



Draw Guide

Chapter 2
Drawing Basic Shapes

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Using LibreOffice on macOS

Some keystrokes and menu items are different on macOS from those used in Windows and Linux. The table below gives some common substitutions for the instructions in this document. For a more detailed list, see the application Help.

<i>Windows or Linux</i>	<i>macOS equivalent</i>	<i>Effect</i>
Tools > Options menu	LibreOffice > Preferences	Access setup options
Right-click	Control+click or right-click depending on computer setup	Open a context menu
Ctrl (Control)	⌘ (Command)	Used with other keys
F5	Shift + ⌘ + F5	Open the Navigator
F11	⌘ + T	Open the sidebar Styles deck

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Introduction

You can create 2D and 3D objects in Draw. This chapter shows how to draw simple 2D objects. The following chapters describe how to work with and edit such objects. For more information on 3D objects, see *Chapter 7 Working with 3D Objects*.

All shapes, whether they are lines, rectangles, or more complicated shapes, are called objects. This is common notation in vector drawing software.

The drawing tools are found on the Drawing toolbar (Figure 1). This toolbar is normally located at the bottom of the workspace. If you do not see it, you can activate it by going to **View > Toolbars** on the Menu bar.

As with all the components of LibreOffice, you can undock the Drawing toolbar and place it wherever you want to on the Draw workspace as a floating toolbar. You can also configure toolbars by adding, moving, hiding, or deleting toolbar icons. See *Chapter 1 Introducing Draw* for more information.

When you draw a shape, select an object for editing or add text to the drawing, the information field in the Status bar (Figure 2) changes to reflect the action taken or in progress. See *Chapter 1 Introducing Draw* for more information on the Status bar.

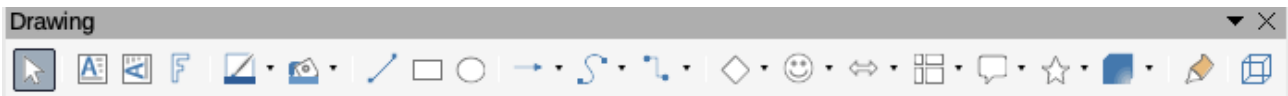


Figure 1: Drawing toolbar

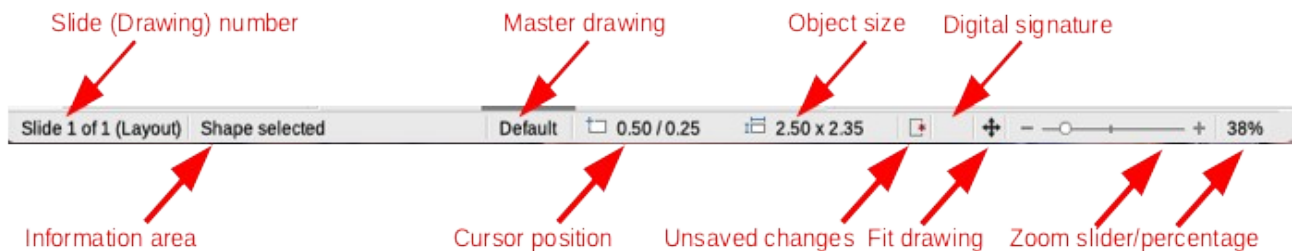


Figure 2: Status bar

Drawing basic shapes

Basic shapes, including text, are treated as objects in Draw. The standard set of tools available for drawing basic shapes on the Drawing toolbar are shown in Figure 1. Click on the small triangle on the right of the Drawing toolbar, then select **Visible Buttons** from the drop down menu to open a list of available tools (Figure 3).

The tools that are already placed on the Drawing toolbar are indicated by a check mark (✓) next to the icon in the **Visible Buttons** list, for example **Select**, **Line** and so on. The tools without a check mark (✓), for example **To Curve**, **To Polygon**, and so on, are not installed on the Drawing toolbar.

Please note that some of the icons on the Drawing toolbar will change shape according to the last tool used from the selection of available tools. The icons that have a small triangle to the right of the icon indicates that more tools are available. See “*Drawing geometric shapes*” on page 14 for information on the available shapes.

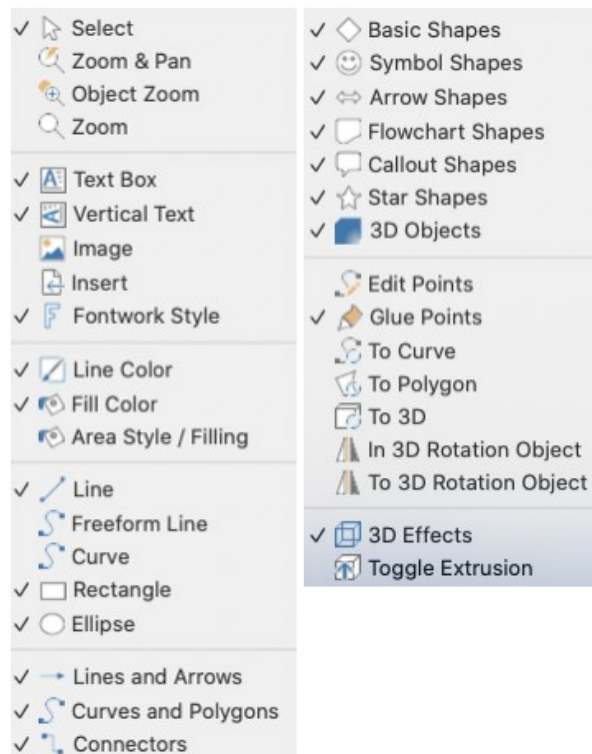


Figure 3: Drawing toolbar - Visible Buttons



Note

When you draw a basic shape or select one for editing, the information area at the left side in the status bar changes to reflect the present action: for example *Line created*, *Text frame xxyy selected*, and so on.

Straight lines

A straight line is the simplest element or object in Draw to create.

- 1) Use one of the following options to start drawing a line:
 - Click the **insert Line** icon in the **Drawing** toolbar.
 - Click the small triangle on the right of the **Lines and Arrows** icon in the **Drawing** toolbar and select the **Insert Line** icon from the drop down list.
 - Click the **Insert Line** icon in the **Lines and Arrows** section of the **Shapes** deck on the Sidebar.

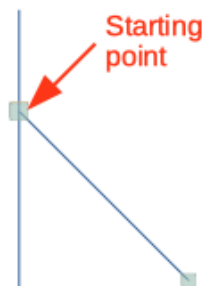


Figure 4: Line starting point

- 2) Place the cursor at the point where you want to start the line (Figure 4) and drag the mouse while keeping the mouse button pressed.
- 3) Release the mouse button at the point where you want to end the line. A selection handle appears at each end of the line, showing that this object is the currently selected object. The selection handle at the starting point of the line is slightly larger than the other selection handle.
- 4) Keep the **Ctrl** key pressed while drawing a line to enable the end of the line to snap to the nearest grid point.



Note

This is the default behavior of the **Ctrl** key. However, if the **Snap to Grid** option on the **View > Grid** menu has been selected, the **Ctrl** key deactivates the snap to grid activity.

- 5) Keep the **Shift** key pressed while drawing a line to restrict the drawing angle of the line to a multiple of 45 degrees (0, 45, 90, 135, and so on).



Note

This is the default behavior of the **Shift** key. However, if the option **When creating or moving objects** in the *Constrain Objects* section of **Tools > Options > LibreOffice Draw > Grid** has been selected, the action of the **Shift** key is the opposite. Lines will automatically be drawn at a multiple of 45 degrees unless the **Shift** key is pressed.

- 6) Keep the **Alt** key pressed while drawing a line to cause the line to extend outwards symmetrically in both directions from the start point. This lets you draw lines by starting from the middle of the line.

When a line is drawn, it uses default attributes. To change any of these attributes, select a line by clicking on it, then use one of the following methods to change the properties:

- Go to the **Properties** deck on the Sidebar and open the **Line** pane (Figure 5).
- Right-click on the line and select **Line** from the context menu to open the **Line** dialog (Figure 6).

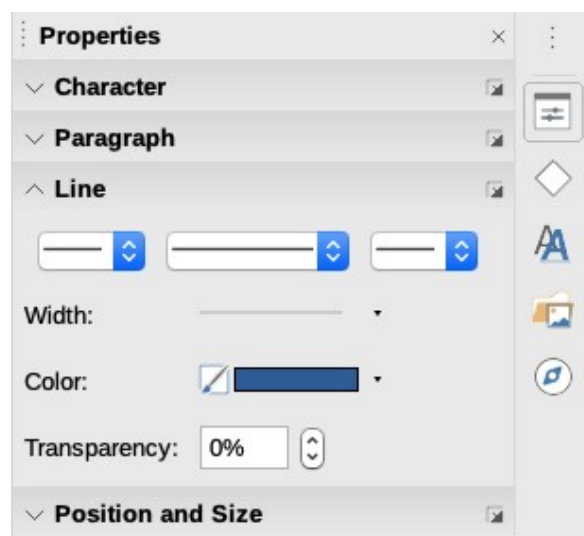


Figure 5: Line section in Properties deck on Sidebar

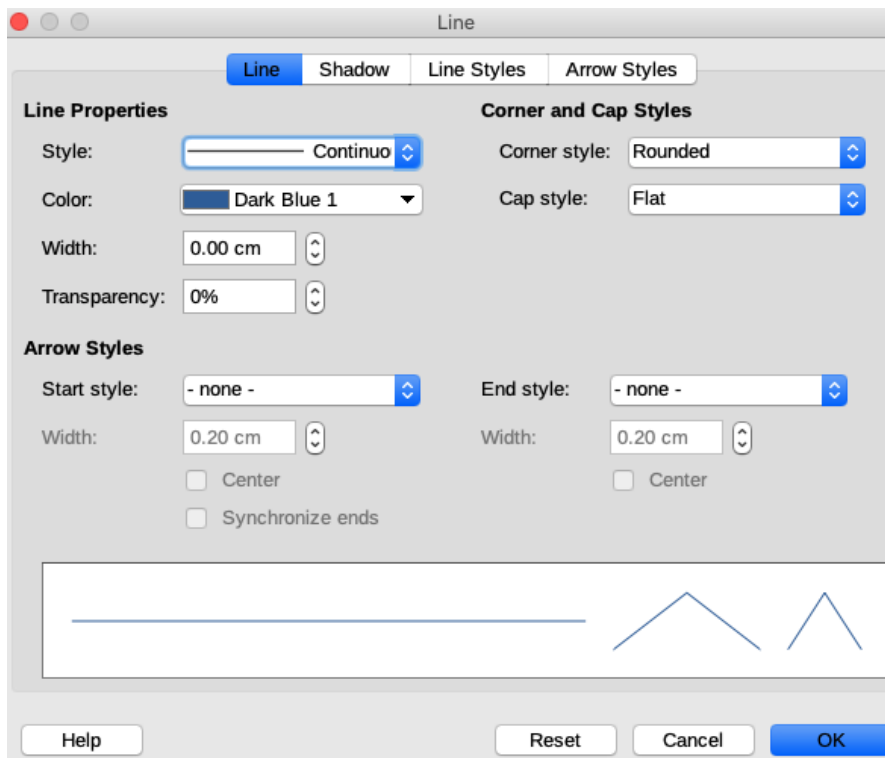


Figure 6: Line dialog - Line page

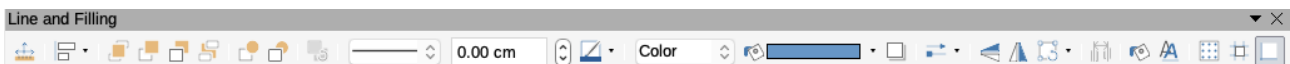


Figure 7: Line and Filling toolbar

- Go to **Format > Line** on the main menu bar to open the **Line** dialog (Figure 6).
- Use the controls in the **Line and Filling** toolbar (Figure 7). If the **Line and Filling** toolbar is not visible, go to **View > Toolbars** on the main menu bar and select **Line and Filling** from the drop down menu.

Arrows

Arrows are drawn like lines. Draw classifies arrows as a subgroup of lines, that is lines with arrowheads. Hovering the mouse cursor over each of the type of arrows available will tell you the type of line endings each icon will draw.



Note

The icon for the tool used most recently will already be selected on the Drawing toolbar to make it easier to use the same tool again.

The line endings available are lines, arrows, circles, squares, dimension lines and 45 degree lines. The information field on the Status bar shows them only as lines.

- 1) Use one of the following options to start drawing an arrow:
 - Click the **Lines and Arrows** icon in the **Drawing** toolbar to draw the type of arrow indicated by the icon.
 - Click the small triangle on the right of the **Lines and Arrows** icon in the **Drawing** toolbar and select the type of arrow you require from the drop down list (Figure 8).
 - Click the icon of the type of arrow you require in the **Lines and Arrows** section of the **Shapes** deck on the Sidebar (Figure 10).

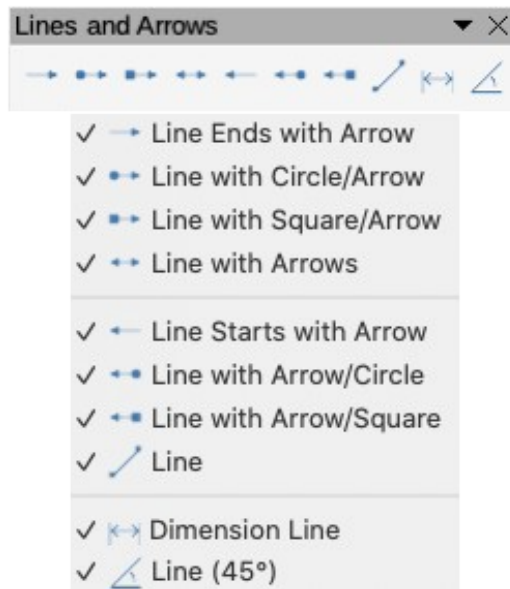


Figure 8: Lines and Arrows

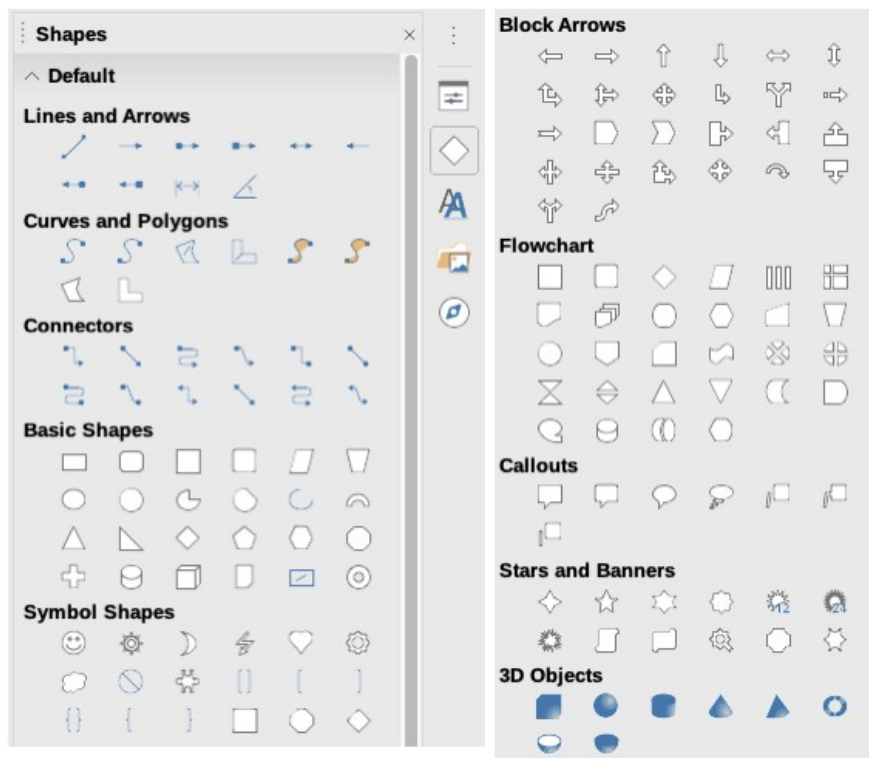


Figure 9: Shapes deck in Sidebar

- 2) Place the cursor at the point where you want to start the arrow and drag the mouse while keeping the mouse button pressed. The arrowhead is drawn at the end point of the arrow when you release the mouse button.



Note

After drawing the line, you can change the arrow style by opening the **Line** dialog (Figure 6) and going to the **Arrow Styles** page. Here you will find a larger selection of line endings to use in your drawing.



Note

You can also select the arrow style using the left or right drop down list in the **Line** section on the **Properties** deck (Figure 5). The left drop down list places an arrowhead at the start of a line. The right drop down list places an arrowhead at the end of a line.

Rectangles or squares

- Drawing a rectangle or a square is similar to drawing a straight line using one of the following methods:
 - Click on the **Rectangle** icon in the **Drawing** toolbar (Figure 1 on page 4).
 - Select **Rectangle** icon in **Basic Shapes** on the **Shapes** deck in the Sidebar (Figure 10 on page 8).
 - Select the icon for the type of rectangle or square from the **Legacy Rectangles** toolbar (Figure 11). To display the **Legacy Rectangles** toolbar, go to **View > Toolbars** on the main menu bar and select it.



Figure 10: Legacy Rectangles toolbar

- As you draw the rectangle with the mouse cursor, the rectangle appears with its bottom right corner attached to the cursor.
- Squares are rectangles with all sides of equal length. To draw a square, click on the **Rectangle** icon and hold down the **Shift** key while you draw a square.
- To draw a rectangle or square from its center rather than the bottom right corner, position your cursor on the drawing, press the mouse button and then hold down the **Alt** key while dragging with the cursor. The rectangle or square uses the start point (where you first clicked the mouse button) as the center.



Note

If the option **When creating or moving objects** has been selected in the Constrain Object section of **Tools > Options > LibreOffice Draw > Grid**, the action of the **Shift** key is reversed: the Rectangle tool draws a square. To draw a rectangle, press the **Shift** key. This **Shift** key reversal also applies when drawing ellipses and circles.

Ellipses or circles

- Draw an ellipse (also called an oval) or a circle using one of the following methods:
 - Click on the **Ellipse** icon in the **Drawing** toolbar (Figure 1 on page 4).
 - Select **Ellipse** icon in **Basic Shapes** on the **Shapes** deck in the Sidebar (Figure 10 on page 8).
 - Select the icon for the type of ellipse or circle from the **Legacy Circles and Ovals** toolbar (Figure 11). To display the **Legacy Circles and Ovals** toolbar, go to **View > Toolbars** on the main menu bar and select it.



Figure 11: Legacy Circles and Ovals toolbar

- As you draw the ellipse with the mouse cursor, the ellipse or circle appears with its bottom right corner attached to the cursor.
- A circle is an ellipse with both axes the same length. To draw a circle, click on the **Ellipse** icon and hold down the **Shift** key while you draw a circle.
- To draw an ellipse or circle from its center, position the cursor on the drawing, press the mouse button and then hold down the **Alt** key while dragging with the cursor. The ellipse or circle uses the start point (where you first clicked the mouse button) as the center.



Tip

To quickly insert a line, rectangle, ellipse, or text, press and hold down the **Ctrl** key and then click on one of the icons for Line, Rectangle, Ellipse, or Text and a standard sized object is drawn automatically in the work area. The size, shape, and color are all standard values. These attributes can be changed later, if desired. See *Chapter 4 Changing Object Attributes* for more information.

Dimension lines

Dimension lines display a measurement of an object in the drawing (Figure 12). The dimension line does not belong to the object itself, but it is usually placed close to it. An object can have as many dimension lines as necessary to indicate measures of its sides, edges, and distances.

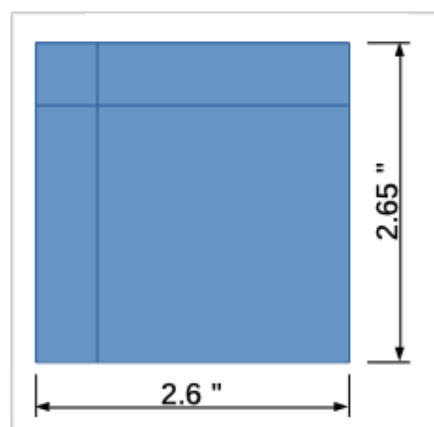


Figure 12: Measuring an object with dimension lines

You can control the display of a dimension line components and appearance by selecting it, right-clicking, and choosing **Dimensions** in the context menu to display the **Dimension line** dialog (Figure 13).

- 1) Use one of the following options to start drawing a dimension line:
 - Click the small triangle on the right of the **Lines and Arrows** icon in the **Drawing** toolbar and select **Dimension Line** from the drop down list (Figure 9 on page 8).
 - Click the **Dimension Line** icon in the **Lines and Arrows** section of the **Shapes** deck on the Sidebar (Figure 10 on page 9).



Figure 13: Dimension lines setting dialog

- 2) Place the cursor at the point where you want to start the dimension line and drag the mouse while keeping the mouse button pressed. The dimension line is drawn and automatically calculates and displays the linear dimension.
- 3) To adjust the settings of a dimension line, right click on the dimension line and select **Dimension** from the context menu to open the **Dimension Line** dialog (Figure 13).
- 4) Change the dimension settings using the various options in the **Dimension Line** dialog, then click **OK** to save your changes and close the dialog.

Arcs and segments

If you regularly draw arcs or segments (partial circles or ellipses), then you can use the optional **Legacy Circles and Ovals** toolbar (Figure 11 on page 10). Go to **View > Toolbar** on the main menu bar and select **Legacy Circles and Ovals** to open the toolbar.

- When you hover the cursor over an icon on this toolbar, the name of the object you are selecting is displayed.
- Click on the required icon in the **Legacy Circles and Ovals** toolbar. As you draw your object with the mouse cursor, the object appears with its bottom right corner attached to the cursor.
- To draw an object from its center, position the cursor on the drawing, press the mouse button and then hold down the **Alt** key while dragging with the cursor. The object uses the start point (where you first clicked the mouse button) as the center.

An arc or segment is drawn as follows:

- 1) Select the appropriate icon in the **Legacy Circles and Ovals** toolbar (Figure 11 on page 10), then click and drag with the cursor to start creating your arc or segment.
- 2) Release the mouse button then move the cursor to the position where you want the arc or segment to start and click to start drawing the arc or segment. The status bar indicates the angle in degrees.

- 3) Release the mouse button then move the cursor to the position where you want the arc or segment to finish. The status bar shows the angle in degrees.
- 4) When you have drawn the arc or segment you require, click again to complete the arc or segment.

Curves, polygons or freeform lines

Use one of the following options to start drawing a curve, polygon or freeform line. Moving the mouse cursor over one of the icons shows a tooltip giving the type of curve, polygon or freeform line:

- Click the small triangle on the right of the **Curve and Polygons** icon in the **Drawing** toolbar and select the type of curve, polygon or freeform line from the drop down list (Figure 19).
- Select and click the type of curve, polygon or freeform line in the **Curve and Polygons** section of the **Shapes** deck on the Sidebar (Figure 10 on page 9).



Notes

The icon for the tool used most recently is shown on the Drawing toolbar to make it easier to use the same tool again.



Figure 14: Curves and Polygons toolbar

Curves

- 1) Click and hold the left mouse button to create the starting point of the curve, then drag from the starting point drawing a line. Release the mouse button and continue to drag the cursor to bend the line into the required curve shape.
- 2) Click to set the end point of the curve and fix it on the page.
- 3) Continue dragging the cursor to draw straight lines at the end of your curve. Each mouse click sets a corner point and allows you to continue drawing another straight line from the corner point.
- 4) Double-click to end the drawing of your curve and lines.



Notes

A filled curve automatically joins the last point to the first point to close off the object and fills it with the selected fill color. A curve without filling will not be closed at the end of the drawing.

Polygons

- 1) Click and draw the first line from the start point while holding down the left mouse button. As soon as you release the mouse button, a line between the first and second points is drawn.
- 2) Move the cursor to draw the next line. Each mouse click sets a corner point and allows you to draw another line.
- 3) Double-click to end the drawing of your polygon.



Notes

A filled polygon automatically joins the last point to the first point to close off the figure and fills it with the selected fill color. A polygon without filling will not be closed at the end of the drawing.

Polygons 45°

Like ordinary polygons, these are formed from lines, but the angles between lines are restricted to 45 or 90 degrees. If required, hold down the **Shift** key as you draw the line so that the line is drawn at an angle other than 45 or 90 degrees.

Freeform lines

Using the freeform line tools is similar to drawing with a pencil on paper.

- 1) Click and drag the cursor to the line shape you require.
- 2) Release the mouse button when you are satisfied with your freeform line and the drawing is completed.
- 3) If **Freeform Line Filled** is selected, the end point is joined automatically to the start point and the object is filled with the selected color.

Glue points and connectors

Glue points

All Draw objects have glue points, which are not normally displayed. Glue points become visible when the **Connectors** icon is selected on the Drawing toolbar (Figure 1 on page 4) or when an icon in the **Connectors** section on the **Shapes** deck in the Sidebar (Figure 10 on page 9).

Most objects have four glue points (Figure 15). You can add more glue points and customize them, using the Glue Points toolbar (Figure 16). Go to **View > Toolbars > Glue Points** to open the toolbar.

Glue points are not the same as the selection handles of an object. Selection handles are for moving or changing the shape of an object. Glue points are used to fix or glue a connector to an object so that when the object moves, the connector stays fixed to the object. For a more detailed description on the use of glue points, see *Chapter 3, Working with Objects and Object Points* and *Chapter 8, Connections, Flowcharts, and Organization Charts*.

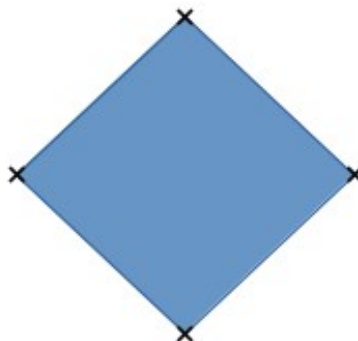


Figure 15: Glue points



Figure 16: Glue points toolbar

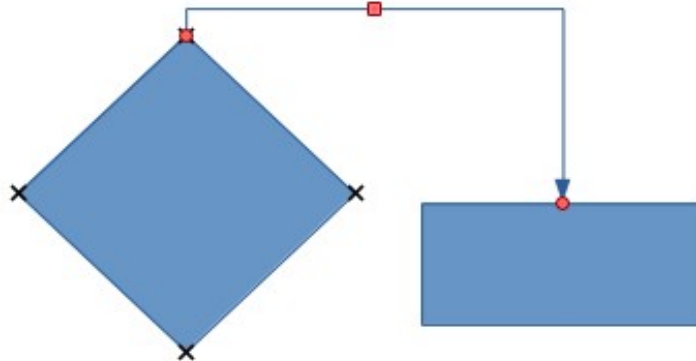


Figure 17: Connector between two objects



Figure 18: Connectors toolbar

Connectors

Connectors are lines or arrows whose ends automatically snap to a glue point of an object. Connectors are especially useful in drawing organization charts, flow diagrams, and mind-maps. When objects are moved or reordered, the connectors remain attached to a glue point. Figure 17 shows an example of two objects and a connector.

Draw offers a range of different connectors and connector functions. On the **Drawing** toolbar, click on the triangle next to the **Connector** icon to open the **Connectors** toolbar (Figure 18), or select a connector from **Connectors** section in the **Shapes** deck in the Sidebar (Figure 10 on page 9). For a more detailed description of the use of connectors, see *Chapter 8, Connections, Flowcharts, and Organization Charts*.

Drawing geometric shapes

The icons for drawing geometric shapes are located on the **Drawing** toolbar and on the **Shapes** deck in the Sidebar (Figure 10 on page 9). Clicking on the triangle to the right of an icon on the Drawing toolbar opens a floating toolbar giving access to the tools for that shape.

The use of these tools for geometric shapes is similar to the tool used for drawing rectangles and squares. For more information, see "Rectangles or squares" on page 9.

The icons used on the **Drawing** toolbar for drawing geometric shapes always indicates the last tool used and may not be the same as the icons shown in the following sections.

You can add text to all of these geometric shapes. For more information, see *Chapter 11 Advanced Draw Techniques*.



Figure 19: Basic Shapes toolbar

Basic shapes

Click on the triangle to the right of the **Basic Shapes** icon to open the **Basic Shapes** toolbar (Figure 20) for drawing basic shapes. This toolbar also includes a rectangle tool identical to the one already displayed on the Drawing toolbar. Alternatively, select the required icon in the **Basic Shapes** section in the **Shapes** deck on the Sidebar (Figure 10 on page 9).

Symbol shapes

Click on the triangle to the right of the **Symbol Shapes** icon to open the **Symbol Shapes** toolbar (Figure 21) for drawing symbols. Alternatively, select the required icon in the **Symbol Shapes** section in the **Shapes** deck on the Sidebar (Figure 10 on page 9).



Figure 20: Symbol Shapes toolbar

Block arrows

Click on the triangle to the right of the **Block Arrows** icon to open the **Block Arrows** toolbar (Figure 22) for drawing block arrows. Alternatively, select the required icon in the **Block Arrows** section in the **Shapes** deck on the Sidebar (Figure 10 on page 9).



Figure 21: Block Arrows toolbar

Flowcharts

Click on the triangle to the right of the **Flowchart** icon to open the **Flowchart** toolbar (Figure 23) for symbols used in drawing flowcharts. Alternatively, select the required icon in the **Flowchart** section in the **Shapes** deck on the Sidebar (Figure 10 on page 9).

The creation of flowcharts, organization charts, and similar planning tools are further described in Chapter 8 *Connections, Flowcharts and Organization Charts*.



Figure 22: Flowchart toolbar

Callouts

Click on the triangle to the right of the **Callout** icon to open the **Callouts** toolbar (Figure 24) for drawing callouts. Alternatively, select the required icon in the **Callouts** section on the **Shapes** deck on the Sidebar (Figure 10 on page 9).



Figure 23: Callouts toolbar

Stars and banners

Click on the triangle to the right of the **Star** icon to open the **Stars and Banners** toolbar (Figure 1) for drawing stars and banners. Alternatively, select the required icon in the **Stars and Banners** section in the **Shapes** deck on the Sidebar (Figure 10 on page 9).



Figure 24: Stars and Banners toolbar

3D Objects

Click on the triangle to the right of the 3D icon to open the **3D-Objects** toolbar (Figure 25) for drawing 3D objects. Alternatively, select the required icon in the **3D-Objects** section in the **Shapes** deck on the Sidebar (Figure 10 on page 9).



Figure 25: 3D-Objects toolbar

Adding text

In Draw you can add, insert, and format text to a drawing, objects, and shapes as follows:

- As a dynamic text frame, which is an independent Draw object and expands as you add more text within the frame.
- Text within a previously drawn object. This integrates text within the object and is placed within the boundary rectangle that surrounds an object. This boundary rectangle is not dynamic and care must be taken so that your text does not go outside of the object boundaries.

For more information on how to add, insert, and format text in a drawing or drawing objects, see *Chapter 9 Adding and Formatting Text*.