

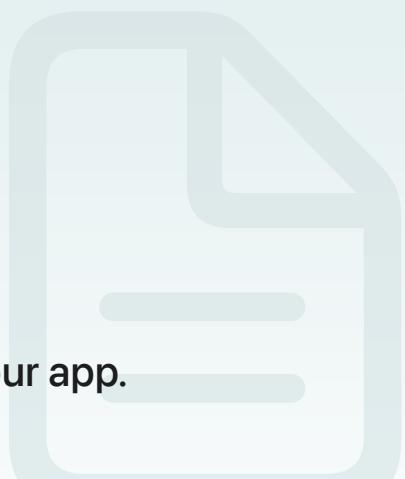
Documentation

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Article

CAMetalLayer Performance

Review CAMetalLayer metadata and performance in your app.



Overview

The data in this report contains metadata and performance information about how your app uses CAMetalLayer.

- Territories: Worldwide
- Platforms: iOS, iPadOS. For more information about iOS and iPadOS, see the Platforms section in [Data Completeness and Corrections](#).
- Availability:
 - Daily: Every day.
- History: On request, data is available beginning with iOS 17.4 and iPadOS 17.4.
- Completeness: Data from devices that contribute to this report can arrive as late as 8 days after the date it generates on device. You can download recent data daily, but it might be incomplete, and data updates incrementally daily, until all late-arriving events are available.
- Privacy:
 - Includes data from users who have opted to share their data with Apple and developers.
 - Individual rows will only appear if they have a value of 5 or more.
- Data Context: You can analyze your data with additional context by comparing it with the data in the [App Sessions Context](#) report, which provides a count of unique devices that use your app on a specific day. For example, if your app performed an action detailed in this report on 10 unique devices on a specific day, and the App Sessions Context report shows there were 100 unique devices running your app that day, then you can approximate that 10% of the devices running your app performed that action.

Report Fields

| Report Field | Description | Data Type |
|--------------------------|---|-----------|
| Count | Number of times the event occurred | integer |
| Territory | Country or region in which the event occurred | string |
| Date | Date when the event occurred | string |
| Platform | OS version on the device on which the event occurred | string |
| Device | Type of device on which the event occurred | string |
| Build | Build of device on which event occurred | string |
| Unique Devices | The count of unique devices | integer |
| Release Type | Type of software release | string |
| Bundle Short Version | The short bundle version of the client process. | string |
| App Version | Version of the app associated with the event | string |
| Layer Name | The name of the layer (if known). | string |
| Process Name | The name of the CAMetalLayer client process. | string |
| Active Duration | The amount of time, in seconds, that the most active layer in the CAMetalLayer client session actively generates new on-screen content. | float |
| Average Height | The average height, in pixels, of the chosen CAMetalLayer over the course of the session. | float |
| Average Width | The average width, in pixels, of the chosen CAMetalLayer over the course of the session. | float |
| Client Lifetime Duration | The number of seconds the client process existed (estimated). | float |

| Report Field | Description | Data Type |
|---|--|-----------|
| Lifetime Active Layer Count | The total number of layers observed during the client's lifetime. | integer |
| Presented Frame Command Buffer Count | The number of command buffers associated with presented frames of the chosen CAMetalLayer. | integer |
| Presented Frame Count | The number of presented frames, as determined by counting presented CAMetalDrawables of the chosen CAMetalLayer. | integer |
| Skipped Frame Count | The number of skipped frames, for example, CAMetalDrawables created but not put on glass. | integer |
| Total Presented Drawables Count | The total presented CAMetalDrawables across all CAMetalLayers of the client process, not just the most active CAMetalLayer. This approximates the proportion of the CAMetalDrawables reported. | integer |
| On Glass Present Lateness Count | The count of frames that arrived late on glass. | integer |
| Presented CPU End-To-End Drawable Total | The total end-to-end CPU walltime, in milliseconds, for all CAMetalDrawables for the chosen layer during the client's lifetime. | float |
| Presented On GPU Walltime Total | The total on-GPU walltime, in milliseconds, attributed to CAMetalDrawables for the chosen layer during the client's lifetime. | float |
| On Glass Present Lateness Total | The total estimated on-glass presentation lateness, in milliseconds, for drawables for the chosen layer during the lifetime of the client process. | float |
| Presented GPU End-To-End Drawable Total | The total end-to-end GPU walltime, in milliseconds, for all CAMetalDrawables for the chosen layer during the client's lifetime. | float |
| Presented GPU Done-To-Completed Total | The total amount of time, in milliseconds, spent waiting for drawables to land on glass after GPU work completion from the selected CAMetalLayer. | float |

| Report Field | Description | Data Type |
|-------------------------|--|-----------|
| On Glass Interval Total | The total on-glass interval, in milliseconds, for CAMetalDrawables from the selected CAMetalLayer. | float |
| On Glass Interval Count | The total number of on-glass frame (CAMetalDrawables) intervals for the given CAMetalLayer. | integer |

Glossary

| Dimension | Value | Definition |
|----------------------|---------------------------------|----------------------------------|
| Bundle Short Version | ExampleBundleShortVersion.0.1.2 | Placeholder short version |
| App Version | Example.BundleVersion.0.1.2 | Placeholder bundle version |
| Layer Name | ExampleLayerName | Placeholder example layer name |
| Process Name | ExampleProcessName | Placeholder example process name |

See Also

Performance

- 📄 [AirPlay Errors](#)
Analyze AirPlay errors in your apps.
- 📄 [AirPlay Performance](#)
Review AirPlay performance in your apps.
- 📄 [App Crashes Expanded](#)
Analyze the rate at which your app crashes.
- 📄 [App Installs Performance](#)
Analyze details about installation success and failure rates for your apps.
- 📄 [App Storage Reads and Writes](#)
Analyze how often your app uses disk reads and writes.

-  **Audio Overloads**
Analyze how many audio glitches people experience in your app.
-  **Bluetooth LE Session Duration**
Analyze how long your app uses Bluetooth Low Energy (LE) connections.
-  **Bluetooth System Wakes**
Analyze details about bluetooth system wakes that your app causes.
-  **Custom Language Model Builds Failed**
Analyze how often your app-triggered rebuild of a custom language model failed.
-  **Display Power Information**
Review your app's impact on display pixel attributes.
-  **HTTP Live Streaming Playback Errors**
Analyze playback errors that your app receives.
-  **Launch Image Over Memory Limit**
Analyze how often your app fails to load because it's over the memory limit.
-  **Networking Connection Activity**
Review how your app uses network connections.
-  **Spotlight Query Performance**
Review how your app uses Spotlight queries.
-  **Streaming Downloads Performance**
Review download performance when using the AVAssetDownloadTask APIs in your apps.