

diagrams.net™/draw.io® Diagramming Software

Windows®



By JGraph Ltd

User Guide

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diagrams.net™/draw.io® **Diagramming Software**

By JGraph Ltd

User Guide

diagrams.net™/draw.io® Diagramming Software User Guide

Version 1.0

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Preface

diagrams.net (also known as draw.io) is a free browser-based diagramming application developed and owned by JGraph Ltd. With diagrams.net, you can create many types of diagrams using the shapes, connectors, and text features of this versatile software, including:

- Organizational charts
- Flow charts
- Mind maps
- Unified Modeling Language (UML)
- Network and architecture diagrams
- Floor plans
- Electrical Diagrams

The purpose of this document is to instruct users on the essential functions of the diagrams.net/draw.io software application. This guide includes instructions for (1) accessing the application from the Internet or installing the application on a computer, (2) navigating the editor, (3) creating and editing diagrams, and (4) importing and exporting diagrams.

Note: This document is limited in scope to the online version of the software available directly from diagrams.net and its equivalent available for installation on a computer running Microsoft Windows. File storage instructions are limited to those that address storage on your local device. Refer to help topics provided on the diagrams.net website for assistance with other file storage and installation methods.

diagrams.net/draw.io can be integrated with many software platforms. Refer to diagrams.net for a list of these platforms and assistance with integration.

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Chapter 1 Application Access

This user guide describes two methods for accessing and using the diagrams.net/draw.io diagramming software. The quickest method is to access the app directly from the diagrams.net website on the Internet. Alternatively, you can choose to install the software on your computer. In either case, you can select the method of storage for your saved files using any of the following:

- On a local device
- Google Drive
- One Drive
- GitHub
- GitLab
- Dropbox

Note: This user guide addresses the saving of files to a local device only.

1.1 Access the Application from the Internet

To access the diagrams.net/draw.io application from the Internet:

1. Open a modern browser and go to the diagrams.net website (<https://www.diagrams.net/>) as shown in Figure 1:

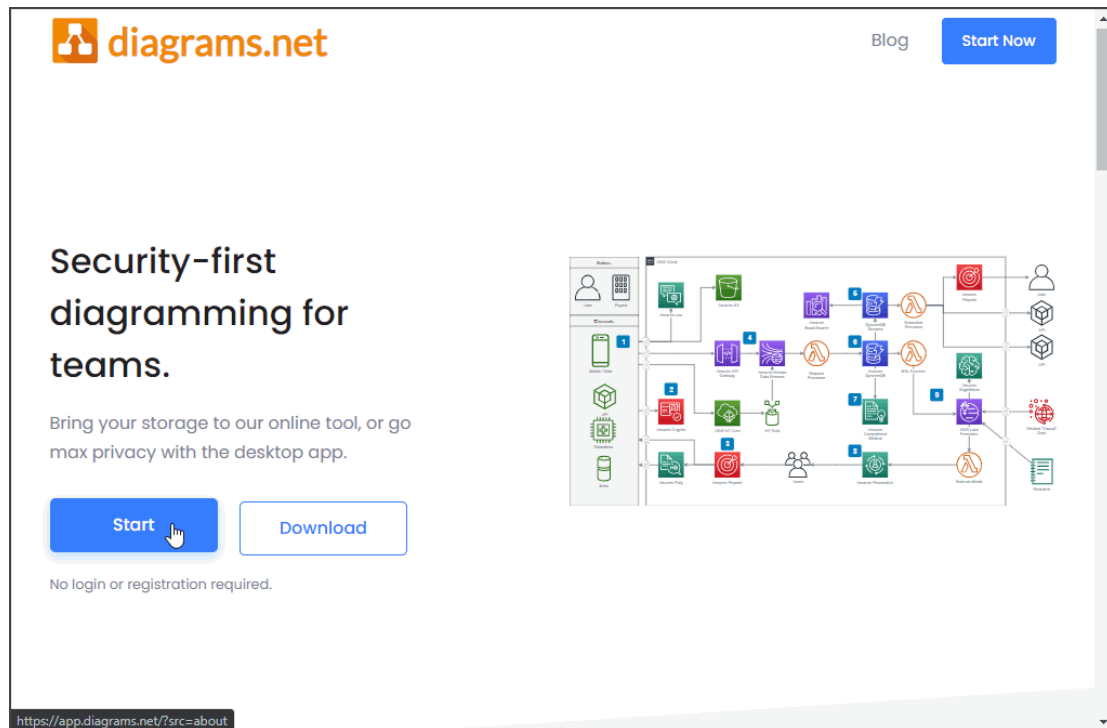


Figure 1. Access the diagrams.net/draw.io application directly from the diagrams.net website.

2. Click the **Start** button to display a dialog as shown in Figure 2:

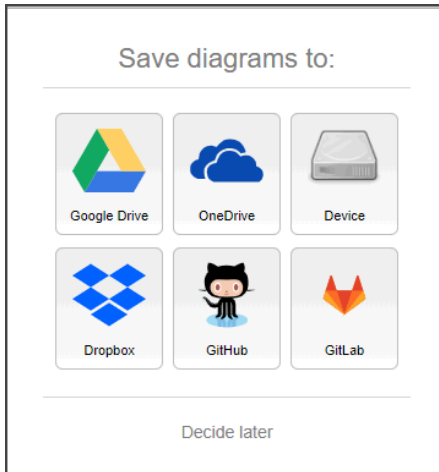


Figure 2. Select the file storage method for saving your diagram from the Save Diagrams dialog.

3. Click the **Decide later** text to temporarily bypass where to store files and access the `diagrams.net/draw.io` editor.

or

Click an icon to select a storage method and follow the prompts to authorize the `diagrams.net/draw.io` app, as shown in Figure 3. Once authorization is complete, you can access the `diagrams.net/draw.io` editor.

Note: Sequence and content of authorization steps vary by storage method selected. Selection of the *Device* option bypasses the authorization prompts and opens the `diagrams.net/draw.io` editor to an empty canvas.

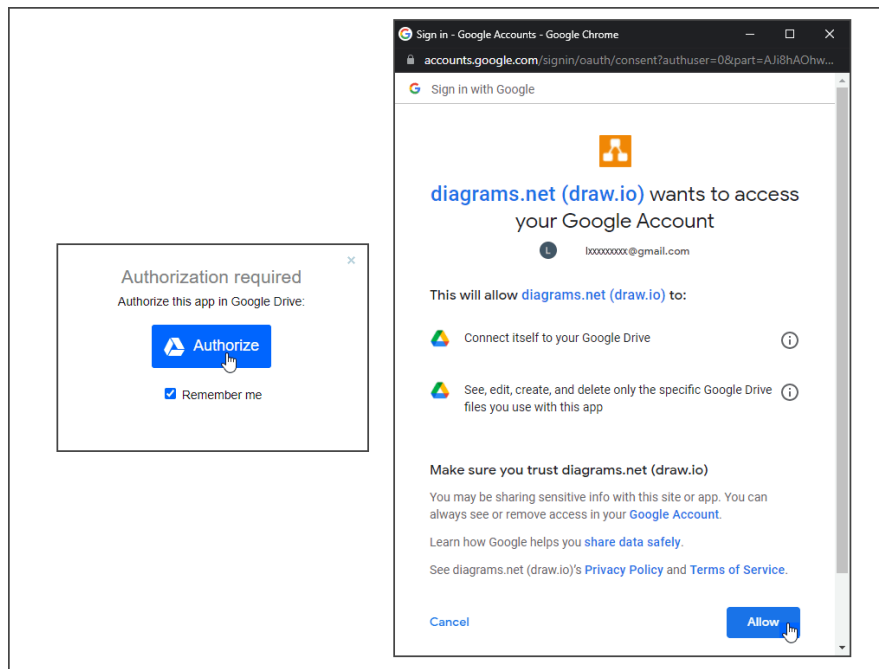


Figure 3. Example of an authorization dialog presented for various storage methods.

1.2 Install and Access the Application from the Computer

Note: The following procedure describes how to install the diagrams.net/draw.io software for Windows only. Refer to the help documentation on the diagrams.net website for information on installation for other operating systems

Use the following procedure to download the diagrams.net/draw.io application to a computer:

1. Go to the diagrams.net website as shown in Figure 4.

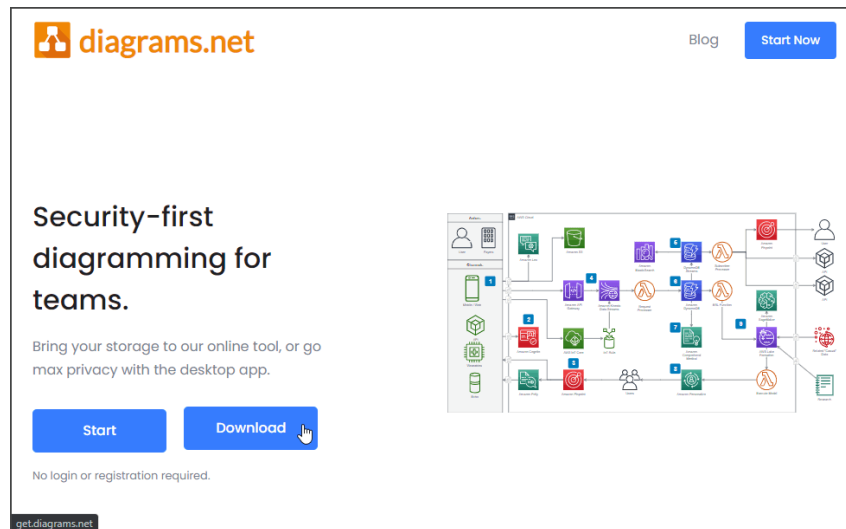


Figure 4. Download the diagrams.net/draw.io application from the diagrams.net website.

2. Click the **Download** button to display the JGraph/drawio - desktop GitHub as shown in Figure 5.

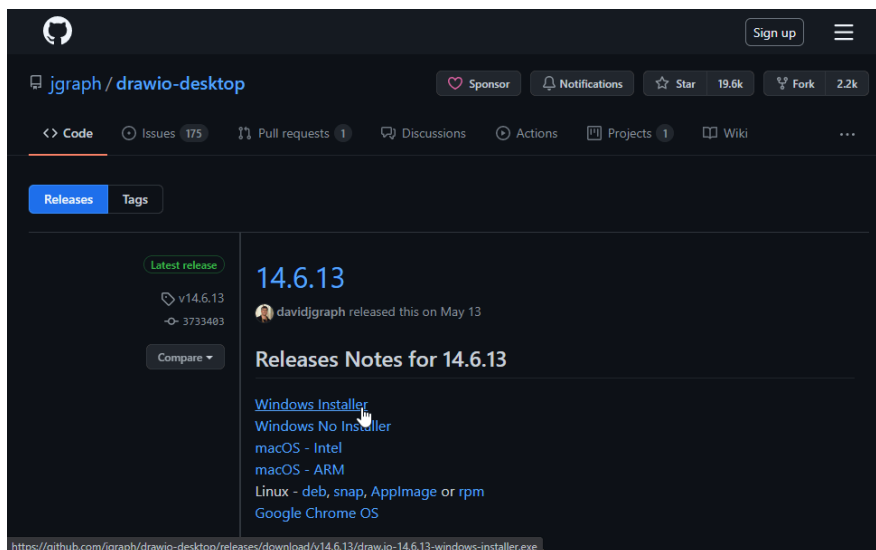


Figure 5. Select the appropriate installer for your computer from the JGraph/drawio - desktop GitHub to download the executable file to your computer.

3. Click the Windows installer link to download the executable file to the Downloads folder of your computer.
4. Locate the executable file in your Downloads folder, double-click the file, then click the **Yes** button from the dialog asking if you want to install the software. The draw.io Setup dialog displays as shown in Figure 6.

Note: If you wish to download the software to a different folder, change the path in the destination field.

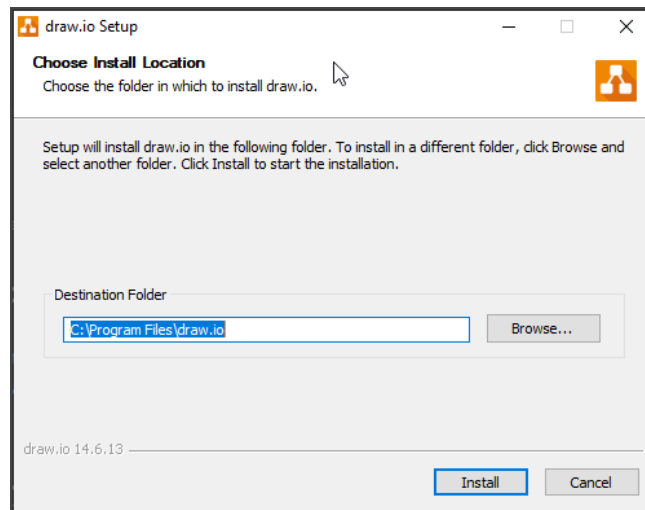


Figure 6. The installation dialog is used to begin the software installation on a computer.

5. Click the **Install** button to install the software to the specified folder on your computer.
6. Click the **Finish Install** button on the final dialog that displays to complete the installation and open the application.

Chapter 2 Editor Overview

Before you begin working in diagrams.net/draw.io, refer to Figure 1 to become familiar with the application's editor. Table 1 contains a description of each of the numbered components.

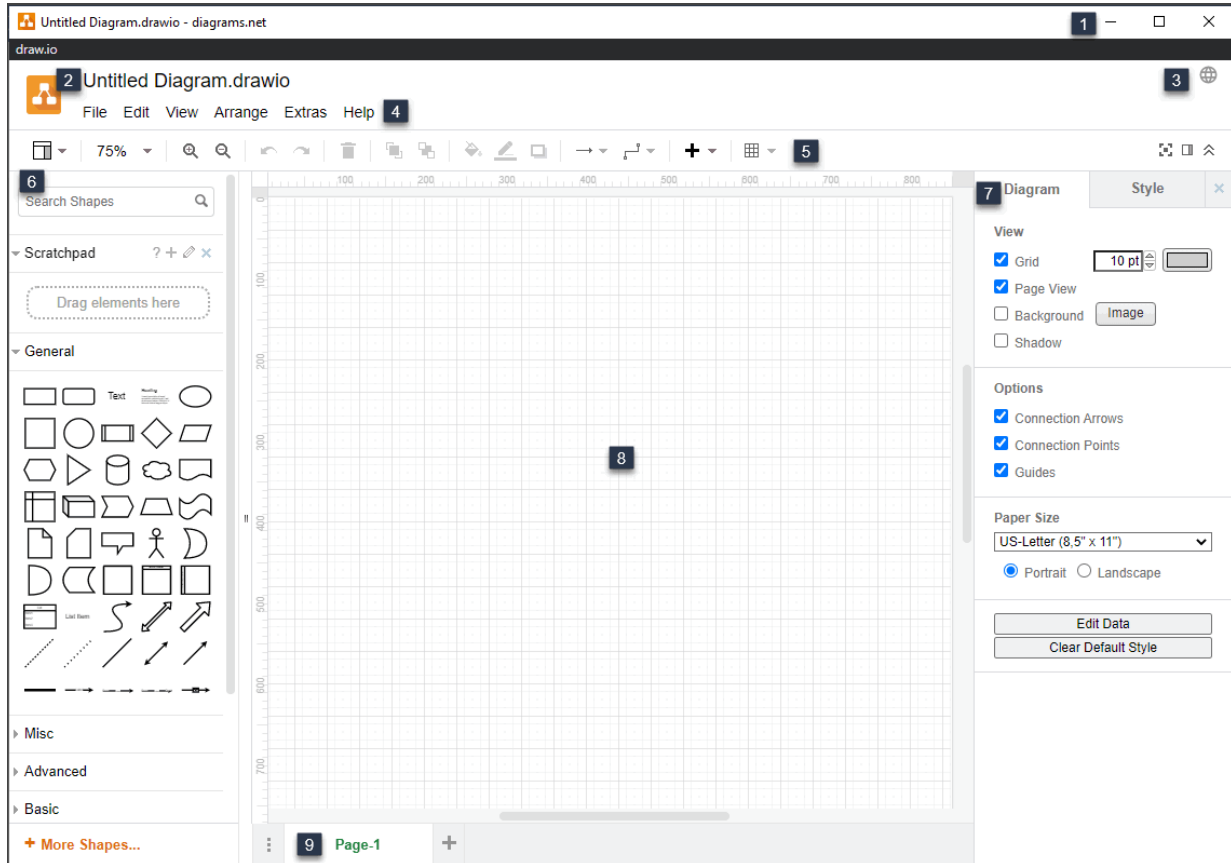


Figure 7. The diagrams.net/draw.io editor contains eight separate components. Refer to Table 1 for a description of each.

The following table contains a description of each of the editor components. The numbers in the Number (No.) column of the table correspond to each numbered item in Figure 7.

No.	Component	Description
1	Title Bar	Company logo, file name, and name of the application are listed on the left side of the title bar. Icons to minimize, maximize, or exit the application are located on the right. <i>Note:</i> The title bar only displays for the installed version of the application.
2	Title	Name of the diagram file.
3	Language	Clickable image that displays a drop-down list of languages from which the user selects their preferred language.

No.	Component	Description
4	Menus	<p>Series of six drop-down menus:</p> <ul style="list-style-type: none"> • File – Perform file actions such as saving, importing, exporting, and printing. • Edit – Edit text, shapes, and connectors by selecting copy and paste, undo and redo, delete, find or replace, and other commands. • View – Show or hide editor components such as panels, the ruler, grid, and more. Adjust zoom or switch to full-screen mode. • Arrange – Organize shapes and connectors or group/ungroup items. Use layout features or insert templates to diagrams. • Extras - Select a different theme for the editor or choose mathematical typesetting for equations. Use the tags plug-in to control what to hide or show in your file using metadata. • Help – View keyboard shortcuts or watch a video tutorial. Use the search feature to search the Internet for answers to questions about the application. Additional application help is available directly from the diagrams.net website. <p><i>Note:</i> Menu items that appear as grey text cannot be selected. If this occurs, select shapes, connectors, or text before accessing the menu’s content to activate these items.</p>
5	Toolbar	<p>Collection of icons from which users can select frequently used functionality:</p> <ul style="list-style-type: none"> • View – Select an option from the drop-down list to view the format panel or the outline and layers dialogs. • Zoom – Select an option from the drop-down list to change the percent of magnification for a diagram in the drawing canvas of the editor. • Zoom In – Increase the percentage of magnification for a diagram. • Zoom Out – Decrease the percentage of magnification for a diagram. • Undo – Remove the last change to the diagram. • Redo – Remove the undo command to keep the previous change. • Delete – Delete a selected shape, connector, or text. • To Front – Move a shape, text, or connector to the top layer for viewing. • To Back – Move a shape, text, or connector beneath a top layer. • Fill Color – Change the color of the inside of a shape. • Line Color – Change the color of connectors or the outline of shapes. • Shadow – Apply or remove a shadow effect to shapes in a diagram. • Connection – Apply a style from the drop-down list to connectors you have selected in a diagram. • Waypoints – Apply a style from the drop-down list to double-ended connectors you have selected in a diagram to alter the bend in the connector. • Insert – Add common shapes, text, and other items from the drop-down list. • Table – Insert a grid of columns and rows into a diagram.

No.	Component	Description
6	Shapes Panel	<p>Panel affixed to the left side of the editor that contains four main components:</p> <ul style="list-style-type: none"> • Search Shapes – Search and return a list of shapes that meet the search conditions you provide in the search field. Use this function in place of manually searching for a shape in the shape libraries. • Scratchpad – Build a personal shape library by dragging and dropping shapes from the drawing canvas into the scratchpad for later use. Select a shape saved to the scratchpad to add it to the drawing canvas. • Shape Libraries – Expandable and collapsible library that contains shapes. • + More Shapes – Open the Shapes dialog to view and select additional categories for display in the shape libraries.
7	Format Panel	<p>Panel affixed to the right side of the editor. This panel can contain a combination of context-sensitive tabs.</p> <ul style="list-style-type: none"> • Style – Customize the color and style of shapes, connectors, and text in your diagrams. • Text – Customize font face, size, and attributes such as alignment and color, or insert links, images, and tables. • Arrange – Move items between layers, adjust size and position, change the angle of shapes, and add hyperlinks and metadata to shapes and connectors. • Diagram – Select page size, orientation, and drawing canvas options.
8	Drawing Canvas	<p>The electronic equivalent of pages where diagram file content is rendered.</p>
9	Page Tabs	<p>Each tab contains the name of a single page in the diagram file. Click the + (plus) icon to create a new page. Right-click on existing page tabs to display options to insert, delete, rename, or duplicate tabs.</p>

Table 1. diagrams.net/draw.io Editor Components

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Chapter 3 Create and Edit Diagrams

This chapter contains instructions to assist you in:

- Creating and saving a new diagram.
- Adding shapes, connectors, and text.
- Modifying the format of your diagram.

3.1 Create a New Diagram File

To create a basic diagram in diagrams.net/draw.io:

1. Open diagrams.net/draw.io from your browser or the local install on your computer.
2. Click the **Create New Diagram** button from the dialog that displays upon opening the application to view the template manager.

or

If your version of the application opens without the initial dialog, click **File > New** from the main menu of the text editor to view the template manager.

Figure 8 depicts the template manager dialog that displays:

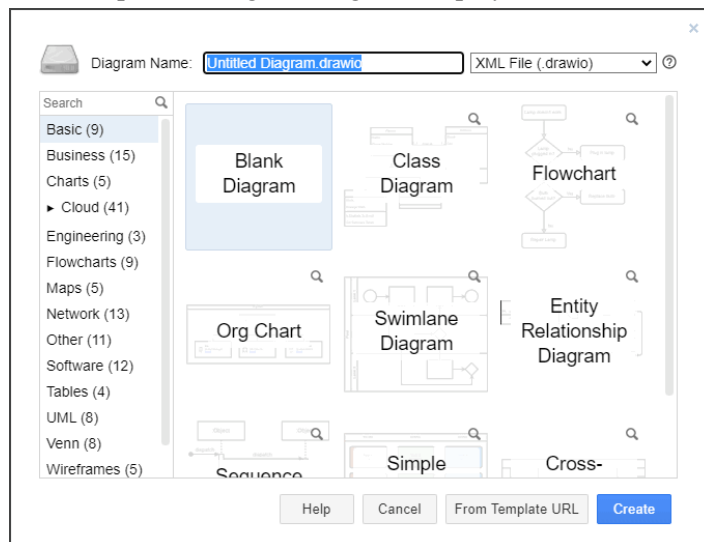


Figure 8. The template manager contains frequently used diagram styles from which users can choose to start a new diagram.

3. Type the name for your file in the **Diagram Name** field.
4. Accept the default file format or select an alternative from the drop-down list.
5. Click the categories in the dialog's left pane to view available templates within each. Use the scrollbar if the list exceeds the length of the dialog's height.

Note: If you know the type of chart you want to use, you can type its name in the search field and press **Enter** to display a short list of results.

6. Select the template to use and click the **Create** button to add the template to the editor session.
7. Save the file.

3.2 Open an Existing Diagram File

To open an existing diagram for edit:

1. Open diagrams.net/draw.io from your browser or the local install on your computer.
2. Click the **Open Existing Diagram** button from the dialog that displays upon accessing the application. Follow the system prompts to locate and open the existing file based on your selected storage method.

or

Click **File > Open From** in the menu, and select the storage method you use from the options provided in the drop-down list to display a file system dialog. Refer to Figure 9.

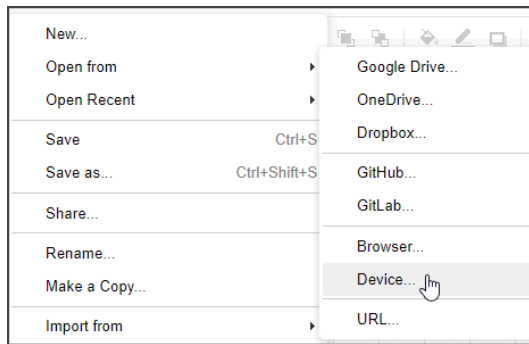


Figure 9. Selection of file storage options from the File menu.

3. Use the file system dialog to locate and open the existing file based on your selected storage method as depicted in Figure 10.

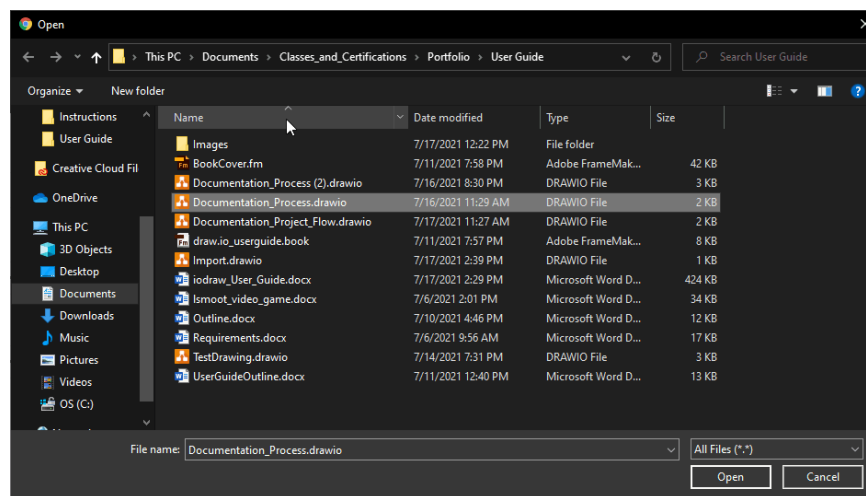


Figure 10. This file selects and opens a file when "device" is the chosen storage method.

3.3 Edit Diagrams

After the initial steps to create and file, use the procedures in the following topics to apply shapes, connectors, and text in diagrams.

3.3.1 Add and Adjust Shapes

Perform this procedure to add shapes to the drawing canvas and apply adjustments to width, height, rotation, and shape contour:

1. Click **View** in the menu and ensure that the Connection Arrows option is active.
2. Select a shape from the shape library and drag and drop it into the desired location on the drawing canvas, as shown in Figure 11:

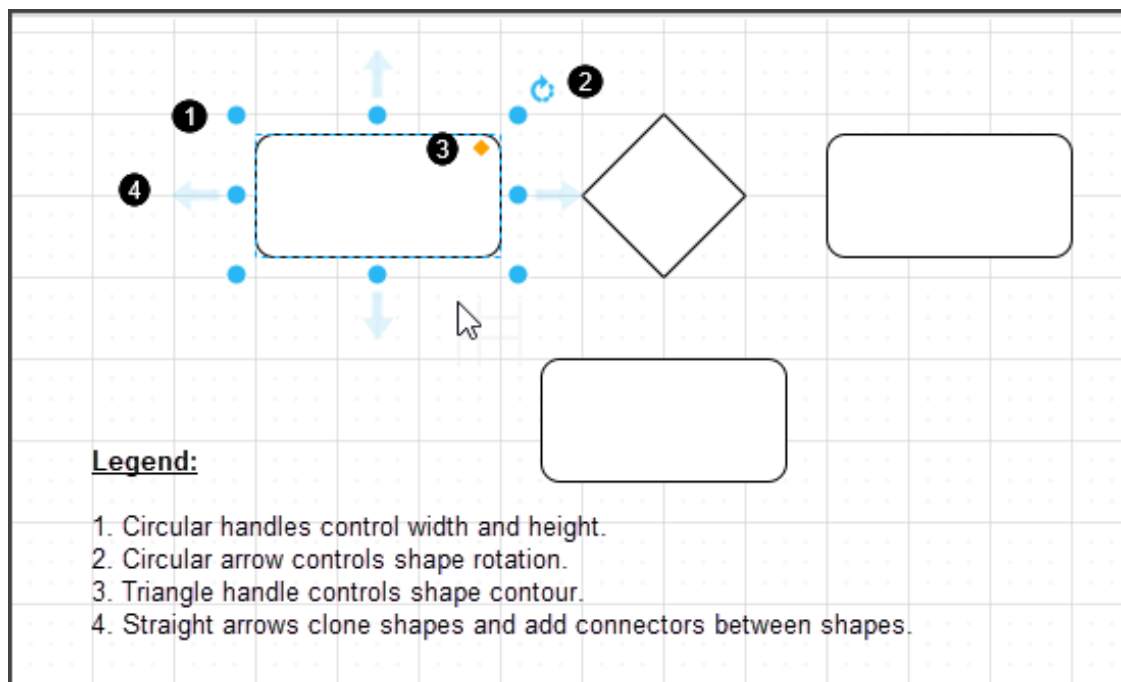


Figure 11. Drag and drop shapes and connectors from the shape libraries to add them to the drawing canvas.

- Continue selecting and adding shapes to the drawing canvas to build a diagram.

Note: The most recent shape added to the drawing canvas is automatically selected.

Table 2 contains a list of additional actions you can use in adjusting shapes:

If you want to...	Then...
Select a shape in the drawing canvas,	Click the shape with the mouse pointer.
Select a range of shapes or an entire diagram,	Press and hold the mouse and drag over the diagram area you wish to select.
Move a shape to a new position on the drawing canvas,	Click the shape, press and hold the mouse pointer, and drag the selected shape to the desired location.
Change the height or width of a shape,	Hover the mouse pointer over a circular handle of a selected shape, press and hold the mouse button, and drag the shape to a new height or width. Refer to Figure 11.
Rotate the shape on the drawing canvas,	Hover the mouse pointer over the circular arrow of a selected shape, press and hold the mouse button, then drag the mouse until you achieve the desired rotation.
Adjust the contour of the outline of a shape,	Hover the mouse pointer over the orange triangle of a selected shape, press and hold the mouse button, then drag the mouse inward or outward to the desired effect. <i>Note:</i> This option is only available on select shapes.
Clone a shape and connect it to the currently selected shape with a connector,	Click on a straight arrow. Refer to Figure 11. <ul style="list-style-type: none"> If a shape is already in place adjacent to the arrow, diagrams.net/draw.io creates only a connector to connect the two shapes. If a shape does not exist adjacent to the selected arrow, select a new one from the drop-down list that displays or select a different object from the shapes panel.
Delete a shape,	Click on the shape and press the Delete key on the keyboard.

Table 2. Optional Shape Adjustments

- Once you finish adding shapes to the drawing canvas, save the file and proceed to topic 3.3.2 Add Connectors and Waypoints to a Diagram for instructions on adding relationships between objects.

3.3.2 Add Connectors and Waypoints to a Diagram

After adding shapes to a diagram, use connectors (one endpoint) and waypoints (connectors with two endpoints) to show relationships. To create relationships:

1. Click **View** in the menu and ensure that the Connection Points option is active.
2. Click the **Connection** icon on the editor toolbar to display a drop-down list of available connectors.

or

Click the **Waypoints** icon on the editor toolbar to display a drop-down list of available waypoints.

Figure 8 depicts the connector and waypoint options available from the drop-down menus:

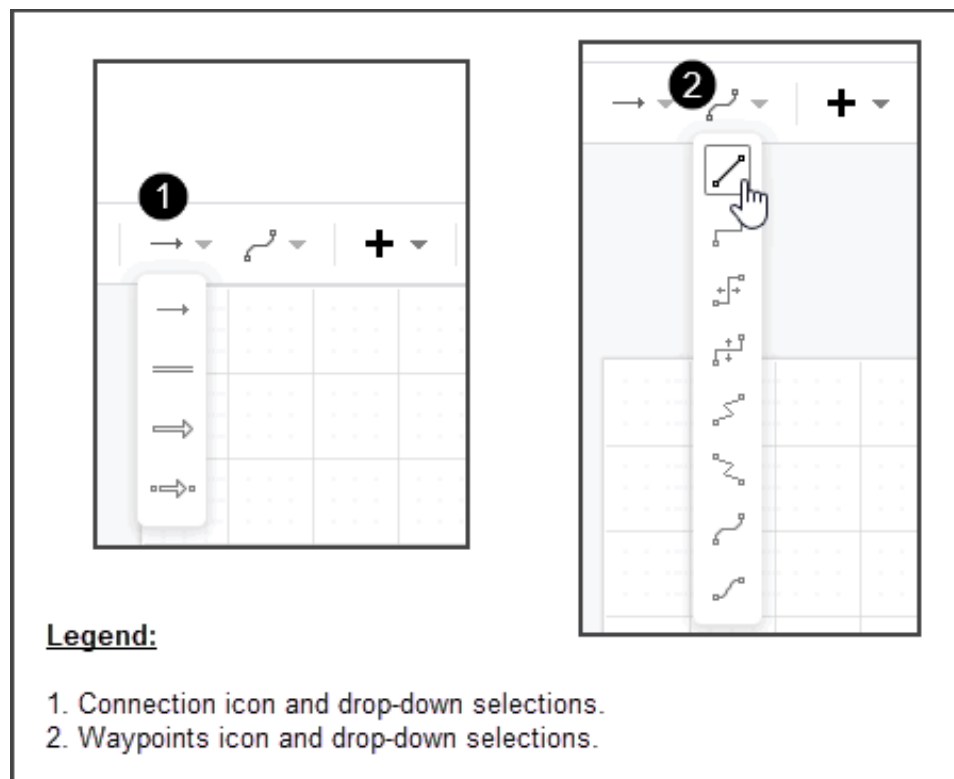


Figure 12. The Connection and Waypoints icons provide quick access for connecting shapes.

Note: Some of the shapes libraries contain alternative styles of connectors and waypoints.

3. Click a connector or waypoint.
4. Hover the mouse pointer over the shape in the diagram where the connection starts—each connection point for the shape displays as a blue x.
5. Move your mouse pointer over a connection point. The connection point is highlighted, as shown in Figure 13.

6. Press and hold the mouse button while dragging the pointer to the shape to which you are connecting. The connector is drawn and snapped to the nearest connection point. To deselect the connector or waypoint, click anywhere in the empty portion of the drawing canvas.

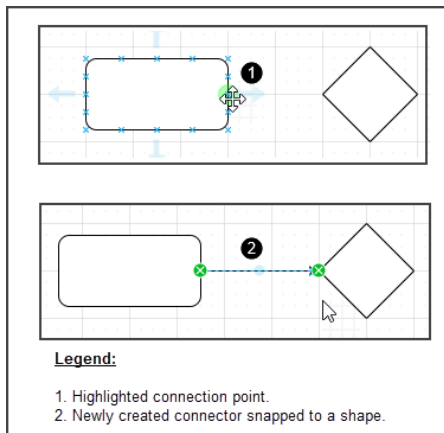


Figure 13. After selecting a connector or waypoint, drag from the connection point of the first shape to the connecting shape. The connector or waypoint is added to the diagram and automatically selected for further action.

7. Once you finish connecting shapes in your diagram, save the file, and proceed to topic 3.2.3 Add Text to a Diagram for instructions on adding text.

3.3.3 Add Text to Shapes and Connectors to the Drawing Canvas

Once you create a diagram, you may wish to add text to identify what the various shapes, connectors, and waypoints represent. It may also be necessary to place a legend directly onto the drawing canvas to provide additional information.

1. To add text to shapes:
 - Double-click inside a shape to activate the cursor, then type some content.
 - or*
 - Go to the shapes panel, select one of the text shapes, and drag and drop the text shape onto a drawing shape. This process creates a layer of text on top of the shape. Double-click inside the text shape to activate the cursor, then replace the placeholder text with your own, as shown in Figure 14.

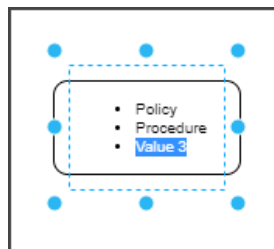


Figure 14. In this example, a list shape has been layered on top of a rectangle.

- To add text to connectors and waypoints, click an object to select it and begin typing. Text is added in a text box that serves as a container for the connector or waypoint as shown in Figure 15. When finished, click anywhere in the drawing canvas to deselect the item and notice that the text box is no longer visible.

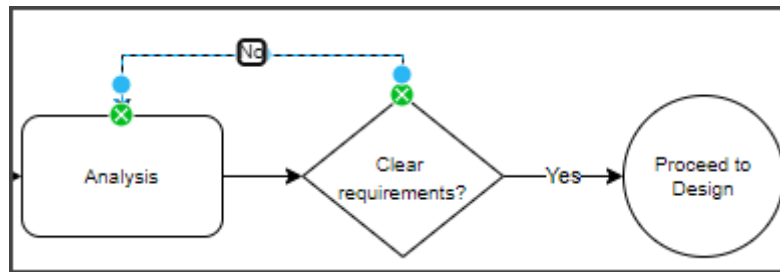


Figure 15. Example of text added to a waypoint.

- To add text to the drawing canvas,
 - Triple-click in a new area of the drawing canvas to display a text box. Click in the text box and type content.
 - or
 - Go to the shapes panel and select one of the text shapes from a shape library by dragging and dropping the selection onto the drawing canvas. Double-click inside the shape to activate the cursor, then replace the placeholder text with your own.
- Once you finish adding text to your diagram, save the file.
- Proceed to topic 3.3 Apply Additional Formatting to view instructions for adding color to shapes and changing font attributes.

3.4 Apply Additional Formatting

Many of the shapes, connectors, and waypoints available from the shapes libraries use a black or black and white color scheme. You can change the appearance of shapes and text by adding color and changing font styles and attributes, as shown in Figure 16.

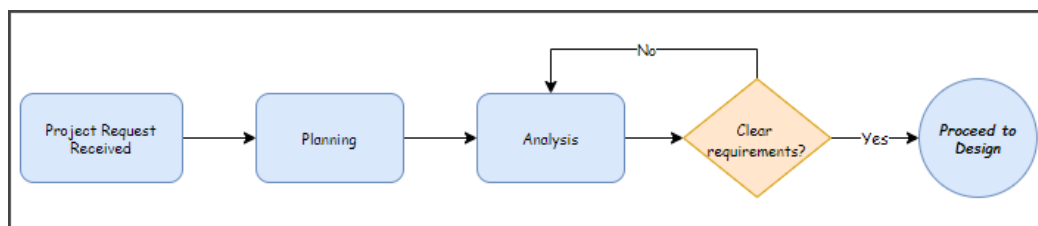


Figure 16. Use color and font attributes to modified diagrams and increase visual appeal.

The following subtopics provide basic procedures to help you modify color, font formatting, and style in diagrams.

3.4.1 Apply Color to Diagram Objects

To add color to the objects (shapes, connectors, and waypoints) in a diagram:

1. Select the object or objects to which you want to add color. Refer to Table 2 to view instructions for selecting objects.
2. Click the **Style** tab in the format panel to display the tab. Refer to Figure 17.
3. Use the < and > slider arrows to scroll through a list of predefined colors in the top portion of the style tab. Click a predefined color to apply it to the selected object.

or

To select a custom color, click the color selector button in the fill or line section of the format panel, select a custom color from the color palette, and click the **Apply** button to change the color for the specified item:



Figure 17 Use the style tab to apply color to objects in a diagram.

4. Save the file when you finish applying changes.

3.4.2 Change Font Attributes for Text

Text appearance is controlled from the text tab of the format panel. Figure 18 contains an illustration of the text tab. Refer to Table 3 to view a description of each item in the image.

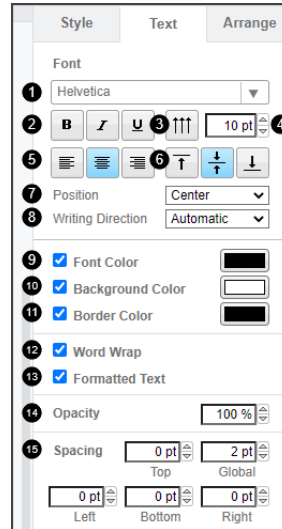


Figure 18. The text tab of the format panel contains options for changing the text in diagrams.

The following table contains a description of each of the editor components. The numbers in the Number (No.) column of the table correspond to each numbered item in Figure 18.

No.	Component	Description
1	Fonts	Drop-down list of available fonts.
2	Font Enhancements	Group of icons used in applying bold, italic, and underline characteristics to text.
3	Vertical Text	Icon that rotates text from a horizontal position to a vertical position.
4	Point Size	Field from which you can specify the point size of the text. Type a new size number in the field and press the Enter key on the keyboard, or click the up and down arrows to increment point size.
5	Horizontal Alignment	Group of icons used to set the horizontal alignment of text; left, center, or right.
6	Vertical Alignment	Group of icons used to set vertical placement of text; top, center, or bottom.
7	Position	Drop-down list of possible positions for text. <i>Note:</i> This feature is especially useful in positioning connector and waypoint text.
8	Writing Direction	Drop-down list of options that change the position of tabular columns of information from left to right or right to left.
9	Font Color	Combination checkbox and color selector button used to apply color to text. When checked, the color selector button activates for custom color selection from the color palette.

No.	Component	Description
10	Background Color	Combination checkbox and color selector button used to create a text highlighting effect. When checked, the color selector button activates for custom color selection from the color palette.
11	Border Color	Combination checkbox and color selector button used to create a custom border for framing text. When checked, the color selector button activates for custom color selection from the color palette.
12	Word Wrap	Checkbox enables or disables word wrapping for label text in diagrams saved in Hypertext Markup Language (HTML) format. The default setting is <i>enabled</i> .
13	Formatted Text	Checkbox enables or disables formatted text in diagrams saved in HTML. The default setting is <i>enabled</i> .
14	Opacity	Field from which users control the density of text. The default is 100 percent.
15	Spacing	Collection of fields used to control the position of text; left, right, top, bottom, and globally.

Table 3. Text Tab Components

To apply changes to the font in a diagram:

1. Select a shape that contains text. The Text tab of the format panel is immediately activated and visible, as shown in Figure 18. Refer to Table 3 to view a description of the individual components.
2. Apply changes to the text as desired. The changes are immediately incorporated into the selected text.
3. Save and close the file when you finish applying changes.

Chapter 4 File Import and Export

You can import and export diagrams using diagrams.net/draw.io. Topics 4.1 Import a File and 4.2 Export a File describe the procedures for each action.

4.1 Import a File

To import a drawing or image file (such as a .gif file format) into a diagrams.net/draw.io file:

1. Open the diagrams.net/draw.io editor.
2. Click **File > Import Item** from the menu and select your storage location from the drop-down list to display a file system dialog. Refer to Figure 9 on page 16 to view an illustration of the drop-down list.
3. Use the file system dialog to locate and open the existing file based on your selected storage method. Refer to Figure 10 on page 16 to view an illustration of a file system dialog. The application imports the diagram as a selected object, as shown in Figure 19:

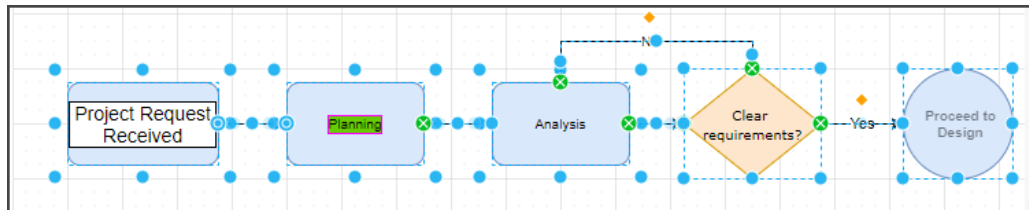


Figure 19. Imported diagrams display as a single selected object.

4. Reposition the diagram on the drawing canvas.
5. Click off the object to deselect it.
6. Save the file.

4.2 Export a File

To export a file from diagrams.net/draw.io:

1. Open the file you want to export from diagrams.net/draw.io.
2. Click **File > Export as**, and select a file format from the drop-down list as shown in Figure 20.

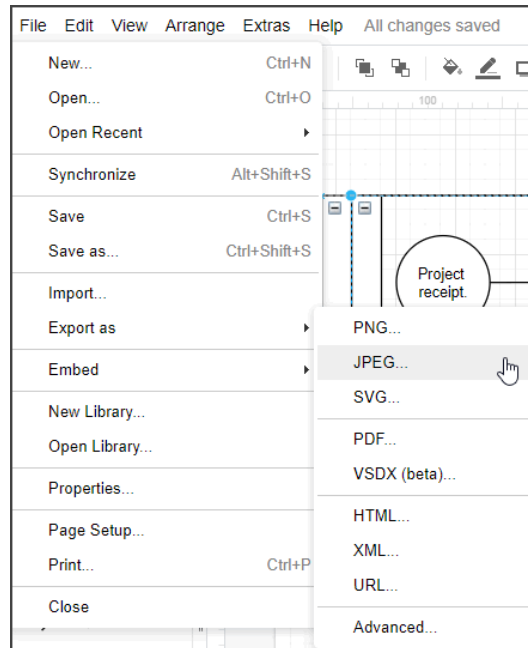


Figure 20. File format options available for exporting from diagrams.net/draw.io files.

Once you select a file type, a dialog displays to set options for the export. The options available from the export dialog vary based on the file type of the export. Figure 21 is an example of the dialog:

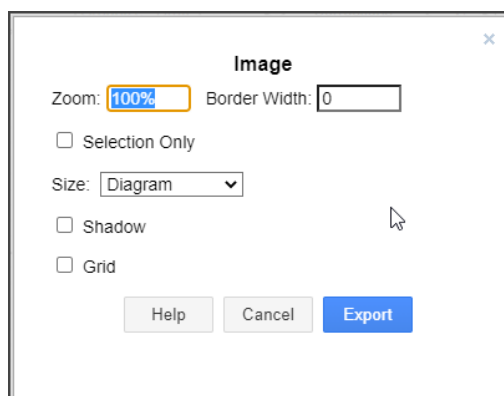


Figure 21. Use the export dialog to export a diagram file from its existing format to a new format.

3. Apply changes to the export dialog as needed and click the **Export** button.
4. If you are using the online version of the application, proceed to Step 5.

or

If you are using the application from your computer, skip Step 5 and proceed to Step 6.

5. Click the storage method icon from the Save As dialog that displays (refer to Figure 22) to indicate where you want to save the export file.

Note: The storage method you choose determines the next steps to complete the export procedure.

- If you select the *Device* method, the file is immediately exported to the Downloads folder on your computer.
- For all other methods, follow the system prompts for your particular storage method to complete the export process. Refer to the help information provided on the diagrams.net website for additional information.

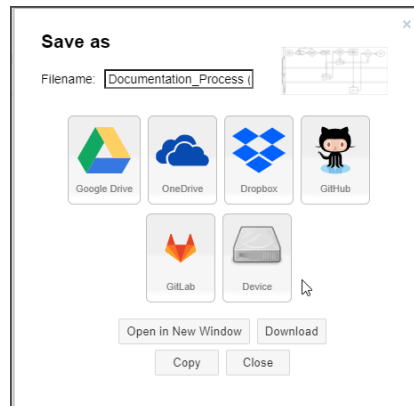


Figure 22. The Save As dialog displays to allow users to select their storage method.

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