



Video Game Anti-Software Development and Considerations

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Abstract

There are over 2 billion people in the world playing video games, estimated to be a \$90 billion industry in America in 2020. Most of the people compete/finish the game by their ability and experience, others using game hacks and cheat software to gain advantages to destroy the fairness of the environment, which also involve criminal activity where in-game items are traded with money in real life. To find a solution for this problem, this research paper provides an overview of different cheat methods, examples of prominent gaming hacks, comparison of anti-cheat methods and future anti-cheat system and security suggestions. This research paper aims to build a framework for a brief conception in cheating system investigate methods of cheating detection and the limitation of various game architectures.

Introduction & Research Question

Introduction

The main purpose of playing video games is to increase happiness. There are numerous of positive effects such as improved memory and problem-solving, establishing new social connections, reducing stress, and experiencing fantasy unable to be achieved in real life. Unfortunately, the gaming industry is covered by huge number of cheaters that destroy the environment and peacefulness which cause different societal problems.

Research Question

Due to the large amount of failure in stopping cheating in game, how future anti-cheating system improved in the future in different aspects.

Hypothesis

Understanding the reason behind cheating and innovation by using blockchain and trusting computer can help decrease the amount of cheating and improve gaming environment.

Research Design & Data Collection

A quantitative descriptive research is provided in this research. Combine over 15 academic research paper and more, by investigating relationships and summarizing different concepts in anti-cheating methods and considerations.

Four major analysis were created after the review of literatures and academic works:

- Video game cheating methods and types
- Influence on the society
- Current anti-cheat methods
- Future anti-cheat system and considerations

Results

There are two types of cheating according to the Master's thesis by Samuli Lehtonen which are soft hacks and hard hacks:

- Soft Hacks- Bugs and exploits
- Hard Hacks- External program software and coding

Current anti-cheat methods:

- Server-side anti-cheat methods
- Client-side anti-cheat methods

The main reason behind cheating is winner syndrome in psychologically, education system and society standards affect people mentally.

Future anti-cheat system:

- Blockchain-based real-time cheat prevention
- Trusted computer system

Conclusions

Based on the research, in order to achieve a more safe and friendly environment, spying on the user side is necessary with more effective anti-cheat program. Value the consequences of cheating and changing the society standard is needed to take actions. Cheating will never be stopped; therefore, anti-cheat cannot only keep adapting new cheating methods but to be able to detect them based on their motivations.



Figure 1. Study by Irdeto

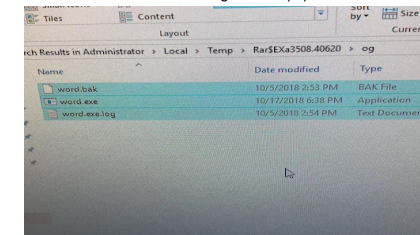
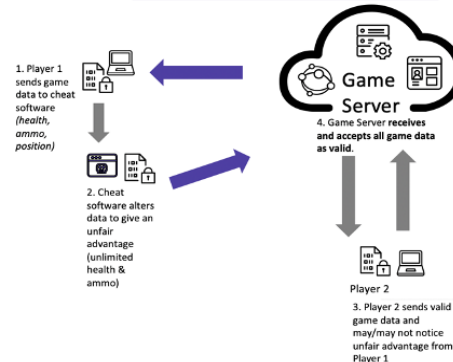


Figure 2. Forsaken cheating file

WITHOUT ANTI-CHEAT SOLUTION



WITH ANTI-CHEAT SOLUTION

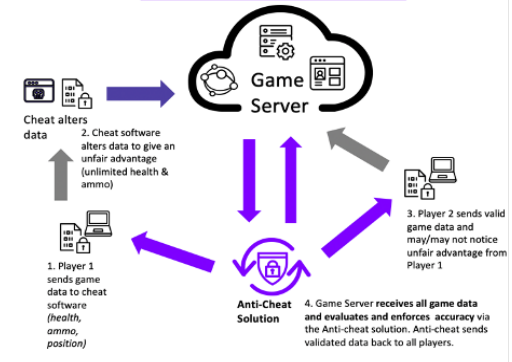


Figure 3. Anti-cheat with and without comparison

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