Leif Reinert

Exploring “Cloudflare Workers for Gaming” PM Challenge:

Plans to learn more about the market and its needs

Begin posing questions and engaging with online communities to learn more about user pain points and interests. These may include:

- Gamedev.net
- UnityForum
- Github Community Forums

Attend important game developer conferences and conduct user interviews to learn as much I can about the industry and its leaders. Conferences such as:

- Game developers Conference (GDC)
- Game Daily Connect USA

Begin lightweight experimentation with most popular game development engines to learn tool basics firsthand and build user empathy:

- Unity Engine
- Unreal Engine

Product changes or additions you believe might be valuable

The ability to load WebAssembly binaries, gives Cloudflare Workers a strong and flexible foundation on which many types of applications (written in various languages) can be run. Therefore, my initial hypothesis (before user research and experimentation) is that significant code forks and technical feature releases are not necessary in order to create an offering that creates value and meets the needs of the game developer community.

To start, I believe Cloudflare should begin creating tutorials and documentation on how to use Cloudflare Workers existing capabilities in a way catered specifically to the types of technical issues gamers are concerned with. These include:

- Execution of authentication and handshaking protocols to facilitate matchmaking at the edge in online gaming.
- Caching of game data for PvE type games at the edge based on locality of HTTP(S) requests and time of day.

Additionally, I believe a forward-looking approach towards where the game development industry is growing will ensure that “Cloudflare workers for Gaming” stays a competitive and desirable product long term. Taking this into account, I also hypothesize that building features, documentation, and support around the newer opportunities in Cloud Gaming would be a worthwhile investment. Some of these features could include:

- Expansion of an API gateway for tight integration of Cloudflare CDN and Cloudflare Workers that would optimize the latency and performance of Cloud Gaming. Potential to enable developers

to deliver their content over the cloud without relying on current cloud gaming platforms (Google Stadia and GeForce).
- With community building being an important factor in the future of gaming, Cloudflare Workers for Gaming could facilitate the integration of online gaming events and community platform engagement. e.g. webhooks that post to Discord or forums on in-game actions.

Methods for improving the quality of your offering before it is released

Begin by engaging early adopters and beta testers (users who have a high tolerance for a less polished product) with early releases to receive as much feedback as possible. Additionally, encourage extensive internal usage of the new offering within the Cloudflare organization.

While engaging with internal and early users before a general release, begin A/B testing different pages and optimizations while collecting metrics on user engagement and performance. Including:

- Latency and loading times are more tolerated in some circumstances and requests more than others. Test user satisfaction across these factors in order to optimize compute load and user experience.
- Placement of interactive elements in Cloudflare's build tools, as well as promotion of specific tutorials, may influence the level of interest and engagement with specific features. Create a testing plan and explore multiple feature highlights to optimize user engagement.

Goals to measure the success of what you build

In releasing "Cloudflare Workers for Gaming", I would define the following goals to serve as a guide in delivering more value for our users:

- Onboard new customers in gaming segments that Cloudflare is currently not serving or not a prominent player.
- Create a sustainable and scalable offering that can gain traction in the gaming community.

To understand the success of the new offering, I would also track a few key quantitative metrics:

- Net gain in # of requests serviced and # of workers deployed on the Cloudflare Network
- Revenue growth attributed to Cloudflare Workers
- Customer Referral rate and Net Promoter Score

Risks which might lead to its failure

As Cloudflare is operating in a competitive space, there are a number of important risks to consider both from a technical and market perspective. Beginning with Technical, I would consider the following:

- Changes in Google V8 JavaScript Engine support, that affect performance or compatibility and require significant development for workarounds.
- Adding more customizability and control could create security issues for accounts that rely on multiple integrations or third party access.

From a market perspective, important risks to consider are:

- Gaming developers may opt for a more extensive use of containers and virtual machines in lieu of the service worker architecture.
- Pricing competition from key competitors at AWS Lambda@Edge or Fastly.