Mobile Time Cheat Prevention 1.0

Unity Plugin for Android and iOS

Documentation

Thank you for purchasing the Mobile Time Cheat Prevention Plugin for Unity!

This plugin is aimed at apps that need to avoid users tampering with the device's clock and provide a cheat-free time instead. This can for example be used to calculate idle and offline progress in games.

This guide will explain how to get the plugin up and running quickly.

Basics

To avoid time cheating by modifying the device date or time on a mobile device, the plugin will use either an Internet based server time, or, if no Internet connection is available, it will use an internal algorithm to estimate the correct time, rather than using the potentially compromised device time.

Note that the plugin will always return the UTC time, which is different from local time, but can easily be converted to local if necessary. If using date and time for the calculation of elapsed time, using UTC time is recommended, because it avoids pitfalls such as players travelling through different time zones.

Usage

1. Place a GameObject in your project's first scene and add the `TimeCheatPrevention` component to it.
2. In your scripts, instead of using `DateTime.Now`, use `TimeCheatPrevention.GetDateTimeUTC()`
3. To get the local date and time, use `TimeCheatPrevention.GetDateTimeUTC().ToLocalTime()`

Callbacks

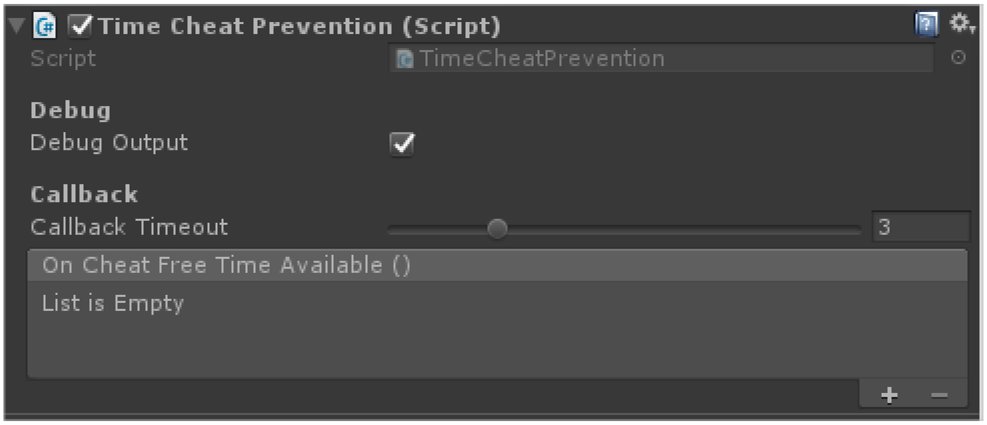
The plugin needs a little time at startup to fetch the Internet based time (if available). If you need the correct time right at the start of your game, you can register your script in your `Start()` function to receive a callback as soon as a cheat-free time is available.

Note that the callback will be triggered even if there is no Internet connection, or if the server time cannot be received due to a connection error. The plugin will automatically fallback to an estimated time instead.

```
TimeCheatPrevention.OnCheatFreeTimeAvailable.AddListener(OnCheatFreeTimeAvailable);
```

You can also see `ExampleScript.cs` for a demonstration on how this can be used.

You can set a timeout in seconds on the TimeCheatPrevention component in your scene. The default is 3 seconds – in most cases, the callback will be a lot faster, since there is either no Internet connection, or the server returns a time within the first second of execution.



☑ Time Cheat Prevention (Script)

Script: TimeCheatPrevention

Debug

Debug Output ☑

Callback

Callback Timeout: 3

On Cheat Free Time Available ()

List is Empty

Device Time, Internet Time and Estimated Time

You can check via script whether the plugin is currently using a reliable Internet-based date and time using these functions:

- `TimeCheatPrevention.IsUsingLocalDeviceTime()`
- `TimeCheatPrevention.IsUsingEstimatedTime()`
- `TimeCheatPrevention.HasServerTime()`

Time Stamp Functions

To easily calculate how much time has passed, and to store and save time stamps, the plugin offers a handful of helper functions.

- `string TimeCheatPrevention.GetTimeStamp()`
  - Returns a string with a timestamp that can be saved into the PlayerPrefs or a save game file.
- `double TimeCheatPrevention.GetSecondsSinceTimeStamp(string timeStamp)`

    - When passed a timestamp that was created with the `GetTimeStamp`() function, it will return the number of seconds that have passed since that time stamp was created.
- `DateTime TimeCheatPrevention.ParseTimeStamp`()
    - Used to convert a timestamp created with `GetTimeStamp`() back into the `DateTime` format.

Example Scene

Included in the plugin is an example scene, which demonstrates the plugin’s functionality, including the timestamp functions.

All relevant code regarding the example scene can be found in `ExampleScript.cs`

Note: This scene is meant to run on Android or iOS devices. If run in the Editor, the plugin will use an Internet-based time if available, but if the computer is offline, it cannot estimate the time and use the computer’s system time instead.

The entire Example folder can be deleted without affecting the plugin’s functionality.

Help and Support

If you need help beyond this documentation, please don’t hesitate to contact us at:
support@metalpopgames.com