Metal / MTL4ComputePipelineDescriptor

Class

MTL4ComputePipelineDescriptor

Describes a compute pipeline state.

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

```
class MTL4ComputePipelineDescriptor
```

Topics

Instance Properties

var **computeFunctionDescriptor**: MTL4FunctionDescriptor?

A descriptor representing the compute pipeline's function.

var **maxTotalThreadsPerThreadgroup**: Int

The maximum total number of threads that Metal can execute in a single threadgroup for the compute function.

var **requiredThreadsPerThreadgroup**: MTLSize

The required number of threads per threadgroup for compute dispatches.

var **staticLinkingDescriptor**: MTL4StaticLinkingDescriptor?

An object that contains information about functions to link to the compute pipeline.

var **supportBinaryLinking**: Bool

A boolean value indicating whether the compute pipeline supports linking binary functions.

var **supportIndirectCommandBuffers**: MTL4IndirectCommandBufferSupportState

A value indicating whether the pipeline supports Metal indirect command buffers.

`var threadGroupSizeIsMultipleOfThreadExecutionWidth: Bool`

A boolean value indicating whether each dimension of the threadgroup size is a multiple of its corresponding thread execution width.

Instance Methods

`func reset()`

Resets the descriptor to its default values.

Relationships

Inherits From

`MTL4PipelineDescriptor`

Conforms To

```
CVarArg
CustomDebugStringConvertible
CustomStringConvertible
Equatable
Hashable
NSCopying
NSObjectProtocol
```

See Also

Configuring a compute pipeline state

`class MTLComputePipelineDescriptor`

An instance describing the desired GPU state for a kernel call in a compute pass.

`protocol MTLComputePipelineState`

An interface that represents a GPU pipeline configuration for running kernels in a compute pass.

class MTLStageInputOutputDescriptor

A description of the input and output data of a function.

class MTLPipelineBufferDescriptor

The mutability options for a buffer that a render or compute pipeline uses.

class MTLPipelineBufferDescriptorArray

An array of pipeline buffer descriptors.

struct MTLPipelineOption

Options that determine how Metal prepares the pipeline.