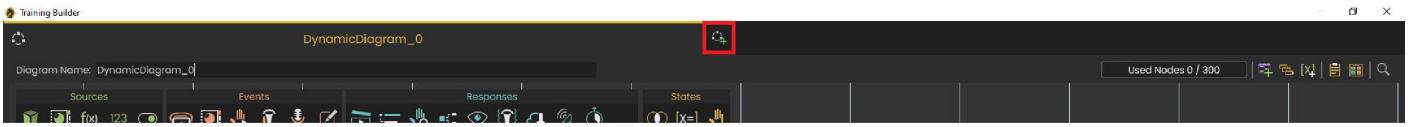
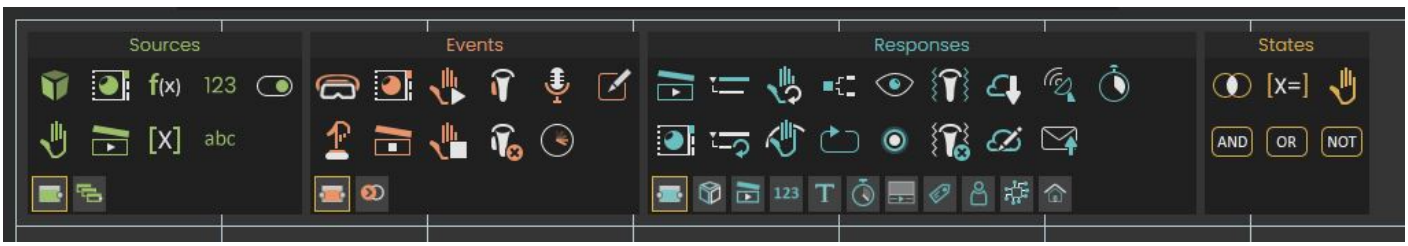
Dynamic Builder

In template diagrams, a user was able to define logic for a group of objects based on name, or attribute criteria. Dynamic diagrams take this to the next level, they allow defining interaction between multiple templates, in a dynamic way. What this mean is that a user can set a dynamic criteria for triggering actions and responses mainly by defining multiple queries using multiple scene nodes.

When you have access to the Dynamic Builder, the default diagram will be a Dynamic diagram, and to add a new one, click the highlighted Add a new dynamic diagram button at the top right side of Training Builder diagram.



A new Dynamic Diagram will open, and the Dynamic Diagram menu will appear.

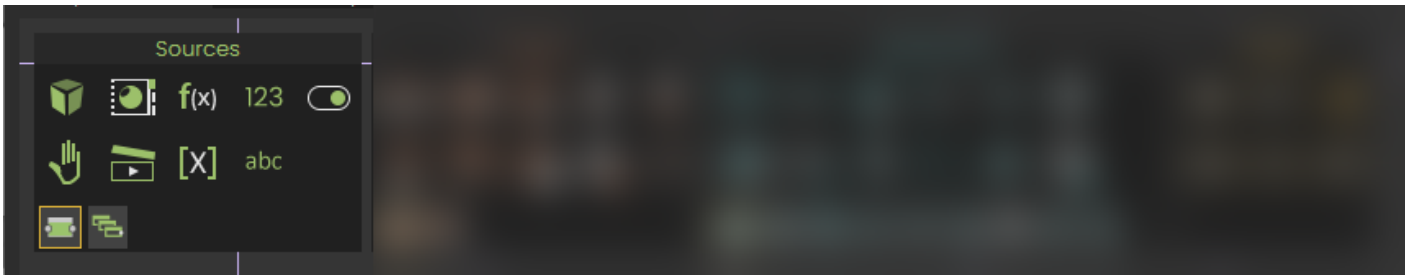


Dynamic training builder menu is divided into four groups:

Sources

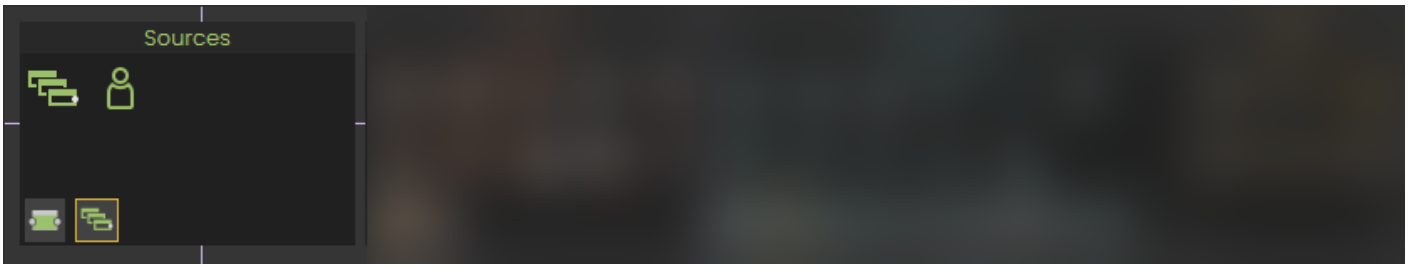
A source is an expression that will generate a value that can be used to trigger an event in the Dynamic Builder. Sources are divided into two tabs, Main Sources and Template Sources.

Main Sources



Icon	Source Name
	Scene Node
	Scene State
	Expression
	Number
	Boolean
	Hand
	Sequence
	Variable
	String

Template Sources

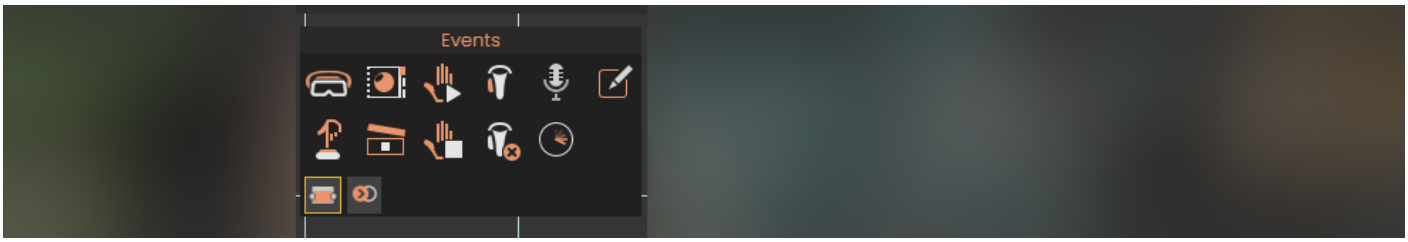


Icon	Source Name
	Scene Node Query
	User Query

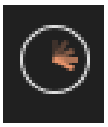
Events

Events are triggered when something happens in the VR Experience. They are arranged into two tabs Main Events and Object Interactions

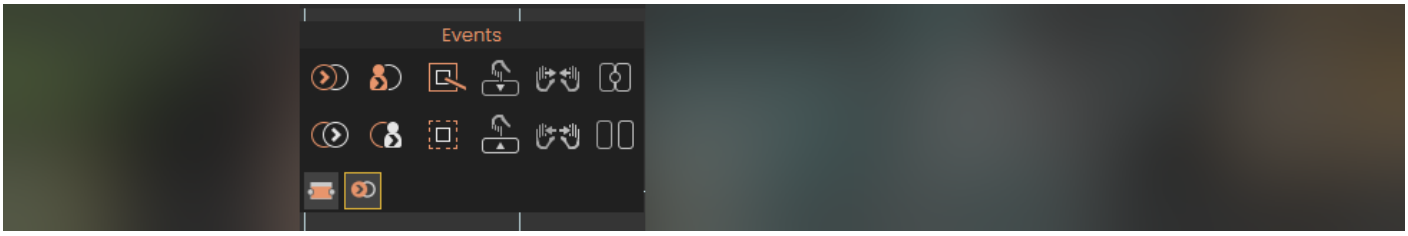
Main Events



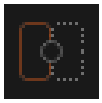
Icon	Event Name
	Scene Start
	Node Triggered
	Scene State Applied
	Sequence Ended

	Node Grab Started
	Node Grab Ended
	Grip Pressed
	Grip Released
	Voice Command Recognized
	Ticker
	Variable Changed

Object Interactions

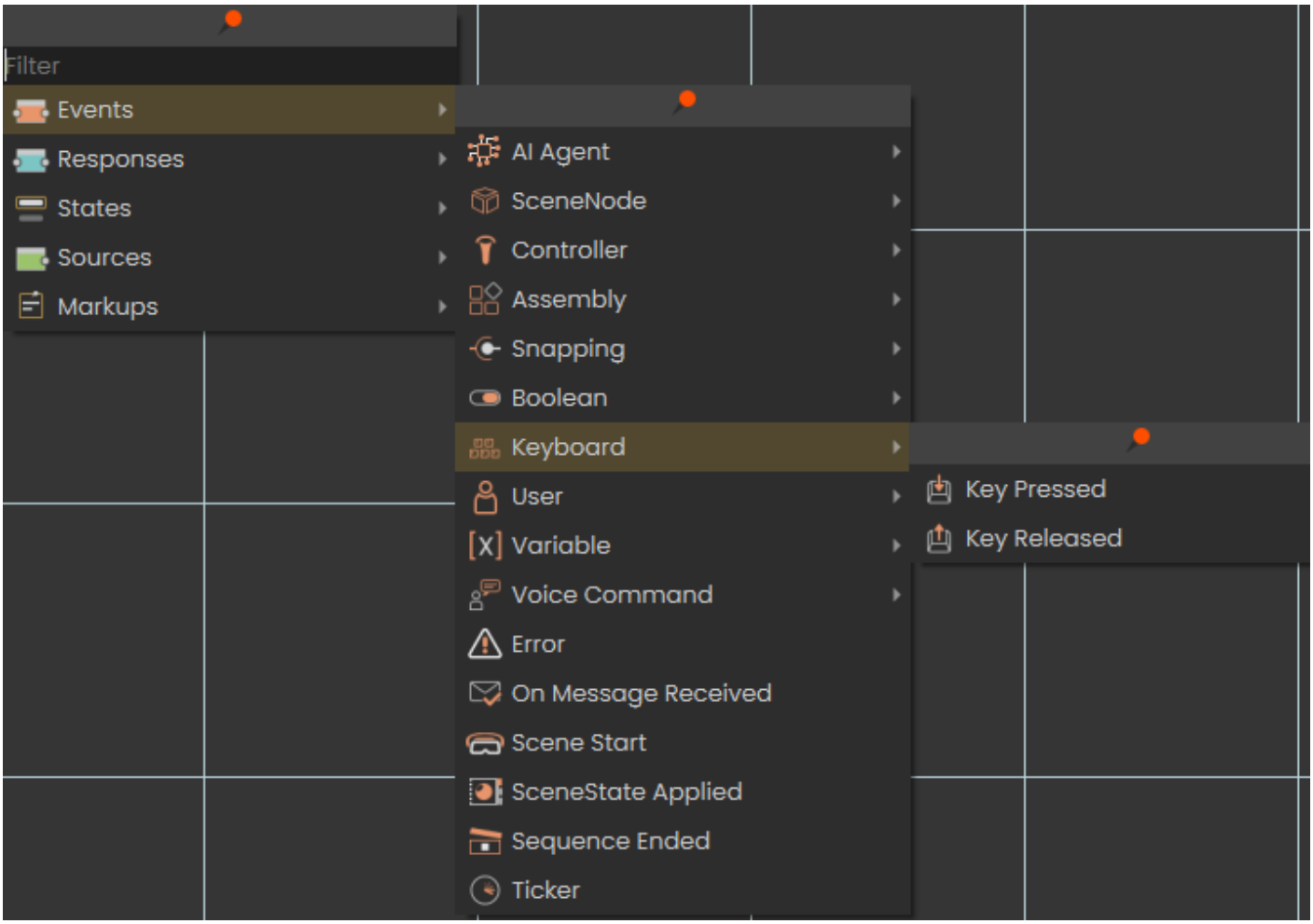


Icon	Event Name
	Node Enter Node
	Node Exited Node
	User Enter Node

	User Exited Node
	Node Hover Started
	Node Hover Ended
	Hand Enter Node
	Hand Exited Node
	Hand Entered Hand
	Hand Exited Hand
	Node Assembled
	Node Disassembled

Right Mouse Events

Not all events are shown in the diagram. More are put under mouse right click menu as shown below:



Key Pressed/Key Released

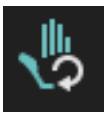
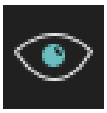
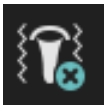
To learn more about this event check this tutorial.

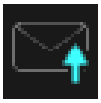
Responses

Responses in SimLab Dynamic Builder are arranged in a number of tabs to make it easier to use.

Main Responses

Icon	Event Name

	Play Animation Sequence
	Apply Scene State
	Set Parent Node
	Reset Parent Node
	Set Node Grabbable State
	Delay
	Branch on Expression
	Loop
	Show/Hide
	Set Node Glow State
	Enable Controller Vibration
	Disable Controller Vibration
	Get Cloud Attribute
	Set Cloud Attribute

	Open External Connection
	Send Message
	Delay

Objects Behavior

Animation Sequences

Numbers

String

Time Variable

Media

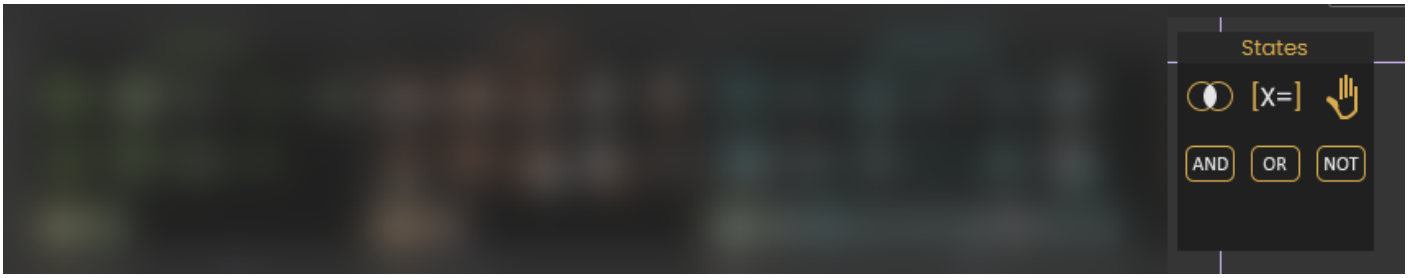
Attributes

User

AI Agents

Scene Management

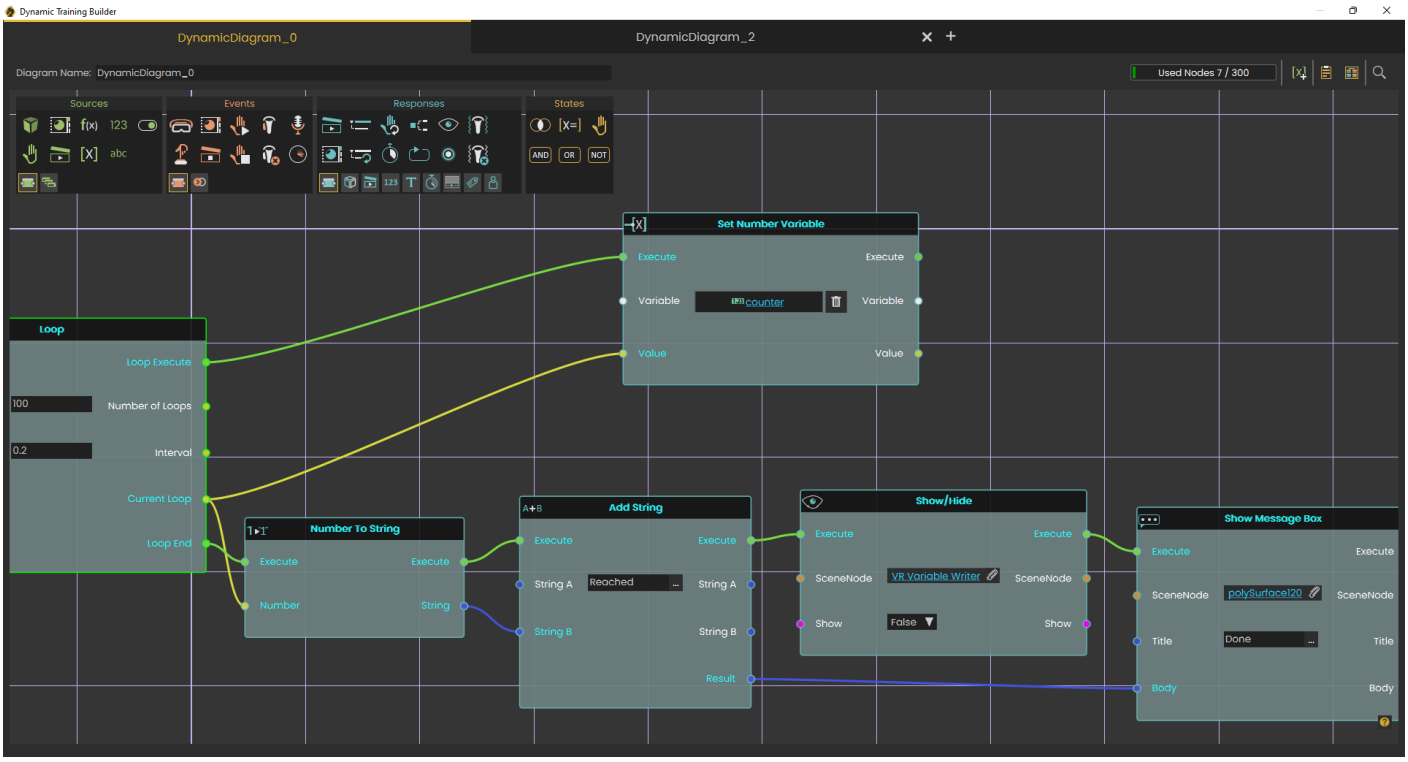
States



The following video shows the behavior in action, if you do not get why this is useful, do not worry about it for now.
In the future when you create more dynamic experiences, you will be glad to have this at your disposal.

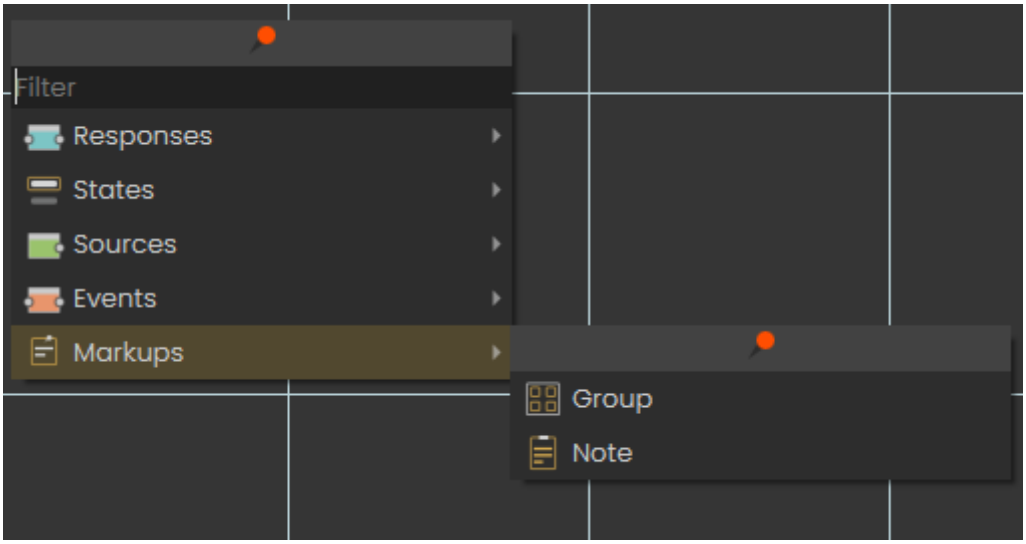
https://www.youtube.com/embed/cJ_ib2JSKno

The following diagram shows how loop end is used, it is combined with the fact that in Dynamic Builder the show message strings can also be dynamic, so we can show a message depending on the execution of the experience



Markups

VR experiences are valuable assets that include custom logic created by users. As more users build advanced experiences—and as these experiences are shared and used over time by multiple creators—we've added colored **groups** and **notes** to help manage them better. These features make it easier to organize related logic into groups and add clear descriptions for each section in the Training Builder. Check this tutorial.



Revision #10
Created 23 February 2025 09:47:32
Updated 24 August 2025 12:46:13 by Samia Sabri