Ensuring a Trustworthy and Secure Genopets Mobile Gaming Environment
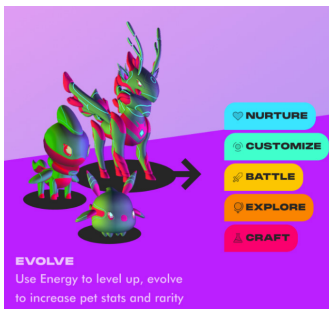
[Genopets](), a global Move-to-Earn gaming app that rewards players for an active life-style, saw rapid growth upon launch. Unfortunately this attracted the attention of malicious users who were looking to abuse the backend API resources for their own benefit. By integrating Approov Mobile Security, the team at Genopets were able to ensure only official, unmodified versions of their app were able to access their backend API resources.

The Challenge

Genopets is a free-to-play downloadable mobile pet care game - think Tamagotchi plus Pokemon Go meets web3. Since its release, the game has attracted attention for its innovative ecosystem. Players build a bond with their digital companion by taking care of themselves and nurturing their Genopet through daily activities.

Gameplay revolves around physically walking and accumulating steps to level up, collect new items, and earn rewards. The more steps a player takes, the more energy they accumulate in the game. Players then use this to nurture, upgrade, customize and evolve their digital pets.

The gaming industry is a popular target for cyberattacks and with a hugely successful launch of the app, the Genopets team saw early signs that they needed to take measures to protect their API backend from abuse. Kevin Kim, Genopets COO, explains:

> *"Some malicious users were using our APIs to manipulate data on our backend so as to gain unfair advantage in our game."*

As a result, they began looking for a security solution that would ensure that requests to their backend originated solely from their authenticated app running on a genuine mobile device but did not introduce lag or negatively impact the customer experience.

How Approov Mobile Security Helped

Approov was chosen because it is highly scalable and can handle high volumes of traffic without any quotas or usage caps. Unlike some other mobile app security solutions, which may limit the amount of traffic that can be processed in order to control costs or manage server resources, Approov is designed to provide unlimited and unthrottled protection.

Approov provides comprehensive protection against different types of attacks that target backend APIs such as API abuse, credential stuffing, fake botnet registrations,

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— Kevin Kim, COO at Genopets

and DDoS attacks.

Approov utilizes a remote attestation approach to ensure that running apps are genuine. The app must pass a sequence of integrity measurements that are sent to the Approov cloud service via a patented challenge-response protocol. If the integrity is confirmed, the app is issued with a short-lived cryptographic token that it can use to authenticate itself to the backend API services. The defense is moved out of the attacker's reach and into the Approov cloud, preventing the app from making its own decisions about integrity or signing its own tokens.

In the constantly evolving mobile gaming industry, scripts can allow players to automate the accumulation of valuable in-game resources to gain an advantage over other players. While this may appear to be a victimless act, it is not. In multiplayer mobile games, where players compete against each other in real-time within a complex and dynamic ecosystem, manipulating the game can provide an undeserved advantage to some players at the expense of others' playing experience.

By conducting a continuous and in-depth analysis of the Genopets mobile app and associated devices, Approov ensured the authenticity of requests to their backend APIs and services.

With Approov Mobile Security in place, only genuine Genopets mobile apps—running in safe environments and communicating over secured connections—could access their APIs and backend resources. Bots, malicious scripts, tampered and fake apps are blocked.

The Results

With strong trusted user and API authorization in place Genopets were able to block suspicious and unwanted traffic and secure its services.

Kevin summarized his experience with Approov,

"We saw an immediate 99.9% reduction of malicious access to our backend resources once Approov was implemented. Approov's ability to get unlimited and unthrottled protection is unlike native or any other mobile apps solutions."

Approov protects your revenue by ensuring that only your own mobile apps—running in safe environments and communicating over secured connections—can use your APIs and backend resources. Botnets, malicious scripts, tampered and fake apps are blocked.

Find out more about Approov Mobile Security: **www.approov.io**