

[Metal](#) / MTL4CommandAllocator

Protocol


MTL4CommandAllocator

Manages the memory backing the encoding of GPU commands into command buffers.

iOS 26.0+ | iPadOS 26.0+ | Mac Catalyst 26.0+ | macOS 26.0+ | tvOS 26.0+ | visionOS 26.0+

```
protocol MTL4CommandAllocator : NSObjectProtocol
```

Mentioned in

 Understanding the Metal 4 core API

Topics

Instance Properties

```
var device: any MTLDevice
```

Returns the GPU device that this command allocator belongs to.

Required

```
var label: String?
```

Provides the optional label you specify at creation time for debug purposes.

Required

Instance Methods

```
func allocatedSize() -> UInt64
```

Queries the size of the internal memory heaps of this command allocator that support encoding commands into command buffers.

Required

```
func reset()
```

Marks the command allocator's heaps for reuse.

Required

Relationships

Inherits From

NSObjectProtocol

See Also

Submitting work to a GPU with Metal 4

```
protocol MTL4CommandQueue
```

An abstraction representing a command queue that you use commit and synchronize command buffers and to perform other GPU operations.

```
class MTL4CommandQueueDescriptor
```

Groups together parameters for the creation of a new command queue.

```
struct MTL4CommandQueueError
```

```
enum Code
```

Enumeration of kinds of errors that committing an array of command buffers instances can produce.

```
let MTL4CommandQueueErrorDomain: String
```

```
protocol MTL4CommandBuffer
```

Records a sequence of GPU commands.

`class MTL4CommandBufferOptions`

Options to configure a command buffer before encoding work into it.

`protocol MTL4CommandEncoder`

An encoder that writes GPU commands into a command buffer.

`struct MTL4RenderEncoderOptions`

Custom render pass options you specify at encoder creation time.

`protocol MTL4ArgumentTable`

Provides a mechanism to manage and provide resource bindings for buffers, textures, sampler states and other Metal resources.

`class MTL4ArgumentTableDescriptor`

Groups parameters for the creation of a Metal argument table.

`class MTL4CommandAllocatorDescriptor`

Groups together parameters for creating a command allocator.

`class MTL4CommitOptions`

Represents options to configure a commit operation on a command queue.

`protocol MTL4CommitFeedback`

Describes an object containing debug information from Metal to your app after completing a workload.

`typedef MTL4CommitFeedbackHandler`

Defines the block signature for a callback Metal invokes to provide your app feedback after completing a workload.