SceneNode \ Transform \ Scale

These nodes read and change the **size** of a 3D object. Size is given as three numbers — X, Y, and Z — each a **multiplier** of the object's original size: `1` means unchanged, `2` means twice as big, `0.5` means half. Most come in two forms: a **world** version that uses the object's size in the whole scene, and a **(Local)** version measured relative to its parent or group. Changing an object's size never moves it or turns it.

What's on this page

- **Read the size** — find out how large an object currently is.
- **Change the size** — resize an object, instantly or smoothly over time.

Read the size

These read an object's current size without changing anything.

 Get Node Scale

Reads how large an object currently is in the scene and gives you its size along each axis as separate numbers.

What it does

This node looks at an object you point it to and reports its current size in the whole scene. You get three numbers back — one for the X axis, one for Y, and one for Z. Each number is a multiplier of the object's original (authored) size: `1` means unchanged, `2` means twice as big, and `0.5` means half size.

It only reads the size — it doesn’t resize the object or change anything else in the scene. The same object is also passed straight through, so you can keep working with it in the nodes that follow.

Inputs

Port	Type	What to connect
Execute	Trigger	Wire this from the previous node’s Execute output.
SceneNode	Scene node	The object whose size you want to read. Connect the object you picked earlier in the flow.

Outputs

Port	Type	What you get
Execute	Trigger	Fires once the node has finished.
SceneNode	Scene node	The same object passed through, so you can chain more nodes after this one.
X	Number	The object’s current size along the X axis, as a multiplier of its original size (`1` = unchanged).
Y	Number	The object’s current size along the Y axis, as a multiplier of its original size.
Z	Number	The object’s current size along the Z axis, as a multiplier of its original size.

Example

SceneNode input	A crate you placed in the scene
X output	`2`
Y output	`2`
Z output	`0.5`

Tips

- A value of `1` on an axis means that axis is at the object's original size. Values above `1` are larger; values below `1` are smaller.
- This reports the object's overall size in the whole scene, so if the object sits inside a group that has been resized, that resizing is included in the result.

Get Node Scale (Local)

Reads how big an object currently is, measured relative to its parent or group.

What it does

This node looks at one object in your scene and tells you its current size along each axis (X, Y, and Z). Each value is a multiplier of the object's original, authored size: `1` means unchanged, `2` means twice as big, and `0.5` means half size. It is not a measurement in meters and not a percentage.

The size you get back is the **local** size — measured relative to the object's parent or group. If that parent or group is resized, this local value stays the same. (If the object has no parent or group, its local size and its size in the whole scene are the same.) This node only reads the size; it doesn't change the object or affect anything else in your scene.

Inputs

Port	Type	What to connect
Execute	Trigger	Wire this from the previous node's Execute output.
SceneNode	Scene node	The object whose size you want to read.

Outputs

Port	Type	What you get
Execute	Trigger	Fires once the node has finished.
SceneNode	Scene node	The same object passed straight through, so you can chain more nodes after this one.
X	Number	The size multiplier along the X axis (`1` = original size).

Port	Type	What you get
Y	Number	The size multiplier along the Y axis (`1` = original size).
Z	Number	The size multiplier along the Z axis (`1` = original size).

Example

SceneNode input	The crate you placed in the scene
X output	`2`
Y output	`0.5`
Z output	`1.5`

Tips

- A value of `1` on every axis means the object is still at its original, authored size.
- To read the object's size in the whole scene instead of relative to its parent or group, use the matching node without "(Local)" in its name.

Change the size

These resize an object. The plain versions change it instantly; the **(Animated)** versions grow or shrink it smoothly over a number of seconds.

Set Node Scale

Resizes an object in your scene by setting how big it is along each axis.

What it does

This node changes the size of the object you give it. You set three numbers — X, Y, and Z — and each one is a multiplier of the object's original, authored size: `1` leaves that axis unchanged, `2` makes it twice as big, and `0.5` makes it half size. The change happens instantly.

The size you set here is the object's overall size in the whole scene. The same object passes straight out the other side, so you can keep working with it in the next node. Only the object you connect is affected — nothing else in your scene moves or resizes.

Inputs

Port	Type	What to connect
Execute	Trigger	Wire this from the previous node's Execute output.
SceneNode	Scene node	The object you want to resize.
X	Number	The size multiplier along the X axis. `1` keeps it the same, `2` doubles it, `0.5` halves it.
Y	Number	The size multiplier along the Y axis. `1` keeps it the same.
Z	Number	The size multiplier along the Z axis. `1` keeps it the same.

Outputs

Port	Type	What you get
Execute	Trigger	Fires once the node has finished.
SceneNode	Scene node	The same object, passed through so you can chain more nodes.
X	Number	The X multiplier you set, passed through.
Y	Number	The Y multiplier you set, passed through.
Z	Number	The Z multiplier you set, passed through.

Example

SceneNode input	A crate object in your scene
X input	`2`
Y input	`2`
Z input	`0.5`

SceneNode output	The same crate, now twice as big on X and Y and half its size on Z

Tips

- Use the same number for X, Y, and Z to resize the object evenly without changing its shape.
- To return an object to its original size, set all three values back to `1`.

Set Node Scale (Animated)

Smoothly resizes a 3D object to a new size over a set number of seconds.

What it does

This node changes the size of the object you give it, gliding from its current size to the new size over the time you choose instead of snapping there instantly. The size is set as a multiplier of the object's original (authored) size: `1` leaves it unchanged, `2` makes it twice as big, and `0.5` makes it half as big. You can set a different multiplier for each axis (X, Y, Z), so the object can grow more along one axis than another.

The new size is the object's absolute size in the whole scene. Only the object you connect is resized — nothing else in your scene is touched. The object is passed straight through the output so you can keep building on it after the resize.

Inputs

Port	Type	What to connect
Execute	Trigger	Wire this from the previous node's Execute output to start the resize.
SceneNode	Scene node	The 3D object you want to resize.
X	Number	The size multiplier along the X axis, where `1` keeps the original size, `2` doubles it, and `0.5` halves it. Defaults to `1`.
Y	Number	The size multiplier along the Y axis, in the same way as X. Defaults to `1`.

Port	Type	What to connect
Z	Number	The size multiplier along the Z axis, in the same way as X. Defaults to `1`.
Duration	Number	How many seconds the smooth resize should take. Defaults to `2`. Must be zero or more.

Outputs

Port	Type	What you get
Execute	Trigger	Fires so the flow can continue once the resize has been applied.
SceneNode	Scene node	The same object you passed in, so you can connect more nodes to keep working with it.
X	Number	The X size multiplier you set, passed along for reuse.
Y	Number	The Y size multiplier you set, passed along for reuse.
Z	Number	The Z size multiplier you set, passed along for reuse.
Duration	Number	The duration in seconds you set, passed along for reuse.

Example

SceneNode input	The crate you want to grow
X input	`2`
Y input	`2`
Z input	`2`
Duration input	`1.5`
SceneNode output	The same crate, now growing to twice its size over 1.5 seconds

Tips

- Use the same value for X, Y, and Z to resize the object evenly; use different values to stretch it more along one axis.
- A `Duration` of `0` resizes the object instantly — for a normal smooth resize, use the non-animated **Set Node Scale** node instead, which always changes the object instantly.
- Remember the values are multipliers, not measurements: `1` means “keep the original size,” not one meter.

Set Node Scale (Local)

Resizes a 3D object by setting how much bigger or smaller it is than its original size, measured relative to its parent or group.

What it does

This node sets the object’s scale along its X, Y, and Z axes. Each value is a multiplier of the object’s original (authored) size: `1` leaves that axis unchanged, `2` makes it twice as big, and `0.5` makes it half size. The scale replaces whatever size the object had before — it isn’t added on top.

The size is “local,” meaning it’s measured relative to the object’s parent or group: if that parent or group is later moved, turned, or resized, this local value stays the same. If the object has no parent or group, its local and world size are the same. Only the object you connect is affected — other objects in the scene are left alone.

Inputs

Port	Type	What to connect
Execute	Trigger	Wire this from the previous node’s Execute output.
SceneNode	Scene node	The 3D object you want to resize.
X	Number	The size multiplier along the X axis (`1` = original size, `2` = twice as big, `0.5` = half size). Defaults to `1`.
Y	Number	The size multiplier along the Y axis. Defaults to `1`.

Port	Type	What to connect
Z	Number	The size multiplier along the Z axis. Defaults to `1`.

Outputs

Port	Type	What you get
Execute	Trigger	Fires once the node has finished.
SceneNode	Scene node	The same object passed straight through, so you can chain more nodes after this one.
X	Number	The X multiplier you set, handy for feeding into the next node.
Y	Number	The Y multiplier you set.
Z	Number	The Z multiplier you set.

Example

SceneNode input	The crate you want to enlarge
X input	`2`
Y input	`2`
Z input	`0.5`
SceneNode output	The same crate, now twice as big on X and Y and half as tall on Z

Tips

- To resize evenly in all directions, set X, Y, and Z to the same value.
- Setting all three to `1` returns the object to its original authored size.

Set Node Scale (Local, Animated)

Smoothly resizes an object in your scene over a set number of seconds, relative to the size it was given when the scene was built.

What it does

This node changes how big an object is, gently growing or shrinking it from its current size to a new size over the time you choose. The X, Y, and Z values are multipliers of the object's original (authored) size: `1` leaves that direction unchanged, `2` makes it twice as big, and `0.5` makes it half as big. You can use different values for each axis to stretch the object, or the same value on all three to resize it evenly.

The size is set in "local" terms — measured relative to the object's parent or group. If that parent or group is later moved, turned, or resized, this local size stays the same. (If the object has no parent or group, its local size and its size in the whole scene are the same thing.) Only the object you connect is affected; nothing else in the scene changes.

Inputs

Port	Type	What to connect
Execute	Trigger	Wire this from the previous node's Execute output to start the resize.
SceneNode	Scene node	The object you want to resize. You can connect more than one, and each will be resized.
X	Number	The size multiplier along the X axis. `1` keeps it the same, `2` doubles it, `0.5` halves it.
Y	Number	The size multiplier along the Y axis, in the same way as X.
Z	Number	The size multiplier along the Z axis, in the same way as X.
Duration	Number	How many seconds the smooth resize should take. Use a larger value for a slower change. (The non-animated version of this node changes the size instantly.)

Outputs

Port	Type	What you get
Execute	Trigger	Fires once the node has applied the resize, so the flow can continue.

Port	Type	What you get
SceneNode	Scene node	The same object (or objects) passed straight through, so you can connect more nodes after this one.
X	Number	The X size multiplier you provided, passed through for reuse.
Y	Number	The Y size multiplier you provided, passed through for reuse.
Z	Number	The Z size multiplier you provided, passed through for reuse.
Duration	Number	The number of seconds you provided, passed through for reuse.

Example

SceneNode input	A box object in your scene
X input	`2`
Y input	`2`
Z input	`0.5`
Duration input	`1.5` — the box grows to its new size over one and a half seconds
SceneNode output	The same box, ready to pass on to the next node

Tips

- Use the same value for X, Y, and Z to resize an object evenly without changing its shape.
- A value of `1` on an axis leaves that direction at its original size, so you can resize in just one or two directions.
- To resize instantly with no smooth motion, use the non-animated version of this node instead.

Revision #3
Created 2026-06-10 12:10:30 UTC by Rafat
Updated 2026-10-25 09:25:59 UTC by Rafat