Rectangle

Version 1.0.0, by Giorgio Bianchini

Description: Draws a rectangle on the plot.

Module type: Plotting

Module ID: `34e1a627-7b6a-4c0f-80d9-795eea245e1e`

Parameters

Node

Control type: Node

This parameter determines the node used as an anchor for positioning the rectangle. If only a single node is selected, the anchor corresponds to that node. If more than one node is selected, the anchor corresponds to the last common ancestor (LCA) of all of them. Nodes are selected based on their `Name`.

Anchor

Control type: Drop-down list

Default value: Node

Possible values:

- Node
- Mid-branch
- Centre of leaves
- Origin

This parameter determines the anchor for the rectangle. If the value is `Node`, the rectangle is anchored to the corresponding node. If the value is `Mid-branch`, the rectangle is aligned with the midpoint of the branch connecting the node to its parent. If the value is `Centre of leaves` or `Origin`, the alignment depends on the value of the Branch reference:

Branch reference	Centre of leaves	Origin

Rectangular	The smallest rectangle containing all the leaves that descend from the current node is computed. The anchor corresponds to the centre of this rectangle.	A point corresponding to the projection of the node on a line perpedicular to the direction in which the tree expands and passing through the root node. Usually (i.e. if the tree is horizontal), this means a point with the same horizontal coordinate as the root node and the same vertical coordinate as the current node.
Radial	The smallest rectangle containing all the leaves that descend from the current node is computed. The anchor corresponds to the centre of this rectangle.	The root node.
Circular	The centre of leaves is computed using polar coordinates: the minimum and maximum distance of the leaves that descend from the current node are computed, as well as the minimum and maximum angle. The anchor has a distance corresponding to the average of the minimum and maximum distance, and an angle corresponding to the average of the maximum and minimum angle.	The root node.

Orientation reference

Control type: Drop-down list

Default value: Branch

Possible values:

- Horizontal
- Branch

This parameter determines the direction along which the offset of the rectangle from the anchor is computed. If the value is `Horizontal`, the offset `X` coordinate corresponds to an horizontal displacement and the `Y` coordinate to a vertical displacement; if the value is `Branch`, the `X` coordinate corresponds to a shift in the direction of the branch, while the

`Y` coordinate corresponds to a shift in a direction perpendicular to the branch.

Branch reference

Control type: Drop-down list

Default value: Rectangular

Possible values:

- Rectangular
- Radial
- Circular

This parameter determines the algorithm used to compute branch orientations. For best results, the value of this parameter should correspond to the coordinates module actually used.

Position

Control type: Point

Default value: (0, 0)

This parameter determines how shifted from the anchor point the rectangle is. The `X` coordinate corresponds to the line determined by the Orientation reference; the `Y` coordinate corresponds to the line perpendicular to this.

Horizontal alignment

Control type: Drop-down list

Default value: Center

Possible values:

- Left
- Center
- Right

This parameter determines the horizontal alignment of the rectangle with respect to the Anchor. If this is `Left`, the left side of the rectangle corresponds to the anchor; if it is `Right`, the right side of the rectangle corresponds to the anchor; if this is `Center`, the centre of the rectangle correspond to the anchor.

Vertical alignment

Control type: Drop-down list

Default value: Middle

Possible values:

- Top
- Middle
- Bottom

This parameter determines the vertical alignment of the rectangle with respect to the Anchor. If this is `Top`, the top side of the rectangle corresponds to the anchor; if it is `Bottom`, the bottom side of the rectangle corresponds to the anchor; if this is `Middle`, the middle of the rectangle correspond to the anchor.

Width

Control type: Number spin box

Default value: 50

Range: (-∞, +∞)

This parameter determines the width of the rectangle.

Height

Control type: Number spin box

Default value: 50

Range: (-∞, +∞)

This parameter determines the width of the rectangle.

Reference

Control type: Drop-down list

Default value: Axis

Possible values:

- Horizontal
- Axis

This parameter determines the direction along which the rectangle is drawn. If the value is `Horizontal`, the Orientation angle is computed starting from a horizontal line. If the value is `Axis`, the angle is computed starting from the reference used to compute the Position of the rectangle.

Orientation

Control type: Slider

Default value: 0°

Range: [0°, 360°]

This parameter determines the orientation of the rectangle with respect to the Reference, in degrees. If this is `0°`, the rectangle is parallel to the reference, if it is `90°` it is perpendicular to the reference and so on.

Fill colour

Control type: Colour

Default value: #DCDCDC (opacity: 100%)

This parameter determines the colour used to fill the rectangle.

Stroke colour

Control type: Colour

Default value: #000000 (opacity: 100%)

This parameter determines the colour used to stroke the rectangle.

Stroke thickness

Control type: Number spin box

Default value: 0

Range: [0, +∞)

This parameter determines the thickness of the stroke.

Stroke style

Control type: Line dash

Default value: ——————

- *Units on*: 0
- *Units off*: 0
- *Phase*: 0

The line dash used to draw the rectangle.

Line join

Control type: Drop-down list

Default value: Miter

Possible values:

- Miter
- Round
- Bevel

This parameter determines the appearance of the corners of the rectangle.