



# Cloudflare Workers for Gaming and Education

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## Summary

### Why do we need this program?

Game developers around the world are facing problems with game production because they are working with hardware that, compared to cloud computing platforms such as Cloudflare Workers, is outdated. This lack of flexibility and support leaves many developers feeling unsatisfied because instead of focusing on creating the best code for their programs, developers need to focus on creating their program to run well on limited hardware. This is also the same for education program developers. Many schools are using antiquated systems that cost much more to maintain and have worse performance compared to Cloudflare Workers. Creating Cloudflare Workers for Gaming and Education could bring many new developers who can use this powerful platform to create new products.

### What is our solution?

Cloudflare Workers for Gaming and Education utilizes the Cloudflare Workers platform as a base and adds helpful tools to help developers create the best versions of their program without sacrificing speed, scalability and security. This program would be split into two different sectors. The first would be catered for primarily game developers who need access to high performance serverless computing systems to create a great game that isn't limited by a consumer's machine. Whether it be an inexpensive laptop or an expensive gaming rig, they would both run the game well. The second sector would be catered for educational program developers and potentially students looking to take advantage of excellent cloud computing power. However, the market for power computing systems is constantly changing so it is key to add new features to cater to more markets.

#### Game Production Cloudflare Workers Controller:

- Access to Cloudflare Worker system
- Support for game engines such as Unreal Engine and Unity.
- Ability to monitor connections between Cloudflare server and user.

#### Education Production Cloudflare Workers Controller:

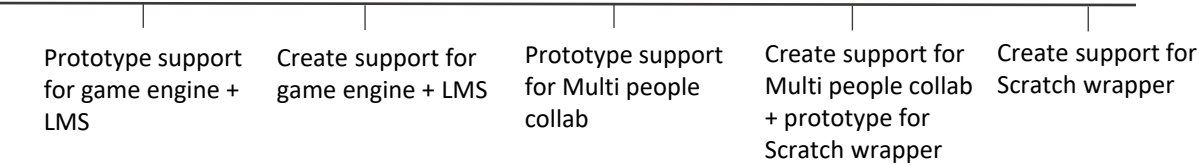
- Access to Cloudflare Worker system
- Easy Integration into learning management systems (LMS) such as Canvas and Blackboard.
- Creating multiple student support and communication mediums that allows collaboration for group projects.
- Creating a wrapper that can let younger students use more elementary languages such as Scratch to create applications

## Vision

Cloudflare Workers for Gaming and Education could potentially change the way people think about when developing programs. No longer do people have to worry about maintaining a fast, secure server by themselves. With this system, game developers can create a game that could run on all types of devices. With support for game engines such as Unreal and Unity, consumers could have Triple A games at their fingertips. For educational purposes, education program developers could create software that integrates directly into LMS's. With this, students could easily collaborate for group programming projects. This could change the future of online learning. Students could also use the platform to create fully functioning systems that are more professional compared to things done in schools today.

## Timeline

(2 – 3 months)



## Stakeholders

- Game developers (Indie, Company developers)
- Education program developers
- Educational Institutes (public, private, primary, higher level education)
- Consumers (Game buyers)
- Students

## Risks

- Limited public-school funding to purchase platform to use.
- Slow adoption for schools due to necessity of teaching JavaScript/Rust/C/C++
- Lower acceptance for developers due to limited market size.
- Lower acceptance for gaming companies that sell consoles because this would make consoles obsolete.
- In areas with sparse internet, performance of Cloudflare Workers is unreliable.

## Goals

- Long Term: Widespread adoption of Cloudflare Workers for Gaming and Education
- Short Term: Increase number of indie developer first for the game production
- Short Term: Bringing Education Cloudflare Workers to College and Universities computer science and engineering programs to use.

## Metrics

### Game Developers/Program Developers

- How fast can development occur
- Reliability of Cloudflare Workers system

### Consumer

- Perceived wait time for loading games
- Latency and performance of game

### Students

- Ease of use for program
- Item Production Time

### Cloudflare

- System Performance
- Developer satisfaction

## QC Methods

- Beta Testing with developers
- In house testing
- Multiple teams for each sector
- Use agile development for most efficiency