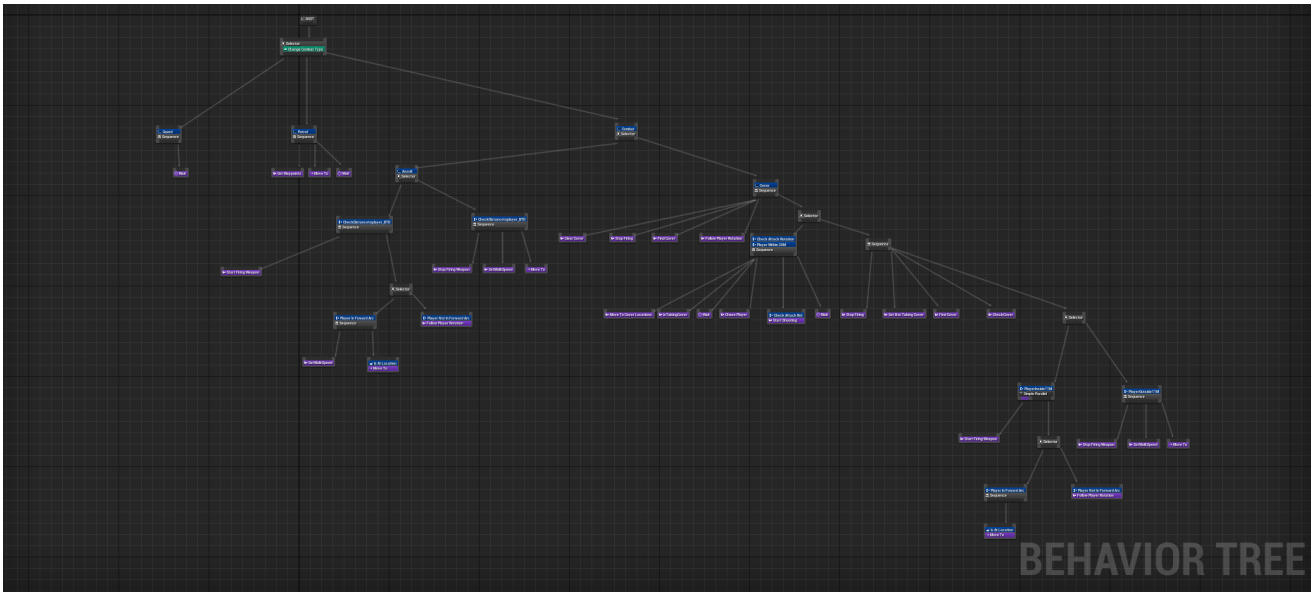
AI in UE5

AIController

BehaviorTree

Behavior Tree asset is used to execute branches containing logic, to determine which branches should be executed



blackboard

the Behavior Tree relies on another asset called a **Blackboard** which serves as the "brain" for a Behavior Tree.

The Blackboard contains several user-defined **Keys** that hold information used by the Behavior Tree to make decisions.

Composite

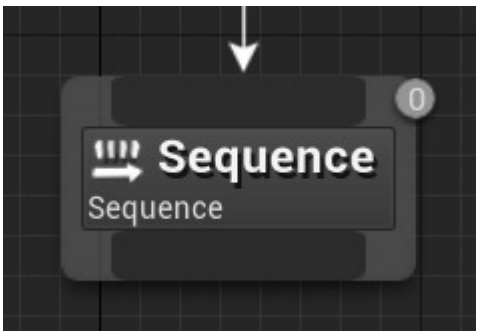
Selector

Executes branches from left-to-right and is typically used to select between subtrees. Selectors stop moving between

subtrees when they find a subtree they successfully execute.|

Sequence

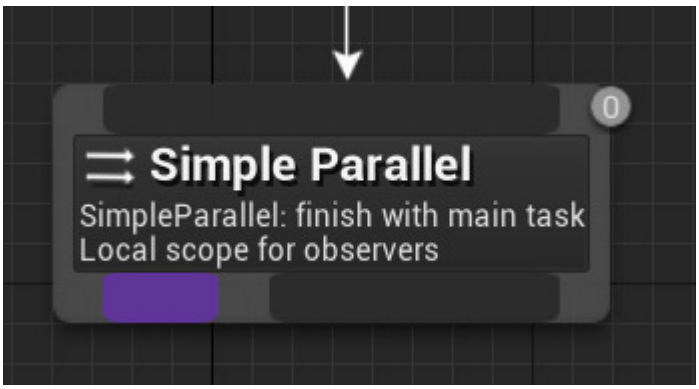
Executes branches from left-to-right and is more commonly used to execute a series of children in order. Unlike Selectors, the Sequence continues to execute its children until it reaches a node that fails.



Simple Parallel

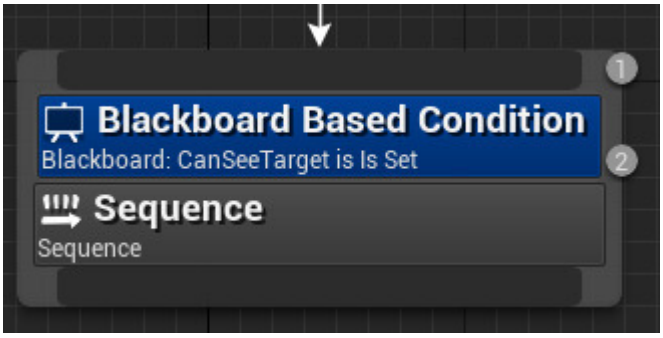
Simple Parallel has two "connections". The first one is the Main Task, and it can only be assigned a Task node (meaning no Composites). The second connection (the Background Branch) is the activity that's supposed to be executed while the main Task is still running. Depending on the properties, the Simple Parallel may finish as soon as the Main Task finishes, or wait for the Background Branch to

finish as well.



Decorator

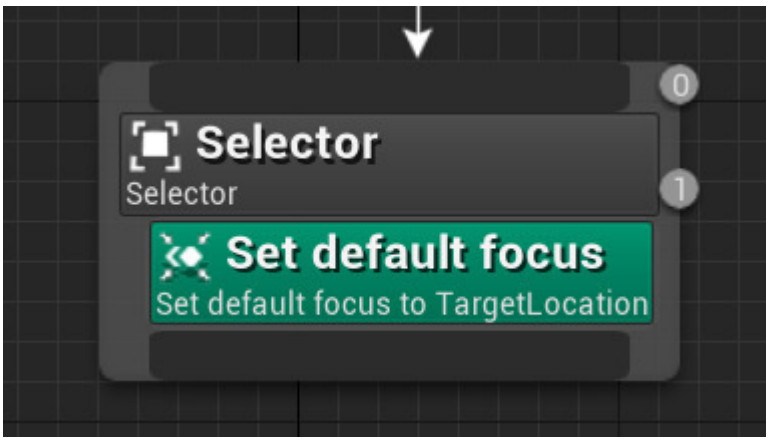
Decorator, also known as conditionals in other Behavior Tree systems, are attached to either a Composite or a Task node and define whether or not a branch in the tree, or even a single node, can be executed.
Allow or block the flow into the branch or node



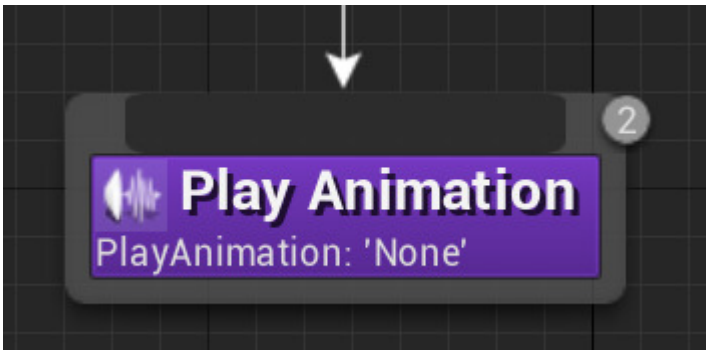
Services

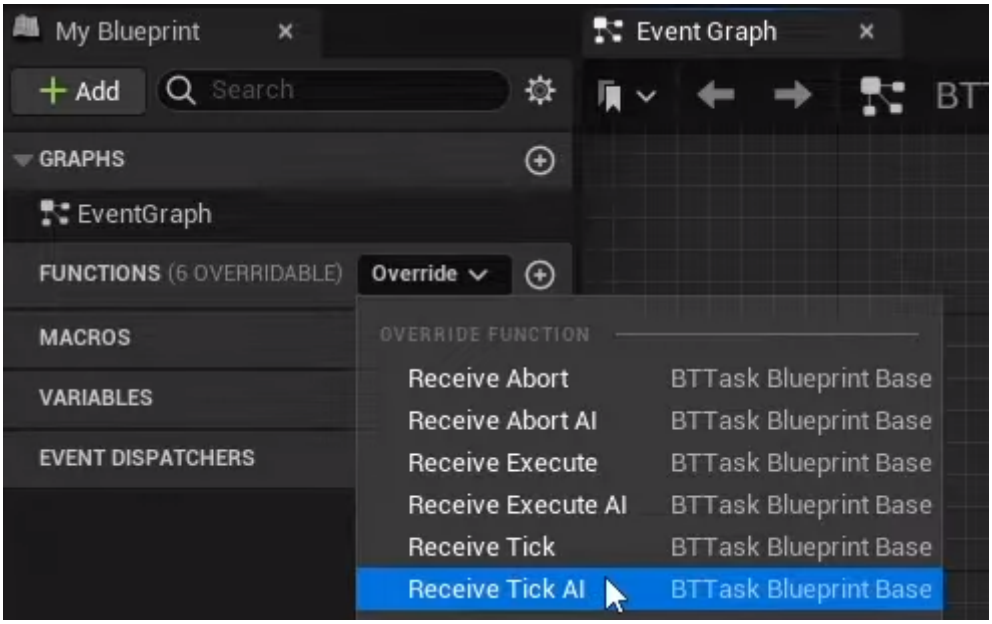
attach to Composite or Task nodes and will execute at their defined frequency as long as their branch is being executed. These are often used to make checks and to update the Blackboard. These take the place of traditional Parallel nodes in other Behavior Tree systems.

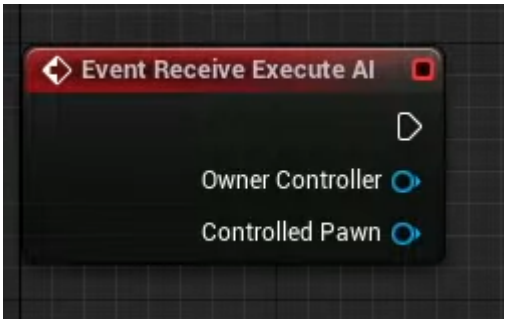
定期选择哪一个分支执行

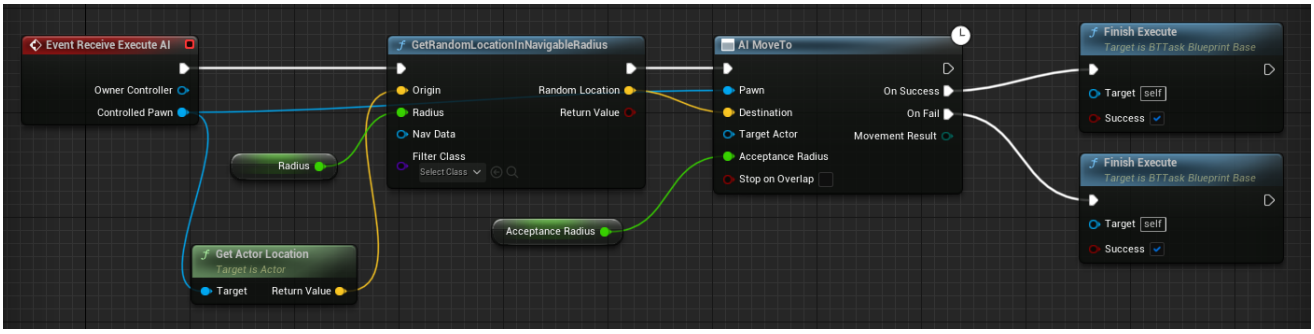


AITask






Event Receive Execute AI
Owner Controller
Controlled Pawn


Event Receive Execute AI
Owner Controller
Controlled Pawn
GetRandomLocationInNavigableRadius
Origin
Radius
Nav Data
Filter Class
Select Class
Random Location
Return Value
AI MoveTo
Pawn
Destination
Target Actor
Acceptance Radius
Stop on Overlap
On Success
On Fail
Movement Result
Finish Execute
Target is BTTask Blueprint Base
Target self
Success
Finish Execute
Target is BTTask Blueprint Base
Target self
Success
Radius
Acceptance Radius
Get Actor Location
Target is Actor
Target
Return Value