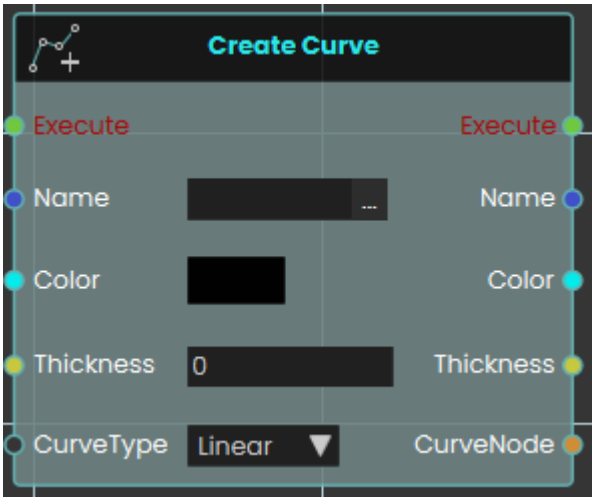
SceneNode \ Curve

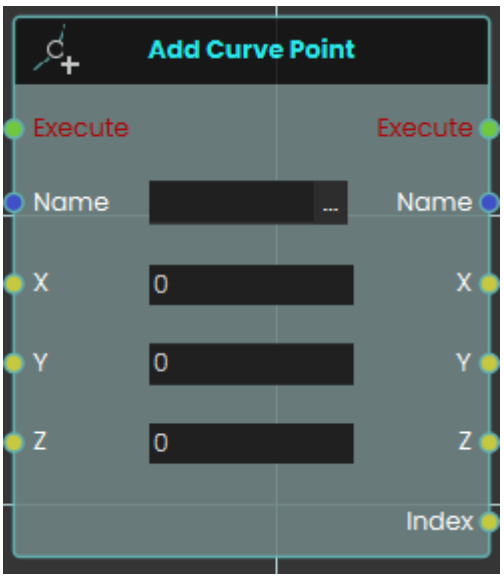
Create Curve



The **Create Curve node** initializes a new 3D cylindrical line within the VR scene. This is highly useful for creating dynamic visual elements like charts, graphs, or data visualizations.

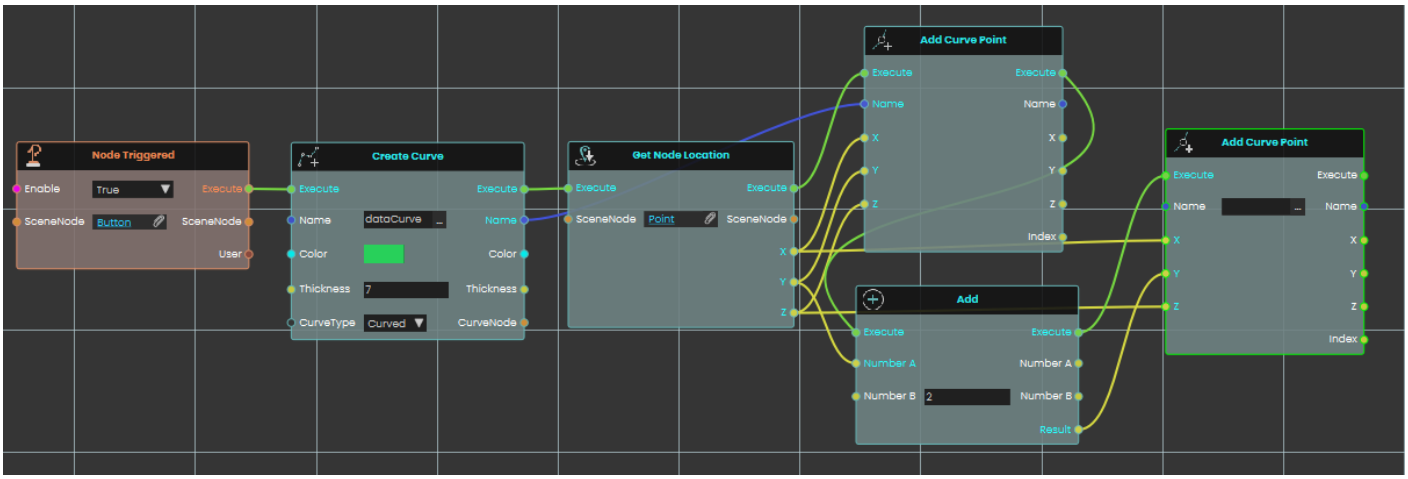
When activated, it generates a base curve using four primary inputs: a unique text **Name** (which acts as an identifier required by all other curve-related nodes to target this specific line), a **Color**, a numerical **Thickness** value, and a **CurveType** dropdown that dictates whether the overall line behaves as a smooth curve or rigid straight lines. It then outputs a reference to the newly created CurveNode to continue the logic flow.

Add Curve Point



The **Add Curve Point node** builds upon an existing curve by generating a new point in 3D space. Once activated, the node locates the specific curve identified by the **Name** input and places a new point at the provided **X, Y, and Z** coordinates. The system automatically draws a line connecting this newly created point to the previously established point, seamlessly extending the curve. Crucially, this node outputs an **Index** value—a unique number assigned to this specific point in the sequence (e.g., the 3rd point created gets an index of 3)—which is used to target this point later.

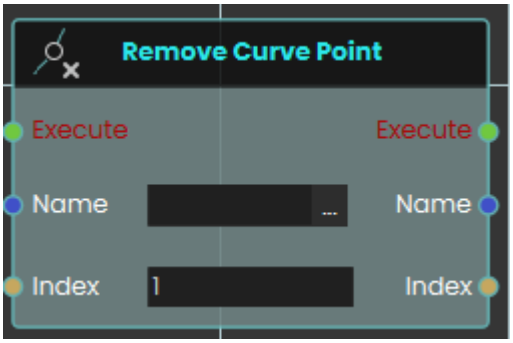
Example:



In this expanded example, we build an interaction where clicking a button initializes a new curve and sequentially places two connected points based on a target object's location:

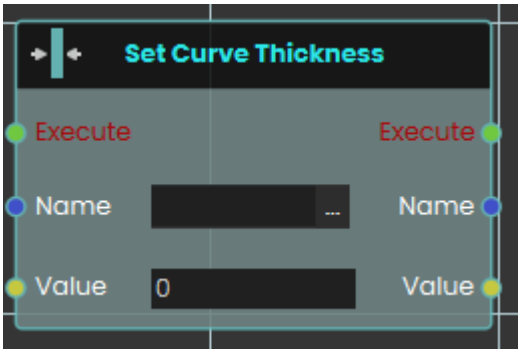
1. A **Node Triggered** event node continuously listens for the user to interact with a specific "Button" object in the scene.
2. Once the button is clicked, it activates a **Create Curve** node, which initializes a new curve named "dataCurve" with a distinct green color, a thickness value of 7, and a "Curved" line type.
3. The execution flow immediately proceeds to a **Get Node Location** node, which retrieves the exact X, Y, and Z spatial coordinates of a target 3D object named "Point".
4. The first **Add Curve Point** node is activated. It takes the "dataCurve" identifier and utilizes the precise X, Y, and Z coordinates retrieved from the target object to generate the first anchor point of the curve.
5. Simultaneously, an **Add** math node receives the original Y coordinate from the "Point" object and adds a numerical value of 2 to it.
6. Following the creation of the first point, a second **Add Curve Point** node is executed. It uses the same "dataCurve" identifier and the original X and Z coordinates, but it uses the newly calculated result from the Add node (Y + 2) for its vertical placement. This generates a second point exactly 2 units directly above the first, automatically drawing a connected line between them.

Remove Curve Point



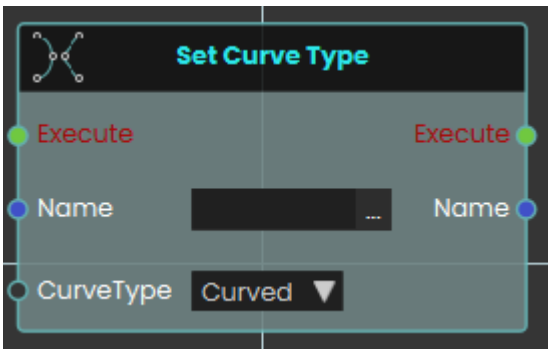
The **Remove Curve Point node** is used to permanently delete a specific point from an active curve. Once activated, it takes the curve's **Name** and the specific **Index** number of the point you wish to erase. Upon deletion, the curve automatically bridges the gap between the remaining adjacent points to maintain a continuous, unbroken line.

Set Curve Thickness



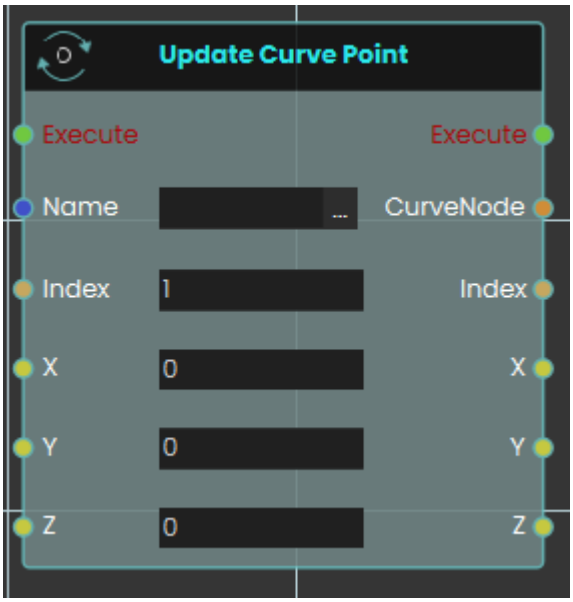
The **Set Curve Thickness node** dynamically adjusts the physical width of an existing curve during the VR experience. When activated, it targets the curve specified by the **Name** input and instantly changes its visual bulk to match the number provided in the **Value** input, allowing you to easily scale the visual prominence of the line on the fly.

Set Curve Type



The **Set Curve Type node** instantly alters how the connections between a curve's points are visually rendered in the scene. Once activated, it locates the curve by its **Name** and applies the newly selected **CurveType** from the dropdown menu. This allows you to toggle a curve between "Curved" (which renders smooth, sweeping connections between the points) and "Linear" (which renders sharp, perfectly straight lines between the points) at any time.

Update Curve Point



The **Update Curve Point** node allows you to dynamically change the 3D location of a previously created point on an existing curve. When activated, it targets the curve using the **Name** input and isolates a specific point using its numerical **Index** value. It then instantly moves that point to the newly provided **X, Y, and Z** coordinates. The line connecting the points will automatically recalculate and redraw itself to reflect the point's new location in the scene.

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