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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

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## Relationships

### Inherits From

NSObjectProtocol

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## 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.

```
typealias MTL4CommitFeedbackHandler
```

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