

## CLOUDFLARE PRODUCT MANAGEMENT ASSESMENT

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*RE: Cloudflare Workers for Gaming Marketplace*

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Thank you so much for giving me the opportunity to create a Cloudflare Workers offering geared towards gaming. What follows is a detailed overview of how I suggest approaching this campaign in light of some established issues facing the gaming market.

Our goal is to introduce a marketplace for developers to tackle deployment and scaling issues by better demonstrating, positioning, and utilizing Cloudflare workers for gamers.

### PROBLEM

Currently, established and upcoming game developers find it hard to distribute due to lack of insight in hardware or limitations on the server-side. Marketing a game after development is a huge drawback for developers, as most of them have no idea how to advertise or promote games to reach users. Scaling the resources on the network side requires an understanding of bandwidth, otherwise causing game lag and other issues as users grow. On the other hand, gamers dislike the time it takes to download, update, or uninstall games. With the world moving more towards a spontaneous lifestyle game-lag and hardware restrictions create the worst experience for gamers.

### PLAN – MARKET ANALYSIS

We will use a customer focused strategy to dive into and understand issues facing our target audience, which are both gamers and videogame developers. An ideal way to do this is to create issue-based focus groups that will help us identify broad issues facing gamers. Groups would consist of individuals targeting, distributing, scaling, developing as well as groups focused on marketing the platform and games themselves. On the consumer side, we will have focus groups concentrated on diskless downloads, updates, speed and reliability of network resources. After gathering a baseline understanding from our focus groups, we can create surveys to reach out to universities, indie game studios and broader markets. This two-tiered planning approach will help us not only streamline our offering but will also position us to gain the largest market share in the sector.

### GOALS & OVERVIEW

Our goal is to create a marketplace for gamers and developers to help alleviate problems faced on both sides. The Cloudflare Workers Gaming Marketplace will offer solutions for developers that will enable them to distribute, scale, deploy, and even market their games faster, and more efficiently than ever before (detailed overview below). On the other hand, the marketplace will help gamers have content readily available without the need for downloads, updates, or any expensive hardware. CFG – Cloudflare for Gamers will streamline the process on both sides of the divide.

### SOLUTION

- Use Cloudflare workers' tutorials to give game developers documentation and a quick start into how they can easily build and deploy their games onto the Cloudflare marketplace.

- For developers, our Cloudflare Edge Network and caching technology, allows for faster runtimes, easy accessibility from thousands of servers across multiple regions.
- The V8 engine, alongside our isolated and virtual machine infrastructure means increased speed, less memory utilization, and more security. While the security infrastructure is set in place and designed to defend against side channel attacks by making it impossible for code to measure execution time locally.
- Distribution of game content across regional boundaries and access to the Cloudflare Gaming Marketplace makes market reach easier and faster because of less deployment hurdles, costs and maintenance. Furthermore, developers can share their games through a link or QR code. This will allow engineers to gain an audience, and for users to try as many games as they like.
- For avid games, our Cloudflare for gamers marketplace means no more waiting for game, downloads, updates or uninstalls.
- Users don't have to lug around CD's or maybe even consoles; with a reliable internet connection and access to the Cloudflare marketplace or a link from a developer, users can play anywhere.
- Games go where gamers go, automatic saving and sharing of video content, pause and play across devices.
- As games continue to update, users would never have to install additional downloadable content or wait for updates to complete with Cloudflare's cloud services and infrastructure.

## RISKS

While Cloudflare for Workers' infrastructure is broad and reliable for almost any application, gaming comes with its own set of obstacles.

- Scripts can only be 1 megabyte in size and accounts are limited to only 30 scripts resulting in a possible barrier for many game developers. These limitations also complicates their usage of libraries and different development methods.
- Storage is limited to 1 gigabyte in base paid plans. While this is a fairly large size, it means that developers now have to either pay overages or store images and other game content on storage servers, increasing cost and further complicating performance upgrades.
- Cost to store user data such as saved games would mean additional fees for game developers on Cloudflare workers
- Abuse Protection – gamers could be inadvertently kicked off of games if accidentally identified as a malicious agent.
- Rate limits possibly might limit consecutive users from accessing certain games.

## RELEASE AND TESTING

Sprint based development will speed up our time to market allowing us to build user features while keeping our customers in mind. Quality assurance will be conducted on both the developer side and gamer side. However, for initial release, testing should be conducted before every sprint deliverable. This way each feature that is developed will allow users to deploy and build faster if tested by our internal teams. Once internal testing is completed, we can have a close beta launch to iron out any further issues we find before mass market release. A similar approach will be taken for the gamer side as well.