

# Namespace Cobilas.GodotEngine.Component

## Classes

### [InternalComponentHub](#)

Inner class for handling [IComponentHub](#).

### [NullComponentHub](#)

Represents a null ComponentHub.

### [RequireComponentAttribute](#)

Signals to the [AddRequireComponent\(Node?\)](#) method which components to add to the Godot.Node object.

## Interfaces

### [IComponentHub](#)

An interface to transform a Godot.Node object into a pseudo Component.

### [IInternalComponentHub](#)

Interface for inner class for handling [IComponentHub](#).

# Interface IComponentHub

Namespace: [Cobilas.GodotEngine.Component](#)

Assembly: com.cobilas.godot.icomponent.dll

An interface to transform a Godot.Node object into a pseudo Component.

```
public interface IComponentHub : IEnumerable<Node>, IEnumerable
```

## Inherited Members

[IEnumerable<Node>.GetEnumerator\(\)](#)

## Properties

### ComponentsCount

The number of child objects.

```
int ComponentsCount { get; }
```

### Property Value

[int](#)

Returns the number of child objects.

## Parent

The parent object.

```
Node? Parent { get; }
```

### Property Value

Node

Returns the parent object.

# ParentComponent

The parent object as [IComponentHub](#).

```
IComponentHub? ParentComponent { get; }
```

## Property Value

[IComponentHub](#)

Returns the parent object as [IComponentHub](#).

## Methods

### AddComponent(Type?)

Allows you to add a component by specifying its type.

```
Node? AddComponent(Type? component)
```

## Parameters

**component** [Type](#)

The type to be added.

## Returns

Node

Returns the type that was added.

### AddComponent<TypeComponent>()

Allows you to add a component by specifying its type.

```
TypeComponent? AddComponent<TypeComponent>() where TypeComponent : Node
```

## Returns

### TypeComponent

Returns the type that was added.

## Type Parameters

### TypeComponent

The type to be added.

## AddComponents(params Type[]?)

Allows you to add multiple components by specifying their type.

```
void AddComponents(params Type[]? components)
```

## Parameters

**components** [Type](#)[]

The types to be added.

## AddNodeComponent(Node?)

Allows you to add a Godot.Node object to the component list.

```
void AddNodeComponent(Node? component)
```

## Parameters

**component** Node

The Godot.Node object to add.

## AddNodeComponents(params Node[]?)

Allows you to add multiple Godot.Node objects to the component list.

```
void AddNodeComponents(params Node[]? components)
```

## Parameters

**components** Node[]

The Godot.Node objects to add.

## GetComponent(Type?)

Gets the component by the specified type.

```
Node? GetComponent(Type? component)
```

## Parameters

**component** [Type](#)↗

The type to be obtained.

## Returns

Node

Returns the component type as node.

## GetComponent(Type?, bool)

Gets the component by the specified type.

```
Node? GetComponent(Type? component, bool recursive)
```

## Parameters

**component** [Type](#)↗

The type to be obtained.

**recursive** [bool](#)

Allows searching in sub-children.

Returns

Node

Returns the component type as node.

## GetComponent<TypeComponent>()

Gets the component by the specified type.

```
TypeComponent? GetComponent<TypeComponent>() where TypeComponent : Node
```

Returns

TypeComponent

Returns the component type as node.

Type Parameters

**TypeComponent**

The type to be obtained.

## GetComponent<TypeComponent>(bool)

Gets the component by the specified type.

```
TypeComponent? GetComponent<TypeComponent>(bool recursive) where TypeComponent : Node
```

Parameters

**recursive** [bool](#)

Allows searching in sub-children.

## Returns

### TypeComponent

Returns the component type as node.

## Type Parameters

### TypeComponent


The type to be obtained.

## GetComponents(Type?)

Gets components by the specified type.

```
Node[]? GetComponents(Type? component)
```

## Parameters

**component** [Type](#)

The type to be obtained.

## Returns

Node[]

Returns the component types as a node list.

## GetComponents(Type?, bool)

Gets components by the specified type.

```
Node[]? GetComponents(Type? component, bool recursive)
```

## Parameters

**component** [Type](#)

The type to be obtained.

**recursive** [bool](#)

Allows searching in sub-children.

Returns

Node[]

Returns the component types as a node list.

## GetComponents<TypeComponent>()

Gets components by the specified type.

```
TypeComponent[]? GetComponents<TypeComponent>() where TypeComponent : Node
```

Returns

TypeComponent[]

Returns the component types as a node list.

Type Parameters

**TypeComponent**

The type to be obtained.

## GetComponents<TypeComponent>(bool)

Gets components by the specified type.

```
TypeComponent[]? GetComponents<TypeComponent>(bool recursive) where TypeComponent : Node
```

Parameters



**recursive** [bool](#)

Allows searching in sub-children.

Returns

`TypeComponent[]`

Returns the component types as a node list.

Type Parameters

**TypeComponent**

The type to be obtained.

## RemoveComponent(Node?)

Allows you to remove a `Godot.Node` object from the list of components.

```
bool RemoveComponent(Node? component)
```

Parameters

**component** `Node`

The `Godot.Node` object to remove.

Returns

[bool](#)

Returns **true** if the operation is successful.

## RemoveComponents(params Node[]?)

Allows you to remove several `Godot.Node` objects from the list of components.

```
void RemoveComponents(params Node[]? components)
```

## Parameters

**components** Node[]

The Godot.Node objects to be removed.

# Interface IInternalComponentHub

Namespace: [Cobilas.GodotEngine.Component](#)

Assembly: com.cobilas.godot.icomponent.dll

Interface for inner class for handling [IComponentHub](#).

```
public interface IInternalComponentHub : IComponentHub, IEnumerable<Node>, IEnumerable
```

## Inherited Members

[IComponentHub.Parent](#) , [IComponentHub.ComponentsCount](#) , [IComponentHub.ParentComponent](#) ,  
[IComponentHub.GetComponent\(Type, bool\)](#) , [IComponentHub.GetComponent\(Type\)](#) ,  
[IComponentHub.GetComponent<TypeComponent>\(bool\)](#) ,  
[IComponentHub.GetComponent<TypeComponent>\(\)](#) , [IComponentHub.GetComponents\(Type, bool\)](#) ,  
[IComponentHub.GetComponents\(Type\)](#) , [IComponentHub.GetComponents<TypeComponent>\(bool\)](#) ,  
[IComponentHub.GetComponents<TypeComponent>\(\)](#) , [IComponentHub.AddComponent\(Type\)](#) ,  
[IComponentHub.AddComponent<TypeComponent>\(\)](#) ,  
[IComponentHub.AddComponents\(params Type\[\]\)](#) , [IComponentHub.AddNodeComponent\(Node\)](#) ,  
[IComponentHub.AddNodeComponents\(params Node\[\]\)](#) , [IComponentHub.RemoveComponent\(Node\)](#) ,  
[IComponentHub.RemoveComponents\(params Node\[\]\)](#) , [IEnumerable<Node>.GetEnumerator\(\)](#) 

## Properties

### Entity

The Godot.Node object that is associated.

```
Node? Entity { get; }
```

### Property Value

Node

Returns the associated Godot.Node object.

# Class InternalComponentHub


Namespace: [Cobilas.GodotEngine.Component](#)

Assembly: com.cobilas.godot.icomponent.dll

Inner class for handling [IComponentHub](#).

```
[Serializable]  
public sealed class InternalComponentHub : IInternalComponentHub, IComponentHub,  
IEnumerable<Node>, IEnumerable, IDisposable
```







## Inheritance

[object](#)  ← InternalComponentHub

## Implements

[IInternalComponentHub](#), [IComponentHub](#), [IEnumerable](#)  <Node>, [IEnumerable](#) , [IDisposable](#) 

## Inherited Members

[object.ToString\(\)](#) , [object.Equals\(object\)](#) , [object.Equals\(object, object\)](#) ,  
[object.ReferenceEquals\(object, object\)](#) , [object.GetHashCode\(\)](#) , [object.GetType\(\)](#) 

## Constructors

### InternalComponentHub(Node)

Inner class for handling [IComponentHub](#).

```
public InternalComponentHub(Node entity)
```

## Parameters

**entity** Node

## Properties

### ComponentsCount

The number of child objects.

```
public int ComponentsCount { get; }
```

Property Value

[int](#)

Returns the number of child objects.

## Entity

The Godot.Node object that is associated.

```
public Node? Entity { get; }
```

Property Value

Node

Returns the associated Godot.Node object.

## Parent

The parent object.

```
public Node? Parent { get; }
```

Property Value

Node

Returns the parent object.

## ParentComponent

The parent object as [IComponentHub](#).

```
public IComponentHub? ParentComponent { get; }
```

## Property Value

[IComponentHub](#)

Returns the parent object as [IComponentHub](#).

## Methods

### AddComponent(Type?)

Allows you to add a component by specifying its type.

```
public Node? AddComponent(Type? component)
```

## Parameters

**component** [Type](#)<sup>↗</sup>

The type to be added.

## Returns

Node

Returns the type that was added.

## Remarks

If the specified type is null or not found in the component list, an object of type [NullNode](#) will be returned.

## Exceptions

[ArgumentException](#)<sup>↗</sup>

Occurs when the specified type does not inherit from Godot.Node.

# AddComponent<TypeComponent>()

Allows you to add a component by specifying its type.

```
public TypeComponent? AddComponent<TypeComponent>() where TypeComponent : Node
```

## Returns

TypeComponent

Returns the type that was added.

## Type Parameters

**TypeComponent**

The type to be added.

## Remarks

If the specified type is null or not found in the component list, an object of type [NullNode](#) will be returned.

## Exceptions

[ArgumentException](#) 

Occurs when the specified type does not inherit from Godot.Node.

# AddComponents(params Type[]?)

Allows you to add multiple components by specifying their type.

```
public void AddComponents(params Type[]? components)
```

## Parameters

**components** [Type](#)  []

The types to be added.

## Exceptions

[ArgumentException](#) 

Occurs when the specified type does not inherit from Godot.Node.

## AddNodeComponent(Node?)

Allows you to add a Godot.Node object to the component list.

```
public void AddNodeComponent(Node? component)
```

### Parameters

**component** Node

The Godot.Node object to add.

## AddNodeComponents(params Node[]?)

Allows you to add multiple Godot.Node objects to the component list.

```
public void AddNodeComponents(params Node[]? components)
```

### Parameters

**components** Node[]

The Godot.Node objects to add.

## AddRequireComponent(Node?)

Static function to add components automatically.

```
public static void AddRequireComponent(Node? mono)
```

### Parameters



**mono** Node

Target Godot.Node object.

## Remarks

The target Godot.Node object must have the [RequireComponentAttribute](#) attribute to specify the types to be added.

## Exceptions

[ArgumentException](#) 

Occurs when the specified type does not inherit from Godot.Node.

## Dispose()

Performs application-defined tasks associated with freeing, releasing, or resetting unmanaged resources.

```
public void Dispose()
```

## ~InternalComponentHub()

The destructor is responsible for discarding unmanaged resources.

```
protected ~InternalComponentHub()
```

## GetComponent(Type?)

Gets the component by the specified type.

```
public Node? GetComponent(Type? component)
```

## Parameters

**component** [Type](#) 

The type to be obtained.

## Returns

### Node

Returns the component type as node.

## Remarks

If the specified type is null or not found in the component list, an object of type [NullNode](#) will be returned.

## Exceptions

[ArgumentException](#) 

Occurs when the specified type does not inherit from Godot.Node.

# GetComponent(Type?, bool)

Gets the component by the specified type.

```
public Node? GetComponent(Type? component, bool recursive)
```

## Parameters

**component** [Type](#) 

The type to be obtained.

**recursive** [bool](#) 

Allows searching in sub-children.

## Returns

### Node

Returns the component type as node.

## Remarks

If the specified type is null or not found in the component list, an object of type [NullNode](#) will be returned.

## Exceptions

[ArgumentException](#) 

Occurs when the specified type does not inherit from Godot.Node.

## GetComponent<TypeComponent>()

Gets the component by the specified type.

```
public TypeComponent? GetComponent<TypeComponent>() where TypeComponent : Node
```

## Returns

TypeComponent

Returns the component type as node.

## Type Parameters

**TypeComponent**

The type to be obtained.

## Remarks

If the specified type is null or not found in the component list, an object of type [NullNode](#) will be returned.

## Exceptions

[ArgumentException](#) 

Occurs when the specified type does not inherit from Godot.Node.

## GetComponent<TypeComponent>(bool)

Gets the component by the specified type.

```
public TypeComponent? GetComponent<TypeComponent>(bool recursive) where TypeComponent : Node
```

## Parameters

**recursive** [bool](#)

Allows searching in sub-children.

## Returns

TypeComponent

Returns the component type as node.

## Type Parameters

**TypeComponent**

The type to be obtained.

## Remarks

If the specified type is null or not found in the component list, an object of type [NullNode](#) will be returned.

## Exceptions

[ArgumentException](#)

Occurs when the specified type does not inherit from Godot.Node.

## GetComponents(Type?)

Gets components by the specified type.

```
public Node[]? GetComponents(Type? component)
```

## Parameters

**component** [Type](#)

The type to be obtained.

## Returns

Node[]

Returns the component types as a node list.

## Remarks

If the specified type is null or not found in the component list, an empty list will be returned.

## Exceptions

[ArgumentException](#)

Occurs when the specified type does not inherit from Godot.Node.

# GetComponent(Type?, bool)

Gets components by the specified type.

```
public Node[]? GetComponent(Type? component, bool recursive)
```

## Parameters

**component** [Type](#)

The type to be obtained.

**recursive** [bool](#)

Allows searching in sub-children.

## Returns

Node[]

Returns the component types as a node list.

## Remarks

If the specified type is null or not found in the component list, an empty list will be returned.

## Exceptions

[ArgumentException](#) 

Occurs when the specified type does not inherit from Godot.Node.

## GetComponents<TypeComponent>()

Gets components by the specified type.

```
public TypeComponent[]? GetComponents<TypeComponent>() where TypeComponent : Node
```

## Returns

TypeComponent[]

Returns the component types as a node list.

## Type Parameters

**TypeComponent**

The type to be obtained.

## Remarks

If the specified type is null or not found in the component list, an empty list will be returned.

## Exceptions

[ArgumentException](#) 

Occurs when the specified type does not inherit from Godot.Node.

## GetComponents<TypeComponent>(bool)

Gets components by the specified type.

```
public TypeComponent[]? GetComponents<TypeComponent>(bool recursive) where TypeComponent : Node
```

## Parameters

**recursive** [bool](#)

Allows searching in sub-children.

## Returns

TypeComponent[]

Returns the component types as a node list.

## Type Parameters

**TypeComponent**

The type to be obtained.

## Remarks

If the specified type is null or not found in the component list, an empty list will be returned.

## Exceptions

[ArgumentException](#)

Occurs when the specified type does not inherit from Godot.Node.

## GetEnumerator()

Returns an enumerator that iterates through the collection.

```
public IEnumerator<Node> GetEnumerator()
```

## Returns

[IEnumerator](#) <Node>

An enumerator that can be used to iterate through the collection.

## RemoveComponent(Node?)

Allows you to remove a Godot.Node object from the list of components.

```
public bool RemoveComponent(Node? component)
```

### Parameters

**component** Node

The Godot.Node object to remove.

### Returns

[bool](#)

Returns **true** if the operation is successful.

## RemoveComponents(params Node[]?)

Allows you to remove several Godot.Node objects from the list of components.

```
public void RemoveComponents(params Node[]? components)
```

### Parameters

**components** Node[]

The Godot.Node objects to be removed.



# Class NullComponentHub

Namespace: [Cobilas.GodotEngine.Component](#)

Assembly: com.cobilas.godot.icomponent.dll

Represents a null ComponentHub.

```
public class NullComponentHub : Node, IDisposable, IComponentHub, IEnumerable<Node>,
    IEnumerable, INullObject
```

## Inheritance

[object](#) ← Object ← Node ← NullComponentHub

## Implements

[IDisposable](#), [IComponentHub](#), [IEnumerable](#)<Node>, [IEnumerable](#), [INullObject](#)

## Inherited Members

Node.NotificationEnterTree , Node.NotificationExitTree , Node.NotificationMovedInParent ,  
Node.NotificationReady , Node.NotificationPaused , Node.NotificationUnpaused ,  
Node.NotificationPhysicsProcess , Node.NotificationProcess , Node.NotificationParented ,  
Node.NotificationUnparented , Node.NotificationInstanced , Node.NotificationDragBegin ,  
Node.NotificationDragEnd , Node.NotificationPathChanged , Node.NotificationChildOrderChanged ,  
Node.NotificationInternalProcess , Node.NotificationInternalPhysicsProcess ,  
Node.NotificationPostEnterTree , Node.NotificationResetPhysicsInterpolation ,  
Node.NotificationWmMouseEnter , Node.NotificationWmMouseExit , Node.NotificationWmFocusIn ,  
Node.NotificationWmFocusOut , Node.NotificationWmQuitRequest ,  
Node.NotificationWmGoBackRequest , Node.NotificationWmUnfocusRequest ,  
Node.NotificationOsMemoryWarning , Node.NotificationTranslationChanged ,  
Node.NotificationWmAbout , Node.NotificationCrash , Node.NotificationOslmeUpdate ,  
Node.NotificationAppResumed , Node.NotificationAppPaused , Node.GetNode<T>(NodePath) ,  
Node.GetNodeOrNull<T>(NodePath) , [Node.GetChild<T>\(int\)](#) , [Node.GetChildOrNull<T>\(int\)](#) ,  
Node.GetOwner<T>() , Node.GetOwnerOrNull<T>() , Node.GetParent<T>() ,  
Node.GetParentOrNull<T>() , Node.\_EnterTree() , Node.\_ExitTree() , Node.\_GetConfigurationWarning() ,  
Node.\_Input(InputEvent) , [Node.PhysicsProcess\(float\)](#) , [Node.Process\(float\)](#) , Node.\_Ready() ,  
Node.\_UnhandledInput(InputEvent) , Node.\_UnhandledKeyInput(InputEventKey) ,  
[Node.AddChildBelowNode\(Node, Node, bool\)](#) , [Node.SetName\(string\)](#) , Node.GetName() ,  
[Node.AddChild\(Node, bool\)](#) , Node.RemoveChild(Node) , Node.GetChildCount() , Node.GetChildren() ,  
[Node.GetChild\(int\)](#) , Node.HasNode(NodePath) , Node.GetNode(NodePath) ,  
Node.GetNodeOrNull(NodePath) , Node.GetParent() , [Node.FindNode\(string, bool, bool\)](#) ,  
[Node.FindParent\(string\)](#) , Node.HasNodeAndResource(NodePath) ,

Node.GetNodeAndResource(NodePath) , Node.IsInsideTree() , Node.IsAParentOf(Node) ,  
Node.IsGreaterThan(Node) , Node.GetPath() , Node.GetPathTo(Node) ,  
[Node.AddToGroup\(string, bool\)](#) , [Node.RemoveFromGroup\(string\)](#) , [Node.IsInGroup\(string\)](#) ,  
[Node.MoveChild\(Node, int\)](#) , Node.GetGroups() , Node.Raise() , Node.SetOwner(Node) ,  
Node.GetOwner() , Node.RemoveAndSkip() , Node.GetIndex() , Node.PrintTree() , Node.PrintTreePretty() ,  
[Node.SetFilename\(string\)](#) , Node.GetFilename() , [Node.PropagateNotification\(int\)](#) ,  
[Node.PropagateCall\(string, Array, bool\)](#) , [Node.SetPhysicsProcess\(bool\)](#) ,  
Node.GetPhysicsProcessDeltaTime() , Node.IsPhysicsProcessing() , Node.GetProcessDeltaTime() ,  
[Node.SetProcess\(bool\)](#) , [Node.SetProcessPriority\(int\)](#) , Node.GetProcessPriority() ,  
Node.IsProcessing() , [Node.SetProcessInput\(bool\)](#) , Node.IsProcessingInput() ,  
[Node.SetProcessUnhandledInput\(bool\)](#) , Node.IsProcessingUnhandledInput() ,  
[Node.SetProcessUnhandledKeyInput\(bool\)](#) , Node.IsProcessingUnhandledKeyInput() ,  
Node.SetPauseMode(Node.PauseModeEnum) , Node.GetPauseMode() , Node.CanProcess() ,  
Node.PrintStrayNodes() , Node.GetPositionInParent() , [Node.SetDisplayFolded\(bool\)](#) ,  
Node.IsDisplayedFolded() , [Node.SetProcessInternal\(bool\)](#) , Node.IsProcessingInternal() ,  
[Node.SetPhysicsProcessInternal\(bool\)](#) , Node.IsPhysicsProcessingInternal() ,  
Node.SetPhysicsInterpolationMode(Node.PhysicsInterpolationModeEnum) ,  
Node.GetPhysicsInterpolationMode() , Node.IsPhysicsInterpolated() ,  
Node.IsPhysicsInterpolatedAndEnabled() , Node.ResetPhysicsInterpolation() , Node.GetTree() ,  
Node.CreateTween() , [Node.Duplicate\(int\)](#) , [Node.ReplaceBy\(Node, bool\)](#) ,  
[Node.SetSceneInstanceLoadPlaceholder\(bool\)](#) , Node.GetSceneInstanceLoadPlaceholder() ,  
[Node.SetEditableInstance\(Node, bool\)](#) , Node.IsEditableInstance(Node) , Node.GetViewport() ,  
Node.QueueFree() , Node.RequestReady() , Node.IsNodeReady() , [Node.SetNetworkMaster\(int, bool\)](#) ,  
Node.GetNetworkMaster() , Node.IsNetworkMaster() , Node.GetMultiplayer() ,  
Node.GetCustomMultiplayer() , Node.SetCustomMultiplayer(MultiplayerAPI) ,  
[Node.RpcConfig\(string, MultiplayerAPI.RPCMode\)](#) ,  
[Node.RsetConfig\(string, MultiplayerAPI.RPCMode\)](#) , [Node.SetUniqueNameInOwner\(bool\)](#) ,  
Node.IsUniqueNameInOwner() , [Node.Rpc\(string, params object\[\]\)](#) ,  
[Node.RpcUnreliable\(string, params object\[\]\)](#) , [Node.RpcId\(int, string, params object\[\]\)](#) ,  
[Node.RpcUnreliableId\(int, string, params object\[\]\)](#) , [Node.Rset\(string, object\)](#) ,  
[Node.RsetId\(int, string, object\)](#) , [Node.RsetUnreliable\(string, object\)](#) ,  
[Node.RsetUnreliableId\(int, string, object\)](#) , Node.UpdateConfigurationWarning() ,  
Node.EditorDescription , Node.\_ImportPath , Node.PauseMode , Node.PhysicsInterpolationMode ,  
Node.Name , Node.UniqueNameInOwner , Node.Filename , Node.Owner , Node.Multiplayer ,  
Node.CustomMultiplayer , Node.ProcessPriority , Object.NotificationPostinitialize ,  
Object.NotificationPredelete , Object.IsInstanceValid(Object) , Object.WeakRef(Object) , Object.Dispose() ,  
[Object.Dispose\(bool\)](#) , Object.ToString() , [Object.ToSignal\(Object, string\)](#) , [Object. Get\(string\)](#) ,  
Object.\_GetPropertyList() , [Object. Notification\(int\)](#) , [Object. Set\(string, object\)](#) , Object.Free() ,  
Object.GetClass() , [Object.IsClass\(string\)](#) , [Object.Set\(string, object\)](#) , [Object.Get\(string\)](#) ,  
[Object.SetIndexed\(NodePath, object\)](#) , Object.GetIndexed(NodePath) , Object.GetPropertyList() ,

[Object.GetMethodList\(\)](#) , [Object.Notification\(int, bool\)](#) , [Object.GetInstanceId\(\)](#) ,  
[Object.SetScript\(Reference\)](#) , [Object.GetScript\(\)](#) , [Object.SetMeta\(string, object\)](#) ,  
[Object.RemoveMeta\(string\)](#) , [Object.GetMeta\(string, object\)](#) , [Object.HasMeta\(string\)](#) ,  
[Object.GetMetaList\(\)](#) , [Object.AddUserSignal\(string, Array\)](#) , [Object.HasUserSignal\(string\)](#) ,  
[Object.EmitSignal\(string, params object\[\]\)](#) , [Object.Call\(string, params object\[\]\)](#) ,  
[Object.CallDeferred\(string, params object\[\]\)](#) , [Object.SetDeferred\(string, object\)](#) ,  
[Object.Callv\(string, Array\)](#) , [Object.HasMethod\(string\)](#) , [Object.HasSignal\(string\)](#) ,  
[Object.GetSignalList\(\)](#) , [Object.GetSignalConnectionList\(string\)](#) , [Object.GetIncomingConnections\(\)](#) ,  
[Object.Connect\(string, Object, string, Array, uint\)](#) , [Object.Disconnect\(string, Object, string\)](#) ,  
[Object.IsConnected\(string, Object, string\)](#) , [Object.SetBlockSignals\(bool\)](#) , [Object.IsBlockingSignals\(\)](#) ,  
[Object.PropertyListChangedNotify\(\)](#) , [Object.SetMessageTranslation\(bool\)](#) ,  
[Object.CanTranslateMessages\(\)](#) , [Object.Tr\(string\)](#) , [Object.IsQueuedForDeletion\(\)](#) ,  
[Object.NativeInstance](#) , [Object.DynamicObject](#) , [object.Equals\(object\)](#) , [object.Equals\(object, object\)](#) ,  
[object.ReferenceEquals\(object, object\)](#) , [object.GetHashCode\(\)](#) , [object.GetType\(\)](#) ,  
[object.MemberwiseClone\(\)](#)

## Properties

### ComponentsCount

The number of child objects.

```
public int ComponentsCount { get; }
```

### Property Value

[int](#)

Returns the number of child objects.

## Null

A representation of a null ComponentHub.

```
public static NullComponentHub Null { get; }
```

### Property Value

## [NullComponentHub](#)

Returns a representation of a null ComponentHub.

## Parent

The parent object.

```
public Node? Parent { get; }
```

## Property Value

Node

Returns the parent object.

## ParentComponent

The parent object as [IComponentHub](#).

```
public IComponentHub? ParentComponent { get; }
```

## Property Value

[IComponentHub](#)

Returns the parent object as [IComponentHub](#).

## Methods

### AddComponent(Type?)

Allows you to add a component by specifying its type.

```
public Node? AddComponent(Type? component)
```

## Parameters

component [Type](#)

The type to be added.

Returns

Node

Returns the type that was added.

## AddComponent<T>()

Allows you to add a component by specifying its type.

```
public T? AddComponent<T>() where T : Node
```

Returns

T

Returns the type that was added.

Type Parameters

T

## AddComponents(params Type[]?)

Allows you to add multiple components by specifying their type.

```
public void AddComponents(params Type[]? components)
```

Parameters

components [Type](#)[]

The types to be added.

## AddNodeComponent(Node?)

Allows you to add a Godot.Node object to the component list.

```
public void AddNodeComponent(Node? component)
```

### Parameters

**component** Node

The Godot.Node object to add.

## AddNodeComponents(params Node[]?)

Allows you to add multiple Godot.Node objects to the component list.

```
public void AddNodeComponents(params Node[]? components)
```

### Parameters

**components** Node[]

The Godot.Node objects to add.

## GetComponent(Type?)

Gets the component by the specified type.

```
public Node? GetComponent(Type? component)
```

### Parameters

**component** [Type](#)

The type to be obtained.

### Returns

## Node

Returns the component type as node.

## GetComponent(Type?, bool)

Gets the component by the specified type.

```
public Node? GetComponent(Type? component, bool recursive)
```

### Parameters

**component** [Type](#)

The type to be obtained.

**recursive** [bool](#)

Allows searching in sub-children.

### Returns

#### Node

Returns the component type as node.

## GetComponent<T>()

Gets the component by the specified type.

```
public T? GetComponent<T>() where T : Node
```

### Returns

#### T

Returns the component type as node.

### Type Parameters

T

## GetComponent<T>(bool)

Gets the component by the specified type.

```
public T? GetComponent<T>(bool recursive) where T : Node
```

### Parameters

**recursive** [bool](#)

Allows searching in sub-children.

### Returns

T

Returns the component type as node.

### Type Parameters

T

## GetComponents(Type?)

Gets components by the specified type.

```
public Node[]? GetComponents(Type? component)
```

### Parameters

**component** [Type](#)

The type to be obtained.

### Returns

Node[]



Returns the component types as a node list.

## GetComponents(Type?, bool)

Gets components by the specified type.

```
public Node[]? GetComponents(Type? component, bool recursive)
```

### Parameters

**component** [Type](#)

The type to be obtained.

**recursive** [bool](#)

Allows searching in sub-children.

### Returns

Node[]

Returns the component types as a node list.

## GetComponents<T>()

Gets components by the specified type.

```
public T[]? GetComponents<T>() where T : Node
```

### Returns

T[]

Returns the component types as a node list.

### Type Parameters

**T**

## GetComponent<T>(bool)

Gets components by the specified type.

```
public T[]? GetComponent<T>(bool recursive) where T : Node
```

### Parameters

**recursive** [bool](#)

Allows searching in sub-children.

### Returns

**T[]**

Returns the component types as a node list.

### Type Parameters

**T**

## GetEnumerator()

Returns an enumerator that iterates through the collection.

```
public IEnumerator<Node> GetEnumerator()
```

### Returns

[IEnumerator](#) <Node>

An enumerator that can be used to iterate through the collection.

## RemoveComponent(Node?)

Allows you to remove a Godot.Node object from the list of components.

```
public bool RemoveComponent(Node? component)
```

## Parameters

**component** Node

The Godot.Node object to remove.

## Returns

[bool](#)

Returns **true** if the operation is successful.

## RemoveComponents(params Node[]?)

Allows you to remove several Godot.Node objects from the list of components.

```
public void RemoveComponents(params Node[]? components)
```

## Parameters

**components** Node[]

The Godot.Node objects to be removed.

# Class RequireComponentAttribute

Namespace: [Cobilas.GodotEngine.Component](#)

Assembly: com.cobilas.godot.icomponent.dll

Signals to the [AddRequireComponent\(Node?\)](#) method which components to add to the Godot.Node object.

```
[AttributeUsage(AttributeTargets.Class, Inherited = true, AllowMultiple = false)]  
public sealed class RequireComponentAttribute : Attribute, _Attribute
```



































## Inheritance

[object](#)  ← [Attribute](#)  ← RequireComponentAttribute

## Implements

[\\_Attribute](#) 

## Inherited Members

[Attribute.GetCustomAttributes\(MemberInfo, Type\)](#)  ,  
[Attribute.GetCustomAttributes\(MemberInfo, Type, bool\)](#)  ,  
[Attribute.GetCustomAttributes\(MemberInfo\)](#)  , [Attribute.GetCustomAttributes\(MemberInfo, bool\)](#)  ,  
[Attribute.IsDefined\(MemberInfo, Type\)](#)  , [Attribute.IsDefined\(MemberInfo, Type, bool\)](#)  ,  
[Attribute.GetCustomAttribute\(MemberInfo, Type\)](#)  ,  
[Attribute.GetCustomAttribute\(MemberInfo, Type, bool\)](#)  ,  
[Attribute.GetCustomAttributes\(ParameterInfo\)](#)  , [Attribute.GetCustomAttributes\(ParameterInfo, Type\)](#)  ,  
[Attribute.GetCustomAttributes\(ParameterInfo, Type, bool\)](#)  ,  
[Attribute.GetCustomAttributes\(ParameterInfo, bool\)](#)  , [Attribute.IsDefined\(ParameterInfo, Type\)](#)  ,  
[Attribute.IsDefined\(ParameterInfo, Type, bool\)](#)  , [Attribute.GetCustomAttribute\(ParameterInfo, Type\)](#)  ,  
[Attribute.GetCustomAttribute\(ParameterInfo, Type, bool\)](#)  ,  
[Attribute.GetCustomAttributes\(Module, Type\)](#)  , [Attribute.GetCustomAttributes\(Module\)](#)  ,  
[Attribute.GetCustomAttributes\(Module, bool\)](#)  , [Attribute.GetCustomAttributes\(Module, Type, bool\)](#)  ,  
[Attribute.IsDefined\(Module, Type\)](#)  , [Attribute.IsDefined\(Module, Type, bool\)](#)  ,  
[Attribute.GetCustomAttribute\(Module, Type\)](#)  , [Attribute.GetCustomAttribute\(Module, Type, bool\)](#)  ,  
[Attribute.GetCustomAttributes\(Assembly, Type\)](#)  ,  
[Attribute.GetCustomAttributes\(Assembly, Type, bool\)](#)  , [Attribute.GetCustomAttributes\(Assembly\)](#)  ,  
[Attribute.GetCustomAttributes\(Assembly, bool\)](#)  , [Attribute.IsDefined\(Assembly, Type\)](#)  ,  
[Attribute.IsDefined\(Assembly, Type, bool\)](#)  , [Attribute.GetCustomAttribute\(Assembly, Type\)](#)  ,  
[Attribute.GetCustomAttribute\(Assembly, Type, bool\)](#)  , [Attribute.Equals\(object\)](#)  ,  
[Attribute.GetHashCode\(\)](#)  , [Attribute.Match\(object\)](#)  , [Attribute.IsDefaultAttribute\(\)](#)  ,

[Attribute.TypeId](#) , [object.ToString\(\)](#) , [object.Equals\(object, object\)](#) , [object.ReferenceEquals\(object, object\)](#) , [object.GetType\(\)](#)

## Constructors

### RequireComponentAttribute(Type)

Creates a new instance of this object.

```
public RequireComponentAttribute(Type component)
```

Parameters

component [Type](#)

### RequireComponentAttribute(Type, Type)

Creates a new instance of this object.

```
public RequireComponentAttribute(Type component1, Type component2)
```

Parameters

component1 [Type](#)

component2 [Type](#)

### RequireComponentAttribute(Type, Type, Type)

Creates a new instance of this object.

```
public RequireComponentAttribute(Type component1, Type component2, Type component3)
```

Parameters

component1 [Type](#)

`component2` [Type](#)

`component3` [Type](#)

## RequireComponentAttribute(params Type[])

Signals to the [AddRequireComponent\(Node?\)](#) method which components to add to the Godot.Node object.

```
public RequireComponentAttribute(params Type[] components)
```

Parameters

`components` [Type](#) []

## Properties

### Components

The types of components to be added.

```
public Type[] Components { get; }
```

Property Value

[Type](#) []

Returns the types of components to be added.