

# Motion Warping

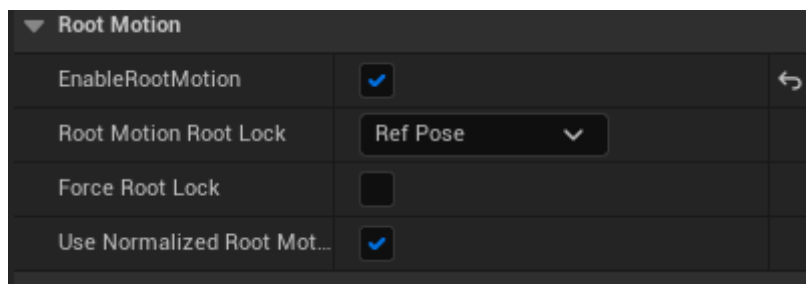
官方文档: <https://docs.unrealengine.com/5.0/en-US/motion-warping-in-unreal-engine/>

需要启用Motion Warping插件

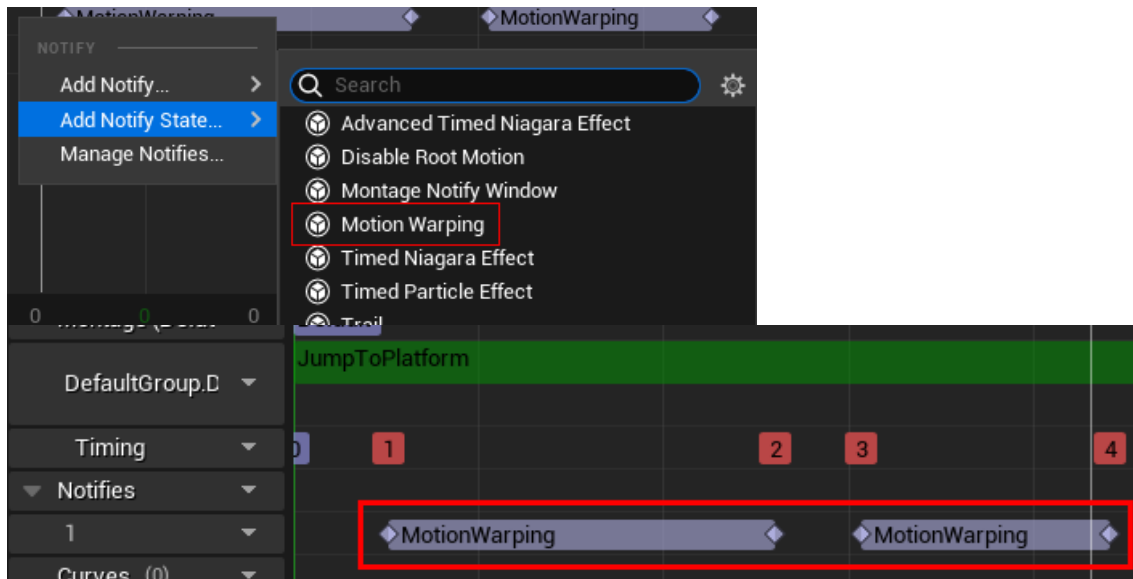
<https://zhuanlan.zhihu.com/p/378948277>

使用流程:

1. 启用Motion Warping插件
2. 动画序列必须是根动画，并启用根动画



3. 通过该动画序列创建对应的Montage动画
4. 在动画帧轨道的Notify中添加Motion Warping类型的Notify State, Motion Warping的结束位置大约在该扭曲位置靠后一点点。



5. 设置Motion Warping参数

▼ Anim Notify

Notify State Class

▼ Root Motion Modifier

Skew Warp

▼

Warp Target Name

Test3

Warp Point Anim Provider

None

▼

▼ Warp Point Anim Transform

Location

0.0

0.0

0.0

Rotation

-0.0

0.0

0.0

Scale

1.0

1.0

1.0

Warp Point Anim Bone Name

None

Warp Translation

☒

Ignore ZAxis

☒

Warp Rotation

☐

Rotation Type

Default

▼

Warp Rotation Time Multiplier

1.0

▶ Notify Color

Root Motion Modifier

The Motion Warping type to specify.

Scale: A Motion Warp that alters an animation's scale in a uniform manner. **Skew Warp:** Warps the game object's root motion so that it matches the animation's location and rotation in the level at the end of the warping window.

Warp Target Name

The name used to find this warp target. Correlates to the **Add or Update Warp Target** Blueprint node.

Warp Point Anim Provider

Select which provider is desired for the **Warp Point**.  
**None:** No Warp Point Provider is declared here. **Static:** Warp Point defined by a user-defined parameter transform, which can be declared through the warping notify itself.  
**Bone:** Warp Point is defined by a Bone.

Warp Point Anim Transform

Transform the Animation Warp Point. Only relevant when the **Warp Point Anim Provider** is set to **Static**.

Warp Point Anim Bone Name

Declare the Bone Name with which to target as a Warp Point. Only relevant when the **Warp Point Anim Provider** is set to **Bone**.

Warp Translation

Whether to warp the translation component of the root motion.

Ignore ZAxis

Whether to warp the Z component of the translation.

Warp Rotation

Whether to warp the rotation component of the root motion.

Rotation Type

Whether the rotation should warp to match the warp target's rotation or face the warp target.  
**Default:** Character rotates to match the rotation of the warp target. **Facing:** Character rotates to face the warp target.

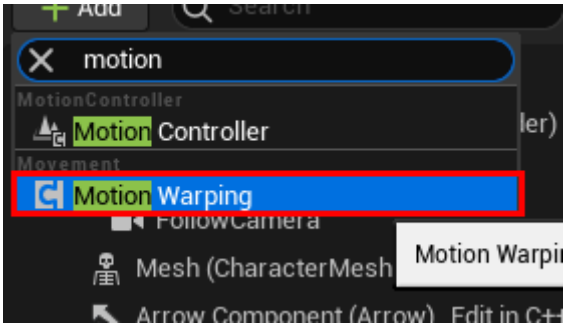
Warp Rotation Time Multiplier

Modifies how fast the rotation is warped. For example, if the Motion Warping window lasts for two seconds, and this property is 0.5, then the final rotation will be reached in one second.


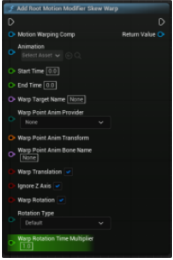
Notify Color

Sets the color of the Motion Warping Notify keyframe.

6. 在角色蓝图中添加Motion Warping组件



7. 通过该组件主要有两个方法可以调用，一个是更新或添加WarpTarget，另一个是添加Skew Warp：

Node Name	Node Image	Description
Add or Update WarpTarget		<p>This node is used to link the Warp Target Name, which was defined in the Montage Asset, to a location. The <b>Warp Target</b> pin can be split into separate <b>Translation</b> and <b>Rotation</b> pins by right-clicking it and selecting <b>Split Struct Pin</b>.</p> <p>Conversely, you can use the <b>Remove Warp Target</b> node to unlink the <b>Warp Target Name</b>.</p>
Add Root Motion Modifier Skew Warp		<p>You can use this node to generate new Motion Warping Windows with Blueprints instead of adding <b>Skew Warp Anim Notifies</b> in the Montage Asset.</p> <p>Settings for this Motion Warping Window can also be assigned here, such as <b>Start Time</b> and <b>End Time</b> and <b>Warp Target Name</b>.</p> <p>Also available is an <b>Add Root Motion Modifier for Scale</b> node, as well as a node for disabling all Root Motion Modifiers.</p>

8. 然后播放Montage动画，蓝图代码如下。如果动画是有高度变化的，还需要在播放动画前开启**飞行模式**，结束后关闭。

