

*Huge shoutout to Cloudflare and you for expanding the intern class and putting this project together, I learned so much about the cogs that turn behind the internet and it provided a welcome respite from the stress of the outbreak! <3 ~ Ethan*

## Cloudflare Workers for Gaming

### Approach

Currently, AAA game publishers like EA, Activision-Blizzard and Riot don't use any kind of Cloudflare product to improve their gaming traffic. This report details a basic glance at how the Cloudflare Workers (CFW) could approach building a product that is attractive enough to lure those publishers onto Cloudflare's content delivery network (CDN).

For most of my research I've used League of Legends publisher **Riot Gaming** as a proxy for the entire gaming industry, because they're the largest game developer that I already have some understanding of. Additionally, they have well documented architecture <https://technology.riotgames.com/news/architecture-league-client-update>, and community that posts frequently about the company's network.

\*means further research is needed for other AAA game developers, as well as indie developers

\*\*this report focuses on the connection between a player's game window and actual game server, which doesn't use HTTP web server protocols, but rather customized bespoke servers

## Concerns of Game Developers

### Lag

Riot currently uses a private content delivery network (CDN) for their games, which uses one server for each other their "regions", which are as large as North America, Asia Pacific, Europe, etc. This is also true for publishers like Wargaming or Activion-Blizzard. In all of North America, Riot's only game serve is in Chicago, which means pings of 70ms+ on the West Coast, and upwards of 300ms for anyone playing overseas.

Cloudflare has a ton of servers spread across the country, which could be used to improve the latency experienced by gamers who live far from the server.

### Cloud Computing (NVidia GeForce)

Non-gaming personal computers often struggle with RAM when running games like League of Legends. For other games with more updated graphics,

### Ddos and Cybersecurity

Ddos attacks are common in all online multiplayer games, and Cloudflare's security protocol could be used to protect game servers from these attacks, instead of requiring gaming publishers to address.

## Product Innovations

### Methods for QA Pre-release/ Beta Testing

### Goals & KPI

## Risks & Concerns

### AAA Game Developer Experience Map

- Coding
- Character Animation
- Rigging
- Testing

Paint points and bright spots

How can Cloudflare workers address this?

Experiment and hypothesis describe my vision

Delivering quickly builds momentum and teaches lessons

Be specific!

