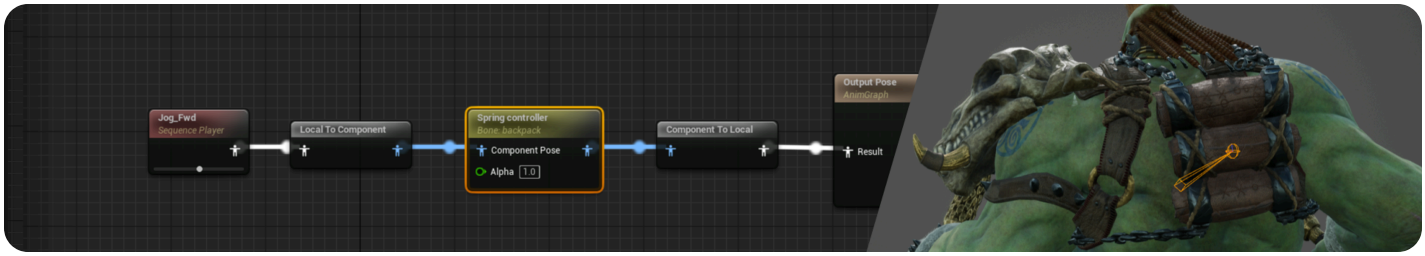
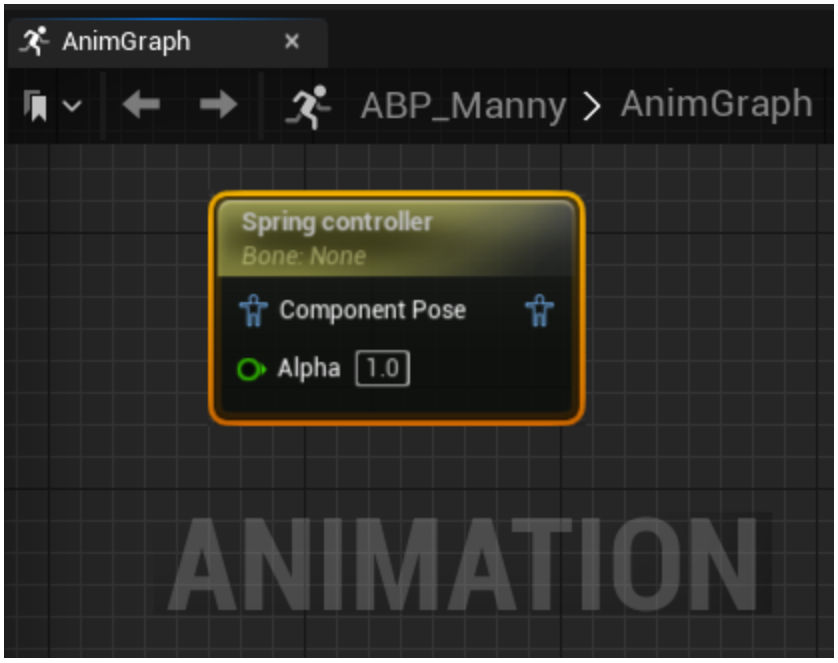
Spring Controller

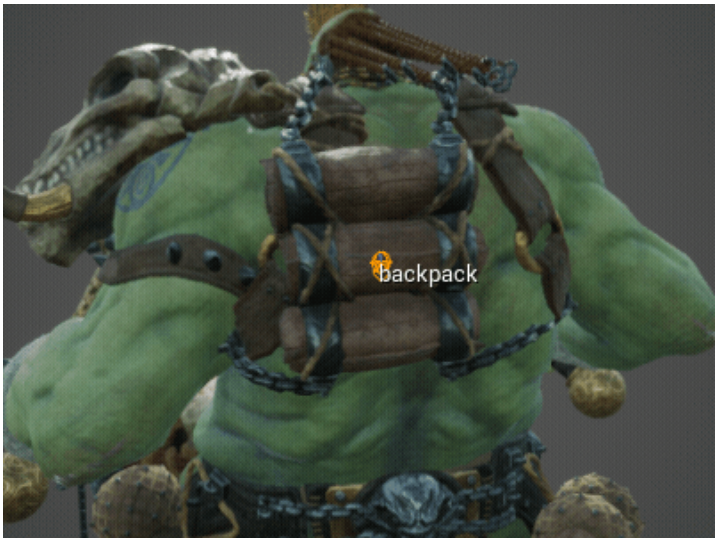
Describes the Spring Controller which is used to limit how far a bone can stretch from its reference pose before force is applied in the opposite direction.



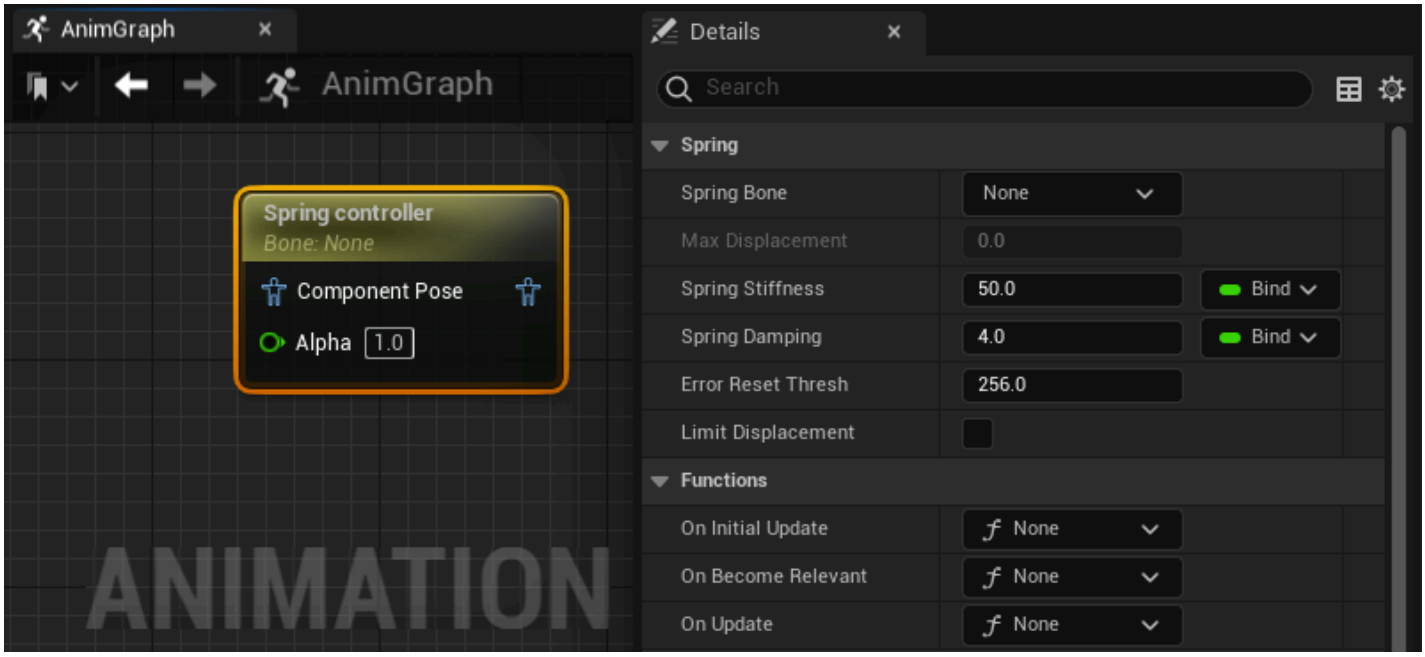
With the **Spring Controller** Animation Blueprint node, you can apply a controlled stretch to bone from a character's skeleton.



Here is an example of the Spring Controller node being used to simulate movement of non-animated bones by applying a force in the opposite direction for the character's motion.

spring cotroller demo disabled (convert:false)	
Spring Controller Disabled	Spring Controller Enabled

Property Reference



Here you can reference a list of the Spring Controller node's properties.

Property	Description
Spring Bone	Select the bone from the character's skeleton to apply the Spring Controller node to.
Max Displacement	Set the maximum distance the bone can stretch from the reference pose location, in Unreal Engine units, when **Limit Displacement** is enabled.
Spring Stiffness	Set a multiplier value used to calculate the stiffness of the spring. Larger values require more bone velocity to displace the bone and result in a larger applied force with quicker reactive movements.
Spring Damping	Set a multiplier to reduce the **Spring Bones**'s velocity, to create smoother and more controlled results.
Error Reset Thresh	Set a threshold to reset the Spring Bones in Unreal Engine units. If the **Spring Bone** stretches more than this amount, it resets in order to avoid errors introduced by sudden, large displacements such as those caused by teleporting Actors.
Limit Displacement	When enabled the **Max Displacement** property will be considered.