REACTIVE CAMERA

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Reactive Camera Documentation

Unreal Engine 4

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REACTIVE CAMERA

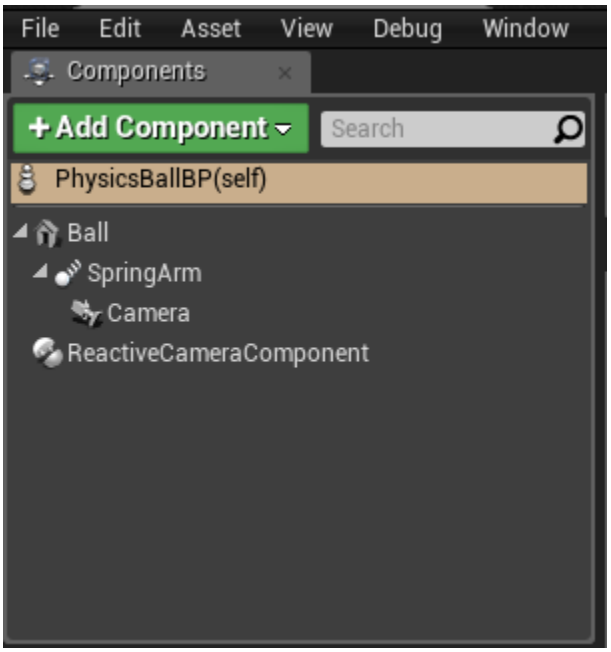
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Introduction

The following will describe the functionality of the Reactive Camera Component for Unreal Engine 4 and provide guidance on how to setup and initialize the component. For the purposes of this document, the UE4 Rolling Template project will be used as a reference.

Attach the component

You can attach the component on any actor you wish. Primary candidates for this are your character blueprint or the Player Controller. You should have a setup as the one shown in the image below, where you have a camera component (Camera) attached to a spring-arm component (SpringArm)

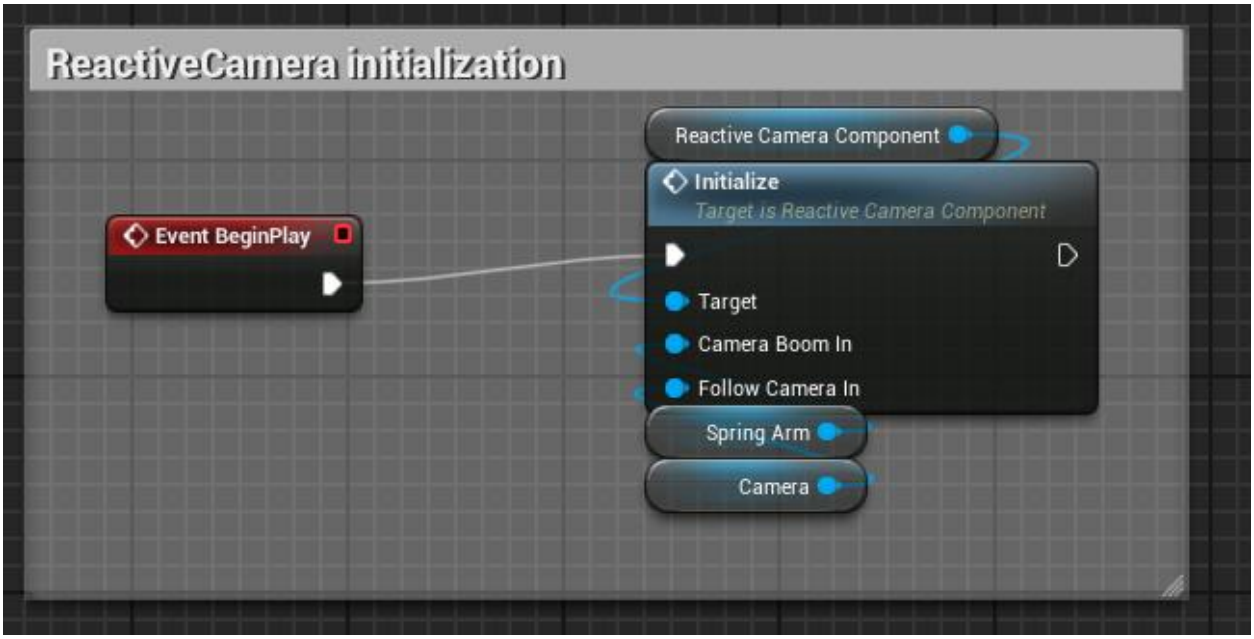


Simply add the ReactiveCameraComponent.

Initialize the component

To initialize the component all is needed is to call the Initialize blueprint function on the ReactiveCameraComponent and connect the following:

- SpringArm -> Camera Boom In
- Camera -> Follow Camera In



Updating the camera

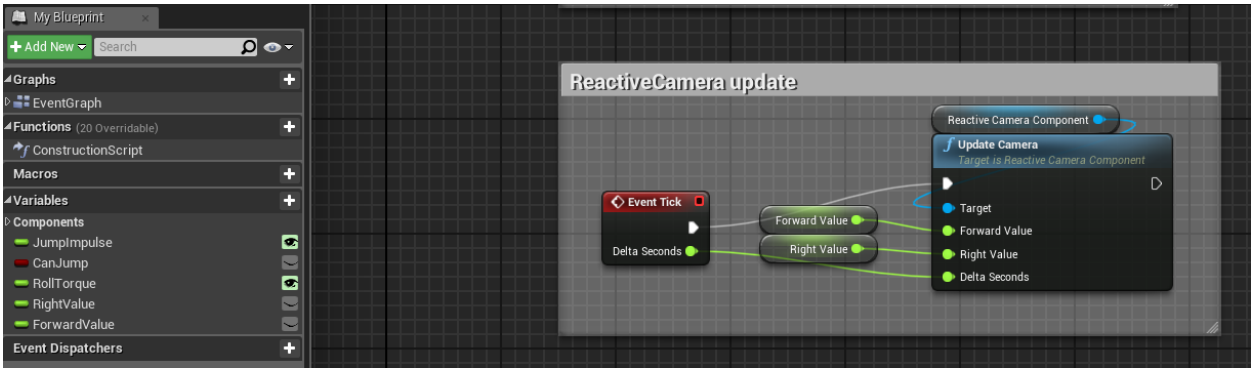
I've created two floats (ForwardValue and RightValue) as you can see in the screenshot below.



We will update these values according to our input.

To have the Reactive Camera component do its work, we need to update it on every tick. To do that simply call the Update Camera blueprint function on the Reactive Camera Component, and connect it to the Event Tick. The Update Camera blueprint function takes three inputs:

- Forward Value
- Right Value
- Delta Seconds



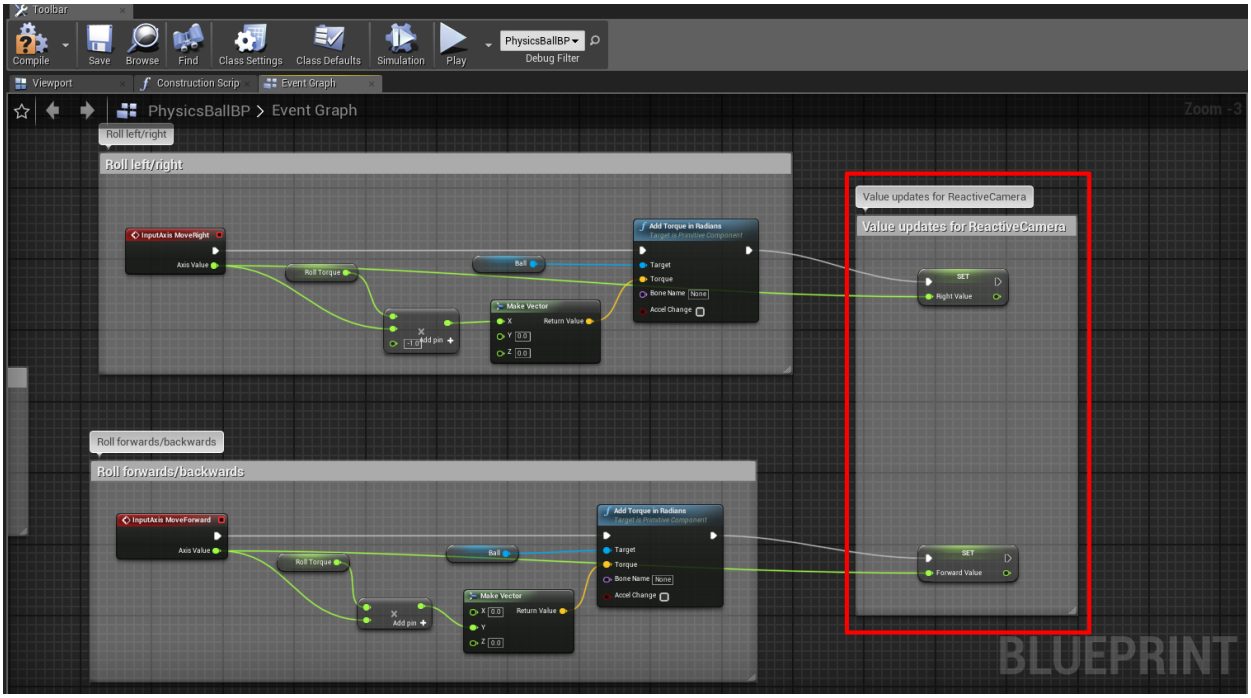
Connect the following:

- Delta Seconds (from Event Tick) -> Delta Seconds
- Forward Value (the one we created earlier) -> Forward Value

- Right Value (the one we created earlier) -> Right Value

The Forward and Right value inputs are the ones that will make your camera “react” or dynamically change.

You can update the Forward and Right values anyway you like. For the purposes of this documentation, we will update the values based on the InputAxis MoveRight and InputAxis MoveForward inputs, as shown below:



Configuration

Reactive Camera component offers a huge array of properties to play around with in order to get the desired behavior. Below you will find an explanation of these properties. The same explanation can be found when you hover over each property inside the engine, for most of the properties.

Name	Description
Enabled	Whether the component is enabled or not. If this is unchecked, no manipulations will occur
Distance	How much distance should the camera show in the direction of the axis (Forward Recommended: 4 - 8, Right Recommended: 10 - 20)
Distance Multiplier	Multiplier used when calculating Distance. Adjust this according to the scale of your input value (Recommended: 1)
Interpolation Speed	The speed in which camera interpolates the vector (Recommended: 1.2 - 4)
Pullback Distance	The distance added to the target arm during input, according to the PullbackMode selected. It is the distance the camera will pull back when input is detected.
Target Arm Length Interpolation Speed	The speed in which camera interpolates the target arm length
FOV Pullback Distance	The distance in degrees added to the current camera FOV during input, according to the PullbackMode selected. It is the degrees that will be removed from the current camera FOV when input is detected.
Camera FOV Interpolation Speed	The speed in which camera interpolates the FOV
Pullback Condition	Choose on which axis and under which conditions should the pullback effect occur
Input Condition	Choose on which axis the reactive effect should be enabled. For example, for a side-scrolling game use the RightOnly option. Use None to disable the reactive effect completely.
Sustain Right Axis Rotation	If set to true, right axis rotation will NOT interpolate back to 0 and will keep adding to the previous rotation. If set to false, the right axis rotation WILL interpolate back to 0.
Apply on Camera instead of Boom	If set to true, it will apply right axis manipulations on the follow camera, instead of the camera boom.