



# Replace attribute

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*Version 1.0.3, by Giorgio Bianchini*

**Description:** Changes the value of an attribute of a node that matches a criterion.

**Module type:** FurtherTransformation

**Module ID:** f17160ad-0462-449a-8a57-e1af775c92ba

This module is used to add or change an attribute of the tree depending on the value of another attribute.

## Parameters

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### Attribute (search attribute)

**Control type:** Text box

This parameter determines the attribute that needs to match the search criterion. If the attribute name entered here does not exist in the tree, the module does nothing.

### Attribute type (search attribute)

**Control type:** Attribute type

**Default value:** String

**Possible values:**

- String
- Number

This parameter should correspond to the correct attribute type for the attribute that needs to match the search criterion. If the attribute type is incorrect, the module does nothing.

### Value (search attribute)

**Control type:** Text box

This text box is used to enter the value that needs to be matched.

### Comparison type ( `Number` )

**Control type:** Drop-down list

**Default value:** Equal

**Possible values:**

- Equal
- Smaller than
- Greater than

If the [Attribute type](#) of the attribute that is being matched is `Number`, the module can match attributes that are equal, smaller than or greater than the specified [Value](#).

## Comparison type ( `String` )

**Control type:** Drop-down list

**Default value:** Normal

**Possible values:**

- Normal
- Case-insensitive
- Culture-aware
- Culture-aware, case-insensitive

If the [Attribute type](#) of the attribute that is being matched is `String`, this parameter determines how the strings are compared. If the value is `Normal`, the strings need to match exactly. If the value is `Case insensitive`, the case of the strings does not matter (e.g. `AaBbCc` matches both `aabbcc` and `AABBCC`). If the value is `Culture-aware`, the comparison takes into account culture-specific rules of the current display language of the OS (for example, in Hungarian `ddzs` would match `dzsdzs`).

## Regex

**Control type:** Check box

**Default value:** Unchecked

If this check box is checked, string matches are performed using a regular expression. This makes it possible to search for complicated strings.

## Apply recursively to all children

**Control type:** Check box

**Default value:** Unchecked

If this check box is checked, the replacement attribute is applied to all descendants of matching nodes, regardless of whether the descendant actually matches the search criterion or not.

## Attribute (replace attribute)

**Control type:** Text box

This parameter determines the name of the attribute whose value will be changed by this module. If the attribute already exists, its value will be replaced. If the attribute does not currently exist, it will be added to matching nodes. This attribute can be the same as the [Attribute](#) that is being matched.

## Attribute type (replace attribute)

**Control type:** Attribute type

**Default value:** String

**Possible values:**

- String
- Number

This parameter determines the type of the new attribute.

## Value (replace attribute)

**Control type:** Text box

This text box determines the value for the new attribute. The value should be coherent with the [Attribute type](#), i.e. a (decimal) number if the attribute type is `Number` or a text string if the attribute type is `String`.

If the [Regex](#) check box is checked, it is possible to recall the value of capture groups here. Note that capture groups are specified by prepending the group index with a `$` sign (e.g. `$2` represents the second capture group in the regex).

## Apply

**Control type:** Button

Applies the changes to the other parameter values and triggers an update of the tree.

## Further information

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The two attributes can be the same, which causes the value of the attribute to be changed in-place (e.g. transform all taxon names to lowercase); if the two attributes are different, a new attribute can be added based on the value of an existing attribute (e.g. add an attribute to all nodes with a support value lower than a certain threshold).

This module is also used by the "Replace" function of the *Search* module.