# Cloudflare Workers for Gaming

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## Plans

Gaming industry has seen massive improvements in the past decade, with multi-player gaming industry growing from $7.7 Billion to $28.5 Billion in these 10 years. With game development engines like Unity and Unreal making game development much easier, more and more companies are focusing on capturing this growing market. Due to these developments, game development time has reduced as well. But, even now, one of the biggest problems being faced by the professionals in this industry is of scalability. Teams spend a considerable amount of effort on infrastructure and operations to ensure zero down time. If the servers are down, the players shift to a different game and all the effort is wasted. To handle such massive volumes, having more and more servers can be a costly affair. A latency of more than 100ms is noticeable during games and spoils the seamless user experience that players expect these days with the kind of internet speeds available to them. Multi-player games are very heavy on the servers since the state of all players need to be constantly in-sync.

To ensure that the servers are not overloaded, Cloudflare Workers can be used to distribute some of that workload. A lot of the static gaming logic that resides on the servers can be moved to the network edge. Also, with automatic scaling, unusual spikes in demand can be handled more gracefully.

Multi-player mobile games are also known to be heavy at the APK/File level. A lot of the client-side logic that makes these games heavier can be brough to the network edge as well.

## Product Changes or additions

Add a layer of analytics to the product for Dev teams to analyze incoming data. This data can be leveraged by these teams to improve product performance, understand user behavior to model their games, and find deficiencies and anomalies during A/B testing of game balance changes.

This analytics offering can collect events from games, analyze them in real-time, and store them for processing. It can also be leveraged to provide real-time flash offers to the players, monitor user acquisition campaigns, and detect abusive players. Through this, we can enhance the experience across the player life cycle from user acquisition to long-term engagement and retention. Developers would be able to ingest, transform, and analyze data in real time and utilize machine learning to better understand their players. They would also be able to segment players more accurately, enhance user acquisition ROI, and increase long-term retention to optimize user acquisition.

## How to improve quality of your offering

From some of the discussions I had with game developers, I felt that a typical company would require more than 30 Workers scripts to address various features of the game. We can include more than 30 Worker scripts to improve our offerings for this particular industry.

## Goals to measure success

We can measure the percentage of requests being served under 100ms latency to gauge the performance of our product. We should aim for 99.9% success rate to present a strong case for

Cloudflare Workers in the gaming industry. We can also measure the number of customers from the gaming industry being on-boarded every month to Cloudflare Workers. Churn rate of these customers can be an indicator of the effectiveness of our product in this domain.

### Risks which might lead to failure

Some of the key risks associated with this exercise are:

- Presence of existing competitors Azure Functions, AWS Lambda, Google Cloud Functions
- Some clients may need to deploy more than 30 Cloudflare Worker scripts depending on the requirements of the game.