Cloudflare Workers for Gaming GTM Strategy
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The utilitarian nature and rapid adoption of Cloudflare Workers (CW) and other function-as-a-service (FaaS) options continuously prove that it is as impactful to software development as [Unity3D was to game development](). Now, there exists a similar opportunity for Cloudflare Workers for Gaming (CWG) to be as big of a game-changer to the gaming industry.

The most popular networked multiplayer games in the market are competitive, requiring the fastest reflexes as well as the fastest internet connectivity. Here is how CW's current offering benefits game developers:
- Games that require low-latency network interactions will make the most of Cloudflare's Edge Network and isolate model.
- Developers benefit from the seamless horizontal scaling, allowing for the focus to be on depth.

Building upon those benefits, the goal of CWG is to make networked multiplayer game development easy, accessible, and seamlessly scalable without breaking the bank.

Risks
1. There are few options in the market, so there is uncertainty around adoption. The most similar product is Microsoft's Azure Gaming, which emphasizes scalability, but not ease-of-use or accessibility.
2. Developers may not be convinced that serverless architecture or FaaS is the right choice for them.
3. It will be difficult to win over the market with future iterations if the initial public release does not address the pressing needs of game developers.

Persona Breakdown
Video game developers can be divided into three main persona groups:
- **A.** Learning students making games in their free time (Doteos, Adin Kwok)
- **B.** Small-mid-sized game studios experimenting to make a hit (Flappy Bird, dotGears)
- **C.** Mid-large-sized publishers releasing AAA titles (Fortnite, Epic Games)

Groups **A** and **B** lack infrastructure, which is a risky investment for them as their player numbers usually pale in comparison to that of a game like Fortnite. This makes them the target users for our product, as FaaS is a low-risk solution that requires little investment; they only need to scale with their users. We may look to target Group **C** in future releases of the product.

To further understand each persona, User interviews will be conducted on a rolling basis to itemize their pain-points. Although each developer group can be separated by their traits, they all share common criteria:
- **Does it perform well?** *Yes, Cloudflare's Edge Network + V8 + Isolates = Fast all around.*
- **Is it cost-efficient?** *Yes, CW quickly scales up and down when needs change.*
- **Is it easy to implement/utilize?** *To be improved upon to make this a home-run product.*

Prototype Development and Assumption Validation (8-12 Months)
Building a prototype will build momentum and validate our assumption that small to mid-sized groups of developers will adopt CWG for its cost-efficient, dynamic pricing, and ease-of-use. During this period, user interviews will occur concurrently with development so that there is constant input from game developers. It is important that the developers feel that this product is being made for them and that it makes their lives easier. Here is a concept list of needs and solutions that we can expand upon with interviews:
- ➢ IoT Interaction for Multiplayer

- Build a notification service to queue notifications sent to players when game states change. This is a necessity for CWG to be competitive. (ie. Azure Notification Hub, Firebase Cloud Messaging)
- ➢ Platform SDK
  - Provide an SDK that can be used with the most popular game development framework. Building an SDK for Unity3D is a great place to start. This reduces the amount of code that the end-developer needs to implement for common tasks such as auth, turn-based event handling, real-time event handling, etc.

Closed Beta (0.5-1 Months)

The development of these two additions is enough to launch a closed beta with a pool of 15 developer groups from Groups **A** and **B**. They will be instructed to recreate the mass-multiplayer game, agar.io, focusing on developing core-functionality over presentability. The pool will be divided further into three groups: one will incorporate CWG into their stack, one will incorporate CW, and one will use a modern third-party stack. We can measure success with the following:

- Did the CWG group complete their games faster than the other groups?
- Do the developers from the CWG group acknowledge and utilize the additions?
- How much faster did the CWG group complete the game compared to the CW group?
- Do the developers who used CWG want to use it for their future projects?
- Do the developers from the non-CWG group think they would have been faster had they been able to use CWG?

Post-Closed Beta Additions and Pivot (6-12 Months)

Based on the answer to those questions, we may need to re-prioritize the construction of certain functionalities. If the feedback is outstanding, we could simultaneously investigate how CWG could impact studios from Group **C** and begin to formulate an R2 roadmap that includes them. Here are some additions that could help take CWG to the next level:

- ➢ Asynchronous Multiplayer Template:
  - Have a ready-to-deploy template to help developers get started. Since we are targeting multiplayer, these template functions will interact with game servers.
- ➢ Multiplayer Game Servers
  - It may be too heavy of an investment for Cloudflare to offer game servers in parallel to CWG. Thus, it may be a better solution to partner with a dedicated server provider (ie. DigitalOcean, Linode) who also has a dynamic pricing model.

Open Beta and Product Hardening (2-4 Months)

Allow developers to register for a beta version of CWG. The primary goal of this beta is to define R2 features and test for product stability. Depending on resourcing, it may even make sense to begin the construction of R2 features. Cloudflare marketing will also begin to develop an advertising strategy to make it a well-known option in the game development scene. One of the easiest ways to do that is to host a game-making hackathon. Success during this period can be measured by whether early adopters are releasing their projects.

Public Release and R2 R&D

We've publicly released CWG and hosted a week-long game development hackathon to incentivize adoption. A successful release means that we immediately look to long-term goals and how we can achieve them.

- **Are developers from Group A and B creating and releasing their games?**
- **Is addressing Group C a worthwhile investment?**
- **Should Cloudflare look into providing dedicated game servers?**
- **How badly do I want to be a Product Management Intern with Cloudflare?** *Yes.*