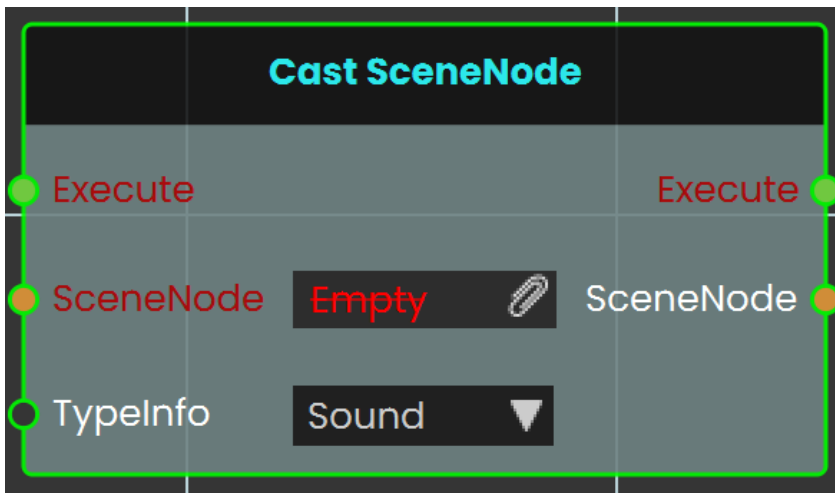


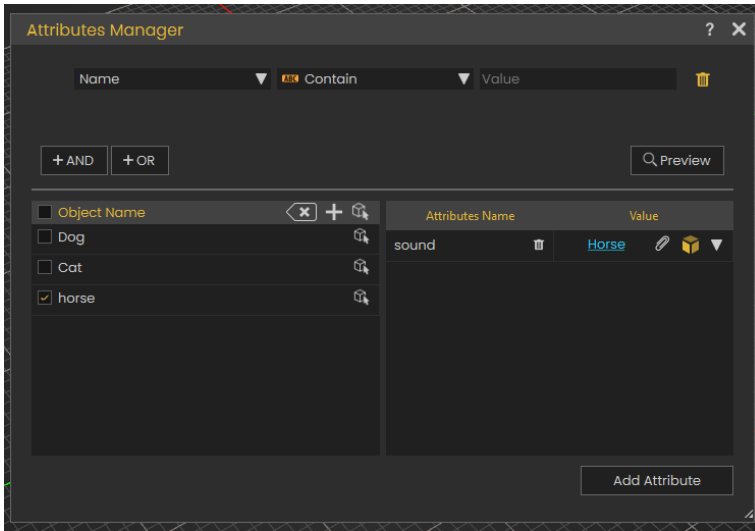
SceneNode \ Management

Cast SceneNode

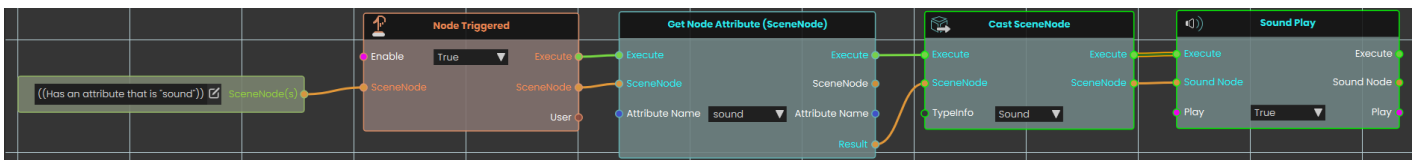


The **Cast SceneNode** enables the user to change the type of a SceneNode by selecting a typeInfo from the list, such as sound, 3D object, video, gadget, or camera. This node identifies the assigned SceneNode as the chosen type, allowing it to function accordingly within the VR environment.

Example

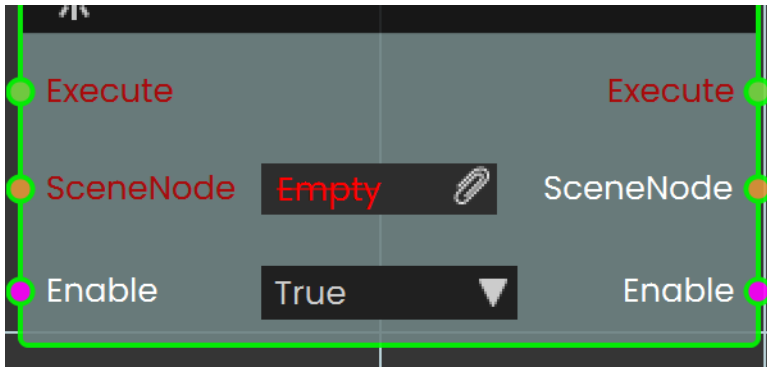


In this example, Animals sounds are assigned to the animals as **SceneNode** type



A **Cast SceneNode** is used to identify the SceneNode of an animal object (dog, cat, and horse) as a sound. An attribute named "Sound" is added to all three animals, and the corresponding sound is assigned to each. When the user triggers the animal SceneNode, the **Cast SceneNode** plays the sound assigned in the attribute.

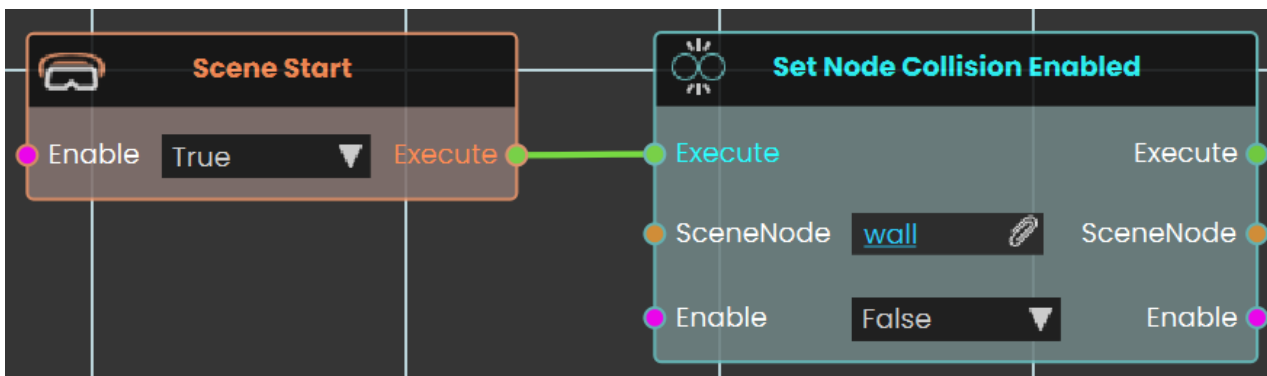
Set Node Collision Enabled



The **Set Node Collision Enabled**

node is used to enable or disable collision for the user. This can be utilized to allow the user to pass through objects or be blocked by them within the VR environment.

Example

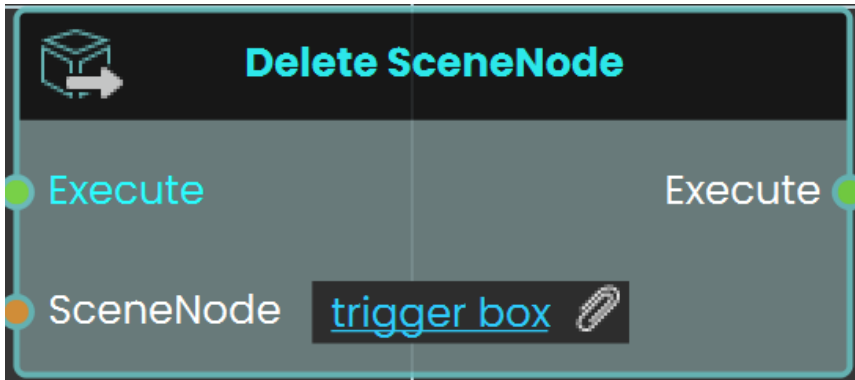


In this example, the **Set Node Collision Enabled** node is used to disable collision for the user when the scene starts. The wall is assigned as the target object, and the collision is set to "False," allowing the user to pass through it.

This is shown in the following tutorial

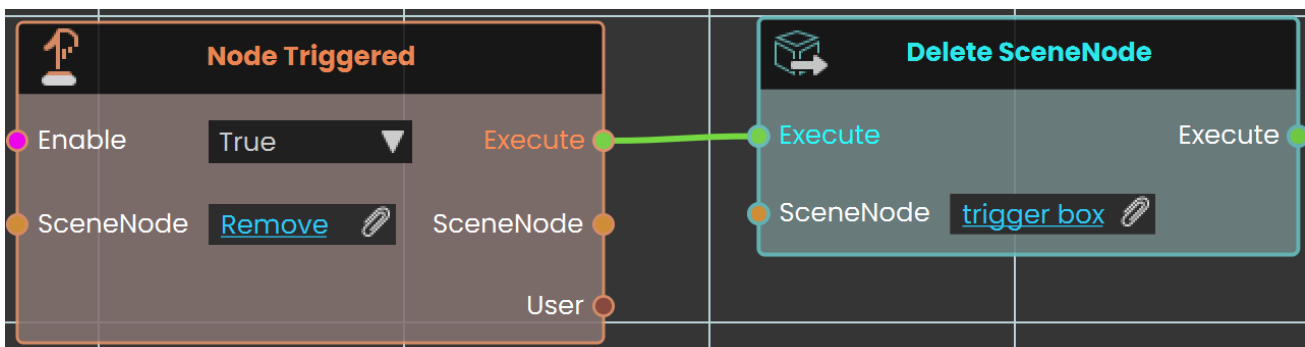
<https://www.youtube.com/embed/QlagX08XJE0>

Delete SceneNode



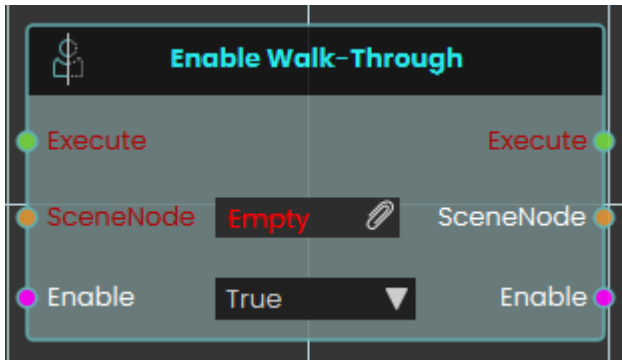
The **Delete SceneNode** node enables users to remove a specified object from the scene during a VR Experience. This node allows for dynamic scene modifications by deleting objects based on interactions or conditions, making the environment more interactive and adaptable. Once executed, the specified object is permanently removed from the scene.

Example



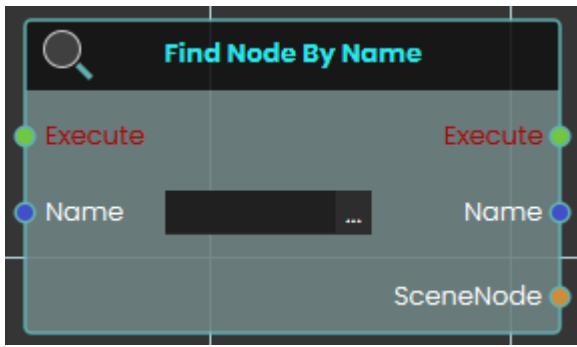
In this example, the **Delete SceneNode** node is used to remove a trigger box from the scene. The **Node Triggered** event is activated when the user triggers or clicks on an object named "Remove." As soon as the object is triggered, the **Delete SceneNode** node removes the trigger box from the scene, preventing further interactions with it.

Enable Walk-Through

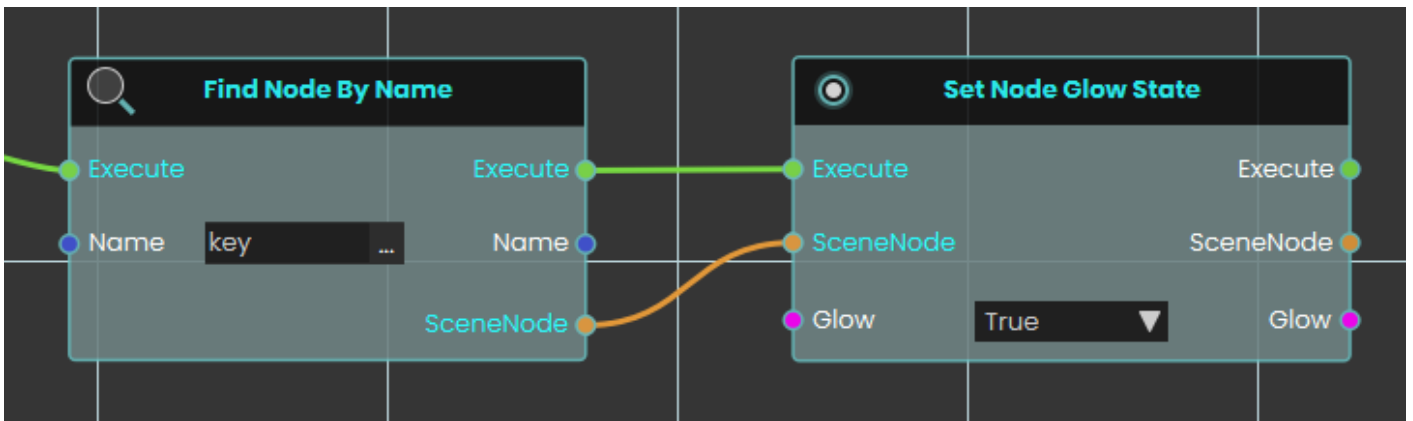


The **Enable Walk-Through node** explicitly controls the physical collision properties of a targeted 3D object within the VR Viewer. When activated, the node uses the boolean Enable input to determine the collision state of the specified SceneNode—allowing users to seamlessly pass directly through the object without physical obstruction if set to *True*.

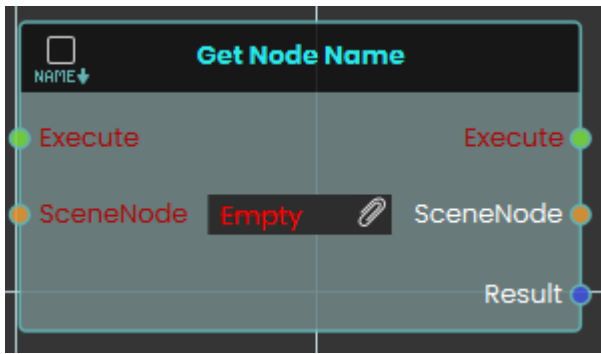
Find Node By Name



The **Find Node By Name node** searches the VR environment and dynamically locate a specific 3D object based on its assigned text identifier. When activated, the node takes the exact string provided in the Name input, searches the scene to find the corresponding object, and outputs that specific SceneNode reference.

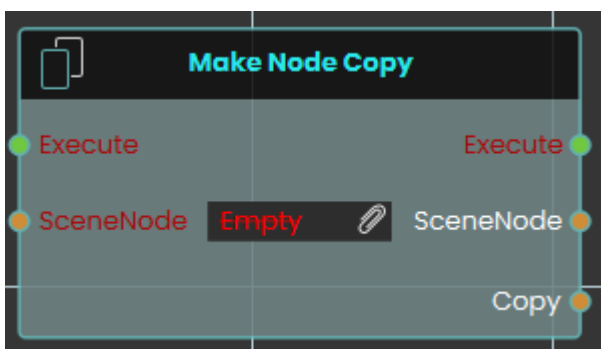


Get Node Name



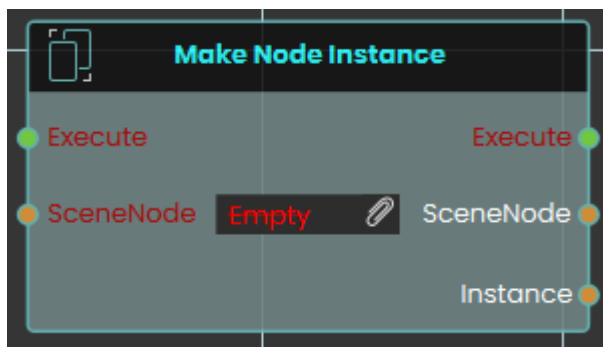
The **Get Node Name node** retrieves the exact text identifier of a specific 3D object within the scene. When activated, the node takes the targeted SceneNode input, extracts its assigned name, and outputs this text as a string value through the Result pin.

Make Node Copy



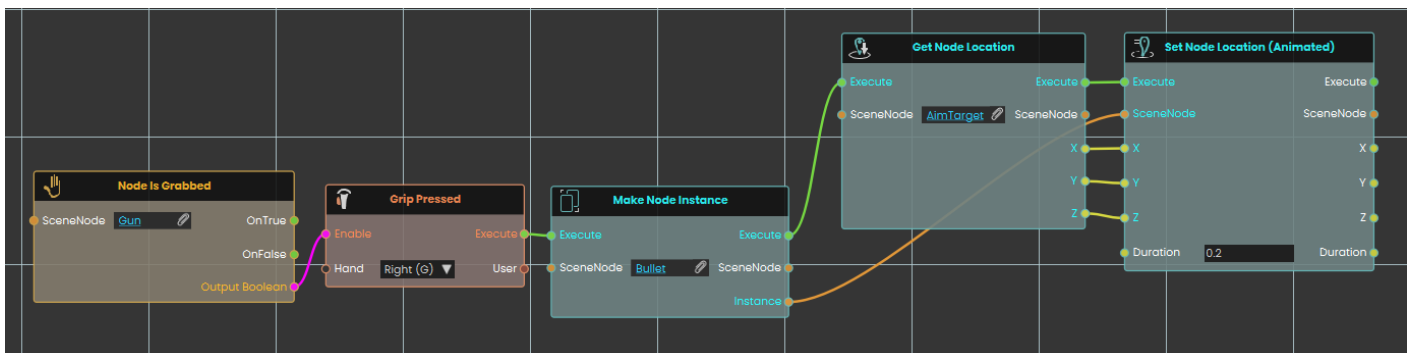
The **Make Node Copy node** duplicates a specific 3D object along with an independent copy of its material. Once activated, the node takes the targeted SceneNode input and generates a completely separate Copy, ensuring that any subsequent material or texture changes applied to this new object do not affect the original source.

Make Node Instance



The **Make Node Instance** node generates a direct clone of a specific 3D object in the scene. When activated, the node takes the targeted SceneNode input and creates a new Instance that shares the exact same material properties as the original.

Example:

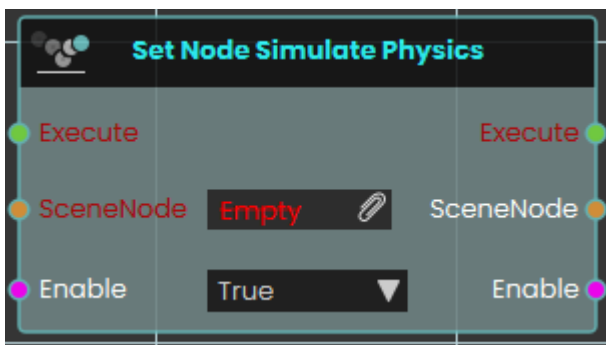


In this example, we create a simple shooting mechanic where firing a gun generates and shoots a bullet toward a target:

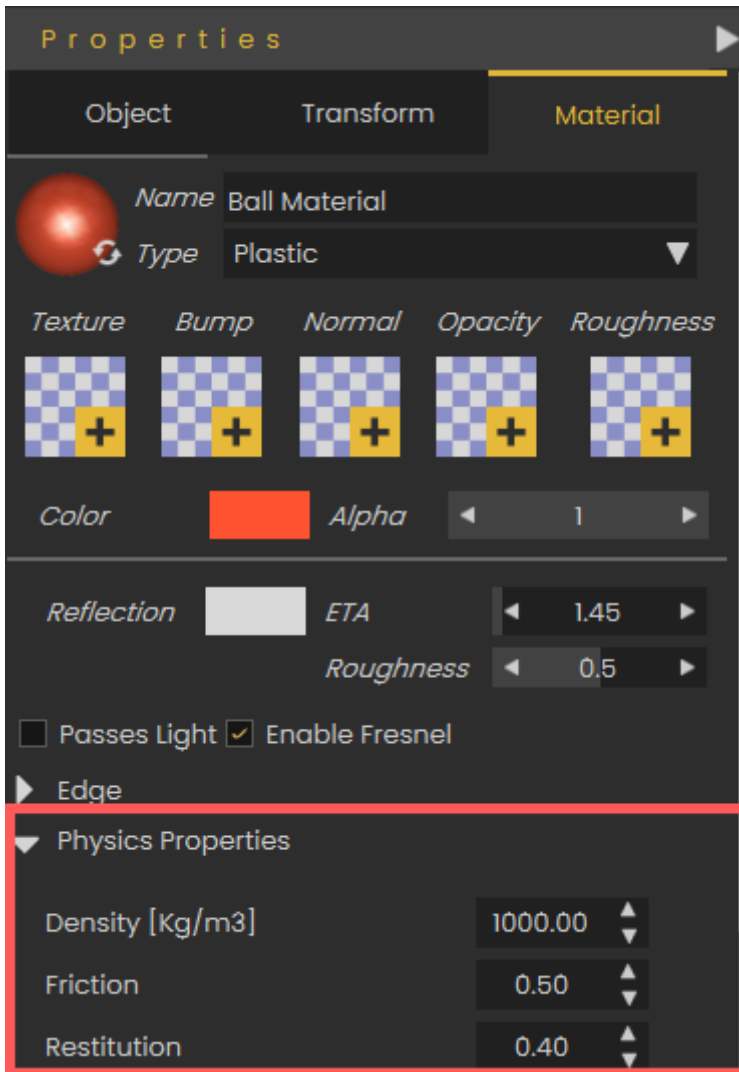
1. A **Node Is Grabbed** node continuously checks if the user is holding the "Gun" object, enabling the next node if the condition is met.
2. A **Grip Pressed** event node listens for the user to press the right hand's grip button, acting as the trigger to fire the weapon.
3. Once the grip is pressed, the **Make Node Instance** node activates, immediately generating a new instance of the "Bullet" object in the scene.
4. A **Get Node Location** node is then used to retrieve the exact X, Y, and Z coordinates of a specific "AimTarget" object.
5. Finally, a **Set Node Location (Animated)** node takes the newly generated bullet instance and smoothly moves it to the AimTarget's coordinates over a quick duration of 0.2 seconds, simulating a flying projectile.

■

Set Node Simulate Physics



The **Set Node Simulate Physics node** activates or deactivates real-time physics calculations for a specific 3D object within the VR Viewer. When activated, the node uses the boolean Enable input to determine the object's physical state, allowing the object to react to gravity, collisions, and user interactions based on its assigned material physics properties



To configure how an object behaves during simulation, navigate to the Properties panel and select the Material tab. Under the Physics Properties section, you can adjust specific physical attributes for that material, such as its Density, Friction, and Restitution, which directly impact how the object interacts with the environment when physics are enabled.

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