix.
How to measure success after your live streaming event
You did it! Now, assess how you did. Ask your vendors to provide you with a summary report and a post-event call. Review post-event analytics in a retrospective with your team and vendors, including logs you kept during the event. Did you meet your goals? What could have been improved or done differently?

More easily deliver the quality live streaming experiences your viewers demand — at scale.
These tips can help you in delivering your live streaming event superbly to your viewers. With so much on the line, you want to be as prepared as possible and make sure you have the support you need pre-event, during the event and post-event.

Now you understand the how — we'll help you with the who. With real-time monitoring, streaming delivery, request collapsing, capacity planning, and flexible deployment, Fastly Live Event Services gives you insights into your live streaming performance and the ability to troubleshoot immediately — all while reducing your costs.

Fastly Live Event Services include everything you need to deliver your live event.

- Streaming delivery
- Live Event Monitoring, dedicated monitoring, status updates throughout the event
- Media Shield, maximizes the efficiency in a multi-CDN environment
- Capacity Reservation, ensures the you have the capacity you need
- Origin Connect, reduces latency between Fastly and origin