

I just wanna use Json.NET in Unity!

- Json.NET is a powerful, open source, and free serializing solution.
- But it's too smart to serialize something like Vectoe3 or Color, etc.
- It even tries to serialize the "normalized" property and throw a loop exception.
- And it always treats a dictionary key as a string, even if it's an array.

Overview:

- This has some common type converters, and sets them as default to make it up..
- If you're using Json.NET, just import and forget this, then coding like before.
- Include Json.Net.Unity3D in case you don't have any version of Json.NET.

The further technical documentation is available here. And the tutorial is right below.

Remarks:

- Remember to set the "Api Compatibility Lavel" to .NET 2.0 before importing.
- Thank James Newton-King!
- Thank SaladLab and Esun Kim!
- This's released as feedback for free.

Release:



1.1.2

- Provide assembly definition files, please be aware the script files were moved therefore.
- Change the namespace of JsonNetUtility to "WanzyeeStudio.Json".

1.1.1

- Set PartialConverter CanRead to avoid DefaultValueHandling.Populate deserializing fail.

1.1

- Change the Json.NET dll from official to Json.Net.Unity3D for cross platform.
- Rearrange the Json.Net.Unity3D's asset files to indicate the provider.
- New class PartialConverter to simplify the code of other converters.
- Fix potential deserialization fail caused by bytecode stripping for IL2CPP.
- Fix initializing default converters fail caused by conditional compilation.
- Make the utility initialize the converters safer.

1.0.3

- Refactoring.
- Update the included Json.NET to 10.0.3.

1.0.2

- Update the documentation link.

1.0.1

- Change NotImplementedException in some converters to InvalidOperationException.
- Update the included Json.NET to 9.0.1.

1.0

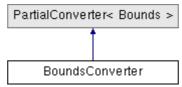
- First release.

BoundsConverter

Released Packages » Json.NET Converters

Custom Newtonsoft. Json. JsonConverter for UnityEngine. Bounds. More...

Inheritance diagram for BoundsConverter:



Public Member Functions

override bool	CanConvert (Type objectType) Determine if the object type is T. More
override object	ReadJson (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer) Read the specified properties to the object. More
override void	WriteJson (JsonWriter writer, object value, JsonSerializer serializer) Write the specified properties of the object. More

Protected Member Functions

override string[] GetPropertyNames ()
Get the property names include center, extents. More...

virtual T CreateInstance ()
Create the instance for ReadJson () to populate. More...

Detailed Description

Custom Newtonsoft. Json. JsonConverter for UnityEngine. Bounds.



Determine if the object type is T. Parameters objectType Type of the object. Returns true if this can convert the specified type; otherwise, false.

```
override object ReadJson ( JsonReader reader,

Type objectType,
object existingValue,
JsonSerializer serializer
) inherited
```

Read the specified properties to the object.

Returns

The object value.

Parameters

reader The Newtonsoft. Json. JsonReader to read from.

objectType Type of the object.

existingValue The existing value of object being read.

```
override void WriteJson ( JsonWriter writer,
object value,
JsonSerializer serializer
)
```

Parameters

writer The Newtonsoft.Json.JsonWriter to write to.

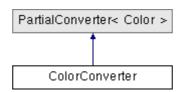
value The value.

ColorConverter

Released Packages » Json.NET Converters

Custom Newtonsoft. Json. JsonConverter for UnityEngine. Color. More...

Inheritance diagram for ColorConverter:



Public Member Functions

override bool	CanConvert (Type objectType) Determine if the object type is T. More
override object	ReadJson (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer) Read the specified properties to the object. More
override void	WriteJson (JsonWriter writer, object value, JsonSerializer serializer) Write the specified properties of the object. More

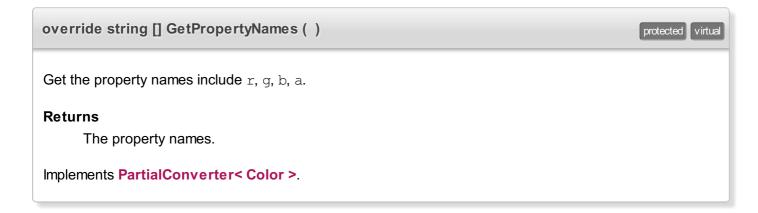
Protected Member Functions

override string[] GetPropertyNames ()
Get the property names include r, g, b, a. More...

virtual T CreateInstance ()
Create the instance for ReadJson () to populate. More...

Detailed Description

Custom Newtonsoft. Json. JsonConverter for UnityEngine. Color.



Determine if the object type is T. Parameters objectType Type of the object. Returns true if this can convert the specified type; otherwise, false.

```
override object ReadJson ( JsonReader reader,

Type objectType,
object existingValue,
JsonSerializer serializer
) inherited
```

Read the specified properties to the object.

Returns

The object value.

Parameters

reader The Newtonsoft. Json. JsonReader to read from.

objectType Type of the object.

existingValue The existing value of object being read.

```
override void WriteJson ( JsonWriter writer,
object value,
JsonSerializer serializer
)
```

Parameters

writer The Newtonsoft.Json.JsonWriter to write to.

value The value.

DictionaryConverter

Released Packages » Json.NET Converters

Custom Newtonsoft. Json. JsonConverter for System. Collections. Generic. Dictionary. More...

Inherits JsonConverter.

Public Member Functions

override bool	<pre>CanConvert (Type objectType) Determine if the type is System.Collections.Generic.Dictionary. More</pre>
override object	ReadJson (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer) Read as System.Collections.Generic.KeyValuePair array to rebuild a dictionary. More
override void	WriteJson (JsonWriter writer, object value, JsonSerializer serializer) Write as System.Collections.Generic.KeyValuePair array. More

Detailed Description

 $\textbf{Custom} \ \texttt{Newtonsoft.Json.JsonConverter} \ \textbf{for} \ \texttt{System.Collections.Generic.Dictionary}.$

Member Function Documentation

override bool CanConvert (Type objectType)

Determine if the type is System.Collections.Generic.Dictionary.

Parameters

objectType Type of the object.

Returns

true if this can convert the specified type; otherwise, false.

```
override object ReadJson ( JsonReader reader,

Type objectType,

object existingValue,

JsonSerializer serializer
)
```

Read as System.Collections.Generic.KeyValuePair array to rebuild a dictionary.

Returns

The object value.

Parameters

reader The Newtonsoft. Json. JsonReader to read from.

objectType Type of the object.

existingValue The existing value of object being read.

serializer The calling serializer.

```
override void WriteJson ( JsonWriter writer,
object value,
JsonSerializer serializer
)
```

Write as System.Collections.Generic.KeyValuePair array.

Parameters

writer The Newtonsoft.Json.JsonWriter to write to.

value The value.

JsonNetUtility

Released Packages » Json.NET Converters

Integrate custom Newtonsoft. Json. JsonConverter to use Json. NET in Unity. More...

Static Public Attributes

```
static JsonSerializerSettings defaultSettings
```

The default Newtonsoft. Json. JsonSerializerSettings. More...

Detailed Description

Integrate custom Newtonsoft. Json. JsonConverter to use Json. NET in Unity.

To use Json.NET, please set Unity "PlayerSettings/Api Compatibility Lavel" to .NET 2.0. Then download from its website and import the .NET 2.0 dll. Json.NET doesn't support serializing some types originally, e.g., UnityEngine.Vector3. This has the defaultSettings includes necessary custom converters by default for Unity using it. And assign to Newtonsoft.Json.JsonConvert.DefaultSettings when initializing if the original null.

Now we can use Json.NET just like before:

```
Debug.Log(JsonConvert.SerializeObject(Vector3.up));
var vec = JsonConvert.DeserializeObject<Vector2>("{'x':1.0,'y':0.0}");
```

User can directly modify defaultSettings for customization, and override it:

```
JsonConvert.DefaultSettings = () => new JsonSerializerSettings() {
   Converters = JsonNetUtility.defaultSettings.Converters,
   DefaultValueHandling = DefaultValueHandling.Populate
};
```

Member Data Documentation

JsonSerializerSettings defaultSettings

static_

The default Newtonsoft. Json. JsonSerializerSettings.

All its properties stay default, but the Converters includes below:

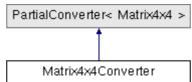
- 1. Any custom Newtonsoft. Json. JsonConverter has constructor without parameters.
- 2. Any Newtonsoft. Json. JsonConverter from WanzyeeStudio. Json.
- 3. Newtonsoft.Json.Converters.StringEnumConverter.
- 4. Newtonsoft. Json. Converters. Version Converter.

Matrix4x4Converter

Released Packages » Json.NET Converters

Custom Newtonsoft. Json. JsonConverter for UnityEngine. Matrix4x4. More...

Inheritance diagram for Matrix4x4Converter:



Public Member Functions

override bool	CanConvert (Type objectType) Determine if the object type is T. More
override object	ReadJson (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer) Read the specified properties to the object. More
override void	WriteJson (JsonWriter writer, object value, JsonSerializer serializer) Write the specified properties of the object. More

Protected Member Functions

override string[] GetPropertyNames ()
Get the property names include from m00 to m33. More...

virtual T CreateInstance ()
Create the instance for ReadJson () to populate. More...

Detailed Description

Custom Newtonsoft.Json.JsonConverter for UnityEngine.Matrix4x4.



Determine if the object type is T. Parameters objectType Type of the object. Returns true if this can convert the specified type; otherwise, false.

```
override object ReadJson ( JsonReader reader,

Type objectType,

object existingValue,

JsonSerializer serializer
) inherited
```

Read the specified properties to the object.

Returns

The object value.

Parameters

reader The Newtonsoft. Json. JsonReader to read from.

objectType Type of the object.

existingValue The existing value of object being read.

```
override void WriteJson ( JsonWriter writer,
object value,
JsonSerializer serializer
)
```

Parameters

writer The Newtonsoft.Json.JsonWriter to write to.

value The value.

PartialConverter< T > abstract

Released Packages » Json.NET Converters

Custom base Newtonsoft. Json. JsonConverter to filter serialized properties. More...

Inherits JsonConverter.

Public Member Functions

override bool	CanConvert (Type objectType) Determine if the object type is T. More
override object	ReadJson (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer) Read the specified properties to the object. More
override void	WriteJson (JsonWriter writer, object value, JsonSerializer serializer) Write the specified properties of the object. More

Protected Member Functions

```
abstract string[] GetPropertyNames ()
Get the property names to serialize, only used once when initializing. More...

virtual T CreateInstance ()
Create the instance for ReadJson () to populate. More...
```

Detailed Description

Custom base Newtonsoft. Json. JsonConverter to filter serialized properties.

Useful for Unity or 3rd party classes, since we can't insert any Newtonsoft. Json. JsonIgnoreAttribute. By the way, this works by reflection to access properties. Please make sure your property not to be stripped by Unity.

It's very easy to make a custom converter, just inherit and override GetPropertyNames () as the filter:

```
public class SomeConverter : PartialConverter<SomeClass>{
    protected override string[] GetPropertyNames() {
        return new []{"someField", "someProperty", "etc"};
    }
}
```

abstract string [] GetPropertyNames ()

protected pure virtual

Get the property names to serialize, only used once when initializing.

Returns

The property names.

Implemented in BoundsConverter, Matrix4x4Converter, ColorConverter, QuaternionConverter, RectConverter, RectOffsetConverter, Vector2Converter, Vector3Converter, and Vector4Converter.

virtual T CreateInstance ()

protected virtual

Create the instance for ReadJson () to populate.

Returns

The instance.

override bool CanConvert (Type objectType)

Determine if the object type is $\ensuremath{\mathbb{T}}$.

Parameters

objectType Type of the object.

Returns

true if this can convert the specified type; otherwise, false.

```
override object ReadJson ( JsonReader
                                          reader,
                           Type
                                          objectType,
                           object
                                          existingValue,
                           JsonSerializer serializer
                         )
```

Read the specified properties to the object.

Returns

The object value.

Parameters

The Newtonsoft. Json. JsonReader to read from. reader

objectType Type of the object.

existingValue The existing value of object being read.

```
override void WriteJson ( JsonWriter writer,
object value,
JsonSerializer serializer
)
```

Parameters

writer The Newtonsoft.Json.JsonWriter to write to.

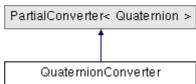
value The value.

QuaternionConverter

Released Packages » Json.NET Converters

Custom Newtonsoft. Json. JsonConverter for UnityEngine. Quaternion. More...

Inheritance diagram for QuaternionConverter:



Public Member Functions

override bool	CanConvert (Type objectType) Determine if the object type is T. More
override object	ReadJson (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer) Read the specified properties to the object. More
override void	WriteJson (JsonWriter writer, object value, JsonSerializer serializer) Write the specified properties of the object. More

Protected Member Functions

```
override string[] GetPropertyNames ()
Get the property names include x, y, z, w. More...

virtual T CreateInstance ()
Create the instance for ReadJson () to populate. More...
```

Detailed Description

Custom Newtonsoft. Json. JsonConverter for UnityEngine. Quaternion.



Determine if the object type is T. Parameters objectType Type of the object. Returns true if this can convert the specified type; otherwise, false.

```
override object ReadJson ( JsonReader reader,

Type objectType,

object existingValue,

JsonSerializer serializer
) inherited
```

Read the specified properties to the object.

Returns

The object value.

Parameters

reader The Newtonsoft. Json. JsonReader to read from.

objectType Type of the object.

existingValue The existing value of object being read.

```
override void WriteJson ( JsonWriter writer,
object value,
JsonSerializer serializer
)
```

Parameters

writer The Newtonsoft.Json.JsonWriter to write to.

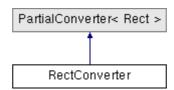
value The value.

RectConverter

Released Packages » Json.NET Converters

Custom Newtonsoft. Json. JsonConverter for UnityEngine. Rect. More...

Inheritance diagram for RectConverter:



Public Member Functions

override bool	CanConvert (Type objectType) Determine if the object type is T. More
override object	ReadJson (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer) Read the specified properties to the object. More
override void	WriteJson (JsonWriter writer, object value, JsonSerializer serializer) Write the specified properties of the object. More

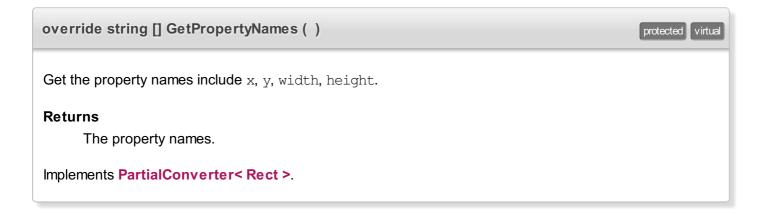
Protected Member Functions

override string[] GetPropertyNames ()
Get the property names include x, y, width, height. More...

virtual T CreateInstance ()
Create the instance for ReadJson () to populate. More...

Detailed Description

 $\textbf{Custom} \ \texttt{Newtonsoft.Json.JsonConverter} \ \textbf{for} \ \texttt{UnityEngine.Rect.}$



Determine if the object type is T. Parameters objectType Type of the object. Returns true if this can convert the specified type; otherwise, false.

```
override object ReadJson ( JsonReader reader,

Type objectType,

object existingValue,

JsonSerializer serializer
) inherited
```

Read the specified properties to the object.

Returns

The object value.

Parameters

reader The Newtonsoft. Json. JsonReader to read from.

objectType Type of the object.

existingValue The existing value of object being read.

```
override void WriteJson ( JsonWriter writer,
object value,
JsonSerializer serializer
)
```

Parameters

writer The Newtonsoft.Json.JsonWriter to write to.

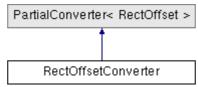
value The value.

RectOffsetConverter

Released Packages » Json.NET Converters

Custom Newtonsoft. Json. JsonConverter for UnityEngine. RectOffset. More...

Inheritance diagram for RectOffsetConverter:



Public Member Functions

override bool	CanConvert (Type objectType) Determine if the object type is T. More
override object	ReadJson (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer) Read the specified properties to the object. More
override void	WriteJson (JsonWriter writer, object value, JsonSerializer serializer) Write the specified properties of the object. More

Protected Member Functions

override string[] GetPropertyNames ()
Get the property names include left, right, top, bottom. More...

virtual T CreateInstance ()
Create the instance for ReadJson () to populate. More...

Detailed Description

Custom Newtonsoft. Json. JsonConverter for UnityEngine. RectOffset.



Determine if the object type is T. Parameters objectType Type of the object. Returns true if this can convert the specified type; otherwise, false.

```
override object ReadJson ( JsonReader reader,

Type objectType,

object existingValue,

JsonSerializer serializer
) inherited
```

Read the specified properties to the object.

Returns

The object value.

Parameters

reader The Newtonsoft. Json. JsonReader to read from.

objectType Type of the object.

existingValue The existing value of object being read.

```
override void WriteJson ( JsonWriter writer,
object value,
JsonSerializer serializer
)
```

Parameters

writer The Newtonsoft.Json.JsonWriter to write to.

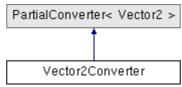
value The value.

Vector2Converter

Released Packages » Json.NET Converters

Custom Newtonsoft. Json. JsonConverter for UnityEngine. Vector 2. More...

Inheritance diagram for Vector2Converter:



Public Member Functions

override bool	CanConvert (Type objectType) Determine if the object type is T. More
override object	ReadJson (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer) Read the specified properties to the object. More
override void	WriteJson (JsonWriter writer, object value, JsonSerializer serializer) Write the specified properties of the object. More

Protected Member Functions

```
override string[] GetPropertyNames ()
Get the property names include x, y. More...

virtual T CreateInstance ()
Create the instance for ReadJson () to populate. More...
```

Detailed Description

Custom Newtonsoft. Json. JsonConverter for UnityEngine. Vector 2.



Determine if the object type is T. Parameters objectType Type of the object. Returns true if this can convert the specified type; otherwise, false.

```
override object ReadJson ( JsonReader reader,

Type objectType,

object existingValue,

JsonSerializer serializer
) inherited
```

Read the specified properties to the object.

Returns

The object value.

Parameters

reader The Newtonsoft. Json. JsonReader to read from.

objectType Type of the object.

existingValue The existing value of object being read.

```
override void WriteJson ( JsonWriter writer,
object value,
JsonSerializer serializer
)
```

Parameters

writer The Newtonsoft.Json.JsonWriter to write to.

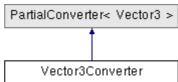
value The value.

Vector3Converter

Released Packages » Json.NET Converters

Custom Newtonsoft. Json. JsonConverter for UnityEngine. Vector 3. More...

Inheritance diagram for Vector3Converter:



Public Member Functions

override bool	CanConvert (Type objectType) Determine if the object type is T. More
override object	ReadJson (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer) Read the specified properties to the object. More
override void	WriteJson (JsonWriter writer, object value, JsonSerializer serializer) Write the specified properties of the object. More

Protected Member Functions

override string[] GetPropertyNames ()
Get the property names include x, y, z. More...

virtual T CreateInstance ()
Create the instance for ReadJson () to populate. More...

Detailed Description

Custom Newtonsoft. Json. JsonConverter for UnityEngine. Vector 3.



Determine if the object type is T. Parameters objectType Type of the object. Returns true if this can convert the specified type; otherwise, false.

```
override object ReadJson ( JsonReader reader,

Type objectType,

object existingValue,

JsonSerializer serializer
) inherited
```

Read the specified properties to the object.

Returns

The object value.

Parameters

reader The Newtonsoft. Json. JsonReader to read from.

objectType Type of the object.

existingValue The existing value of object being read.

```
override void WriteJson ( JsonWriter writer,
object value,
JsonSerializer serializer
)
```

Parameters

writer The Newtonsoft.Json.JsonWriter to write to.

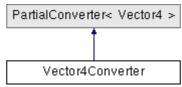
value The value.

Vector4Converter

Released Packages » Json.NET Converters

Custom Newtonsoft. Json. JsonConverter for UnityEngine. Vector 4. More...

Inheritance diagram for Vector4Converter:



Public Member Functions

override bool	CanConvert (Type objectType) Determine if the object type is T. More
override object	ReadJson (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer) Read the specified properties to the object. More
override void	WriteJson (JsonWriter writer, object value, JsonSerializer serializer) Write the specified properties of the object. More

Protected Member Functions

override string[]	GetPropertyNames () Get the property names include x, y, z, w. More
virtual T	CreateInstance () Create the instance for ReadJson () to populate. More

Detailed Description

Custom Newtonsoft. Json. JsonConverter for UnityEngine. Vector 4.



Determine if the object type is T. Parameters objectType Type of the object. Returns true if this can convert the specified type; otherwise, false.

```
override object ReadJson ( JsonReader reader,

Type objectType,

object existingValue,

JsonSerializer serializer
) inherited
```

Read the specified properties to the object.

Returns

The object value.

Parameters

reader The Newtonsoft. Json. JsonReader to read from.

objectType Type of the object.

existingValue The existing value of object being read.

```
override void WriteJson ( JsonWriter writer,
object value,
JsonSerializer serializer
)
```

Parameters

writer The Newtonsoft.Json.JsonWriter to write to.

value The value.