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.