

Commands and tools



Click a letter to go to that section.

To display help for a command while working in Visio, pause the pointer over the command, and then press the F1 key. You can also click the Help button in most dialog boxes.

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Zoom In

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Zoom submenu

Actions submenu

■ [Related Topics](#)

Shape menu, drawing window

Displays a list of commands that correspond to actions you can perform with the shape. This list changes depending on the shape you select. For example, if a shape has custom-properties data associated with it, Properties appears on the list and choosing it opens the [Custom Properties dialog box](#). If a shape has no actions, the Actions submenu is not available.

The commands listed under Actions are also available on a shape's shortcut (right-mouse) menu.

For details about actions related to project timeline shapes, see [Project Timeline Template](#) or choose Help > Visio Help, click Index, then type the action name, such as Link Tasks or View Start Date.

Drawing Page submenu

■ [_Related Topics](#)

Edit menu, drawing window

Includes commands that remove and change the order of pages in the drawing:

[Delete](#)

[Reorder](#)

Go To submenu

■ [_Related Topics](#)

Edit menu, drawing and print preview windows

Includes commands for viewing other pages or [backgrounds](#), or a background's foreground:

[Foreground](#)

[Background](#)

[1, 2, 3... Pages and Backgrounds](#)

[Page](#)

Grouping submenu

■ [_Related Topics](#)

Shape menu, drawing window

Includes commands for grouping shapes:

[Group](#)

[Ungroup](#)

[Add To Group](#)

[Remove From Group](#)

[Convert To Group](#)

Hyperlink submenu

■ Related Topics

Right-click linked object, drawing window

Includes commands for hyperlinked shapes:

Open

Open In New Window

Copy Hyperlink

Add To Favorites

Edit Hyperlink

New submenu

■ [Related Topics](#)

File menu

Creates a new [drawing](#) or starts one of the Visio wizards. You can

- Base a new drawing on a [template](#) by choosing [Browse Templates](#) or choosing a template from the drawing type submenus.
- Start a new drawing from scratch by choosing Drawing or Blank Drawing.
- Start a wizard to automate a task by choosing the appropriate wizard from the drawing type submenus.

You can also use the new button on the [Standard toolbar](#) to start a drawing that is not based on a template. Use [tips](#) to identify the button.

Tip: To open additional stencils while you are working on a drawing, use File > [Stencils](#). You can also use the open stencil button on the [Standard toolbar](#). Use [tips](#) to identify the button.

Macro submenu

■ [Related Topics](#)

Tools menu

Includes commands with which you can run [macros](#) you've created, the [Visual Basic Editor](#), the [Custom Properties Editor](#), and the [Shape Explorer](#). You can also display other category submenus (for example, Business Diagram, Internet Diagram, Network Diagram, Visio Extras) from which you can run [wizards](#), [macros](#), and programs called add-ons. For details about running a specific wizard, macro, or add-on, see its online help topic.

Operations submenu

■ [_Related Topics](#)

Shape menu, drawing window

Includes commands for combining two or more shapes to create one shape:

[Union](#)

[Combine](#)

[Fragment](#)

[Intersect](#)

[Subtract](#)

[Join](#)

[Trim](#)

[Offset](#)

[Fit Curve](#)

[Custom Fit](#)

Send To submenu

 [_Related Topics](#)

File menu, drawing window

Includes a list of commands you can use to send drawings to another person through electronic mail. Visio products are compatible with electronic mail programs that support the Messaging Application Program Interface (MAPI) protocol.

Visio also takes advantage of Microsoft Office 97 routing features, including sending drawings to Microsoft Exchange folders, adding routing slips to drawings you send through e-mail, and adding journal entries to Outlook.

Stencils submenu

 [_Related Topics](#)

File menu

Includes a list of drawing types for which Visio includes [stencils](#). When you're working with a drawing, use the Stencils command (or the Open Stencil button on the [Standard toolbar](#)) to open additional stencils, or to open an original stencil file so you can add or modify [master shapes](#).

OTHER SUBMENU COMMANDS

Open Stencil Displays a dialog box in which you can navigate to the folder that contains the stencil you want.

Blank Stencil Creates a new blank stencil on which you can drag and drop the master shapes you want. You can then save the stencil as a .vss file to use with future drawings.

[Shape Explorer](#) Opens Shape Explorer, where you can search for and catalog Visio shapes, stencils, and templates that are provided with Visio products, on the World Wide Web, in databases you create.

Toolbars submenu

 [_Related Topics](#)

View menu

Includes commands that display or hide appropriate Visio toolbars, depending on the window you are working in. Toolbars that are currently displayed have a check mark next to them; toolbars that are hidden do not.

OTHER SUBMENU COMMANDS

Toolbars Opens a dialog box in which you can choose to display larger toolbar icons or show or hide screen tips that identify tools on the screen when you pause your mouse over them.

Visio On The Web submenu

Help menu

Includes commands that open your World Wide Web browser application to search the Internet; browse resources for drawing, online technical support, and Visio templates and stencils; and view the Visio home page on the Web:

[Search The Web](#)

[Drawing Resources](#)

[Online Support](#)

[Visio Solutions Library](#)

[Visio Home Page](#)

Zoom submenu

■ [_Related Topics](#)

View menu, drawing window

Includes commands for changing the magnification of the view. To choose a different zoom percentage, choose the Custom command.

1, 2, 3, 4... More Files

■ [_Related Topics](#)

File menu

Opens one of the last files you closed. Choose the number that corresponds to the file you want to open. Choosing a numbered file from the File menu is a convenient alternative to the [Open](#) command, because Visio opens the file without displaying the Open dialog box.

1, 2, 3... More Windows

■ [Related Topics](#)

Window menu

Opens the [drawing](#), [stencil](#) (if it's open as a copy or original), or [ShapeSheet](#) window that corresponds to a number and brings it to the front. More Windows displays a list from which you can select a window. The More Windows command appears on the menu only if there are more than nine windows open.

1, 2, 3... Pages and Backgrounds

■ [_Related Topics](#)

Edit > Go To, drawing and print preview windows

Displays the selected page or background in the drawing window.

About Visio

 [Related Topics](#)

Help menu

Identifies the version of Visio you are using and displays copyright information.

Action

 [Related Topics](#)

Edit menu, ShapeSheet window

Assigns an action to a shape. The action appears on the shape's shortcut (right-mouse) menu. The command is dimmed unless you have inserted an Actions section (by choosing Section from the Insert menu, then checking Actions) and selected a cell.

DIALOG BOX OPTIONS

Properties Specifies the menu command name, status bar prompt, and online help topic for the shortcut menu command.

Menu Specifies the menu command to add to the shape's shortcut menu.

Prompt Adds a status bar prompt for the shortcut menu command.

Help When the user selects this menu command on the shortcut menu, then presses F1, the help topic for the command appears. The syntax is:

FILENAME.HLP!keyword or FILENAME.HLP!#Number

where **filename** is the Windows help file, **keyword** is the index term associated with the Help topic, and **number** is a numeric ID which is referenced in the MAP section of the Help project file (HPJ). For information on developing Microsoft Windows online help, see the Microsoft Platform SDK documentation.

Action Specifies the action performed by the shortcut menu command.

Edit Shape's Text Opens the shape's [text block](#).

Open Group In New Window Opens a [group](#) in the group window.

Show ShapeSheet Opens the [ShapeSheet](#) window.

Custom Performs custom action. You enter the formula for this action directly in the [Action](#) section of the ShapeSheet spreadsheet.

OLE Verb Activates [OLE](#) options, such as Edit, when an OLE object is double-clicked.

Run Macro Activates the macro or wizard selected from the list.

Display Help Opens an online help topic. Uses the same syntax as described in the [Special](#) dialog box.

Go To Page Displays a specific drawing page.

Open In New Window Displays a specific drawing page in a new window.

Activate (stencil)

 [_Related Topics](#)

Right-click a docked stencil's title bar

When multiple stencils are open, Activate brings the stencil you right-click to the front, displaying that stencil's masters. This command is available only when multiple stencils are open and docked, but is not available on the front-most (active) stencil.

Note: You can also click a stencil's title bar to activate it.

Actual Size (100%) (Ctrl+I)

■ [_Related Topics](#)

View menu, drawing and print preview windows

Displays the page at approximately its actual printed size. If a shape is selected in the drawing window, the view is centered on the shape. If nothing is selected, the view is centered on whatever was in the center of the previous view.

You can also choose 100% from the zoom list on the [Standard toolbar](#). Use [tips](#) to identify the zoom list.

Add To Group

 [Related Topics](#)

Shape > Grouping, drawing window

Adds the selected shape to the selected group without affecting the group in other ways. The added shape remains in its current location, and Visio repositions the group's selection rectangle to encompass it. The shape keeps its own ShapeSheet spreadsheet, and Visio updates the group's ShapeSheet spreadsheet to reflect the added shape.

While holding down the Shift key, select the group to which you want to add the shapes and the shapes you want to add. You can add a group to another group.

Bitmaps

A metafile can contain a bitmap or consist solely of a bitmap. Visio cannot convert bitmaps into shapes. However, a metafile that consists of a single bitmap sometimes stores the bitmap in separate segments. In that case, the Add To Group command converts each segment of the metafile into an individual bitmap object.

Linked objects

If an object from another program is linked, adding the object to a group breaks the object's link to its original file. Edits you make to the object in the original program will no longer be reflected in the copy in Visio.

Add To Favorites

 [_Related Topics](#)

Hyperlink submenu

Opens a dialog box in which you can add the linked object to the Favorites folder so that you can navigate to it quickly later.

Align Shapes (F8)

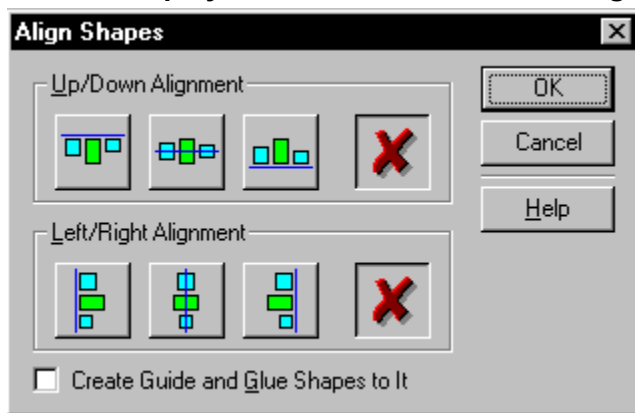
 [Related Topics](#)

Tools menu, drawing window

Aligns selected shapes with the first shape you select (the one that displays green selection handles). If you dragged the pointer tool around a group of shapes to select them, they are aligned with the shape at the front of the stacking order (also indicated by green selection handles if 25 or fewer shapes are selected).

You can also use the align shapes palette on the Shape toolbar to display alignment options. Use tips to identify the palette. To choose an alignment option, click the toolbar button and hold down the mouse button.

Click to display information about the dialog box.



Determines vertical alignment.

Aligns the tops of shapes.

Aligns shapes along their vertical centers.

Aligns the bottoms of shapes.

No vertical alignment (default).

Determines horizontal alignment.

Aligns the left sides of shapes.

Aligns shapes along their horizontal centers.

Aligns the right sides of shapes.

No horizontal alignment (default).

If checked, creates a guide and glues selected shapes to the guide to retain the alignment. When you move the guide, the shapes move with it.



Arc tool (Ctrl+7)

[Related Topics](#)

Standard toolbar

Use the arc tool to draw elliptical quarter-arc segments. A single arc is a 1-D shape when you first draw it. Adding other arc and line segments creates a 2-D shape.

The way you drag the mouse determines whether the arc has a horizontal axis (the end point is right or left of the begin point) or vertical axis (the end point is above or below the begin point). If the end point is exactly horizontal or vertical to the begin point, the arc becomes a straight line.

You can use the [arc tool](#), [line tool](#), [pencil tool](#), or [freeform tool](#) to draw shapes of contiguous segments.

Arrange Icons

 [_Related Topics](#)

Window menu, right-click in stencil window

Note: This command is available only when you have an original stencil open.

Arranges master shape icons in the stencil window into rows. The stencil window must be active.

Auto Arrange

 [_Related Topics](#)

View menu, right-click in stencil window

Note: This command is available only when you have an original stencil open.

When Auto Arrange is checked, [master shape](#) icons are rearranged in the stencil window after the window is resized or when icons are added to or deleted from a stencil. The stencil window must be active.

Automation Reference

 [_Related Topics](#)

Help menu

Opens the [Visio Automation Reference](#)—online help that contains information about creating [Visio macros](#) with Visual Basic for Applications (VBA).

Back button

 [_Related Topics](#)

Web toolbar

Pages back in a Web document.

Background

 [_Related Topics](#)

Edit > Go To, drawing and print preview windows

Displays the background page assigned to the page displayed in the drawing window. This command is available only when the displayed page has a background assigned to it. Choose Foreground to return to the foreground page of a drawing.

Behavior

 [Related Topics](#)

Format menu, drawing and ShapeSheet windows

Opens a dialog box where you can specify options for shape behavior.

Interaction Style Sets whether a shape behaves as a 1-D or a 2-D shape.

Selection Highlighting Sets the way a shape is displayed onscreen.

Resize Behavior Determines how a shape or other object within a group resizes when you resize the group.

Layout Behavior Determines how a 2-D shape interacts with [routable connectors](#), and whether or not it's included in a layout when you choose the [Lay Out Shapes](#) command. You can set the shape so that routable connectors can detect it and route around it rather than cross through it. A 2-D shape that routable connectors can detect is called a "placeable" shape.

Let Visio Decide Allows Visio to determine when to make the shape placeable, based on the type of connector you glue to the shape. Visio makes the shape placeable if you glue a [Dynamic Connector](#), or other routable connector, to it.

Layout And Route Around Makes a 2-D shape placeable in all cases. Routable connectors always route around it, and it is always included in an automatic layout. For organization charts, flowcharts, and network and software diagrams, this is the default setting for 2-D shapes.

Do Not Layout And Route Around Sets a shape so it's never placeable. Routable connectors cannot detect it, and it is not included in an automatic layout.

Non-Printing Shape When checked, makes the shape non-printing. The shape still appears onscreen, but when you print the drawing, the shape does not appear on the printed page.

Bring Forward

■ [Related Topics](#)

Shape menu, drawing window

Moves selected shapes forward one position in the stacking order. If multiple shapes are selected, they all move closer to the front and keep their original stacking order in relation to each other.

Bring To Front (Ctrl+F)

■ [Related Topics](#)

Shape menu, drawing window

Moves selected [shapes](#) to the front of the [stacking order](#) for shapes on a page. If multiple shapes are selected, they all move to the front and keep their original stacking order in relation to each other.

You can also use the bring to front button on the [Shape toolbar](#). Use [tips](#) to identify the button.

Browse Sample Drawings

File > New > Browse Sample Drawings

Opens the Browse Sample Drawings dialog box, where you can double-click a solutions folder to see sample Visio drawing files. To preview a sample drawing, select it. A thumbnail appears under preview. To open a sample drawing, select it, then click Open.

Browse Templates

 [Related Topics](#)

File > New > Browse Templates

Opens the [New Drawing](#) dialog box, where you can double-click a [template](#) icon to open a template. The templates that appear in the dialog box are in the solutions folder you last opened when you started Visio. To choose a different solutions folder, click the up one level button.

DIALOG BOX OPTIONS

Look In Displays the current folder. Double-click the folder you want to open.

Up One Level Moves the Look In folder up one level in the hierarchy.

Create New Folder Creates a new folder in the current hierarchy.

List Displays the list as an icon and a label.

Details Displays list of files by name, size, type, and modified date.

File Name Displays files of the type specified in the List Files Of Type box. To open a file, choose from the list, or type a path and filename in the box.

Files Of Type Displays the file types you can open, identified by their file name extension. To change the type, choose from the list.

Description Displays information about the selected file. This information comes from the Description box in the [Properties](#) dialog box.

Open button Opens the selected file.

Open section Determines whether the file is opened as original, copy, or read-only.

Preview Displays a preview of the selected file if a preview has been saved for the file in the [Properties](#) dialog box.

File Preview Turns file preview on or off.

Bullet button

 [Related Topics](#)

Text tool bar

Use the bullet button to create bulleted lists from text you've already typed or text you begin typing after you choose the button. To convert text you've already typed to bullets, select the text, then click the bullet button. To type bullets, choose the text tool or select a shape, choose the bullet button, then type the bullets you want.

Cascade (Alt+F7)

 [_Related Topics](#)

Window menu

Arranges open windows so the title bar of each window is visible. Stencil windows that are open as copies or originals, or that are floating, stack on the left; drawing and ShapeSheet windows stack on the right. To activate a window and bring it to the front, click its title bar.

Center Drawing

 [_Related Topics](#)

Tools menu, drawing window

Centers the entire drawing on the page, regardless of whether shapes are selected.

Change Row Type

 [Related Topics](#)

Edit menu, ShapeSheet window

Opens a dialog box where you can change the type of a selected row in a Geometry section of a ShapeSheet spreadsheet. Changing the row type changes the type of the segment the row refers to.

If you select a Controls cell, this command toggles between displaying and hiding the control handle tips.

DIALOG BOX OPTIONS

Row Type Displays the current type for the selected row. Choose a different option to change the row type.

LineTo Changes the segment into a line. The endpoints are defined by the X and Y cells in the Geometry section row.

ArcTo Changes the segment into a circular arc. The endpoints are defined by the X and Y cells, and the bow is defined by the A cell in the Geometry section row.

EllipticalArcTo Changes the segment into an elliptical arc. The endpoints are defined by the X and Y cells, the A and B cells indicate the coordinates of the segment's control point, the C cell specifies an angle between 0 and 180 degrees for orientation, and the D cell specifies the ratio of the major to minor axis, which is usually one or greater (must be greater than zero).

SplineStart Changes the segment into a spline start. The X and Y cells define the spline's second control point. (The spline's first control point is defined by the X and Y cells in the row preceding the SplineStart row). The A, B, and C cells indicate the spline's first, second, and last knot, respectively. The D cell indicates the degree of the spline, which controls the curvature of the spline with respect to its control polygon.

SplineKnot Changes the segment into a spline knot. The X and Y cells define the control point for the row. The A cell indicates a spline knot.

Change Source dialog box

 [_Related Topics](#)

Links dialog box

Click this option in the Links dialog box to change the reference for a linked file. For example, you can update a link if the file name or path has changed.

DIALOG BOX OPTIONS

Source Determines the file to which Visio will link the object. You can choose an item in the Files Of Type and Folder lists to locate the file. You can change a linked object's file reference to any other file of the same format.

Directories Displays the current folder.

List Files Of Type Displays files of the same file format as the original linked file.

Drives Displays the current drive.

Change Timeline Units

 [_Related Topics](#)

Project timeline template, Project > Change Timeline Units

Lists the units you can display on the timeline in the project frame for a project timeline. The choices are Days/Months, Months/Years, and Quarters/Years. When you change the units, the size of the project frame doesn't change so the smaller the unit (Days/Months being the smallest unit), the shorter the time period displayed in the project frame, and the longer the task bars.

Chart Shape Wizard

 [_Related Topics](#)

Tools > Macro > Macros

Use this wizard to create custom stackable or extendable shapes for use in charts. A stackable shape is duplicated when you drag to enlarge it, and an extendable shape stretches when you drag to enlarge it.

Choose A Drawing Template dialog box

 [Related Topics](#)

Start Visio

Opens only when you start Visio. Enables you to choose a template on which to base a new drawing or to open an existing drawing, stencil, or workplace file.

DIALOG BOX OPTIONS

Look In Choose the type of drawing you want to create.

File List Box Choose the template on which you want to base your drawing or the file you want to open. The Blank Drawing in the Solutions folder opens a new drawing that is not based on a template.

File Name Displays the name of the file selected. For example, you can choose Drawing (*.vsd), then choose an existing Visio drawing to open, instead of creating a new drawing.

Files of Type Choose the type of file you want to display in the file list.

Description Displays a description of the template selected in the file list.

File Preview Check to see a preview.

Preview Displays a thumbnail of the first page of the drawing.

Open Choose whether you want to open the original file, a copy of the file that you can edit, or read-only copy of the file that you cannot edit.

Cancel Closes the dialog box and returns to Visio.

Clear (Del key)

■ [_Related Topics](#)

Edit menu (not in print preview window)

Deletes selected shapes or text. To restore a deleted item, use the [Undo](#) command. You cannot use the [Paste](#) command to restore a shape that has been deleted using the Clear command.

Clip Art

 [_Related Topics](#)

Insert menu

Opens the Microsoft ClipArt Gallery, a tool that helps you organize clip art files. In the ClipArt Gallery, you can select a clip art picture you want to include in your Visio drawing.

This command appears only when the ClipArt Gallery is installed.

For details about the Microsoft ClipArt Gallery, click Help in the ClipArt Gallery window.

Close

 [Related Topics](#)

File menu and Windows system menu


Closes the file in the active window. If you changed a Visio file but did not save it before choosing the Close command on the File menu, Visio asks if you want to save the changes. Choose Yes to save the changes, No to close the file without saving changes, or Cancel to keep the file open and cancel the Close command. If you choose Yes and have not saved the file, Visio opens the [Save As](#) dialog box so you can save the file.

You can also click the close button on the Print Preview [toolbar](#) to close the print preview window and return to the drawing page.

Close (stencil)

 [_Related Topics](#)

Right-click a docked stencil's title bar

Closes only the stencil you right-click. If the stencil is floating, you can click  to close it.

Color Palette

 [Related Topics](#)

Tools menu, drawing window

Opens a dialog box that displays the current color palette. You can customize the color palette for the active [drawing file](#) or choose a different color palette to use for the file.

Visio uses solid colors for lines. For [fills](#) that don't have a pattern (item 0 or 1 in the pattern lists in the Fill dialog box), Visio uses the dithered version of the foreground color you specify. For patterned and gradient fills (patterns 2 through 40), Visio uses the solid color for the foreground and background colors you specify.

To create a custom fill, line, or text color, you can add a new color, or edit an existing color in the color palette. If shapes in the file are formatted with a color that you edit, the shapes' formatting changes to the new color. Colors you define or edit appear in the color lists in the [Fill](#), [Font](#), and [Line](#) dialog boxes.

DIALOG BOX OPTIONS

Color Solid Displays the 24 colors in the drawing file's color palette. The left side of each color bar shows the color when dithered; the right side shows the closest solid color. (If your display driver supports 16 colors, you will see dithered color. If it supports 256 colors or higher, you may not see any dithered colors.)

Copy Colors From Displays a list of open template and drawing files and predefined color palettes. By choosing from the list, you can copy a new color palette to the active drawing file.

Edit Click to edit the color selected in the Color Palette. Visio opens the [Edit Color dialog box](#) so you can edit the color.

Apply Click to apply color changes without closing the dialog box. Visio applies the new colors.

Combine

 [Related Topics](#)

Shape > Operations, drawing window

Creates a new shape from selected shapes. If the selected shapes overlap, Visio cuts out, or discards, the area where they overlap, which creates holes in the new shape. Use this command to create picture frames, windows, and other shapes that you want to see through.

The combined shape inherits the formatting and text of the first shape you select when you combine the shapes. The combined shape also has a single ShapeSheet spreadsheet, which contains the Geometry rows from each component shape's ShapeSheet spreadsheet.

Configure Task Bar Sizes

 [_Related Topics](#)

Project Timeline template, right-click the drawing page with no shapes selected, then choose Configure Task Bar Sizes

Opens the Custom Properties dialog box, in which you can set the size of normal and summary task bars and the percent-complete line. You can also set the size of the symbols that you can add to the ends of task bars.

Time Symbol Height Type the height of all end, start, and milestone symbols used in the project timeline.

Normal Task Bar Height Type the height of all normal task bars in the project timeline.

Summary Task Bar Height Type the height of all summary task bars (for tasks with subtasks) in the project timeline.

Normal Task Bar Percent Complete Height Type the height of the blue percent-complete line that appears in normal task bars when you add a Percent Complete column to your project timeline.

Summary Task Bar Percent Complete Height Type the height of the green percent-complete line that appears in summary task bars when you add a Percent Complete column to your project timeline.

Configure Task Bar Text

 [_Related Topics](#)

Project Timeline template, right-click the drawing page with no shapes selected, then choose Configure Task Bar Text

Or, right-click a task bar or milestone, then choose Configure Task Bar Text

Opens the Custom Properties dialog box, in which you can set the text that appears in or beside the task bars in your project timeline.

Task Left Text Choose or type text that appears at the left end of all task bars in your project timeline.

Task Inner Text Choose or type text that appears inside all task bars in your project timeline.

Task Right Text Choose or type text that appears at the right end of all task bars in your project timeline.

Configure Timeline Symbols

 [_Related Topics](#)

Project Timeline template, right-click the drawing page with no shapes selected, then choose Configure Timeline Symbols

Opens the Custom Properties dialog box, in which you can set the symbols that appear on the ends of normal and summary task bars. You can also set a size for all the symbols in your project timeline.

Normal Task Start Symbol Choose the symbol you want to add to the beginning of all task bars in your project timeline.

Normal Task End Symbol Choose the symbol you want to add to the end of all task bars in your project timeline.

Summary Task Start Symbol Choose the symbol you want to add to the beginning of all summary task bars in your project timeline.

Summary Task End Symbol Choose the symbol you want to add to the end of all summary task bars in your project timeline.

Milestone Symbol Choose the symbol you want to use for milestones in your project timeline.

Configure Working Days

 [_Related Topics](#)

Project Timeline template, Project > Configure Working Days

Opens the Configure Working Days dialog box, where you can check the non-working days for the current project. By default, Saturday and Sunday are checked. Non-working days appear as light yellow areas in the project timeline. Task bars extend over non-working days but the days aren't counted as part of the task duration.

Connect Shapes

 [Related Topics](#)

Tools menu, drawing window

Connects selected 2-D shapes (or other objects) in the order you select them. The shapes are connected with an instance of the connector master shape selected in the stencil. If no master shape is selected, Visio creates an instance of the Dynamic Connector to connect the shapes.

You can also use the connect shapes button on the Shape toolbar. Use tips to identify the button.

Connection point tool

 [Related Topics](#)

Standard toolbar

Use the connection point tool to add, move, or delete [connection points](#).

Note: The connection point tool always adds a connection point to the *selected* shape. Before using this tool, you must always select the shape to which you want to add the connection point.


To add a new connection point, select the shape, hold down the Ctrl key (the pointer should display an X above it), and click the shape where you want to add the connection point.

To select a connection point, position the mouse pointer over the connection point (the pointer is a four-headed arrow), and then click. The connection point turns magenta when it is selected.

To delete a connection point, select it, then press the Delete key. (**Note:** You cannot delete a connection point that has something glued to it.)

To move a connection point, select the connection point, and then drag it to a new location. The connection point turns magenta when it is selected.


Display options

Connection points appear as  on shapes. To display connection points, make sure [Connection Points](#) is checked on the View menu.

Connection Points

 [Related Topics](#)

View menu, drawing window

Turns the display of [connection points](#) on and off. When this command is checked, Visio displays connection points as . When you select a connection point, it turns magenta.

You can also use the connector tool on the [View toolbar](#). Use [tips](#) to identify the button.



Connector tool (Ctrl+3)

[_Related Topics](#)

Standard toolbar

Use the connector tool to connect two shapes as you drop them. To connect shapes, choose the connector tool, and then drag 2-D shapes from the stencil to the drawing page. The shapes are connected with an instance of the connector master shape selected in the stencil. If no master shape is selected, Visio creates an instance of the Dynamic Connector to connect the shapes.

To connect shapes point-to-point, drag the shapes you want to connect to the drawing page, select the connector tool, point to one of the shape's connection points, and then drag to one of the other shape's connection points.

To connect shapes shape-to-shape with the Dynamic Connector, press Ctrl and drag the shapes you want to connect to the drawing page, select the connector tool, point to one of the shape's connection points, and then drag to one of the other shape's connection points.

When you've successfully connected two shapes, the endpoints of the connector turn red when the connection is selected. The shade of red varies according to whether the connection is point-to-point or shape-to-shape.

Control

 [Related Topics](#)

Insert menu, drawing window

Inserts ActiveX controls, which are programmable objects that you can use to add functionality to a drawing. For example, you might insert standard Windows dialog box controls such as single-click buttons, check boxes, or list boxes, or custom controls that provide more complex functionality such as animation. To program a control, you typically write event procedures in the drawing's VBA project to handle the control's events, and you may get or set the control's properties or invoke its methods in other procedures.

DIALOG BOX OPTIONS

Controls Lists the controls installed on your system, including those installed by applications that contain the controls. You might need a design license to insert such controls in your own drawings. For details, contact the control vendor.

<control name> Displays the location of the file that contains the control selected in the Controls list.

Convert To Group

■ [Related Topics](#)

Shape menu, Grouping submenu, drawing window

Changes a selected Windows metafile (.wmf) or an [object](#) from another application into a [group](#) so you can edit it. If you want to separate the group into individual shapes, use the [Ungroup](#) command on the Shape menu.

Bitmaps

A metafile can either contain a [bitmap](#) or consist solely of a bitmap. Visio cannot convert bitmaps into shapes. However, a metafile that consists of a single bitmap sometimes stores the bitmap in separate segments. In that case, the Convert To Group command converts each segment of the metafile into an individual bitmap object.

Linked objects

If an object from another application is [embedded](#) or [linked](#), converting the object to a group disassociates the object from its original file so you can no longer edit the object in its original application.

Convert <OLE object>, <OLE object> Convert

 [_Related Topics](#)

Edit > Object, drawing window

Converts an OLE object to another format. Use this command to display the OLE object as an icon in a drawing. The command appears on a submenu when you choose the Object command from the Edit menu.

DIALOG BOX OPTIONS

Current Type Specifies the current type of embedded object.

Convert To Displays the Object Type list.

Activate As Displays the Treat As list.

Result Displays a message that describes the results of converting the object.

Display As Icon Displays the OLE object as an icon in a drawing.

Change Icon Opens a dialog box where you can specify a custom icon and change the icon label. (This option is available only when Display As Icon is checked.)

Copy, Copy Drawing (Ctrl+C)

 [_Related Topics](#)

Edit menu (not in print preview window)

Places a copy of selected shapes or text onto the [clipboard](#). When the drawing window is active and nothing in it is selected, the Copy command changes to Copy Drawing. Copy Drawing places a copy of the entire drawing on the Clipboard.

The information remains on the Clipboard until you use the Copy or [Cut](#) command again. Use the [Paste](#) command to [paste](#) as many copies as you want from the Clipboard. If both programs support [OLE](#), pasting an [object](#) from another program embeds it.

You can also use the copy button on the [Standard toolbar](#). Use [tips](#) to identify the button.

Copy Hyperlink

 [_Related Topics](#)

Right-click linked object, then choose Hyperlink > Copy Hyperlink

Places a copy of the linked Visio shape or drawing on the [clipboard](#). You can then choose Edit > [Paste As Hyperlink](#) in the destination document.

Corners

 [Related Topics](#)

Format menu, drawing and ShapeSheet windows

Applies formats to corners. You can choose from options for rounded corners or enter a value for a custom corner.

You can also use the corner rounding palette on the [Shape toolbar](#). Use [tips](#) to identify the button.

Note: If you use the [Union](#), [Combine](#), [Fragment](#), [Intersect](#), or [Subtract](#) command, round corners are replaced by arcs.

DIALOG BOX OPTIONS

Round Corners Displays icons from which you can choose a corner roundness.

Rounding Displays a numeric value for each corner option. You can also enter a value.

Apply Applies formatting without closing the Corners dialog box.



Crop tool

 [Related Topics](#)

Standard toolbar

Use the crop tool to size the border that encloses an object from another program or to move the object within the border.

When you change the size of an object's border with the crop tool, the object itself is not sized, but the amount of the object that is visible is reduced or enlarged. Drag the object's selection handles to crop, or drag inside the border to pan the object.

Custom Fit

 [Related Topics](#)

Shape > Operations, drawing window

Converts a polygonal line into a combination of lines, arcs, and splines that go approximately through its vertices. You can specify the error tolerance. If the tolerance is sufficiently loose (that is, if a large error is acceptable), the converted shape may be smaller in size than the original. Ungroup clipart shapes before you use the Custom Fit command.

DIALOG BOX OPTIONS

Periodic Splines Check to create a periodic (seamless) spline if the original shape is closed and smooth. If Cusps And Bumps is unchecked, the original shape need not be smooth.

Circular Arcs Check to replace polygonal line vertices with either line segments or circular arcs. For this option to work, the polygonal line vertices must be close to a line segment or circular arc within the specified tolerance.

Cusps And Bumps Check to preserve sharp angles and other features in the original shape.

Error Tolerance Type a tolerance value. The looser the tolerance (that is, the higher the amount of error tolerated), the simpler (less data, smaller disk size) the arc or spline. Zero tolerance results in no reduction in data. The typical error tolerance for converting clipart should be about 0.1 mm (.004 inches).

If you check Periodic Splines, uncheck Circular Arcs and Cusps and Bumps, and type an Error Tolerance of zero, you convert a polygonal line to a spline that goes exactly through the polygonal line's vertices. If the polygonal line is closed (that is, if it's a polygon), the result is a periodic spline. These Custom Fit settings are equivalent to choosing the Fit Curve command.

Custom Line Weight

 [_Related Topics](#)

Format > Line, click Weight and choose Custom

A dialog box in which you can type a specific value for the selected shape's line weight, in any unit of measure Visio recognizes.

Custom Properties

■ [Related Topics](#)

Shape menu, drawing and ShapeSheet windows

Opens a box in which you can edit a shape's [ShapeSheet custom-property](#) fields. The contents of this box change depending on the shape you select and the custom properties set for that shape in its ShapeSheet spreadsheet.

This command is available only when a shape contains custom-property fields.

You can also use the custom properties button on the [Shape toolbar](#). Use [tips](#) to identify the button.

Tip: You can define new custom-property fields for a shape, or edit existing properties, with the [Custom Properties Editor](#).

Custom Properties Editor

 [_Related Topics](#)

Tools > Macro

Runs a wizard in which you can add new custom property fields to selected shapes, edit existing properties, or delete existing property fields from shapes.

Cut (Ctrl+X)

 [_Related Topics](#)

Edit menu (not in print preview window)

Deletes selected shapes or text and places them on the [clipboard](#). The items remain on the Clipboard until you use the Cut command again or use the [Copy](#) command.

You can also use the cut button on the [Standard toolbar](#). Use [tips](#) to identify the button.

Data Map (Insert menu)

 [_Related Topics](#)

Insert menu, drawing window

Inserts data maps created in Microsoft Data Map. Data maps are geographical maps based on data from Microsoft Excel and Microsoft Access.

Database Export

 [_Related Topics](#)

Tools > Macro > Database, drawing window

Starts the Database Export Wizard, which exports data from ShapeSheet cells in Visio shapes and creates a new database table. You can insert the database table into an existing database or create a new database in which to contain the table. If you insert the table into an existing database, the database must have been created in an ODBC-compliant application. You can export data for every shape in a drawing or for selected shapes.

For information about options on Database Export Wizard screens, click [More Info](#).

Database Refresh

 [_Related Topics](#)

Tools > Macro > Database, drawing window

When a [shape](#) or [drawing](#) is linked to a database created in an [ODBC](#)-compliant program, this command refreshes linked ShapeSheet cell values to match values in database records. The command applies to selected shapes or to all shapes in the drawing, if no shapes are selected. For information about how to link shapes and drawings to data sources, see [Database Wizard](#).

Database Settings

 [Related Topics](#)

Tools > Macro > Database

Opens the Database Settings dialog box where you can set certain aspects of ODBC behavior. When you've linked Visio shapes or drawings to databases created in ODBC-compliant applications, the settings control how the drawing monitor passes changes to the database. The settings are global, that is, they apply to all the drawing-database links you have established. You can override the global settings in the process of establishing a link between a database and a drawing.

DIALOG BOX OPTIONS

Number Of Retries Type the number of times you want to try updating a database based on changes to a drawing the database is linked to if the first attempt fails.

UpdateRetry Interval (msecs.) Type the number of milliseconds between update attempts.

Time out Interval (secs) Type the number of seconds after which the update attempts time out.

Default ODBC Data Source Choose the ODBC data source you want the Database Wizard to link to by default. When you're using the wizard to link a shape to a database, you can choose a different data source.

Automatically Refresh Drawing Page Check to pass changes from a database to a drawing according to the interval you type in the next option.

Refresh Drawing Interval (secs.) Type the number of seconds (for example, 30 seconds) that should elapse before changes to a database are passed to a drawing. If it takes longer than the time you type to actually refresh a drawing, Visio adjusts the time accordingly.

Database Update

 [_Related Topics](#)

Tools > Macro > Database, drawing window

When a [shape](#) or [drawing](#) is linked to a database created in an [ODBC](#)-compliant program, this add-on updates values in database records to match the values in linked ShapeSheet cells. The command applies to selected shapes or to all shapes in the drawing, if no shapes are selected. For information about how to link shapes and drawings to data sources, see [Database Wizard](#).

Database Wizard

 [Related Topics](#)

Tools > Macro > Database, drawing window

Links Visio [shapes](#) or [drawings](#) to databases created in programs compliant with the [Open Database Connectivity \(ODBC\)](#) standard, such as Microsoft Access 7.0 or later, Microsoft SQL Server, and Oracle SQL Server. When you link a shape, you link specific ShapeSheet cells to specific database fields. You can keep the shape's ShapeSheet cell values synchronized with the database field values by using the [Refresh](#) and [Update](#) commands. After you link a shape to a database record, you can use the wizard to create drawings that are graphical representations of database tables and you can generate new master shapes, which are graphical representations of database records.

For information about options on Database Wizard screens, click [More Info](#).

Days/Months

 [_Related Topics](#)

Project Timeline template, right-click Project Frame shape, then choose Days/Months

Or, right-click the timescale, or the nonworking stripe, then choose Days/Months

Changes the timeline to display days and months. When you change the units, the size of the project frame doesn't change so the smaller the unit (Days/Months being the smallest unit), the shorter the time period displayed in the project frame, and the longer the task bars.

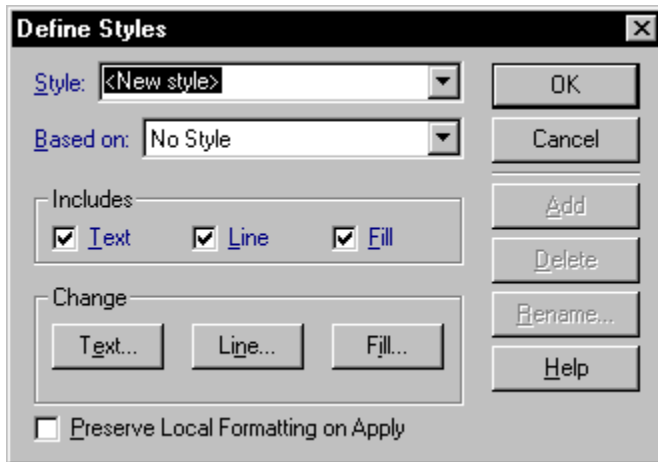
Define Styles

 [Related Topics](#)

Format menu, drawing window

Opens a dialog box where you can create, edit, rename, and delete [styles](#). Before using the Define Styles command, you can select one or more shapes and apply the newly created or edited style to the shapes.

Click to display information about the dialog box.



Tip: If you apply local formatting to selected characters in a shape's text [block](#) after applying a style to the shape, the [link](#) between the shape's text and the style is broken. The shape will still respond to changes in the style's definition of line and fill [attributes](#).

Displays a list of existing styles, as well as New style. If a shape is selected, the style for that shape is highlighted in the list.

Displays the style that the style displayed in the Style box is based on.

Indicates whether the style includes attributes for lines, fills, or text.

Includes buttons that open the Font, Line, and Fill dialog boxes in which you define attributes for the style. If a style is selected in the Style box, the dialog boxes display the current style's attributes; if no style is selected, they display default attributes or attributes for the style in the Based On box. Choosing OK in the Line, Fill, or Text dialog box returns you to the Define Styles dialog box.

If checked, prevents the style's attributes from replacing formatting you applied directly to the shape. Uncheck Preserve Local Formatting on Apply if you want the style to replace all previous formatting.

Discards only those changes specified the last time you clicked the Add, Change, Delete, or Rename button.

When you finish defining a new style or revising a style, Visio adds a new style to the style lists or changes a style without closing the dialog box so you can continue creating and editing styles.

Deletes the style selected in the Style list. A shape previously formatted with the deleted style becomes linked to and formatted with the Based On style, and may change in appearance as a result. Any local formatting that had been applied to the shape is preserved.

Opens the Rename dialog box, which displays the name of the style selected in the Style list. If you previously applied the style to shapes, Visio updates the link to the renamed style.

Delete Column

 [_Related Topics](#)

Project Timeline template, Project > Delete Column

Or, right-click a column in the project timeline, then choose Delete Column

Deletes the selected column from the project frame. The data contained in the column is not deleted from the file. If you insert the same column type again, the data reappears in the column.

Delete Page

 [_Related Topics](#)

Edit > Drawing Page, drawing window

Lists the pages in a drawing file so you can choose the pages to delete. You can restore a page you delete by using the [Undo](#) command.

DIALOG BOX OPTIONS

Page Lists the pages in the drawing file.

Update Page Names Check this option to renumber the remaining pages. This option applies only to pages that use default names.

Delete Row (Edit menu)

■ [_Related Topics](#)

Edit menu, ShapeSheet window

Deletes the selected [ShapeSheet](#) row. You can restore a row you've deleted by using the [Undo](#) command. Deleting a row in a ShapeSheet spreadsheet may change the shape's behavior.

Delete Row (Project Timeline template)

 [_Related Topics](#)

Project Timeline template, Project > Delete Row

Or, right-click a task bar or a horizontal grid line, then choose Delete Row

Deletes the task corresponding to the selected row or task bar. To select a row, select any cell in the row. Deleting a row deletes the data for the task from your project.

Delete Section

 [_Related Topics](#)

Edit menu, ShapeSheet window

Deletes the selected [ShapeSheet](#) section. You can restore a section you delete by using the [Undo](#) command. Deleting a section can change a shape's behavior.

Delete Shape and Record

■ [Related Topics](#)

Right-click a selected shape linked to a database record

For this command to appear on a shape's shortcut menu, you must have previously run the [Database Wizard](#) to link the shape to a database record.

Deletes the shape from the Visio drawing and the database record the shape is linked to in the database table.

Demote Tasks

 [_Related Topics](#)

Project Timeline template, Project > Demote Tasks

Or, right-click a task bar or a horizontal grid line, then choose Demote Tasks

Makes selected tasks subtasks of the nearest preceding task and moves the subtasks to the right in the Task Name column. A task with subtasks becomes a summary task. By default, summary task bars have yellow triangles on either end.

Design mode button

 [_Related Topics](#)

Developer toolbar

Switches Visio to a mode in which you can design pages and forms. In design mode, inserted ActiveX controls cannot send events. By default, Visio opens files in run mode, unless you have Macro Virus Protection checked in the General tab of the Options dialog box. To protect your document from macro viruses, Visio runs in design mode.

The fundamental distinction between run mode and design mode is that 1) controls hosted in a document are told not to fire events when the document is in design mode and to fire events when in run mode and 2) Visio will not source events from any object whose document is in design mode.

Developer toolbar

 [Related Topics](#)

View > Toolbars, Toolbar shortcut menu

Displays a Visio toolbar that provides buttons you can use as shortcuts for choosing menu commands. To switch the toolbar, choose View > [Toolbars](#) or right-click the toolbar, then choose Developer from the shortcut menu.

The tools available on the Developer toolbar are

- [Run macro](#)
- [Visual Basic Editor](#)
- [Insert control](#)
- [Show ShapeSheet](#)
- [Design mode](#)

Note: Your toolbar may vary depending on the display resolution of your monitor, the size of your window, and which window is active.

Distribute Shapes

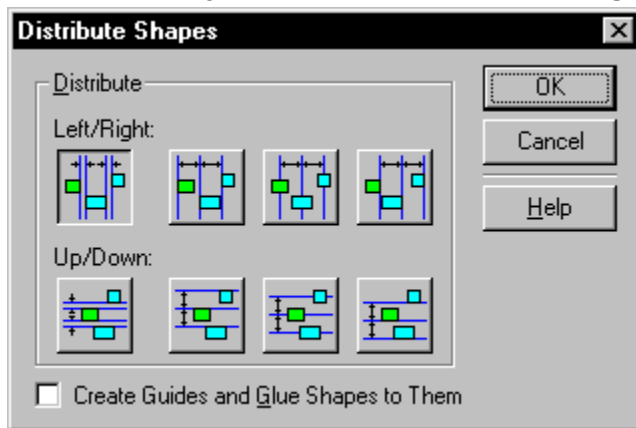
 [Related Topics](#)

Tools menu, drawing window

Places three or more selected shapes at regular intervals on the drawing page. Choose from horizontal and vertical distribution options. The order in which you select shapes is not relevant when distributing shapes.

You can also use the distribute shapes palette on the [Shape toolbar](#) to display distribution options. Use [tips](#) to identify the palette. To choose a distribution option, click the toolbar button and hold down the mouse button.

Click to display information about the dialog box.



Displays options for distributing shapes horizontally.

Distributes shapes horizontally so there is a uniform space between shapes.

Distributes shapes so their left edges are uniformly spaced.

Distributes shapes horizontally so their centers are uniformly spaced.

Displays options for distributing shapes vertically.

Distributes shapes so their right edges are uniformly spaced.

Distributes shapes vertically so there is a uniform space between shapes.

Distributes shapes so their top edges are uniformly spaced.

Distributes shapes vertically so their centers are uniformly spaced.

Distributes shapes so their bottom edges are uniformly spaced.

If checked, creates guides to retain the distribution of the shapes. Select and move the outermost guides to move the shapes without changing their distribution.

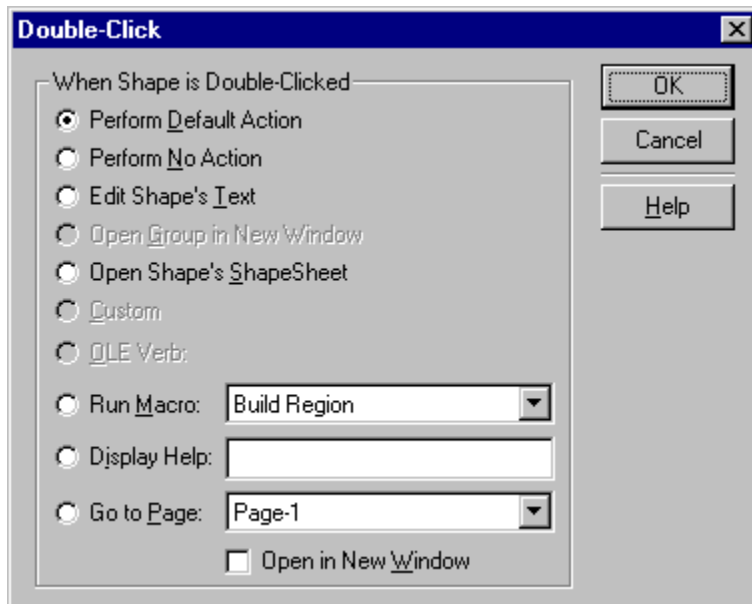
Double-Click

 [Related Topics](#)

Format menu, drawing and ShapeSheet windows

Opens a dialog box where you can assign an action to be performed when a shape is double-clicked.

Click to display information about the dialog box.



Activates the default action for the shape.

Takes no action.

Opens the shape's text block.

Opens a group in the group window.

Opens the ShapeSheet window.

Activates OLE options, such as Edit, when an OLE object is double-clicked.

Activates the macro selected from the list.

Opens an online help topic. Uses the same syntax as described in the Special dialog box.

Displays a specific drawing page.

Displays the drawing page in a new window.

Performs custom double-click behavior.

Drawing

■ [_Related Topics](#)

File > New

Opens a new drawing file (.vsd) based on the currently open template.

Drawing Resources

 [_Related Topics](#)

Help > Visio On The Web

Opens your World Wide Web browser application and displays a Web site, <http://www.visio.com/resources>, that contains links to other Web sites that can help you create accurate drawings quickly. For example, some of the sites contain information and forums about such topics as demographics or OSHA (Occupational Safety and Health Administration) standards. Other sites contains graphics such as clip art or standard forms.

Duplicate (Ctrl+D)

 [_Related Topics](#)

Edit menu, drawing and stencil windows

Places a copy of selected shapes offset to the lower right of the original shapes.

Tip: To duplicate the shape at a specific distance from the original, select the shape, hold down the Ctrl key, and drag to the location where you want the new shape. To make copies quickly, duplicate one shape, and then press F4 to duplicate others.

Note: To view this command for a stencil, you must have an original stencil open.

Edit Color dialog box

 [Related Topics](#)

Tools menu, Color Palette dialog box

Opens a dialog box where you can edit the basic color palette and create up to 16 custom colors.

DIALOG BOX OPTIONS

Basic Colors Displays the Microsoft Windows basic color palette. Select any of the colors and use the Color Selector Palette to change the default color.

Custom Colors Specifies up to 16 custom colors.

Define Custom Colors This button is dimmed because the Edit Color dialog box is already in custom color mode.

Add To Custom Colors Use the Color Selector Palette to create a custom color by adjusting the hue, saturation, and luminosity of the color. Alternatively, specify its red, green, and blue values. Once you're satisfied with the color displayed in the Color/Solid box, choose the Add To Custom Colors option.

Edit Icon

■ [Related Topics](#)

Master menu, stencil window

Opens the [edit icon window](#), where you can edit the icon for the [master shape](#) selected in the stencil window. The window, whose title bar identifies the stencil and master shape, displays the icon as a bitmap, which you can edit [pixel](#) by pixel.

Tip: Before choosing Edit Icon, use the [Properties](#) command (on the Master menu) to specify the size of the icon. The icon's size determines the size of the area available for editing the icon. You should also choose Manual as the Update option in the [Properties](#) or [New Master](#) dialog box, so you don't accidentally overwrite the customized icon each time you change the master shape.


Edit Master

 [Related Topics](#)

Master menu, stencil window

Displays a selected master shape in the master drawing window, so you can edit the master shape. You can choose to have changes you make to the master shape be applied to future instances. The Edit Master command is available only when you open an original stencil.

You can also open the master drawing window by double-clicking a master shape icon when an original stencil is opened.

To close the master drawing window, click the close box  in the upper-right corner of the window.

Edit Text (F2)

 [Related Topics](#)

Shape menu, drawing window

Controls the text block for the selected shape. If a shape is selected with a tool other than the text tool, choosing Edit Text opens the shape's text block so you can edit text. If a shape is selected with the text tool, choosing Edit Text selects the shape's text block so you can move, rotate, or size the text block independently of the shape.

Edit <OLE object>, <OLE object> Edit

■ [_Related Topics](#)

Edit menu, drawing window

Opens an OLE object so you can edit it. If the object is embedded, and the program in which it was created is compatible with in-place editing, the object opens in place. Otherwise the object's program opens in its full window. This command appears on a submenu when you choose Edit > <OLE object>. For example, if you select a Windows Paintbrush object, the command changes to Paintbrush Object.

If a group is selected, the command in this position is Open <group name>. If nothing is selected, the command in this position is Object.



Ellipse tool (Ctrl+9)

 [Related Topics](#)

Standard toolbar

Use the ellipse tool to draw ellipses and circles.

Drag diagonally to draw an ellipse. As you drag, hold down the Shift key to draw a circle. Both ellipses and circles are closed shapes, consisting of two arc segments. To size an ellipse or circle, drag a selection handle. Drag a corner handle to preserve the shape's original proportions.

To manipulate the arc segments of the ellipse, select the ellipse with the pencil tool to display vertices and control points that you can drag.

To apply a fill style or fill format to an ellipse, use the Fill command.

Exchange Folder

 [_Related Topics](#)

Send To submenu, drawing window

This command is available only if Microsoft Office 97 is installed on your computer.

Choose to send a drawing to a folder in Microsoft Exchange or Outlook. The drawing becomes an embedded object in that folder, after which you can open and edit it in Visio by double-clicking it.

Exit

 [_Related Topics](#)

File menu

Closes Visio windows and exits Visio. If you have changed a Visio file but did not save it before choosing the Exit command, a message asks if you want to save the changes before closing.

Export [data]

 [Related Topics](#)

Tools menu

Exports an inventory report based on shape properties. The Export [data] command is available for certain types of drawings in which you may incorporate data frequently, such as network diagrams, office layouts, and organization charts.

When you export information, you choose whether to report on all pages in the document, whether to report on all shapes or selected shapes, and whether to create a report in Excel, Notepad, or Access format.

DIALOG BOX OPTIONS

Range Specifies whether you want to create an inventory report for the entire document or the current page.

Include Specifies whether to include all shapes, only selected shapes, or all shapes on a specific layer.

Export To Specifies whether to export the inventory report to Notepad, Microsoft Excel, or Microsoft Access.

File Name Specifies text you enter as the name of the inventory report; for example, “Bill of Materials.”

Total Identical Items Totals identical items in the inventory report.

Display column Headings Displays column headings in the resulting inventory report.

Export Project

 [_Related Topics](#)

Project Timeline template, Project > Export Project

Opens the Save As dialog box, in which you can save a project timeline you created in the Visio Project Timeline template as a Microsoft Project exchange file (.mpx) so you can open the file in Microsoft Project.

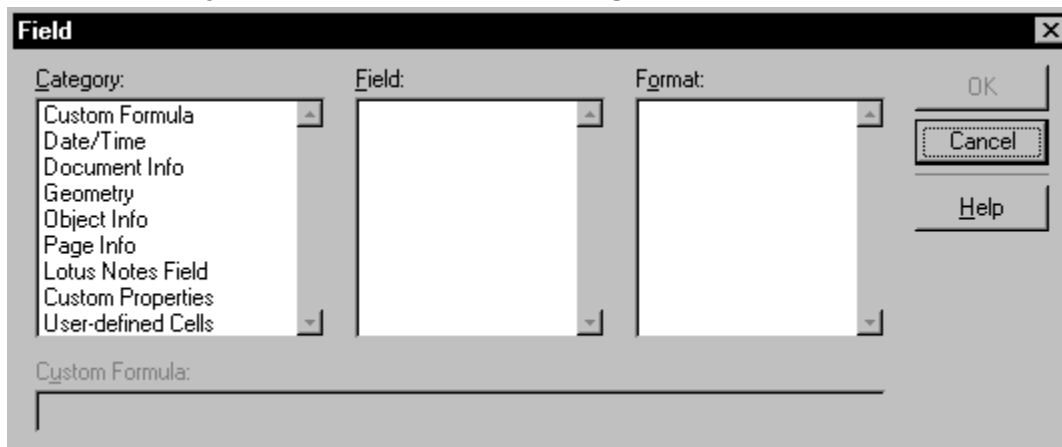
Field (Ctrl+F9)

■ [Related Topics](#)

Insert menu, drawing window

Inserts a text field into a text block. Visio inserts a field at the insertion point or, if a shape is selected but its text block is not open, replaces the shape's existing text with the field.

Click to display information about the dialog box.



Tip: Some field categories, such as Date/Time, are useful for providing up-to-the-minute information in final drawings. Other field categories, such as Document Info, help you keep track of information as you work on a drawing.

Lists the field categories. Insert a text field to display information in drawings.

Lists the fields within the selected category. For example, if you choose Geometry, the Field box displays options for Height, Width, and Angle.

Determines the format of the selected field. For example, if you chose Angle in the Field box, you can choose from the General, Radians, and Degrees options.

If you choose Custom Formula as the category, enter the formula in the formula box. To create a formula, use the same functions you use in the ShapeSheet spreadsheet.

Enter ShapeSheet functions to create a formula.

Uses system information to track the Creation Date, Creation Time, Current Date, Current Time, Last Edit Date, Last Edit Time, Print Date, and Print Time.

Uses information entered in the Properties dialog box to track Creator, Description, Folder, Filename, Keywords, Subject, and Title.

Uses the shape's width, height, and angle information. Use the Width field for dimension lines, or the Angle field to show how far a shape is rotated from its original position. Use any Geometry field to automatically update technical specifications in a drawing.

Uses information entered in the Special dialog box to track Data 1, Data 2, Data 3, ID, Master, Name, and Type.

Uses information entered in the Properties or Page dialog box to track Background Name, Number of Pages, and Page Number.

Uses information entered in the Lotus Notes Field dialog box to manage information such as shape details, shape measurements, and date of creation.

Uses custom properties stored in the Custom Property section of the selected shape's ShapeSheet spreadsheet. You define Custom Properties to associate the type of information you want with a shape. For example, you can associate a serial number with a piece of equipment.

Uses information entered in the Value cell of the User-defined Cells section in the shape's ShapeSheet spreadsheet. For details, see [User-Defined Cells section](#).

Fill (F3)

 [Related Topics](#)

Format menu, drawing and ShapeSheet windows

Opens a dialog box where you apply [fills](#) and shadows to selected shapes. Closed shapes can have fills and shadows. Open shapes can have shadows but no fill.

You can also use the fill formatting buttons on the [Shape toolbar](#). Use [tips](#) to identify the buttons.

The numbers preceding the patterns and colors in the Pattern, Foreground, and Background lists act as labels. As you work with the ShapeSheet spreadsheet, these numbers provide a shorthand for identifying patterns and colors.

Patterns

For both Fill and Shadow, you can specify a pattern of none (transparent) or a solid, gradient, or bitmap pattern. Each bitmap and gradient pattern has two components: a foreground color applied to the dots and lines making up the pattern, and a background color. You can specify different colors in the Foreground and Background lists, and Visio changes the display of the Pattern list according to your color choices. If there are custom patterns associated with a [stencil](#) you have open, those patterns will appear by name at the end of the pattern list.

Colors

Some colors in the Foreground and Background lists are quite dark. For those colors, the left half of the color sample shows how the color will look as a solid (pattern 1). The right side shows how the color will appear in any [bitmap](#) pattern.

You can use the color palette to define a custom fill color. To define a custom color, on the Foreground or Background list, choose Custom. The [Color](#) dialog box appears, in which you can define the color and assign it to the shape.

DIALOG BOX OPTIONS

Fill Displays the current pattern, foreground color, and background color for the selected shape's fill. Choose options from the following lists:

Pattern Choose a pattern, which can be blank or transparent (None or pattern 0), solid (pattern 1), a bitmap pattern (patterns 2 through 24), or a gradient pattern (patterns 25 through 40). Choosing None in the Pattern list creates a transparent shape. Visio ignores the foreground and background colors.

Foreground Choose a color that is applied to the dots and lines making the pattern.

Background Choose a color that is behind the dots and lines making the pattern.

Shadow Displays the current pattern, foreground color, and background color for the selected shape's shadow. Choose options from the following lists:

Pattern Choose a pattern, which can be blank or transparent (None or pattern 0), solid (pattern 1), or a bitmap pattern (patterns 2 through 24). Choosing None in the Pattern list deletes an existing shadow, and Visio ignores the foreground and background colors.

Foreground Choose a color that is applied to the dots and lines making the shadow.

Background Choose a color that is behind the dots and lines making the shadow.

Preview Displays a preview of the Fill and Shadow options you select.

Apply Applies formats without closing the dialog box.

Fill Color tool

 [Related Topics](#)

Shape toolbar

Use the fill color tool to fill shapes with color or to make them transparent. Select the shape or shapes you want to fill, then click the fill color tool to display the fill color palette. On the palette, choose

- No Fill, to make shapes transparent.
- One of the colors in the palette to fill the shapes with that color.
- More Colors to open the [Fill](#) dialog box where you can choose colors and patterns for fills and shadows.

Fill Pattern tool

 [Related Topics](#)

Shape toolbar

Use the fill pattern tool to fill shapes with a pattern. Select the shape or shapes you want to fill, then click the fill pattern tool to display the fill pattern palette. On the palette, choose

- No Fill, to make shapes transparent.
- One of the patterns in the palette to fill the shapes with that pattern.
- More Fill Patterns to open the [Fill](#) dialog box where you can choose different background and foreground colors for the pattern.

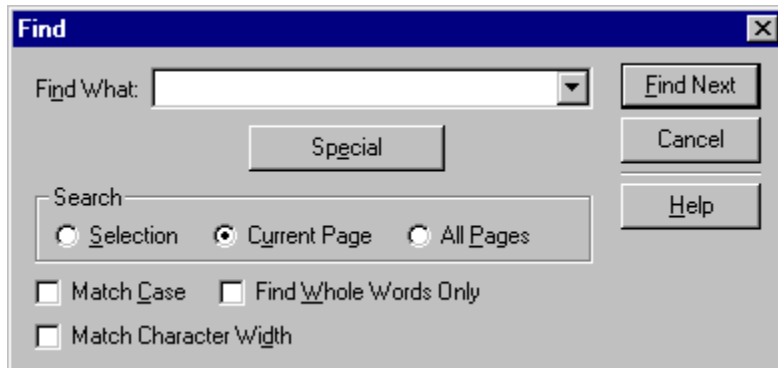
Find

 [_Related Topics](#)

Edit menu, drawing window

Searches for specified text in shapes, stencils, the Properties dialog box, and data fields in the active drawing file.

Click to display information about the dialog box.



Specifies the text you want to find. You can type or paste text into this field. To search using text you previously searched for, click the down arrow, then choose the text from the list.

Displays a list of special characters on which you can search: Tab Character, Manual Return, Optional Hyphen, Caret Character, or Any Character.

Specifies the range of the search.

Specifies to search only the current selection.

Specifies to search only the current page.

Specifies to search all pages in the open diagram.

Finds only those occurrences with the exact combination of uppercase and lowercase letters specified in the Find What box. Visio uses the case of letters as they were originally typed, regardless of whether the text has been formatted using Small Caps or All Caps formatting.

Finds occurrences that are words and not parts of larger words. For example, if you type "for" in the Find What box, Visio finds all instances of "for" but ignores "foreign."

Finds and selects the next occurrence of the text in the Find What box.

Ignores occurrences of Japanese words if the character widths do not match.

First Tile button

 [Related Topics](#)

Print preview toolbar

For a large drawing that Visio [tiles](#), displays the part of the drawing that prints on the first page (or tile).

Fit Curve

 [Related Topics](#)

Shape > Operations, drawing window

Draws a spline based on a polygonal line. Fit Curve converts a polygonal line to a spline that goes exactly through the polygonal line's vertices. If the shape is a closed polygon, the result is a periodic (seamless) spline. Choosing Fit Curve is the same as choosing [Custom Fit](#), then checking Periodic Splines, unchecking Circular Arcs and Cusps and Bumps, and setting Error Tolerance at zero.

Flip Horizontal (Ctrl+H)

 [_Related Topics](#)

Shape menu, drawing window

Transposes the left and right sides of selected shapes.

You can also use the flip horizontal button on the [Shape toolbar](#). Use [tips](#) to identify the button.

Flip Vertical (Ctrl+J)

 [_Related Topics](#)

Shape menu, drawing window

Transposes the top and bottom sides of selected shapes.

You can also use the flip vertical button on the [Shape toolbar](#). Use [tips](#) to identify the button.

Float

■ [Related Topics](#)

Right-click a docked stencil's title bar

Makes the stencil float. By default, stencils are docked.

Flowchart-TQM Diagram Wizard

 [_Related Topics](#)

File > New > Flowchart

Or, Tools > Macro > Flowchart

Starts the Flowchart-TQM Diagram Wizard, which:

- Lays out the initial structure for and formats a cause and effect, force field, top down, or cross functional (Rummler-Brache) flowchart, or
- Reads data from a text (.txt) or Microsoft Excel (.xls) file and generates a flowchart based on the data.

Foreground

 [_Related Topics](#)

Edit > Go To, drawing and print preview windows

Displays the foreground page for a drawing. Available only when a background page is displayed.

To cycle through the background pages in a drawing, from the Edit menu, choose Go To, then choose Background.

Tip: Although you can see shapes on a background page when a foreground page is displayed, you can't edit the shapes on the background unless you display the background page.



Format Painter tool

 [_Related Topics](#)

Standard toolbar

If you're pleased with the formatting of a shape, you can use this tool to quickly transfer the formatting (such as line, fill, and text styles) to another shape instead of starting from scratch.

Formulas

■ [Related Topics](#)

View menu, ShapeSheet window, formula bar

Displays cell formulas in the [ShapeSheet spreadsheet](#). To display values instead of formulas, use the [Values](#) command.

Forward button

 [_Related Topics](#)

Web toolbar

Pages forward in a Web document.

Fragment

 [Related Topics](#)

Shape > Operations, drawing window

Breaks selected shapes into smaller shapes. For example, you can draw lines through a 2-D shape where you want to break the shape, select the 2-D shape and the lines, and then choose Fragment to break the shape where the lines intersect it.

When you fragment shapes, Visio creates a new ShapeSheet spreadsheet for each of the new shapes.

When you fragment overlapping 2-D shapes, new shapes are formed from both the areas where the original shapes overlap and the areas where they do not overlap.

When you fragment three or more intersecting lines, the enclosed spaces become new shapes.



Freeform tool (Ctrl+5)

 [_Related Topics](#)

Standard toolbar

Draws smooth curves (also called splines). For example, you can draw a flower bed with an irregular border that is smooth, not jagged.

Full Screen Preview

 [_Related Topics](#)

View menu

Maximizes the amount of space for your drawing. In full-screen view, the Visio toolbars, title bars, status bar, menus, scrollbars, and stencils are hidden and the drawing page takes up the entire screen. The drawing page grid is also turned off. Full-screen view is a view-only mode—you cannot edit or change the pages you view.

Function

 [Related Topics](#)

Insert menu, ShapeSheet window

Opens a dialog box where you select a function to paste into a formula for a [ShapeSheet](#) cell. Visio pastes the function at the insertion [point](#) in the formula bar. (The command is dimmed until you click in the formula bar to place an insertion point.)

DIALOG BOX OPTIONS

Select Function Lists functions you can paste into a formula. When you select a function, the function and its arguments appear below the Select Function list.

Paste Arguments Check this box if you want to paste placeholders for a function's arguments. Uncheck this box to paste only the function.

Grid

 [Related Topics](#)

View menu, drawing window

When checked, displays the [grid](#). The grid helps you position shapes visually. You can also [snap](#) shapes to the grid.

The intervals of the grid correspond to the unit of measure you set in the [Options](#) dialog box. You control the size of the intervals in the [Ruler & Grid](#) dialog box.

You can also use the grid button on the [View toolbar](#). Use [tips](#) to identify the button.

Group (Ctrl+G)

 [Related Topics](#)

Shape > Grouping, drawing window

Creates a group from the shapes and objects from other programs selected on the drawing page. Group members keep their original spatial relationships to each other and also retain their original ShapeSheet spreadsheets. Visio also creates a new ShapeSheet spreadsheet for the group.

You can also use the group button on the Shape toolbar. Use tips to identify the button.

Guides

 [_Related Topics](#)

View menu, drawing window

When checked, displays guides and guide points. Rulers must be visible if you want to create guides and guide points.

You can also use the guides button on the [View toolbar](#). Use [tips](#) to identify the button.

Hyperlink

 [Related Topics](#)

Insert menu, drawing window

Or, right-click linked object, then choose Hyperlink > Edit Hyperlink

Opens the Hyperlink dialog box, where you can create a [jump](#) between a shape or drawing page and another drawing page, another file, or a World Wide Web site.

You can also use the insert hyperlink button on the [Web toolbar](#). Use [tips](#) to identify the button.

DIALOG BOX OPTIONS

Link To File Or URL Specifies the file or Web site you want to link to. You can either type in a path or URL, or click Browse and navigate to the file or Web site. If you are using a relative path, you can simply type the name of the file.

Path Indicates the full path to the file or URL. Visio updates this path as you type data in the dialog box. If you are using a relative path, only the appended portion of the path is indicated.

Base Indicates the base path, which you can specify in the Properties dialog box for the file. If this is not present in the dialog box, the path to the current document will be used.

Named Location In File Specifies the location in a file or Web site that you want to link to. For example, a specific page or anchor. If you are linking to a Visio drawing, you can click Browse and select a drawing page from a list.

Descriptive Name Of Link Specifies a name for the link that appears in the Hyperlink section of the ShapeSheet spreadsheet for the shape or page. For example, "Link to our pricing Web site."

Use Relative Path For Hyperlink A relative link describes the location of the linked file in relation to the Visio drawing. You can move the Visio drawing and the linked file together (that is, move the entire path structure) without breaking the link. An absolute link spells out the exact location of the linked file in terms of drives, directories, and folders. You can move the Visio drawing file without affecting an absolute link but if you move the linked file, you must reset the path. To specify an absolute link, uncheck Use Relative Path For Hyperlink.



Icon pencil tool

 [Related Topics](#)

Edit icon toolbar, edit icon window

Use the icon pencil tool to change the color of a pixel in a bitmap. Assign the color you want to the left or right mouse button by clicking in the color palette, and then with the same mouse button, click the pixel you want to change.

Icons And Names

[_Related Topics](#)

View menu, stencil window

When checked, displays [master shape](#) icons and their names in the [stencil window](#).

Icons Only

 [Related Topics](#)

View menu, stencil window

When checked, displays master shape icons without their names in the stencil window.

You can also use the Icons Only button. Use tips to identify the button.

Tip: Even though the names aren't visible when Icons Only is checked, you can display the master shape's name by placing the pointer over a master shape icon. A tip containing the master shape's name appears. (If you've turned off ScreenTips with the toolbar shortcut menu, these tips are also turned off.)

Import Project

 [_Related Topics](#)

Project Timeline template, Project > Import Project

Opens an Open dialog box where you can locate a Microsoft Project exchange file (.mpx) to import into Visio. When you import the file, the project data is displayed in a project timeline.

Insert Column

 [_Related Topics](#)

Project Timeline template, Project > Insert Column

Or, right-click a column or the project frame, then choose Insert Column

With a column in the project frame selected, opens the Insert Column dialog box where you choose a column type and type the name of the column. When you click OK, a column is inserted before the selected column.

Column type Choose a column type from the drop-down list. Column Name reflects the type you choose.

Column name Type a name for the column you're inserting if you don't want to accept the default name, which is the same as the Column Type.

Insert Control

 [Related Topics](#)

Developer toolbar

Inserts ActiveX controls, which are programmable objects that you can use to add functionality to a drawing. For example, you might insert standard Windows dialog box controls such as single-click buttons, check boxes, or list boxes, or custom controls that provide more complex functionality such as animation. To program a control, you typically write event procedures in the drawing's VBA project to handle the control's events, and you may get or set the control's properties or invoke its methods in other procedures.

DIALOG BOX OPTIONS

Controls Lists the controls installed on your system, including those installed by applications that contain the controls. You might need a design license to insert such controls in your own drawings. For details, contact the control vendor.

<control name> Displays the location of the file that contains the control selected in the Controls list.

Insert Row

 [_Related Topics](#)

Project Timeline template, Project > Insert Row

Or, right-click a task bar or horizontal grid line, then choose Insert Row

Inserts a row above the selected row or task bars. To select a row, click any cell in the row. To select more than one task bar, hold down the Shift key, then click the shapes you want to select.

Intersect

 [_Related Topics](#)

Shape > Operations, drawing window

Creates one closed shape from the area in which two shapes overlap or intersect. The new shape inherits the text and formatting of the first shape you select.

When you intersect two or more shapes, the ShapeSheet spreadsheet for the shapes you intersected are deleted, and Visio creates a ShapeSheet spreadsheet for the new shape.

Join

 [_Related Topics](#)

Shape > Operations, drawing window

Assembles selected segments into paths. The number of paths depends upon the configuration of the selected shapes.



Lasso tool

 [_Related Topics](#)

Edit icon toolbar, edit icon window

Use the lasso tool to select a non-rectangular area of a [master shape](#) icon. The area can be any size or contour. Drag the lasso tool to select the area you want. You can then drag the selected area to move it or use commands on the Edit menu to change the selected area.

Last Tile button

 [Related Topics](#)

Print preview toolbar

For a large drawing that Visio [tiles](#), displays the part of the drawing that prints on the last page (or tile).

Last Zoom

 [_Related Topics](#)

View menu, drawing window

Toggles between the current view and the most recent view.

You can also choose Last from the zoom list on the [Standard toolbar](#). Use [tips](#) to identify the zoom list.

Lay Out Shapes dialog box

 [Related Topics](#)

Tools > Lay Out Shapes, drawing window

With certain connected drawings, such as flowcharts, you can have Visio position shapes automatically. The Lay Out Shapes command opens a tabbed dialog box where you can choose settings to control how Visio positions shapes.

You can also use the lay out shapes button on the [Shape toolbar](#) to lay out shapes using the last-selected layout settings. Use [tips](#) to identify the button.

By default Visio lays out all the shapes on the page, but you can choose to lay out only selected shapes, or exclude shapes or [connectors](#).

Click one of the following tabs to choose layout settings:

[General](#)

[Advanced](#)

Lay Out Shapes dialog box (Advanced tab)

 [Related Topics](#)

Tools > Lay Out Shapes, click the Advanced tab; drawing window

Contains settings that determine how the Lay Out Shapes grid is set up. This grid is separate from the drawing page grid; it applies only to the Lay Out Shapes command. It's set up with blocks and avenues, like a city map, and isn't visible on the drawing page, even when it's enabled.

Note: Avoid using the grid if your drawing contains shapes of various sizes, particularly shapes that exceed the size of the grid blocks. Visio can position these shapes more precisely when they do not need to fit within a fixed grid block.

DIALOG BOX OPTIONS

Line To Line Spacing Specifies the minimum amount of space between connectors.

Line To Node Spacing Specifies the minimum amount of space between connectors and shapes.

Avenue size Specifies the amount of space between shapes.

Block Size Specifies the size of the shapes in your drawing.

Lay Out Shapes dialog box (General tab)

 [Related Topics](#)

Tools > Lay Out Shapes, click the General tab; drawing window

Determines how Visio places nodes (shapes) and draws, or routes, lines ([connectors](#)) between the shapes. Specifies the spacing between connectors, between connectors and shapes, and between shapes and shapes.

DIALOG BOX OPTIONS

Style When shapes are automatically laid out, specifies the direction Visio uses to place shapes. Interactively determines the direction of flowchart and tree routing. Choose Top To Bottom or Left To Right for directed drawing styles, such as organization charts, process flow diagrams, and other drawings that flow in a specific direction. Choose Radial for undirected drawing styles, such as network diagrams.

Depth When automatically laying out a drawing, determines the number of levels Visio looks at in the drawing before establishing the layout. The more levels Visio checks, the better it can determine how much space to leave between shapes so that all the shapes fit. You may want to try different depth settings on the same drawing to find the one that produces the best results.

Routing Indicates the type of drawing path, or route, that Visio uses to connect shapes.

Enable Grid Check to have Visio lay out shapes based on an internal grid. You can specify settings for the grid on the Advanced tab.

Range Determines whether Visio lays out only the selected shapes or all of the shapes on the current page.

Lay Out Determines whether Visio lays out nodes (shapes), lines (connectors), or both.

Set Layout Properties Only Sets the layout properties of the diagram in the page's ShapeSheet spreadsheet but does not change the diagram display.

Move Other Shapes Away on Drop Shapes in the diagram automatically adjust to allow placement of a shape that is dropped, moved, or resized on the page.

Enlarge Page to Fit Drawing on Layout When shapes are automatically laid out, the drawing page enlarges to accommodate the diagram.

Layer Properties

 [Related Topics](#)

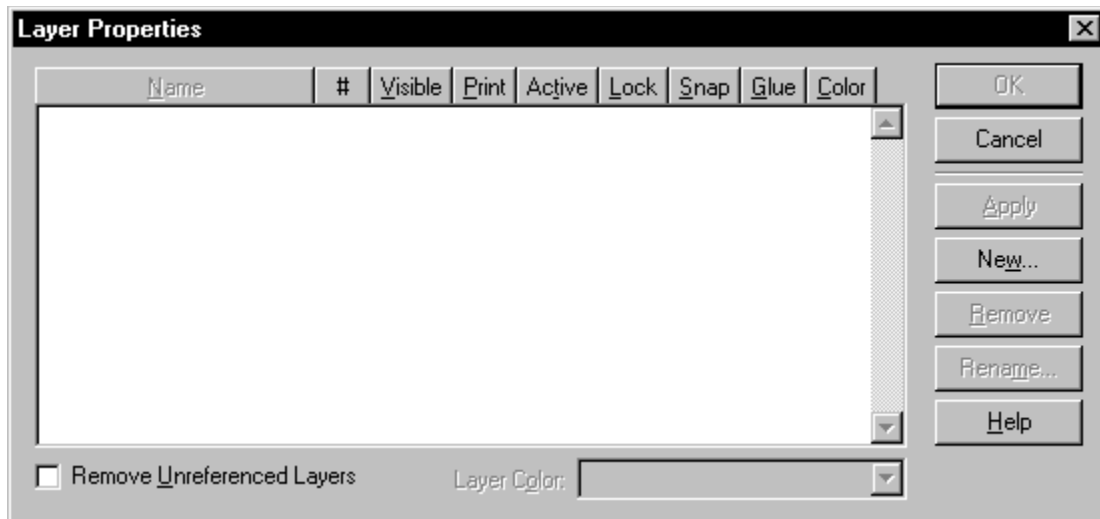
View menu, drawing and print preview windows

Creates and modifies [layers](#) in a diagram. By assigning shapes to different layers, you can selectively view, print, and lock layers, as well as control whether shapes on a layer can be snapped to or glued to.

You can also use the layer properties button on the [View toolbar](#). Use [tips](#) to identify the button.

Note: Some [templates](#), such as the Office Layout Template, contain shapes that are already assigned to pre-existing layers.

Click to display information about the dialog box.



Specifies the name of the layers in the diagram. Clicking this button opens the Rename Layer box, in which you can change the name of the selected layer.

Displays the number of shapes assigned to each layer.

Specifies whether the shapes on a layer are visible or hidden. Check to show the layer and uncheck to hide the layer.

Specifies whether to print the shapes on a layer. Check to have the layer print; uncheck this option so that the layer does not print.

Specifies the active layer to which shapes without a pre-assigned layer are assigned. Check to make the layer active or uncheck to deactivate the layer. The active layer cannot be locked.

Prevents shapes on a layer from being selected or altered. Check to lock the layer or uncheck to unlock the layer. If a layer is locked, it cannot be the active layer, and its Visible, Print, Snap, Glue, or Color properties cannot be changed.

Specifies whether other shapes can snap to shapes assigned to the layer. A shape on a layer that has Snap unchecked can still snap to other shapes, but other shapes cannot snap to it.

Specifies whether other shapes can glue to shapes assigned to the layer. A shape on a layer that has Glue unchecked can still glue to other shapes, but other shapes cannot glue to it.

Specifies that all shapes assigned to the layer appear in the specified color; this option does not permanently change the shape colors. Check to override each shape's original color in favor of the layer color. Uncheck to return shapes to their original colors.

Applies the current settings of the box to the drawing page without closing the box.

Adds a new layer and opens the New Layer dialog box, in which you can type a name for a new layer.

Deletes the selected layer. All shapes that are assigned to only the selected layer are deleted.

Opens the Rename Layer dialog box, in which you can rename the selected layer.

Removes all layers that do not have shapes on them.

Adds color to a layer so that all objects assigned to the selected layer appear in the layer color.

Left:  **Left Color box**

 Related Topics

Edit icon toolbar, edit icon window

Displays the color assigned to the left mouse button in the edit icon window. Choose the icon pencil and click with the left mouse button to change the pixels in the icon to this color. To change the assigned color, click with the left mouse button in the color palette.

Line (Shift+F3)

 [Related Topics](#)

Format menu, drawing and ShapeSheet windows

Applies formatting such as line pattern, line weight, line ends, and corner rounding to lines and arcs in the selected [shape](#).

You can also use line formatting buttons or the line style list on the [Shape toolbar](#). Use [tips](#) to identify the buttons.

DIALOG BOX OPTIONS

Line Displays options to change the shape's formatting.

Pattern Choose among none, solid, or dashed lines.

Weight Choose an appropriate thickness.

Color Choose among colors that are set in the Visio color palette. To add a new color to the color palette, choose Custom.

Cap Choose between round and square line caps.

Line Ends Displays options for line ends such as arrowheads for the endpoints of an open shape.

Begin Displays line end options for the shape's begin point.

End Displays line end options for the shape's end point.

Size Displays options for the size of line ends.

Round Corners Choose among various round corner formats.

Rounding Displays the numeric equivalent for the roundness of the corner—the higher the number, the rounder the corners.

Preview Displays a preview of the options you select.

Apply Applies formats without closing the dialog box.



Line tool (Ctrl+6)

 [Related Topics](#)

Standard toolbar

Use the line tool to draw straight line segments in any direction.

As you drag, hold down the Shift key to constrain the line to angles at 45-degree intervals. A single line is a 1-D shape when you first draw it. Adding other line or arc segments creates a 2-D shape.

Endpoints

Any selected 1-D shape displays two square endpoints: the begin point contains an X, and the end point contains a plus sign (+). To move a 1-D line or arc segment, drag a portion of the line other than an endpoint with the pointer tool. To size a 1-D line or arc segment, drag an endpoint with the pointer tool.

Arc/line segment

To change a line to an arc or to edit a line segment in a 2-D shape, use the pencil tool. You can switch between the arc tool, line tool, pencil tool, and freeform tool to draw shapes consisting of contiguous segments.

Link All Tasks

 [_Related Topics](#)

Project Timeline template, Project > Link All Tasks

Links all tasks in a project timeline. A link is a dependency. Linking two tasks means that you can't start the later task until the earlier task is completed.

Link Tasks

 [_Related Topics](#)

Project Timeline template, Project > Link Tasks

Or, right-click a task bar or horizontal grid line, then choose Link Tasks

Links selected tasks in a project timeline. A link is a dependency. Linking two tasks means that you can't start the later task until the earlier task is completed.

Links

 [Related Topics](#)

Edit menu, drawing window

Opens a dialog box where you can manage [links](#) between [objects](#) from other programs in Visio drawings and their original files. You can view the links and choose whether to update the object manually or automatically as you use the original program to edit the linked file. You can also open a dialog box where you can change the file reference for the linked object.

DIALOG BOX OPTIONS

Links Lists the object's folder path, the original [OLE](#) program used to create the linked object, and the update option you specified: Automatic or Manual. To change information for a linked file, choose it from the list. You can then change its update option or use the Change Source button to change the file reference.

Source Lists the folder path.

Type Lists the original OLE program used to create the linked object.

Update Specifies when Visio updates the linked object. Choose Automatic or Manual.

Update Now Checks the file reference. If changes have been made since you last updated, Visio applies those changes to the object.

Open Source Opens the OLE program used to create the linked object.

Change Source Opens the [Change Source dialog box](#), where you can change the file reference to the correct file.

Break Link Breaks the link between the object and the original file. Future changes to the original file will not affect the object on the drawing page, which Visio changes to a Windows metafile. As a result, you don't have to provide any additional files when giving someone a Visio drawing on disk.

Lotus Notes Field

 [Related Topics](#)

Insert menu

Opens a dialog box where you can create and display Lotus Notes Fields for the active drawing.

If you create a [field](#) in Lotus Notes, you need to create a corresponding field in the Lotus Notes Field dialog box in order for Visio to read the field. Once you create a field in Visio, you can embed a Visio object into a Lotus Notes document.

Fields created using the Lotus Notes Field command are also displayed in the [Field](#) dialog box.

DIALOG BOX OPTIONS

Field Name And Direction Displays the field name. Indicates whether the field is read from Lotus Notes or written to Lotus Notes.

If Read From Notes is checked, choose from Text, Time, and Number.

If Write To Notes is checked, choose from:

Text Choose from Text, Name, Data 1, Data 2, Data 3 and Help.

Time Enter a custom formula that returns a time or date.

Number Enter a custom formula.

Data Type Lists three data types for the field: Text, Time, Number. Also lists available shape fields.

Custom Formula Use this section to enter a custom formula for a field.

Macros (Alt+F8)

 [Related Topics](#)

Tools menu, Macro submenu

Opens a dialog box that displays [macros](#) and add-ons that you can run to automate a specific task.

DIALOG BOX OPTIONS

Macro Name Specifies the name of the macro or add-on to run, edit, delete, or step into. To create a macro, enter a new name, then click the Create button.

Run Runs the selected macro. You can also use the run macro button on the [Developer toolbar](#). Use [tips](#) to identify the button.

Step Into Begins executing the selected macro in the [Visual Basic Editor](#) and allows you to step through its execution.

Edit Opens the selected macro in the Visual Basic Editor so you can edit its code.

Create Creates a macro with the given name and opens it in the Visual Basic Editor.

Delete Deletes the selected macro.

Macros In Determines the set of macros and add-ons that are listed in the dialog box. You can list:

- Macros in the active drawing (but not all open drawings) and all available add-ons.
- Available add-ons only.
- Macros in a specific module in any Visio file that is currently open with read-write access.

Description Displays information about the selected macro. You can assign a description to a macro using the Object Browser in the Visual Basic Editor. For details about the Object Browser, see the Microsoft Visual Basic online help.

Mail Recipient

 [_Related Topics](#)

Send To submenu, drawing window

Choose to send a drawing to another person through e-mail. Your mail program opens with a new message containing the Visio drawing as an attachment. To open Visio and view the drawing, open the mail message and double-click the Visio icon.

Make Department, Make Subpage

 [_Related Topics](#)

Organization Chart Template, right-click a position shape, then choose Make Department Web Diagram Template (Visio Professional only), right-click a URL shape, then choose Make Subpage

When an organization chart or Web site diagram is large enough to require more than one drawing page, use this command to move parts of the diagram to other pages.

Choosing the command opens a dialog box in which you can click OK to create a new drawing page. The selected shape and all the shapes connected to it are placed on the new page. A copy of the selected shape remains in the original location.

To jump from the original shape to the new drawing page, right-click the shape, then choose Go To [Page Name]. To return to the original page from the new page, right-click the drawing page, then choose Go To [Page Number].

DIALOG BOX OPTIONS

Page Name Type or choose a name for the new drawing page.

Add Title Bar To New Page Adds a title bar to the top center of the new drawing page. The page name appears in the title bar.

Months/Years

 [_Related Topics](#)

Project Timeline Template, right-click Project Frame shape, then choose Months/Years

Or, right-click the timescale or nonworking strip, then choose Months/Years

Changes the timeline to display months and years. When you change the units, the size of the project frame doesn't change so the smaller the unit (Days/Months being the smallest unit), the shorter the time period displayed in the project frame, and the longer the task bars.

More <options>

 [_Related Topics](#)

File > New > More Templates; File > Stencils > More Stencils; Tools > Macro > More Macros

Use these commands to display more options from which to choose. Choose [More Templates](#) or [More Stencils](#) to display additional templates and stencils, or choose [More Macros](#) to display all macros and automated tools available from the Tools menu.

Name

 [Related Topics](#)

Insert menu, ShapeSheet window

Opens a dialog box where you select a cell name to paste into a formula for a ShapeSheet cell. Visio pastes the cell name at the insertion point in the formula bar. (The command remains dimmed until you place an insertion point by clicking in the formula bar.)

DIALOG BOX OPTIONS

Select Name Lists the names of cells in the open ShapeSheet spreadsheet.

Insert Pastes the selected cell name into the formula. You can paste one cell name after another at the insertion point.

Close Cancels all changes made since you opened the dialog box.

Names Only

[Related Topics](#)

View menu, stencil window

When checked, displays the names of [master shapes](#) in the [stencil window](#).

You can also use the names only button. Use [tips](#) to identify the button.

New Drawing

 [Related Topics](#)

File > New > Browse Templates

Opens a dialog box in which you can navigate to the folder that contains the template on which you want to base a new drawing.

You can also use the new button on the [Standard toolbar](#). Use [tips](#) to identify the button.

DIALOG BOX OPTIONS

Look In Displays the current folder. Double-click the folder you want to open.

Up One Level Moves the Look In folder up one level in the hierarchy.

Create New Folder Creates a new folder in the current hierarchy.

List Displays the list as an icon and a label.

Details Displays list of files by name, size, type, and modified date.

File Name Displays files that are in the format selected in the Files Of Type list.

Files Of Type Displays the file formats you can import in the folder you chose.

Open Includes options for opening the file as an original, a copy, or in read-only mode.

Preview Displays the first page of the file (if the file was saved with a preview picture).

Description Displays information about the selected template or wizard.

New Layer dialog box

 [_Related Topics](#)

View menu, Shape Layer dialog box

Creates a new layer. This dialog box is displayed by clicking New in the [Shape Layer](#) dialog box. To create a new layer, type a name in the Layer Name box, then click OK. The new layer appears in the Shape Layer dialog box.

New Master

 [Related Topics](#)

Master menu, stencil window

Creates and displays a blank master shape icon for a new master shape. Use the command to specify the new master shape's name, icon size, icon update method, and master shape prompt. When you double-click the blank icon, Visio opens the master drawing window, where you can draw the new master shape.

DIALOG BOX OPTIONS

Master Name Displays the name that appears under the master icon in the stencil window. Master shape names can contain up to 31 characters. To specify how the name is aligned below the icon, choose Left, Center, or Right.

Icon Specifies the icon size and when Visio should update the icon.

Size Choose Normal, Tall, Wide, or Double. The default icon size is Normal. Tall is the same width, but twice the height; Wide is the same height, but twice the width. Double is twice as wide and twice as tall as Normal. Choose the Edit Icon command on the Master menu to adjust the icon to fit a larger size.

Update Updates the master shape icon each time you edit the drawing of the master shape. Manually updates a master shape icon when you choose Update Icon from the Master menu.

Master Type Specifies whether the shape is to be a shape, line pattern, line end, or fill pattern.

Prompt Displays the text that appears when you point to the master icon in the stencil window. To change the text, type new text in the Prompt box.

Match Master By Name On Drop If you've created a stencil, preserves the formatting you've applied to the stencil's master shapes. For example, you've modified the shapes in the Office Layout stencil, created a stencil called My Office, then you drop a shape from the Office Layout stencil into the drawing.

- If Match Master By Name On Drop is checked for the shapes on the My Office stencil, when you drop a shape into the drawing, Visio checks to see if the shape you're dropping matches any of the master shapes in the My Office stencil. If it finds a match, Visio formats the shape with the changes you made to the My Office master shape.
- If Match Master By Name On Drop is unchecked for the shapes on the My Office stencil, when you drop a shape from the Office Layout stencil, the shape is added to the drawing file with the default Office Layout formatting.

New Window

 [_Related Topics](#)

Window menu

Opens a copy of the active window (stencil, drawing, or ShapeSheet spreadsheet) in a new window.

Next Page

 [_Related Topics](#)

Edit > Go To, print preview window

Displays the next [page](#) in the current [drawing file](#).

You can also use the next page button on the [Page toolbar](#). Use [tips](#) to identify the button.

Next Tile

 [_Related Topics](#)

View menu, print preview window

For a large drawing that Visio [tiles](#), displays the next printed page (or tile) of the drawing.

You can use the View > [Previous Tile](#) command to display the previous tile.

You can also use the next tile button. Use [tips](#) to identify the button.

Object (Insert)

 [Related Topics](#)

Insert menu, drawing window

Inserts objects from other programs into a Visio drawing. You can either open another program from within Visio and create a new object or insert an existing file into Visio.

DIALOG BOX OPTIONS

Object Type Lists the types of objects that you can link or embed from an OLE-compatible program. The items in the list depend on which OLE-compatible applications are installed on your computer. Some programs installed on your system appear as commands on the Page menu. Choose the program's command to insert an object created in that program.

Create New Opens the corresponding program and creates the object you want to insert.

Create From File Inserts an existing file. To link the object to Visio, choose Link.

Display As Icon Displays the application's icon in Visio.

Change Icon Displays the Change Icon option. When Display As Icon is checked, you can choose between the current icon, a default icon, or an icon from a bitmap file. You can also change the icon Label.

Result Displays a message detailing the result you'll get by clicking OK.

Object (Edit)

■ [Related Topics](#)

Edit menu, drawing window

Displays the submenu of commands that you use to work with embedded or linked objects from another application. Usually the submenu contains the <OLE object> Edit and the <OLE object> Convert commands. In some cases, the submenu may contain the Open command.

Tip: This command is available only when an OLE object is selected.

If you select an embedded or linked object, the menu command's name reflects the type of object. For example, if you select a Windows Paintbrush object, the menu command appears as Paintbrush Object.

Offset

 [Related Topics](#)

Shape > Operations

Creates a set of parallel lines and curves on either side of the original shape. For example, you can create a representation of a two-way road by offsetting a line. If the offset to a curve is neither a line nor a curve, then it is approximated by a spline. This approximation comes as close as possible to fitting all the points that are a specified distance from a curve.

DIALOG BOX OPTION

Offset Distance Specifies the offset distance you want from the original line or curve.

Online Support

 [_Related Topics](#)

Help > Visio On The Web

Opens your World Wide Web browser application and displays a site where you can find "tips & tricks" and answers to specific product support questions.

Open (Ctrl+O)

 [Related Topics](#)

File menu

Displays a dialog box where you can open an existing [drawing file](#), [stencil](#), [template](#), [workspace](#), or other graphic formats.

You can also use the open button on the [Standard toolbar](#). Use [tips](#) to identify the button.

DIALOG BOX OPTIONS

Look In Displays the current folder. Double-click the folder you want to open.

Up One Level Moves the Look In folder up one level in the hierarchy.

Create New Folder Creates a new folder in the current hierarchy.

List Displays the list as an icon and a label.

Details Displays list of files by name, size, type, and modified date.

File Name Displays files of the type specified in the List Files Of Type box. To open a file, choose from the list, or type a path and filename in the box.

Files Of Type Displays the file types you can open, identified by their filename extension. To change the type, choose from the list.

Description Displays information about the selected file. This information comes from the Description box in the [Properties](#) dialog box.

Open button Opens the selected file.

Open section Determines whether the file is opened as [original](#), [copy](#), or [read-only](#).

Preview Displays a preview of the selected file if a preview has been saved for the file in the [Properties](#) dialog box.

File Preview Turns file preview on or off.

Opens the original file so you can edit it. If this option is dimmed when opening a stencil file, it means the original stencil is open or has been saved as read-only.

Opens an untitled copy of the selected file. You can edit the file, and then use the Save As command on the File menu to name and save it. You cannot save it with its original name (default for a template).

Opens a read-only file. Read-only templates or drawing files are identified in the title bar with brackets. Use this option to open a stencil that you don't expect to modify.

Open Group, Open <group name>

■ [Related Topics](#)

Edit menu, drawing window

Opens the selected group and displays its component shapes in the group window. (If you have named the group by using the Special command, the group name follows the command Open; otherwise, the command reads Open Group.)

Whether or not the group is rotated on the drawing page, it does not appear rotated in the group window. Shapes appear as if they were independent, not grouped. The group window displays a page just large enough to hold the shapes. You can edit the shapes in the same way as you edit shapes in the drawing window. Changes you make in the group window are reflected in the drawing window.

Tip: After editing the shapes in a group in the group window, you might need to readjust the width and height of the group so its selection rectangle tightly encloses all the group's shapes. To do this, select the group, and choose Update Alignment Box from the Tools menu.

Open (Hyperlink submenu)

■ [_Related Topics](#)

Hyperlink submenu

Jumps from the linked object to its destination. In full-screen view, you can simply click the shape or page to open the hyperlink.

Open In New Window

■ Related Topics

Hyperlink submenu

Opens the linked object's destination in a new window.

Open In Visio

 [Related Topics](#)

View menu, in-place window only

Opens Visio in its own window when working with an embedded or a linked Visio drawing in place in an OLE container application. When Visio is open in its own window, you can open original stencil files so you can add or delete shapes from a stencil.

Note: When Visio is open in its own window, the File and Window menus are updated to include additional commands.

Open Stencil

■ [Related Topics](#)

File > Stencils > Browse Stencils

Opens a [stencil](#) in the [stencil window](#). Use the Stencils command to open additional stencils or to open an original stencil file so you can add or modify [master shapes](#).

You can also use the open stencil button on the [Standard toolbar](#). Use [tips](#) to identify the button.

DIALOG BOX OPTIONS

File list Lists folders of drawing types for which Visio includes stencils. Double-click to open a folder, then select a stencil and click Open.

Note: If you created your own stencil (.vss file) and saved it in the Visio\Solutions folder, it will also be included in the Open Stencil file list.

Browse Displays the [Open](#) dialog box, where you can search folders to find a stencil file.

Open Determines whether the stencil opens as an [original](#), a copy, or a read-[only](#) version.

Description Displays information about the selected stencil file. This information comes from the Description box in the [Properties](#) dialog box.

Filename Displays the Windows path for the file name.

Options dialog box

 [Related Topics](#)

Tools > Options

Opens a tabbed dialog box where you can set paths to files Visio saves or uses, [units of measure](#), spelling settings, and other options.

Click one of the following tabs to set file options:

[General](#)

[File Paths](#)

[Default Units](#)

[Spelling](#)

[Advanced](#)

Options dialog box (Advanced tab)

 [Related Topics](#)

Tools > Options, click the Advanced tab

Specifies advanced user and developer settings.

DIALOG BOX OPTIONS

Record Actions In Microsoft Outlook Journal Specifies that your actions, such as editing a file, are recorded in Microsoft Outlook Journal.

Enable Page Rotation Enables dynamic page rotation so that you can use the rotation tool to grab the corner of a page and rotate it.

Undo Levels Specifies the number of consecutive actions you can undo. The higher the number, the more memory Visio requires to store the actions.

Recently Used Files Specifies the number of recently used files listed on the File menu. You can then choose the files on the File menu to reopen them quickly.

Enable Microsoft Visual Basic For Applications Enables Visual Basic for Applications (VBA) in Visio. If unchecked, disables VBA.

Enable Automation Events Enables Visio events to be sent to Visio add-ons and VBA macros. If unchecked, disables all Visio events.

Run in Developer Mode Enables certain user interface functions for the development environment. If checked, the Show Shapesheet command is added to shapes' context (right-click) menus.

Put All Settings In Visio.ini File Includes all possible application settings in Visio.ini file. By default, Visio writes out only those settings that are not default and a few others that are useful (for example, file paths, import and export filters, and last files) to keep the file small and simple.

Options dialog box (Default Units tab)

 [Related Topics](#)

Tools > Options, click the Default Units tab

Specifies the default units of measure for your drawings.

DIALOG BOX OPTIONS

Page Specifies the unit of measure for a page's dimensions, margins, drawing size, scale, and other features.

Text Specifies the unit of measure for indents, line spacing, and other text measurements. The default unit for type size is points (1 point = $1/72$ in.). You can enter type size in another unit of measure (for example, 1 ft. or 12 in.), but you can't change the default unit for type size.

Angle Specifies the unit of measure for the angle of rotation.

Duration Specifies the unit of measure for duration, which is elapsed time as compared to a specific date or a given hour.

Options dialog box (File Paths tab)

 [Related Topics](#)

Tools > Options, click the File Paths tab

Specifies the default file paths for Visio files. To change the default path, select the option you want to change and type a new path.

Tip: You can specify multiple paths by separating them with semicolons. For example, in the Add-ons option Visio looks in two folders for macros and add-ons: Solutions and Startup.

DIALOG BOX OPTIONS

Drawings Displays the default drawings folder: My Documents.

Templates Displays the default templates folder: Solutions.

Stencils Displays the default stencil folder: Solutions.

Help Displays the default help files folders: Help;Solutions.

Add-ons Displays the default folders for macros and add-ons: Solutions;Startup.

Start-up Displays the folder for macros and add-ons opened when you start Visio: Startup.

Filters Displays the default filters folder: System\Filter32.

Options dialog box (General tab)

 [Related Topics](#)

Tools > Options, click the General tab

Opens a dialog box where you can set the units of measure, the default folder in which drawing files are saved, and other options.

DIALOG BOX OPTIONS

User Name Specifies the name of the person working on the file. This name appears in the File Properties dialog box the first time you save the file.

Macro Virus Protection Specifies whether or not to check drawings for macros that may contain viruses. When Macro Virus Protection is enabled, documents run in design mode.

Prompt For Document Properties On Save Specifies to display the Properties dialog box for the file when you save. File properties include author name and information such as the status of the file, preview settings, and other properties.

Freeform Drawing For a shape drawn with the freeform tool, the Precision bar controls how many points there are in the shape, and Smoothing controls how precisely Visio smoothes the mouse movements.

Options dialog box (Spelling tab)

 [Related Topics](#)

Tools > Options, click the Spelling tab

Or, Tools > Spelling, click Options

Specifies default settings for the Spelling command.

DIALOG BOX OPTIONS

Search Specifies where Visio checks the spelling of text.

Selection Specifies to check the spelling of only the current selection.

Page Specifies to check the spelling of only the current page.

All Pages Specifies to check the spelling of the entire drawing file.

User Dictionaries Specifies the dictionaries Visio uses to check the spelling of text.

Active Specifies the dictionaries Visio is currently using to check the spelling of text.

Add Opens the Add User Dictionary box, in which you can add a new dictionary to the list of active dictionaries.

Remove Removes a dictionary from the list of active dictionaries.

Use MS Word Dictionaries If you have Microsoft Word installed, check this option to use its dictionary.

Ignore Words With Numbers Check this option if you want Visio to ignore words that have numbers in them.

Organization Chart Wizard

 [_Related Topics](#)

File > New > Business Diagram

Or, Tools > Macro > Business Diagram

Starts the Organization Chart Wizard, which reads employee data from a text (.txt), Microsoft Excel (.xls), or database file and generates an organization chart. The database must have been created in an ODBC-compliant database application and the employee data must be contained in one database table.

You can also use the Organization Chart Wizard to generate and format a generic organization chart to which you can add your own information.

Page (Go To submenu)

■ [_Related Topics](#)

Edit > Go To, drawing and print preview windows

Opens a dialog box in which you can choose a page to display in the drawing window.

You can also choose a page to display from the list on the [Page toolbar](#). Use [tips](#) to identify the button.

DIALOG BOX OPTIONS

Select Page Displays a list of [background](#) and [foreground](#) pages in the drawing file. Foreground pages are listed in bold type; background pages are listed in normal type. The current page is dimmed.

New Displays the [Page \(Insert\)](#) dialog box so that you can create and go to a new page.

Open Page In New Window Displays the selected page in a new window.

Page (Insert menu)

 [Related Topics](#)

Insert menu, drawing window

Creates a new page and opens a tabbed dialog box where you can change the settings for the new page. To create a new page or a [background](#) with the same settings as the page currently displayed, leave the settings as shown, and then click OK in the Page dialog box.

The Page dialog box is similar to the [Page Setup](#) dialog box. Use the Page command to create and set options for a new page. Use Page Setup to change the settings for the displayed page.

Visio adds the new page after the last page in the drawing file. You can change the page order by using the [Reorder](#) command on the Page menu.

DIALOG BOX OPTIONS

Click one of the following tabs to change page options:

[Page Size](#)

[Drawing Scale](#)

[Page Properties](#)

Page Breaks

 [_Related Topics](#)

View menu, drawing window

Displays page breaks for a drawing that's larger than the paper in the printer on which you want to print it. Page breaks are displayed where the document tiles when printed. Page breaks are determined by settings in the Page Setup dialog box.

Page Layout Wizard

 [_Related Topics](#)

Tools > Macro > Visio Extras

Automates setting up the page and adding title or border details.

Page Setup dialog box

 [_Related Topics](#)

File > Page Setup, drawing and print preview windows

Opens a tabbed dialog box where you change page size and orientation, printer settings, drawing scale, and set other options.

Click one of the following tabs to change page setup options:

[Page Size](#)

[Drawing Scale](#)

[Page Properties](#)

[Output Format](#)

[Header/Footer](#)

Page Setup dialog box (Drawing Scale tab)

 [Related Topics](#)

File > Page Setup, click Drawing Scale tab; drawing and print preview windows

Determines the drawing page size and scale.

Note: If you choose No Scale in the Drawing Scale tab and choose 100% scale in the Print Setup dialog box, the printed drawing will be the same size as the drawing page. Changing the scale of a drawing page does not change the scale of a background page assigned to it.

Tip: If you specify a scale other than No Scale, you can specify the size of the drawing in scaled units (shown on the Visio rulers) by setting dimensions for Page Size. You can specify the size of the drawing page in units by choosing Custom in the Page Size option. For example, If you want the drawing to be 40 feet by 50 feet in scaled units, specify a scale of 1 inch = 1 foot. Then, you can type either 40 feet by 50 feet in the Dimensions option or 40 inches by 50 inches in the Custom option.

DIALOG BOX OPTIONS

Drawing Scale Specifies the scale of the drawing. You can choose from the following options:

No Scale (1:1) If the drawing should print at its actual size, choose No Scale. If you specify No Scale and chose Same As Printer in the Drawing Size section, the drawing page and printed drawing are the size specified for paper with the Page Setup command on the File menu.

Metric Changes the list in the Scale box to include Metric standard scales, such as 1:100.

Architectural Changes the list in the Scale box to include Imperial measurements such as 3/32" = 1' 0".

Civil Engineering Changes the list in the Scale box to include Imperial measurements such as 1" = 10' 0".

Mechanical Engineering Changes the list in the Scale box to include Imperial measurements such as 1/32:1.

Custom Scale Sets a custom ratio of page size to drawing size. For example, at 1 inch = 25 feet, a shape which measures 1 inch (when printed at 100 percent) measures 25 feet on Visio's rulers.

Scaled Drawing Size Specifies the size of the drawing page, based on the Drawing Scale you choose and the Physical Page Size.

Physical Page Size Indicates the size of the printed page. You can change this setting in the Page Size tab.

Page Setup dialog box (Header/Footer tab)

 [Related Topics](#)

File > Page Setup, click Header/Footer tab; drawing and print preview windows

Specifies the text and formatting for the header and footer, which will appear on all of the pages of the drawing. The header and footer only appear on the printed page, not on screen.

DIALOG BOX OPTIONS

Header And Footer Specifies text that appears at the top (header) or bottom (footer) of every tile when you print pages from the drawing file. You can type up to 128 characters in each of the header and footer boxes.

Margins Specifies the distance from the text to the edge of the page. For Header, the distance is measured from the top of the header text to the upper edge of the page. For Footer, the distance is measured from the bottom of the header text to the lower edge of the page.

Formatting Indicates the text formatting specified for the header and footer. Click Choose Font to open a dialog box when you can choose font, style, size, and other text formatting options.

Target Printer Information Indicates paper size and orientation specified in the Print Setup dialog box. To change the settings, click Print Setup.

Print Setup button Opens a dialog box where you can choose printing options, such as the orientation and size of the paper, the margins, reduce/enlarge options, and the targeted printer.

Page Setup dialog box (Output Format tab)

 [_Related Topics](#)

File > Page Setup, click Output Format tab; drawing and print preview windows

Sets the output format for the open drawing. This tab applies to all pages in the active document.

By default, Visio formats drawings for printing. Choose a screen resolution option (PowerPoint Slide Show and HTML or GIF Output) if you intend to use the drawing onscreen, for example, in a PowerPoint slide show or on a Web page.

When you choose the onscreen format, Visio substitutes screen fonts for any printer fonts you've used in the text of your drawing.

Page Setup dialog box (Page Properties tab)

 [Related Topics](#)

File > Page Setup, click Page Properties tab; drawing and print preview windows

Opens a dialog box where you can change the size, scale, and other settings for a drawing page.

DIALOG BOX OPTIONS

Page Properties Specifies the page type and name, whether a background is assigned to it, and the unit of measurement of the rulers.

Shape Shadow Offset Specifies the position of shadows in relation to shapes. All shapes on a page that are formatted with shadows have the same shadow offset. By default, shadows appear 0.125 inches down and to the right of the shape. Type new distances after Right and Down to change the shadow offset. To position shadows above or to the left of a shape, type negative numbers.

Add Line Jumps To Specifies that line jumps be on horizontal or vertical routers only, or that they be on the last router that was created or adjusted. If you choose Last Routed Line, jumps will occur on both horizontal and vertical routers. A line jump is a small, uneditable arc that occurs on one of two crossing lines, indicating that the lines are crossed rather than connected.

Page Size And Drawing Scale Displays the page size and scale. To change these settings, click the Page Size or Drawing Scale tab.

Lists properties for either the drawing page or the background page.

To change the name of the drawing page, type a name containing up to 31 characters.

Lists the name of the background page in the drawing.

Choose the unit of measure the Visio rulers should display on the page. Unless you specify different units here, the ruler units will be those specified in the drawing scale.

Page Setup dialog box (Page Size tab)

 [Related Topics](#)

File > Page Setup, click Page Size tab; drawing and print preview windows

Specifies page size and orientation, as well as print setup options.

DIALOG BOX OPTIONS

Page Orientation Specifies the drawing page orientation as either portrait (a page taller than it is wide) or landscape (a page wider than it is tall). Changing the orientation of the drawing page does not change the paper orientation of the paper you print on. Make sure the drawing page size and orientation you choose will fit on the paper size and orientation you specify in the [Print Setup](#) dialog box.

Page Size Specifies the dimensions of the drawing page. You can choose a Custom Page Size from the list and then type custom dimensions or you can choose one of the following options: (Options in the list reflect page orientation as well as size. The width is listed first and then the height.)

Standard Changes the list in the Page Size box to include Imperial standard paper sizes, such as letter, legal, and so on.

Metric (ISO) Changes the list in the Page Size box to include Metric standard paper sizes, such as 210mm x 149mm.

ANSI Engineering Changes the list in the Page Size box to include ANSI Engineering standard paper sizes, such as 8.5in x 11in.

ANSI Architectural Changes the list in the Page Size box to include ANSI Architectural standard paper sizes, such as 9in x 12in.

Custom Page Size Lets you enter a custom dimensions in the Page Size box.

Size Page To Fit Drawing Creates a drawing page just large enough to contain the shapes.

Custom Scaled Drawing Size Specifies the ratio of the printed drawing to the drawing page.

Same As Printer Matches the drawing page size to the paper size specified in the Print Setup dialog box.

Print Setup Opens a dialog box where you can choose printing options, such as the orientation and size of the paper, the margins, reduce/enlarge options, and the targeted printer.

Page toolbar

 [Related Topics](#)

View > Toolbars, Toolbar shortcut menu

Displays a Visio toolbar that provides buttons you can use as shortcuts for choosing menu commands. To switch the toolbar, choose View > [Toolbars](#) or right-click the toolbar, then choose Page from the shortcut menu.

The tools on the Page toolbar are

- [Snap](#)
- [Glue](#)
- [Previous Page](#)
- [Next Page](#)
- [Go To Page](#)

Note: Your toolbar may vary depending on the display resolution of your monitor, the size of your window, and which window is active.

Page Width

 [_Related Topics](#)

View menu, drawing window

Displays the entire width of the page in the drawing window.

You can also adjust width view by using the [Actual Size](#) command.

You can also choose Width from the zoom list on the [Standard toolbar](#). Use [tips](#) to identify the zoom list.



Paint bucket tool

 [_Related Topics](#)

Edit icon toolbar, edit icon window

Use the paint bucket tool to change the color of an area of a master shape icon (a bitmap). Assign the color you want to the left or right mouse button by clicking in the color palette. Then click a pixel in the area you want to change with the same mouse button. The new color is applied to all contiguous pixels of the same color in the area you clicked.

Paste (Ctrl+V)

 [_Related Topics](#)

Edit menu (not in print preview window)

Pastes the shape, object, or text stored on the Windows clipboard into the center of the active drawing window. If a text block is open, text is pasted at the insertion point. The pasted item remains on the Clipboard until you use the Copy or Cut command again.

If both programs support OLE, pasting embeds the object. Many Windows programs put objects on the Clipboard in several formats. The Paste command chooses a preferred format. To select a specific format, choose the Paste Special command from the Edit menu.

You can also use the paste toolbar button. Use tips to identify the button.

Paste As Hyperlink

 [_Related Topics](#)

Edit menu

Appears when you have a hyperlink on the [clipboard](#). Pastes the hyperlink into the document.

Paste Special

 [Related Topics](#)

Edit menu, drawing window

Pastes an object on the clipboard into a Visio drawing in the format you choose.

Many Windows programs put information on the Clipboard in several formats. With this command, you can choose which format you want. For example, Visio automatically embeds objects from OLE-compatible programs, but you can use the Paste Special command to paste the object as a non-editable bitmap.

DIALOG BOX OPTIONS

Source Identifies the program used to create information on the Clipboard. If the program is unknown, displays Unknown.

As Lists the default format and other formats that Visio can use. Usually these include Bitmap, Picture (a Windows metafile), and Text. Choose the format you want from this list.

Paste Pastes the Clipboard contents onto the page in the specified format. Depending on the program that created the object, pasting may embed the object in Visio.

Paste Link Pastes the Clipboard contents onto the page in the specified format and establishes a link to the original file.

Result Displays a message that describes the result you'll get by clicking OK.

Display As Icon Displays the OLE object as an icon in a drawing.

Tip: You can convert Visio shapes into a Windows metafile with the Paste Special command. To convert shapes, select them, copy them to the Clipboard with the Cut command, and then use the Paste Special command to paste them as a metafile. If you've completed a complex drawing and know you won't need to make further changes, converting it to a metafile may reduce its file size.



Pencil tool (Ctrl+4)

[_Related Topics](#)

Standard toolbar

Use the pencil tool to draw both line and arc segments. You also use the pencil tool to edit shapes by dragging an endpoints, a control point, or a vertex. Drawing with the pencil tool relies on gesture recognition.

Line segment

To draw a line segment, drag the pencil tool in a straight line in any direction. The pointer displays a small line. Hold down the Shift key as you drag to draw lines at 45-degree intervals.

Arc segment

To draw an arc segment, drag the pencil tool along a curve. The pointer displays a small arc.

Picture

 [Related Topics](#)

Insert menu, drawing window

Displays a list of graphic files that you can insert into a Visio drawing. Visio converts the image to a metafile that cannot be edited or rotated. To edit the image, you must convert it to a Visio object using the Ungroup command.

DIALOG BOX OPTIONS

Look In Displays the current folder. Double-click the folder you want to open.

Up One Level Moves the Look In folder up one level in the hierarchy.

Create New Folder Creates a new folder in the current hierarchy.

List Displays the list as an icon and a label.

Details Displays list of files by name, size, type, and modified date.

File Name Displays files that are in the format selected in the File Type list.

Files Of Type Displays the file formats you can import in the folder you chose.

Open Opens the selected file.

Depending on the format of the graphic file you're importing, Visio may respond with a dialog box that contains options for setting Color Translation. If you import .cgm, .eps, or .pct files, the dialog box also has options for Retain Background, Emulate Line Styles, and Color Translation.

Retain Background When checked, preserves the background color of the original image. To do this, Visio draws a background rectangle in that color.

Emulate Line Styles When checked, draws thick or patterned lines as polygons rather than as lines to ensure they match the lines of the original file.

Color Translation Lists five options for displaying color: normal, inverse, inverse grays only, gray scale, and inverse gray scale.

Matches the color of the original image.

Inverts the colors (for example, what was black becomes white).

Inverts only the black, white, and gray shades, matching all other colors to the original file.

Converts all colors to gray shades (useful if you plan to print on a monochrome printer).

Converts all colors to grays and inverts them.



Pointer tool (Ctrl+1)

[_Related Topics](#)

Standard toolbar

Choose the pointer tool from the [Standard toolbar](#) to select [shapes](#) so you can move, format, and size them. You also use the pointer tool to drag [master shapes](#) from [stencils](#) and drop them in the drawing. When you move the pointer tool over a shape that you can select, the pointer turns white.

Selection net

You can select more than one shape by dragging the pointer tool to form a selection [net](#) that encloses all the shapes you want to select. The shape that is first in the [stacking order](#) becomes the primary selection.

Selection handles

The number of handles on a selected shape depends on its type and size. A [1-D](#) arc or line segment has handles at each [endpoints](#) and one in between. A [2-D](#) shape displays at least four handles and can display eight [selection handles](#) at a large enough view.

Previous Page

 [_Related Topics](#)

Edit > Go To, print preview window

Displays the previous [page](#) in the current [drawing file](#).

You can also use the previous page button on the [Page toolbar](#). Use [tips](#) to identify the button.

Previous Tile

■ [Related Topics](#)

View menu, print preview window

For a large drawing that Visio [tiles](#), displays the previous printed page (or tile) of the drawing.

You can use the View > [Next Tile](#) command to display the next tile.

You can also use the Previous Tile button. Use [tips](#) to identify the button.

Print (Ctrl+P)

 [Related Topics](#)

File menu, drawing and print preview windows

Opens a dialog box where you specify which pages to print and other print options. Clicking the OK button sends the drawing file to the selected printer.

You can also use the print button on the [Standard toolbar](#) to print the current page. Use [tips](#) to identify the button.

DIALOG BOX OPTIONS

Printer Displays the name, status, and location current printer. To change the printer, choose another printer listed for Name.

Print To File Specifies that Visio sends the information for printing to a file on disk, rather than to the printer. When you click OK, a dialog box opens in which you name the print file and specify where it should be saved. You can send the resulting print file from any computer connected to the printer specified for the drawing file, even if Visio is not installed on the computer.

Color As Black If checked, Visio prints all colors as black to ensure that all shapes are visible in the printed drawing. This is useful if a monochrome printer translates very light colors in a drawing to white rather than a shade of gray.

Properties Opens a tabbed dialog box where you can specify printer properties such as paper size and orientation, and print resolution. The options available depends on your printer. For details, see the documentation for your printer.

Print Range Specifies which drawing pages to print. Choose [All Pages](#) or [Current Page](#), or specify a [range of pages](#).

Copies Specifies the number of [copies](#).

Prints every page in the drawing file in the order in which the foreground pages are stored in the file. This is the default setting.

Prints the currently displayed drawing. If the page is a foreground, Visio prints the entire drawing. If the page is a background, Visio prints the background and the backgrounds on lower layers in the drawing, but does not print the foreground and backgrounds on higher layers in the drawing.

Prints only the specific range of pages identified by the values you type in the From and To boxes.

Tells Visio how many copies to print (default is 1).

Print Preview

■ [Related Topics](#)

File menu, drawing and print preview windows

Opens the [print preview window](#) and displays a drawing as it will appear when printed. When you preview a drawing in the print preview window, Visio displays the drawing within the margins and [tiles](#) the drawing if the drawing page is larger than the page size.

Note: If the Print Preview command is checked on the menu, choosing this command displays the drawing window.

Once you're in the print preview window, you can use the View > [Previous Tile](#) and View > [Next Tile](#) commands to move from tile to tile or page to page.

To exit the print preview window, click the Close button or press the Esc key.

You can also use the print preview button on the [Standard toolbar](#). Use [tips](#) to identify the button.

Print Preview toolbar

 [_Related Topics](#)

View > Toolbars > Print Preview, print preview window

Check to display the print preview toolbar in the [print preview window](#). Uncheck to hide the toolbar. The toolbar includes tools for zooming in and out, moving between tiles, and displaying the whole page or a single tile at a time as well as tools for printing, saving, and opening files.

Print Setup dialog box

 [Related Topics](#)

File > Page Setup, click Page Size tab or Header/Footer tab, click Print Setup

Specifies page size and orientation, as well as print setup options.

DIALOG BOX OPTIONS

Paper Identifies the paper size and source. For details about options, see your printer documentation.

Orientation Specifies the drawing page orientation as either portrait (a page taller than it is wide) or landscape (a page wider than it is tall). Changing the orientation of the drawing page does not change the paper orientation of the paper you print on. Make sure the drawing page size and orientation you choose will fit on the paper size and orientation you specify in the Print Setup dialog box.

Margins Defines an area that Visio can use to position the drawing on the paper. Enter values for Left, Top, Right, Bottom, and Center.

Note: To center a drawing that's smaller than the paper, you must first set the drawing size to Fit Page To Drawing Contents in the Drawing Scale tab.

Reduce/Enlarge Specifies the size you want the drawing when it prints. Choose one of the following options:

Percentage Reduces or enlarges by a specified percentage. For example, to reduce a drawing to three quarters of its original size, type 75.

Fit On Fits each drawing in the print job on the specified number of sheets across and down. Depending on the number of pages and the margins you specify, Visio enlarges or reduces the drawing. If the pages across and down are not proportional to the drawing's dimensions, Visio uses only those sheets needed to maintain the drawing's proportions.

Printer Opens a dialog box where you can choose the printer you want to target.

Lists the paper sizes available for the specified printer. Changing the paper size also affects the drawing page size if you check Same As Page Setup in the Drawing Size/Scale dialog box.

Lists paper trays, cassettes, manual feed, and other paper sources specific to the specified printer.

Specifies the distance from the left edge of the paper to the left margin.

Specifies the distance from the top edge of the paper to the top margin.

Specifies the distance from the right edge of the paper to the right margin.

Specifies the distance from the bottom edge of the paper to the bottom margin.

Centers a printed drawing that is smaller than the paper. Check Left/Right to center the drawing between the left and right margins or edges of the paper, and Up/Down to center the drawing between the top and bottom margins or edges of the paper.

Project Timeline Options

 [Related Topics](#)

Project Timeline template. Drop a Project Frame shape on the drawing page and choose not to run the Project Timeline Wizard.

Opens the Project Timeline Options dialog box where you can choose layout and formatting options for your project timeline. Based on the information you provide in this dialog box, Visio creates a project timeline. You can revise the project timeline after it's on the drawing page.

DIALOG BOX OPTIONS

Grid line options - Vertical lines Check to display vertical lines in the project timeline frame. You can show both vertical and horizontal lines.

Grid line options - Horizontal lines Check to display horizontal lines in the project timeline frame. You can show both horizontal and vertical lines.

Date label options Choose the units you want to display in the timeline.

Chart options: Number of tasks Type the number of tasks in your project.

Project start date Type the date on which your project begins.

Project Timeline Wizard

 [_Related Topics](#)

File > New > Business Diagram

Or, Tools > Macro > Business Diagram

Starts the Project Timeline Wizard, which reads project data from a text (.txt), Microsoft Excel (.xls), or Microsoft Project Exchange (.mpx) file and generates a project timeline.

If you haven't created a data file you can still run the Project Timeline Wizard to set formatting and style options for your project timeline.

Promote Tasks

 [_Related Topics](#)

Project Timeline template, Project > Promote Tasks

Or, right-click a task bar or horizontal grid line, then choose Promote Tasks

Makes selected subtasks tasks and moves the subtasks to the left in the Task Name column.

Properties (Master menu)

 [Related Topics](#)

Master menu, stencil window

Changes the name, icon size, update status, master type, and prompt for the selected master shape. Available only when a stencil is open as an original and the stencil window is active.

DIALOG BOX OPTIONS

Master Name Displays the name that appears under the master icon in the stencil window. Master shape names can contain up to 31 characters. To specify how the name is aligned below the icon, choose Left, Center, or Right.

Icon Specifies the icon size and when Visio should update the icon.

Size Choose Normal, Tall, Wide, or Double. The default icon size is Normal. Tall is the same width, but twice the height; Wide is the same height, but twice the width. Double is twice as wide and twice as tall as Normal. Choose the Edit Icon command on the Master menu to adjust the icon to fit a larger size.

Update Updates the master shape icon each time you edit the drawing of the master shape. Manually updates a master shape icon when you choose Update Icon from the Master menu.

Master Type Specifies whether the shape is to be a shape, line pattern, line end, or fill pattern.

Prompt Displays the text that appears when you point to the master icon in the stencil window. To change the text, type new text in the Prompt box.

Match Master By Name On Drop If you've created a stencil, preserves the formatting you've applied to the stencil's master shapes. For example, you've modified the shapes in the Office Layout stencil, created a stencil called My Office, then you drop a shape from the Office Layout stencil into the drawing.

- If Match Master By Name On Drop is checked for the shapes on the My Office stencil, when you drop a shape into the drawing, Visio checks to see if the shape you're dropping matches any of the master shapes in the My Office stencil. If it finds a match, Visio formats the shape with the changes you made to the My Office master shape.
- If Match Master By Name On Drop is unchecked for the shapes on the My Office stencil, when you drop a shape from the Office Layout stencil, the shape is added to the drawing file with the default Office Layout formatting.

Properties (File menu)

 [Related Topics](#)

File > Properties

Opens a tabbed dialog box where you can view and add information that describes a file and set preview options.

The information you type and the preview appear in the [Open](#) and [Open Stencil](#) dialog boxes when you select a [drawing file](#), [template](#), or [stencil](#) to open. Entering a detailed description in the dialog box can help you locate and keep track of files more easily, especially if you work with many files over a network or share them with a workgroup.

If you opt to have previews of every page in the drawing, they appear when you right-click the file in Windows and choose [Quick View](#).

Note: To view this command for a stencil, you must have an original stencil open.

Click one of the following tabs to view or set file properties:

[General](#)

[Summary](#)

[Contents](#)

Properties dialog box (General tab)

 [_Related Topics](#)

File > Properties, click the General tab

Displays details about the open file. The information comes from the file itself and cannot be edited in this dialog box.

DIALOG BOX OPTIONS

File name Displays the file's name if the file has been named and saved.

Type Indicates the kind of Visio file, such as Visio Drawing File.

Location Identifies the path for the folder where the file is stored.

Size Indicates how many bytes the file occupies on the drive.

Based On Lists the template on which the file is based.

Properties dialog box (Summary tab)

 [Related Topics](#)

File > Properties, click the Summary tab

Specifies preview options and information that describes the file. To add information, type it in the appropriate box. To edit information, select and then delete or replace text.

You can use the [Field](#) command to create [text fields](#) that display file summary information entered in the dialog box. Any changes you make to information in the dialog box carry over to the fields.

DIALOG BOX OPTIONS

Title Displays a descriptive title for the file. You can type up to 63 characters.

Subject Describes the contents of the file. You can type up to 63 characters.

Author Identifies the person who created or last updated the file. You can type up to 63 characters.

Manager Identifies the person in charge of the project or department. You can type up to 63 characters.

Company Identifies the company creating the drawing or the company that the drawing is for. You can type up to 63 characters.

Category Describes the drawing, such as flowchart or office layout. You can type up to 63 characters.

Keywords Displays words (up to a total of 63 characters) that identify topics or other important information about the file, such as project name, client name, or version number.

Description Displays important information (up to 191 characters) about the file, such as its purpose, recent changes, pending changes, and so on.

Hyperlink Base Type the path you want Visio to use for relative hyperlinks (hyperlinks for which the linked file location is described in relation to the Visio drawing). By default, a hyperlink's path is relative to the current document unless you type a different base path here. You can type up to 259 characters.

Preview Picture Specifies to save a preview picture of one or all of the pages in the file. A preview of the first page appears in the Open box and in Windows Quick View. Previews of all the pages appear in Quick View. Choose from the following options:

None Saves the file without a preview picture.

Draft Saves the file with a preview picture of Visio shapes only (does not show embedded objects, text, or gradient fills).

Detailed Saves the file with a preview picture of all objects.

First Page Only Save a preview of the first page in the file. When unchecked, Visio saves previews of all of the pages in the file.

Properties dialog box (Contents tab)

 [_Related Topics](#)

File > Properties, click the Contents tab

Displays a list of the contents of the file, including each page and the masters on it.

Property Report

■ [Related Topics](#)

Tools menu

Runs the Property Reporting Wizard. The wizard can write shape, custom property, or inventory data to a spreadsheet, to generate a report which provides results of numeric calculations on data, such as a bill of materials.

Note: To add custom properties to a shape, use the [Custom Property Editor](#).

Protect Document

■ [Related Topics](#)

Tools menu, drawing window

Protects document features from unauthorized changes. Other users can open the file to look at drawings, but they cannot edit the features you protect. You can protect individual features and also set a password.

Note: Use the Protect Document command to apply protection to all shapes in the drawing file. To protect individual shapes, use the [Protection](#) command.

DIALOG BOX OPTIONS

Password Provides a text box where you can type a password. If you do, the Protect Document command changes to Unprotect Document. To turn off protection, choose [Unprotect Document](#) from the Tools menu, and enter the password. Be sure to make a note of your password so you don't forget it.

Protect Lists features you can lock. Choose from [styles](#), [backgrounds](#), [shapes](#), and [master shapes](#).

Prevents users from creating and editing styles, although users still can apply styles.

Prevents users from deleting or editing background pages.

Prevents users from selecting shapes if From Selection is also checked in the Protection dialog box.

Prevents users from creating, editing, or deleting master shapes, although they can still create instances of master shapes.

Protection

 [Related Topics](#)

Format menu, drawing and ShapeSheet windows

Opens a dialog box where you choose characteristics of a selected shape you want to lock. For example, if you lock a shape's dimensions, you cannot change the size of the shape.

DIALOG BOX OPTIONS

Protect Lists characteristics you can lock on the selected shape. When an item is checked, the characteristic is locked against changes. You can choose as many of the characteristics as you want: Width, Height, Aspect Ratio, X-Position, Y-Position, Rotation, Begin Point, End Point, From Deletion, and From Selection.

All Locks all options in the Protect section. The Protection section in the ShapeSheet spreadsheet includes protection options not available in the Protection dialog box, such as locking against cropping, editing with any drawing tool, text editing and formatting, group editing, and recalculation of height and width when you size the shape.

None Unlocks all options in the Protect section.

Locks the shape's width against sizing. To lock a 1-D shape against rotation, you must lock its width.

Locks the shape's height against sizing.

Locks the ratio between a shape's height and width so its proportions won't change when you size it.

Locks the x (horizontal) position.

Locks the y (vertical) position.

Locks a shape against rotation using the rotation tool. A 1-D shape can still be rotated by dragging its endpoints. To lock a 1-D shape against rotation, you must lock its width.

Locks the beginning point of a 1-D shape to a specific location.

Locks the ending point of a 1-D shape to a specific location.

Locks the shape so it cannot be deleted.

Locks the shape so it cannot be selected. For this setting to take effect, you must also check Shapes in the Protect Document dialog box.

Quarters/Years

 [_Related Topics](#)

Project Timeline template, right-click Project Frame shape, then choose Quarters/Years

Or, right-click the timescale or nonworking stripe, then choose Quarters/Years

Changes the timeline to display quarters and years. When you change the units, the size of the project frame doesn't change so the smaller the unit, the shorter the time period displayed in the project frame, and the longer the task bars.



Rectangle tool (Ctrl+8)

[Related Topics](#)

Standard toolbar

Use the rectangle tool to draw rectangles or squares.

Drag diagonally to draw a rectangle. To draw a square, hold down the Shift key as you drag. Both rectangles and squares you draw with the rectangle tool are closed shapes.

Editing options

To size a rectangle or square, select it with the [pointer tool](#) and drag a [selection handle](#). To size the shape proportionally, drag a corner handle.

To edit the component line segments, select the rectangle with the [pencil tool](#) and then drag [vertices](#) and [control points](#).

Fill styles

To apply a [fill](#) style or fill format to a rectangle, use the [Fill](#) command.

Redo (Ctrl+Y)

 [_Related Topics](#)

Edit menu

Reverses the most recent Undo command. If the action cannot be redone, the command is dimmed, or Visio beeps when you click the toolbar button.

Tip: You can use the [Undo](#) command to reverse the action of the Redo command.

You can also use the redo button on the [Standard toolbar](#). Use [tips](#) to identify the button.

Refresh Shape Properties

■ [Related Topics](#)

Right-click a selected shape linked to a database record

For this command to appear on a shape's shortcut menu, you must have previously run the [Database Wizard](#) to link the shape to a database record.

Refreshes the selected shape to reflect changes in the database record the shape is linked to. Values in the shape's linked ShapeSheet cells are updated to match values in fields of the database record.

Remove From Group

 [Related Topics](#)

Shape > Grouping, drawing window

Removes the selected shapes from the selected group without affecting the rest of the group in other ways. The removed shape remains in its current location.

First, select the group, and then click to subselect the shape you want to remove. The group displays green selection handles, but the shape shows gray handles. When you choose Remove From Group, the handles of the selected shape turn green, to indicate that it is independent of the group.

Note: The group's selection rectangle is updated when you remove a shape from a group.

Reorder Pages

 [Related Topics](#)

Edit > Drawing Page, drawing window

Opens a dialog box where you can change the sequence of the drawing pages in the drawing file.

DIALOG BOX OPTIONS

Page Order Lists all foreground pages by name in the order stored in the drawing file. Choose the page you want to move.

Update Page Names When checked, renumbers pages that use default names (for example, Page-1, Page-2, and so on). Visio renumbers the pages to match the new order. This option doesn't affect pages you've renamed in Page Properties tab of the File > Page Setup dialog box.

Move Up Moves the page closer to the beginning of the file.

Move Down Moves the page farther from the beginning of the file.

Repeat (F4)

 [Related Topics](#)

Edit menu

Repeats the most recent action. If an action cannot be repeated, Visio dims the command and changes it to Can't Repeat.

Tip: To create evenly spaced copies of a shape, select the shape, and then press the Ctrl key and drag to create the first copy and place it where you want. To space other copies evenly, press F4 for each additional copy.

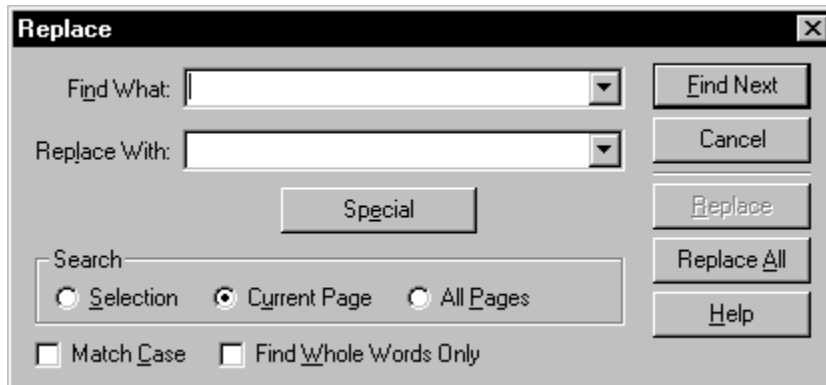
Replace

 [_Related Topics](#)

Edit menu, drawing window

Searches for and replaces specified text in shapes, the Properties dialog box, and data fields in the active drawing file.

Click to display information about the dialog box.



Specifies the text you want to find. You can type or paste text into this field. To search using text you previously searched for, click the down arrow, then choose the text from the list.

Specifies the text to use as replacement text. You can type or paste text into this field. To use text you previously used as Replace With text, click the down arrow, then choose the text from the list. To delete the text in the Find What box from the drawing file, leave the Replace With box empty.

Displays a list of special characters on which you can search: Tab Character, Manual Return, Optional Hyphen, Caret Character, or Any Character.

Specifies the range of the search.

Specifies to search only the current selection.

Specifies to search only the current page.

Specifies to search all pages in the open diagram.

Finds only those occurrences with the exact combination of uppercase and lowercase letters specified in the Find What box. Visio uses the case of letters as they were originally typed, regardless of whether the text has been formatted using Small Caps or All Caps formatting.

Finds occurrences that are words and not parts of larger words. For example, if you type "for" in the Find What box, Visio finds all instances of "for" but ignores "foreign."

Finds and selects the next occurrence of the text in the Find What box.

Replaces the Find What text with the Replace With text, and then finds the next occurrence.

Replaces all occurrences of the Find What text with the Replace With text. To undo a Replace All, choose Undo from the Edit menu.

Reverse Ends

 [_Related Topics](#)

Shape menu, drawing window

Flips selected shapes horizontally and vertically. What was at the top appears at the bottom, and what was on the left appears on the right.

Right: **Right Color box**

■ Related Topics

Edit icon toolbar, edit icon window

Displays the color assigned to the right mouse button in the edit icon window. Choose the icon pencil tool on the Standard toolbar and click with the right mouse button to change the pixels in the icon to this color. To change the assigned color, click with the right mouse button in the color palette.



Rotate Left (Ctrl+L)

[_Related Topics](#)

Shape menu, drawing window

Rotates selected shapes (including freestanding [text blocks](#)) counterclockwise by 90-degrees. A shape's text usually rotates with the shape. Use the [Rotate Right](#) command to rotate a shape clockwise. You can also use the [rotation tool](#) to rotate a shape by any increment.

You can also use the rotate left button on the [Shape toolbar](#). Use [tips](#) to identify the button.



Rotate Right (Ctrl+R)

[_Related Topics](#)

Shape menu, drawing window

Rotates selected shapes (including freestanding [text blocks](#)) clockwise by 90-degrees. A shape's text usually rotates with the shape. Use the Rotate [Left](#) command to rotate a shape counterclockwise. You can also use the [rotation tool](#) to rotate a shape by any increment.

You can also use the rotate right button on the [Shape toolbar](#). Use [tips](#) to identify the button.



Rotate Text 90° tool

 [_Related Topics](#)

Text toolbar

Use the rotate text 90° tool to rotate a text block in 90° increments. To use the rotate text 90° tool, choose it from the [Text toolbar](#), then click on the text block.



Rotation tool (Ctrl+ Ø)

[_Related Topics](#)

Standard toolbar

Use the rotation tool to rotate a shape by any amount. To rotate a shape, select it with the rotation tool, and then drag a round rotation handle. For finer control, drag the handle farther out from the shape. As you drag, the angle of rotation appears in the status bar at the bottom of the drawing page.

By dragging the center of rotation to a new location, you can rotate the shape around a point other than its center.

To rotate a shape by 90-degree increments, use the Rotate Left and Rotate Right commands.

You can also rotate a 1-D shape by using the pointer tool to drag one of its endpoints.

Routing Recipient

 [_Related Topics](#)

Send To submenu, drawing window

This command is available only if Microsoft Office 97 is installed on your computer, or Microsoft Outlook is your mail program.

Choose to add a routing slip to a drawing that you send to other people through e-mail. When you add a routing slip, you can track the progress of the drawing as each recipient opens it (updates are sent to your Inbox), and have the drawing returned to you when the last recipient is finished with it.

Row

 [_Related Topics](#)

Insert menu, ShapeSheet window

Inserts a [ShapeSheet](#) row before the selected row. For example, to add a segment to a shape, insert a row in the Geometry section; to define a new [connection point](#), insert a row in the Connection Points section.

To insert a row after the selected row, use the [Row After](#) command.

Row After

 [_Related Topics](#)

Insert menu, ShapeSheet window

Inserts a [ShapeSheet](#) row after the selected row. For example, to add a segment to a shape, insert a row in the Geometry section; to define a new [connection point](#), insert a row in the Connection Points section.

To insert a row before the selected row, use the [Row](#) command.

Ruler & Grid

 [Related Topics](#)

Tools menu, drawing window

Specifies the settings for the rulers and the grid lines. You can have separate settings for the horizontal and vertical rulers and grid lines.

DIALOG BOX OPTIONS

Rulers Specifies the ruler settings.

Subdivisions Specifies how many tick marks are on the vertical or horizontal ruler. You can choose Fine, Normal, or Coarse.

Ruler Zero Specifies the location of zero on the horizontal and vertical ruler. By default, the horizontal ruler's zero point is the top-left corner of the page, and the vertical ruler's zero point is the bottom-left corner of the page. For example, if you specify 3 inches for both rulers, the ruler zero is positioned to the right (for the horizontal ruler) and 3 inches toward the top (for the vertical ruler).

Grid Specifies the grid lines settings.

Grid Spacing Specifies how far apart the grid lines are. You can choose Fine, Normal, Coarse, or Fixed. Fine, Normal, and Coarse set the grid to a variable grid: the grid spacing changes as you zoom in and out. Fixed sets the grid to a fixed grid; if you zoom in or out, the spacing between grid lines does not change.

Minimum Spacing For Fine, Normal, or Coarse, specifies the minimum grid lines. For Fixed, specifies how far apart the grid lines are.

Grid Origin Specifies where to place the grid origin. For example, you could move the grid in increments different from the ruler to align the grid with a shape or part of the diagram. By default, the grid origin is in the lower-left corner.

Rulers

 [Related Topics](#)

View menu, drawing and print preview windows

Hides or displays the rulers. When rulers are displayed, they appear along the top and left sides of the drawing window.

The intervals of the ruler correspond to the unit of measure you set in the [Options](#) dialog box. You control the [subdivisions](#) for the rulers in the [Ruler & Grid](#) dialog box.

Tip: To create [guides and guide points](#), rulers must be visible.

Run Macro tool

 [Related Topics](#)

Developer toolbar

Opens a dialog box that displays [macros](#) and add-ons that you can run to automate a specific task.

DIALOG BOX OPTIONS

Macro Name Specifies the name of the macro or add-on to run, edit, delete, or step into. To create a macro, enter a new name, then click the Create button.

Run Runs the selected macro. You can also use the run macro button on the [Developer toolbar](#). Use [tips](#) to identify the button.

Step Into Begins executing the selected macro in the [Visual Basic Editor](#) and allows you to step through its execution.

Edit Opens the selected macro in the Visual Basic Editor so you can edit its code.

Create Creates a macro with the given name and opens it in the Visual Basic Editor.

Delete Deletes the selected macro.

Macros In Determines the set of macros and add-ons that are listed in the dialog box. You can list:

- Macros in the active drawing (but not all open drawings) and all available add-ons.
- Available add-ons only.
- Macros in a specific module in any Visio file that is currently open with read-write access.

Description Displays information about the selected macro. You can assign a description to a macro using the Object Browser in the Visual Basic Editor. For details about the Object Browser, see the Microsoft Visual Basic online help.

Save (Ctrl+S)

■ [_Related Topics](#)

File menu

Saves changes to the file in the active window. If the file is new and you haven't saved and named it yet, Visio displays the [Save As](#) dialog box.

You can also use the save button on the [Standard toolbar](#). Use [tips](#) to identify the button.

Save As (F12)

 [Related Topics](#)

File menu

The first time you save a file, this dialog box appears. After you name the file and click Save, the Properties dialog box appears where you add file information and save a preview of the first page in the file (which is used in the Open dialog box and in Quick View).

You can also use this dialog box to

- Name and save a drawing, stencil, or template file.
- Change the name or format of the open file.
- Save a file to a different disk location.
- Make a copy of a file, naming and saving the copy as a new file while leaving the original version intact.
- Save the workspace within a drawing, stencil, or template file.
- Export a Visio drawing or the selected shapes for use by another program. If you have appropriate export filters installed, Visio uses a matching filter to convert the drawing from its original format (.vsd) to the format you choose. The exported file will not be linked to a Visio file. You can export an entire Visio page or export selected shapes.

After you save the file, it remains open. Use the Close command to close the file or the Exit command to quit Visio. To name and save all open windows, use the Save Workspace command.

DIALOG BOX OPTIONS

Save In Displays the current folder. To change the folder, choose from the list.

Up One Level Moves the Look In folder up one level in the hierarchy.

Create New Folder Creates a new folder in the current level in the hierarchy.

List Displays the list as an icon and a label.

Details Displays the list as the name, size, type, and modified date.

File Name Names the file. Change the name or create a new name by typing up to eight characters, followed by the file name extension. If you don't type an extension, Visio enters the extension displayed in the File Type box.

Save As Lists formats for these files: Stencil (.vss), Drawing (.vsd), Template (.vst), Visio 4 Stencil (.vss), Visio 4 Drawing (.vsd), Visio 4 Template (.vst), HTML Files (.htm, .html), Adobe Illustrator File (.ai), Computer Graphics Metafile (.cgm), Encapsulated PostScript File (.eps), Enhanced Metafile (.emf), Graphics Interchange Format (.gif), IGES Drawing File Format (.igs), JPEG Format (.jpg), Macintosh PICT Format (.pct), Portable Networks Graphics Format (.png), PostScript File (.ps), Tag Image File Format (.tif), Windows Bitmap (.bmp, .dib), Windows Metafile (.wmf), and Zsoft PC Paintbrush Bitmap (.pcx).

Save button Saves the file with the selected options.

Save Lists additional options for saving the file. Choose the Workspace and Read Only options.

Creates a new file that retains the positions of the open windows.

Saves the file so that it opens as read-only or can be opened as a copy. You cannot open the original file. Check this option to protect a file from changes.

Save As (to a Document Management System)

 [_Related Topics](#)

File menu, drawing window

If you have Open Document Management Architecture (ODMA) version 1.5 on your system, this command opens the Document Management System (DMS) Save As dialog box, which you can use to save Visio drawings and store them within your document management system. The exact appearance of the dialog box depends on the document management system you're using.

Save As HTML

 [Related Topics](#)

File menu, Save As dialog box

Saves a Visio drawing in HTML format so you can open and view the file with a World Wide Web browser. When you save a drawing as an HTML page, Visio creates a Web page complete with HTML source code and includes the drawing on the page.

If shapes in the drawing include navigational links to other Visio drawing pages, to files created in different applications, or to Web sites, these links are also exported and are still active on the Web page.

DIALOG BOX OPTIONS

Page Lists the pages in the drawing. Choose the pages you want to save as HTML pages. By default, Visio saves all the drawing pages.

Filter Lists the file formats in which you can save the drawing pages. The .jpg, .gif, and .png file formats are supported by Web browsers.

Filter Settings Opens a dialog box that contains settings that control the size of the saved HTML files.

Zoom Determines the level of magnification in which Visio saves the drawing. By default, Visio saves the drawing at 50% of the size it appears in Visio.

Dots-Per-Inch Controls the size of the exported drawing by setting the horizontal and vertical pixels per inch.

Screen Resolution Targets the HTML page to a specific screen resolution.

Options Opens a dialog box that contains settings that determine how links from a Visio drawing are saved, and which template on which to base the HTML file formatting.

Enable Image Maps Determines whether or not links in Visio shapes are exported.

Client Side Controls whether or not drawings are saved as client-side image maps. Check this option unless you know your Web site has a program on its server for processing image map data.

Server Side Controls whether or not drawings are saved as server-side image maps. Check this option if your Web site has a program on the server that examines map data associated with image maps and processes the links.

URL The box in which you type the URL to the Common Gateway Interface (CGI) directory on the Web server. Visio includes this URL as an anchor on the HTML page it creates when it saves your drawing.

Format Determines the standard for handling image map data. Choose either NCSA (National Center for Supercomputing Applications) or CERN (European Particle Physics Laboratory).

HTML Template Displays the path to the HTML template you want to use to format the exported Visio drawing.

Save Workspace (Alt+F12)

 [Related Topics](#)

File menu

Opens a dialog box where you can name and save a workspace file. Workspace files save the arrangement of windows currently open in the Visio window. Save a workspace when you have not finished a drawing file but need to close the file. When you want to resume work, Visio opens the workspace—not just the drawing file—so all windows are open and ready for you to continue where you left off.

Important: Before saving a workspace, you must use the Save As or Save command from the File menu to name and save any unnamed open files—including the drawing file you're working on. If unnamed files are open, Visio asks if you want to save the workspace without them.

DIALOG BOX OPTIONS

Save In Displays the current folder.

Up One Level Moves the Look In folder up one level in the hierarchy.

Create New Folder Creates a new folder in the current level in the hierarchy.

List Displays the list as an icon and a label.

Details Displays the list as the name, size, type, and modified date.

File Name Names the workspace file. Filenames can be up to eight characters; Visio adds the .vsw file name extension to identify the file as a workspace.

Save As Type Lists the file name extension for a workspace (.vsw).

Save Saves the file with the selected options.

Search The Web

 [_Related Topics](#)

Help > Visio on the Web

Choose Search The Web to open your web browser application and search the Internet.

You can also use the [search the web](#) button on the [Web toolbar](#). Use [tips](#) to identify the button.

Section

 [Related Topics](#)

Insert menu, ShapeSheet window

Opens a dialog box where you can choose which sections to add to a ShapeSheet spreadsheet. Each section controls the behavior and appearance of some aspect of a [shape](#).

By default, each ShapeSheet spreadsheet has at least one section that provides positioning information. Visio builds in other sections required for a specific shape. Each ShapeSheet spreadsheet can contain only one of each type of section except for Geometry sections.

Each [path](#) in a shape is represented by a Geometry section, which Visio numbers sequentially (Geometry 1, Geometry 2, and so on). You can add sections to modify a shape. Which sections are visible or hidden in the ShapeSheet spreadsheet depends on which sections are checked in the [Sections](#) dialog box.

DIALOG BOX OPTIONS

Show Sections Lists the sections you can add to a ShapeSheet spreadsheet. Sections included in the ShapeSheet spreadsheet of the selected shape and sections that are not available for the selected shape are dimmed.

Text Transform Used to position text in relation to its shape. Without this section, text can only be positioned within the shape. With the Text Transform section, you can move the text; for example, you can rotate text independently of its shape.

Geometry Lists the vertices for a path in a shape. Each path requires its own Geometry section. Within each Geometry section, a row describes each line and each arc segment in the path.

Connection Points Specifies the *x-* and *y-coordinates* for each connection point on a shape.

Controls Specifies the *x-* and *y-coordinates*, behavior, and anchor point for each [control handle](#) defined for a shape.

Scratch Contains cells where you can enter and test formulas or calculate intermediate values that can be referred to in other sections.

Text Fields Contains formulas inserted in a shape's text block using the [Field](#) command. The formulas appear in this section in the same order as in the [text block](#).

Actions Inserts a section from which you can add an action to a shape or page.

Layer Membership For a shape, inserts a section in which you can change the shape's layer assignment.

Layers For the page, inserts a section in which you can view the page's layer properties.

User-Defined Cells Inserts a section in which you can add user-defined cells for a shape or page.

Custom Properties Inserts a section in which you can add custom properties for a shape or page.

Ruler & Grid Inserts a section in which you can enter values for the page's ruler and grid.

Sections

 [Related Topics](#)

View menu, ShapeSheet window

Opens a dialog box where you choose which [ShapeSheet](#) sections are displayed for the selected shape.

DIALOG BOX OPTIONS

Section Indicates the sections you want to display. Check to display and uncheck to hide any number of sections. (Sections not available for the selected shape are dimmed.) When you activate the ShapeSheet window, all the checked sections included in the ShapeSheet spreadsheet are visible.

All Displays all sections.

None Displays no sections.

You can also collapse and expand a section by clicking its title. When a section is collapsed, you see only its title; when it is expanded, you see all of its rows.

Tip: If you use the [Section](#) command to add a section to the ShapeSheet spreadsheet, but you don't see the section in the ShapeSheet window, use the Sections command to make sure the section is set to display.

Select All (Ctrl+A)

 [_Related Topics](#)

Edit menu; drawing, stencil, and edit icon windows

Selects all shapes, guides, and objects from other programs on a drawing page. To select all of a specific kind of item, use the Select Special command.

Note: To view this command for a stencil, you must have an original stencil open.

Select Color palette

 [_Related Topics](#)

Edit icon toolbar, edit icon window

Displays color swatches, including the [Transparent Color box](#), that you can choose to assign to the [Left Color box](#) or the [Right Color box](#). To assign a color, click with the left or right mouse button in the color palette.

Select Database Record

 [_Related Topics](#)

Right-click a selected shape linked to a database record

For this command to appear on a shape's shortcut menu, you must have previously run the [Database Wizard](#) to link the shape to a database record.

Opens the Select Database Record dialog box where you can select the database record you want the selected shape to represent. The dialog box lists the data source and data source table to which the shape is linked and the table's primary key field.

Key Value Choose the value in the primary key field for the record you want the shape to link to.

Select Special

 [Related Topics](#)

Edit menu, drawing window

Opens a dialog box where you can choose one or more types of items you want to select. When you click OK, Visio selects all items of the specified types on the page.

Tip: To determine a shape's type, choose Special from the Format menu.

DIALOG BOX OPTIONS

Select By Specifies the type of objects you want to select.

Shape Type Lists the types of items you can select all at once. Select any number of these types: Shapes, Groups, Guides, OLE Objects, Metafiles, Bitmaps.

Layer Lists the available layers from which you can select.

All Click this button to select all types in the Select By list.

None Click this button to uncheck all types in the Select By list.

Selects all shapes on the page.

Selects all groups on the page.

Selects all the guides and guide points on the page.

Selects all objects from other programs saved in the .wmf (Windows metafile) format or objects inserted into Visio by selecting Windows Metafile Data in Paste Special.

Selects all objects from other programs saved as bitmaps.

Selects all linked or embedded objects to a container.



Selection net tool

 [_Related Topics](#)

Edit icon toolbar, edit icon window

Use the selection net tool to select a rectangular area of a master shape icon. Drag a selection net around the area of the bitmap you want to select. You can then drag to move the selected area or use the commands on the Edit menu to work with the selected area.

Send Backward

■ [_Related Topics](#)

Shape menu, drawing window

Moves selected shapes back one position in the stacking order. If multiple shapes are selected, they all move back one position and keep their original stacking order in relation to each other.

Send To Back (Ctrl+B)

■ [_Related Topics](#)

Shape menu, drawing window

Moves selected [shapes](#) behind other shapes in the [stacking order](#). If multiple shapes are selected, they keep their original stacking order in relation to each other.

You can also use the send to back button on the [Shape toolbar](#). Use [tips](#) to identify the button.

Set To L Connectors

 [_Related Topics](#)

Right-click the drawing page with no shapes selected, Project Timeline template

Sets all the connectors in your project timeline to L-shaped connectors. Connectors indicate links, or dependencies, between tasks.

Set To S Connectors

 [_Related Topics](#)

Right-click the drawing page with no shapes selected, Project Timeline template

Sets all the connectors in your project timeline to S-shaped connectors. Connectors indicate links, or dependencies, between tasks.

Shadow

 [Related Topics](#)

Format menu, drawing and stencil windows

Applies or changes the shadow for selected shapes.

You can also use the shadow color palette on the [Shape toolbar](#). Use [tips](#) to identify the button.

DIALOG BOX OPTIONS

Pattern Determines the shadow pattern. Choosing None deletes a shadow.

Foreground Determines the shadow foreground color. For example, in a [grid](#) pattern, the grid displays the foreground color.

Background Determines the shadow background color. For example, in a grid pattern, the spaces between the grid show the background color.

Apply Applies a shadow format without closing the dialog box.

Shadow Color tool

 [Related Topics](#)

Shape toolbar

Use the shadow color tool to add or remove shadows from shapes and to choose the shadow color. Select the shape or shapes to which you want to add shadows, then click the shadow color tool to display the shadow color palette. On the palette, choose

- No Shadow, to remove shadows from shapes.
- One of the colors in the palette to fill the shadow with that color.
- More Shadow Colors to open the [Shadow](#) dialog box where you can choose a shadow's pattern and background and foreground colors.

Shape Explorer

 [_Related Topics](#)

Tools > Macro > Shape Explorer

Searches for and catalogs Visio shapes, stencils, and templates that are provided with Visio products, that are on the World Wide Web, or that are in databases you create.

Shape Help

 [_Related Topics](#)

Stencil master and shape shortcut menus

Displays online help for a specific shape in a stencil. This command is available only when a Windows online help topic is associated with the shape.

You can activate the Shape Help command by entering syntax in the [Special](#) dialog box. For information on developing Microsoft Windows online help, see the Microsoft Platform SDK documentation.

To associate a help topic to a double-click action, use the [Double-Click](#) command on the Format menu.

Shape Layer

 [Related Topics](#)

View menu, drawing and ShapeSheet windows

Assigns the selected shape to one or more [layers](#), or removes a shape's layer assignment.

You can assign a selected shape to a layer using the shape layers list on the [View toolbar](#). Use [tips](#) to identify the button.

DIALOG BOX OPTIONS

On Layer(s) Assigns the selected shape to one or more layers. You can assign a shape to multiple layers.

Preserve Group Member Layers Specifies that individual shapes in a group retain their current layer assignments. For example, you might assign a desk to the furniture layer and a computer to the electronics layer, then group them. If you then assign the group to the den layer, the desk and computer retain their previous layer assignments as well. When this option is unchecked, when you assign a [group](#) to a layer, all of the group members become members of the new layer. Their previous layer assignments are canceled.

All Assigns the selected shape to all layers.

None Assigns the selected shape to no layers.

New Opens the New Layer box, in which you can type a name to create a new layer.

Shape toolbar

 [Related Topics](#)

View > Toolbars, Toolbar shortcut menu

Displays a Visio toolbar that provides buttons you can use as shortcuts for choosing menu commands. To switch the toolbar, choose View > [Toolbars](#) or right-click the toolbar, then choose Shape from the shortcut menu.

The tools available on the Shape toolbar are line style list, line color palette, line weight list, line pattern list, line ends list, corner roundings list, fill style list, fill color palette, fill pattern list, shadow list, align shapes palette, distribute shapes palette, lay out shapes, connect shapes, flip horizontal, flip vertical, rotate right, rotate left, bring to front, send to back, group, ungroup, and custom properties.

Note: Your toolbar may vary depending on the display resolution of your monitor, the size of your window, and which window is active.

Show Drawing Page

 [_Related Topics](#)

Window menu, stencil window

Note: This command is available only when you have an original stencil open.

Opens a dialog box that lists current drawing pages. Choose a page to display in the drawing window. Show Drawing Page is available only when a stencil window is active.

DIALOG BOX OPTIONS

Select Page Displays a list of background and foreground pages in the drawing file. Foreground pages are listed in bold type; background pages are listed in normal type.

Show Master Shapes

 [_Related Topics](#)

Window menu, drawing window

Opens the [local stencil](#) for the current drawing file. The local stencil contains a copy of every [master shape](#) that appears in the current drawing file. [Instances](#) in a drawing file remain linked to their master shapes in the local stencil (unless you ungroup the instance or delete the master).

Note: The local stencil also includes masters you may have deleted from the drawing page.

To use the command, make sure the drawing window is active by clicking the title bar of the drawing window. The local stencil window displays the name of the [drawing file](#), followed by "Stencil."

When you select a master shape in a local stencil, you can use the [Edit Master](#) command to edit a master shape. Visio updates all instances of the master in the drawing file.

Show ShapeSheet

■ [Related Topics](#)

Window menu, drawing window

Opens the ShapeSheet spreadsheet for the selected [shape](#) or the page.

Every shape you draw with Visio or [object](#) you insert from another program has a ShapeSheet spreadsheet. When you [group](#) shapes, Visio retains the ShapeSheet spreadsheet for each shape in the group and creates a separate ShapeSheet spreadsheet for the group.

When you open the ShapeSheet window, the menu bar changes and displays menus and commands for working in the ShapeSheet spreadsheet. What you see in a ShapeSheet spreadsheet depends on which shape is selected and how you have set ShapeSheet display options with the [Values](#), [Formulas](#), and [Sections](#) commands.


You can also use the show ShapeSheet button on the [Developer toolbar](#). Use [tips](#) to identify the button.

Show Task Bar

 [_Related Topics](#)

Project Timeline template, right-click a task bar, the choose Show Task Bar

Or, right-click a horizontal grid line or text entry area, then click Show Task Bar

Brings a selected task (or the task in a selected row) into the project frame. The timeline scrolls so the first date that displays in the project frame corresponds to the start date of a selected task. You can also click the Show Task Bar () toolbar button.

Single Tile

 [_Related Topics](#)

View menu, print preview window

Displays a single page or tile of a drawing as it appears when printed. You can view the entire drawing by choosing Whole Page from the View menu.

You can also use the Single Tile button. Use tips to identify the button.

Alternatively, you can use the Zoom In and Zoom Out buttons.

Size & Position

■ [Related Topics](#)

Shape menu, drawing and stencil windows

If a shape is selected, determines the selected shape's position on the page, its dimensions, and its degree of rotation. The dialog box options vary depending on whether a 1-D or 2-D shape is selected.

If a guide is selected, determines the selected guide's or guide point's position on the page and its degree of rotation. The dialog box options vary depending on whether the selected guide or guide point is vertical, horizontal, or oblique (in other words, diagonal).

Size & Position (shape selected)

 [Related Topics](#)

Shape menu, drawing and stencil windows

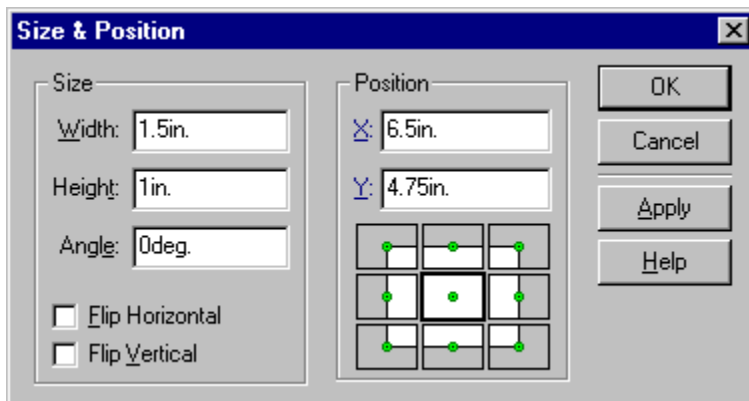
Determines the selected shape's position on the page, its dimensions, and its degree of rotation. The dialog box options vary depending on whether a 1-D or 2-D shape is selected.

For a 1-D shape, the options in the Parameters section vary depending on which option you choose in the Show section. You can change the size and position of a 1-D shape by changing values in the Parameters section of the dialog box.

Click to display information about the dialog box options for a 1-D shape.



Click to display information about the dialog box options for a 2-D shape.



Displays the shape's beginning and ending points and its height in the Parameters section.

Displays the shape's beginning point, angle of rotation, length, and height in the Parameters section. Visio calculates the ending point.

Displays the shape's ending point, angle of rotation, length, and height in the Parameters section. Visio calculates the beginning point.

The x-coordinate of the beginning point of the 1-D shape in relation to the origin of its parent.

The y-coordinate of the beginning point of the 1-D shape in relation to the origin of its parent.

The x-coordinate of the ending point of the 1-D shape in relation to the origin of its parent.

The y-coordinate of the ending point of the 1-D shape in relation to the origin of its parent.

The height of the shape.

The shape's current angle of rotation in relation to its parent.

Applies a setting without closing the dialog box.

Specifies the width, height, and angle of the shape. Enter a new value to resize the shape.

The width of the shape.

When checked, flips the shape horizontally.

When checked, flips the shape vertically.

Specifies the position of the x- and y-coordinates of the shape's local pin (center of rotation) in relation to the page. Enter a new value to change the position of the pin.

Specifies the position of the x-coordinate of the shape's local pin (center of rotation) in relation to the page. Enter a new value to change the horizontal position of the shape on the page.

Specifies the position of the y-coordinate of the shape's local pin (center of rotation) in relation to the page. Enter a new value to change the vertical position of the shape on the page.

Changes the location of the pin (center of rotation) on the shape so you can rotate the shape around a point other than its center. Choose a section to change the pin location. When you change the location of the pin, the shape's position on the page also changes.

Size & Position (guide selected)

 [_Related Topics](#)

Shape menu, drawing and stencil windows

Determines the selected guide's or guide point's position on the page and its degree of rotation. The dialog box options vary depending on whether the selected guide or guide point is vertical, horizontal, or oblique (in other words, diagonal).

SmartShape Wizard

 [_Related Topics](#)

Tools > Macro > Visio Extras

Automates adding smart behavior to shapes you create, including text behavior, control handle connectors, hidden notes, custom properties, and protection options.

Snap & Glue (Alt+F9)

 [Related Topics](#)

Tools menu, drawing window

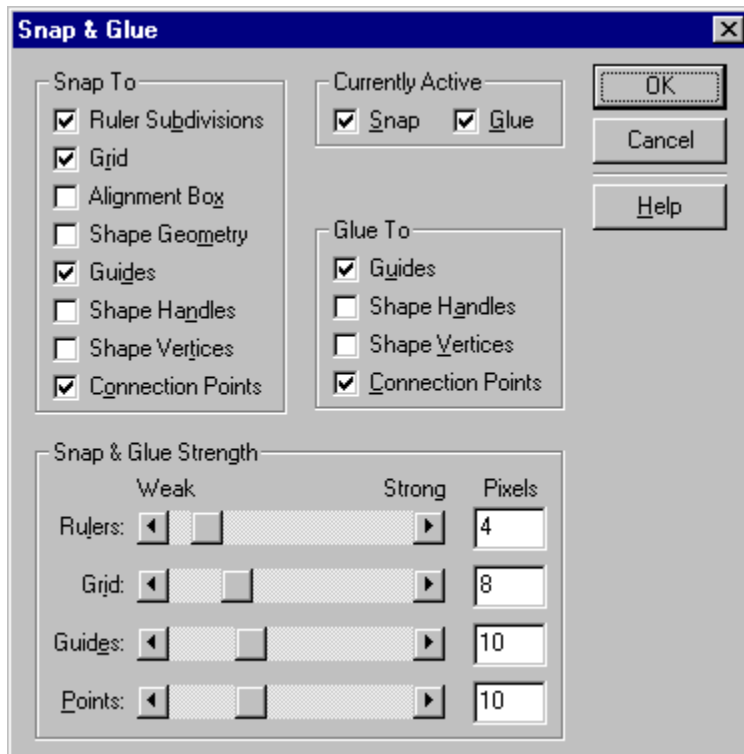
Specifies whether snap and glue are active and what objects shapes will snap and glue to. You can change these settings at any time without affecting shapes that are positioned or glued. You can check any number of items to snap and glue to. For aligning shapes, the most useful options are ruler subdivisions, grid, and guides. The other options are most useful when you are gluing shapes.

You can change the snap and glue strength setting in the Options dialog box.

Tip: Press F9 to toggle glue on or off, and press Shift+F9 to toggle snap on or off.

You can also use the snap and glue buttons on the Page toolbar to turn snap and glue on or off. Use tips to identify the button.

Click to display information about the dialog box.



When checked, you can snap to these items.

Specifies the distance in pixels that the grid, guides, rulers, or points (connection points, vertices, handles) pull when snapping or gluing is on.

When checked, you can glue to these items.

Activates snapping so shapes snap to items checked in the Snap To section.

Activates glue so shapes glue to items checked in the Glue To section.

Spelling (F7)

 [Related Topics](#)

Tools menu, drawing window

Checks the spelling of text in shapes, summary information, and data fields in the active drawing file.

You can also use the spelling button on the Standard toolbar. Use tips to identify the button.

DIALOG BOX OPTIONS

Not In Dictionary Displays a word not found in the open dictionaries.

Change To Type or select a word from the Suggestions list to replace the misspelled word.

Suggestions Lists replacement words from the open dictionaries.

Add Words To Select the dictionary to which you want to add the word. For example, a person's name might not be in the dictionary.

Ignore Ignores the word and continues checking.

Change Changes the word to the one in the Change To box.

Add Adds the word to the dictionary selected in the Add Words To box.

Ignore All Ignores all instances of the word and continues checking.

Change All Changes all instances of the word to the one in the Change To box.

Options Displays the Spelling tab, in which you can specify default settings for the Spelling command.

Cancel Closes the Spelling box, but does not reverse any changes you have made.

Special

 [Related Topics](#)

Format menu, drawing and ShapeSheet windows

Opens a dialog box that identifies the selected shape and provides three text boxes where you can type information about the shape.

DIALOG BOX OPTIONS

ID The sequential ID number Visio assigns to the selected shape. The number is based on the order in which shapes are created. The first shape you create in the drawing is 1, the second is 2, and so on.

Master Displays the name of the master shape if the shape is an instance of a master. If a shape is a component shape in a master shape, the section displays the name of the master and the name or number of the component shape.

Type Identifies the type of shape or other object.

Name Identifies the shape by its default Visio name or a name you assign. You can type up to 31 characters for the name. **Note:** You cannot use the open rounded bracket ({) as the first character of a shape name.

Help Enables the Shape Help command by associating the selected shape with a help keyword. The syntax is:

FILENAME.HLP!keyword or **FILENAME.HLP!#Number**

where **filename** is the Windows help file, **keyword** is the index term associated with the help topic, and **number** is a numeric ID which is referenced in the MAP section of the help project file (HPJ). For information on developing Microsoft Windows online help, see the Microsoft Platform SDK documentation.

Copyright. Displays copyright information for the selected shape.

Data 1, Data 2, and Data 3 Provides room for information you want to supply about the shape. You can type up to 64KB of data in each box.

Note: The default path for shape and stencil help files is the Visio Help folder, although VISIO.HLP resides in Visio's main folder. You can change the default path in the File Paths tab, which remains in effect until you set it again.

To enter descriptive information about the file, use the Properties command.

If you use the Field command to create a text field, one category option is Object Info. The Object Info fields (Data 1, Data 2, Data 3, ID, Master, Name, and Type) display the information you enter in the Special dialog box. Any changes you make to information in the Special dialog box are displayed in the fields.



Stamp tool

[Related Topics](#)

Standard toolbar

Use the stamp tool to create instances of the selected master shape in a drawing.

To stamp a shape, choose the stamp tool, and then select the master shape in the stencil. Click the drawing page where you want to position the center of the shape.

To create multiple shapes, drag a master shape to the drawing page, select the stamp tool, and then click on the page to make copies of the original shape.

Standard toolbar

 [Related Topics](#)

View > Toolbars, Toolbar shortcut menu

Displays a Visio toolbar that provides buttons you can use as shortcuts for choosing menu commands and for choosing drawing and formatting tools. To switch the toolbar, choose View > [Toolbars](#) or right-click the toolbar, then choose Standard from the shortcut menu.

Note: Your toolbar may vary depending on the display resolution of your monitor, the size of your window, and which window is active.

Status Bar

 [Related Topics](#)

View menu; drawing, stencil, and print preview windows

Displays or hides the status bar at the bottom of the Visio window. The status bar is displayed when the command is checked.

The status bar provides information related to the task you are doing. For example, when you point to a master shape on a stencil, the status bar shows a brief description of the master shape. As you drag a shape, the status bar displays the shape's position.

Stencil Report Wizard

 [_Related Topics](#)

Tools > Macro > Visio Extras

Automates creating a report showing all shapes on a stencil, creating a catalog of shapes.

Style

 [Related Topics](#)

Format menu, drawing window

Applies styles to selected shapes. The styles listed in the dialog box are the same as those listed in the style lists on the Text toolbar and Shape toolbar.

DIALOG BOX OPTIONS

Text Style Lists styles that contain text formats.

Line Style Lists styles that contain line formats.

Fill Style Lists styles that contain fill formats.

Preserve Local Formatting When checked, this option prevents attributes defined in a style from overriding formatting applied directly to selected shapes. For example, if a text style specifies italic text, and you've used the Bold button to make the text bold, Visio leaves the text bold but also makes it italic.

Apply Choose this button to apply styles without closing the dialog box. If necessary, drag the dialog box by its title bar to make selected shapes visible on the page.

Subtract

 [Related Topics](#)

Shape > Operations, drawing window

The Subtract command works like a cookie cutter. Overlap two shapes, select the first one, and then the second. Choose Subtract to delete the second shape you selected, leaving its shape cut into the first. (The overlapping segment of the second shape is "subtracted" from the first.)

When you use this command on two or more shapes, Visio creates a ShapeSheet spreadsheet for the new shape and deletes the ShapeSheet spreadsheets of the original shapes.

Switch Sides

 [_Related Topics](#)

Right-click a docked stencil's title bar

Docks the stencil on the opposite side of the drawing window.

Tab Properties dialog box

 [_Related Topics](#)

Text dialog box (Tabs tab), click New or Edit

Specifies the position and alignment for a new or existing tab.

DIALOG BOX OPTIONS

Position Shows the distance of the tab stop from the left margin. To move the tab, change the setting.

Align Shows the alignment of the selected tab. To change the alignment, choose between Left (the left side of the text aligns with the tab stop), Center (centers the text on the tab stop), Right (the right side of the text aligns), or Decimal (the decimal points in a column of numbers align).

Template Help

 [_Related Topics](#)

Help menu

Opens online documentation for the template you're working with. [Template Help](#) provides helpful tips and instructions for creating drawings with a specific template.

For details about a specific shape on a stencil or on the drawing page, right-click the shape and choose [Shape Help](#).



Text block tool

[_Related Topics](#)

Standard toolbar

Use the [text block](#) tool to select a shape's text block. You can size, move, and rotate the text block independently of its shape. To use the text block tool, click the text tool and hold down the mouse button. The text tool menu appears, from which you can choose the text block tool.

To rotate a text block, select a [rotation handle](#), and then drag. To move a shape, click inside the center of the shape or on the green border, and then drag. To size a shape, click one of the [selection handles](#), and then drag.

Text dialog box

 [Related Topics](#)

Format >Text, drawing and ShapeSheet windows

Opens a tabbed dialog box where you can apply formatting to selected text or to all text in the [text blocks](#) of selected shapes.

To format selected text, use the [text tool](#) on the Standard toolbar to open the text block and then select the text you want to format. To apply formatting to all text in a shape's text block, select the shape.

Tip: If the selected text contains more than one setting for any format (for example, more than one font), the Text dialog box displays the formatting of the first character in the selection.

Click one of the following tabs to set formatting options:

[Font](#)

[Paragraph](#)

[Text Block](#)

[Tabs](#)

[Bullets](#)

Tip: You can also use buttons on the [Text toolbar](#) to format text. Use [tips](#) to identify the buttons.

Text dialog box (Font tab)

 [Related Topics](#)

Format > Text, click Font tab; drawing and ShapeSheet windows

Specifies font and style characteristics for selected text or the selected shape's entire text block.

DIALOG BOX OPTIONS

Font Displays a list of all the enabled fonts installed in Microsoft Windows. To change the font, choose from the list. You can also use the font list on the Text toolbar. Use tips to identify the button.

The symbol TT precedes TrueType fonts. A printer icon precedes printer fonts that are not TrueType fonts. Fonts with neither icon are Windows fonts but not TrueType, so they may not size or print as well as TrueType or printer fonts.

Size Determines the point size of selected text. You can also use the font size list, or the increase font size or decrease font size buttons on the Text toolbar. Use tips to identify the buttons.

Color Determines the text color. To assign a custom color, choose Custom. The Color dialog box appears, in which you can define the new color in the color palette. You can also use the font color palette on the Text toolbar. Use tips to identify the button.

Case Determines whether text appears in uppercase or lowercase as you type, or as all uppercase or initial capitals regardless of how you typed the text. (For small caps, choose that option in the Style section.)

Position Determines whether text is displayed in normal, superscript, or subscript position.

Language Once you choose a language (such as French) from this box, when you use Spelling, Visio uses the appropriate dictionary (such as the French dictionary) to check the spelling of the formatted text.

Style Determines whether text is displayed in bold, italic, underline, or small caps style. You can also use the bold, italic, and underline buttons on the Text toolbar. Use tips to identify the buttons.

Apply Applies formatting without closing the Text dialog box.

Displays all characters as uppercase, regardless of whether you typed lowercase or uppercase letters.
(For small caps, choose that option in the Style section.)

Displays the font as you first typed it—uppercase, lowercase, or a mixture of characters.

Displays the first character of every word as an uppercase letter, with all other characters lowercase, regardless of whether you typed lowercase or uppercase letters.

Aligns text horizontally on the baseline.

Raises text slightly above the baseline and reduces the point size.

Drops text slightly below the baseline and reduces the point size.

Makes the font heavier.

Makes the font slanted.

Draws a line under the text.

Displays all lowercase characters as small capital letters (smaller than the specified point size), leaving uppercase characters full-size.

Text dialog box (Paragraph tab)

 [Related Topics](#)

Format > Text, click Paragraph tab; drawing and ShapeSheet windows

Specifies alignment, indentation, and spacing for selected paragraphs or the selected shape's entire text block.

DIALOG BOX OPTIONS

Horizontal Alignment Displays the current horizontal alignment of the text in relation to the text block margin. Choose Left, Right, Center, Justify, or Force Justify. You can also use the align and justify buttons on the Text toolbar. Use tips to identify the buttons.

Indentation Displays the current indentation from the text block margins. You can also use the increase indent or decrease indent buttons on the Text toolbar. Use tips to identify the buttons.

Spacing Displays the current paragraph and line spacing. Type values for Before, After, and Line. You can also use the increase paragraph spacing and decrease paragraph spacing buttons on the Text toolbar. Use tips to identify the button.

Apply Applies formatting without closing the dialog box.

Starts each line of text at the left margin. The right side of the text is ragged.

Centers each line of text between the left and right margins.

Positions the last character in each line at the right margin. The left side of the text is ragged.

Adjusts the spacing between words and characters so each line of text (except the last line of the paragraph) fills the space between the left and right margins.

Adjusts the spacing between words and characters so each line of text (including the last line of the paragraph) fills the space between the left and right margins.

Specifies the space Visio inserts before a paragraph (except for the first paragraph in the text block). Traditionally, vertical spacing is measured in points. One point (abbreviated as pt.) equals $\frac{1}{72}$ inch. You can type new values using any unit of measure.

Specifies the space Visio inserts after a paragraph (except for the last paragraph in the text block). If you specified a value for Before, the amount of space between paragraphs will equal the sum of the Before and After values. Traditionally, vertical spacing is measured in points. One point (abbreviated as pt.) equals $1/72$ inch. You can type new values using any unit of measure.

Specifies the space Visio inserts between lines in a paragraph. You can specify a percentage of the type size; the default setting of 120 percent ensures that characters do not touch the line below. Otherwise, you can type an absolute size (for example, for 12-point type with two extra points inserted between lines, set line spacing to 14 points).

Text dialog box (Text Block tab)

 [Related Topics](#)

Format > Text, click Font tab; drawing and ShapeSheet windows

Sets the vertical alignment, margins, and background color for the selected [text block](#).

DIALOG BOX OPTIONS

Vertical Alignment Specifies the vertical position of the text in relation to the top and bottom margins of the text block. Choose from [Top](#), [Middle](#), or [Bottom](#). You can also use the alignment buttons on the [Text toolbar](#). Use [tips](#) to identify the buttons.

Margins Specifies the distance between the text and each edge of the text block. To change margins, type a number in the appropriate box: Top, Left, Bottom, or Right.

Text Background Specifies whether the text block is transparent or opaque. For an invisible background that reveals shapes behind the text, choose None (Transparent).

Apply Applies text block formats to the selected shapes without closing the dialog box.

Aligns the top line of text with the top margin.

Centers the text between the top and bottom margins so the distance from the top line to the top margin equals the distance from the bottom line to the bottom margin.

Aligns the bottom line of text with the bottom margin.

Text dialog box (Tabs tab)

 [Related Topics](#)

Format > Text, click Font tab; drawing and ShapeSheet windows

Adds, deletes, and adjusts tab stops for paragraphs or for a selected shape's entire text block.

You can add up to 10 tab stops and delete tabs you no longer want. To move a tab, change the settings in the Edit Tab section. To define a new tab, type the tab's position in the Position box, and then select the alignment from the Alignment list.

DIALOG BOX OPTIONS

Tab Stops Lists the current tab stops. The left side of the box lists tab positions, and tab alignment is listed on the right. To edit a tab, select it, then click Edit.

Add Opens the Tab Properties dialog box, where you can set the position and alignment for a new tab. The new tab appears in the Tab Stops list.

Edit Opens the Tab Properties dialog box, where you can edit the position and alignment for the select tab.

Delete Deletes the tab stop selected in the Tab Stops list.

Apply Applies all the tabs in the Tab Stops list to the selected text without closing the dialog box.

Text dialog box (Bullets tab)

 [Related Topics](#)

Format > Text, click Font tab; drawing and ShapeSheet windows

Specifies bullet options for selected paragraphs or for the selected shape's entire [text block](#).

You can also use the [bullets](#) button on the [Text toolbar](#) to apply the last-used bullet formatting. Use [tips](#) to identify the button.

DIALOG BOX OPTIONS

None Removes bullet formatting from text.

Other options Specifies bullet formatting indicated by the icons. All of the formatting options use hanging indents, except the last.

Apply Applies formatting without closing the Text dialog box.

Text tool (Ctrl+2)

Standard toolbar

Use the text tool to create a freestanding text block (the shape is invisible) or activate a text block so you can edit the text. To create new freestanding text, choose the text tool to place an insertion point, and then type.

If you want the text block to have a certain line length, drag to create an area of the width you want, and then type.

Tip: To add text to a shape or replace all of a shape's text with new text, select the shape with any tool and start typing.

Text toolbar

 [Related Topics](#)

View > Toolbars, Toolbar shortcut menu

Displays a Visio toolbar that provides buttons you can use as shortcuts for choosing menu commands. To switch the toolbar, choose View > [Toolbars](#) or right-click the toolbar, then choose Text from the shortcut menu.

The tools available on the Text toolbar are style list, font list, font size list, bold, italic, underline, align left, center, align right, justify, align top, middle, align bottom, bullets, decrease indent, increase indent, decrease paragraph spacing, increase paragraph spacing, increase font size, decrease font size, font color palette, and rotate text 90°.

Note: Your toolbar may vary depending on the display resolution of your monitor, the size of your window, and which window is active.

Tile

 [_Related Topics](#)

Window menu

Sizes and arranges open windows side by side so that all windows are visible.

Shortcut: Press Shift+F7 to tile horizontally, or press Ctrl+Shift+F7 to tile vertically.

Tip: To enlarge the active window so it fills the screen, choose the Maximize button in the upper-right corner of the window. Choose the Restore button to return the window to its previous tiled size.

Toolbars

 [_Related Topics](#)

View > Toolbars menu; drawing, stencil, and print preview windows

Changes the Visio toolbar.

DIALOG BOX OPTIONS

Toolbars Check the toolbars that you want Visio to display. Options are [Standard](#), [Text](#), [Shape](#), [View](#), [Page](#), [Web](#), and [Developer](#).

Options Choose display options for the toolbar. Options are Large Buttons and Show [ScreenTips](#).

Tip: Right-click anywhere on the toolbar or status bar to change display options.

Transparent Color box

 [_Related Topics](#)

Edit icon toolbar, edit icon window

Specifies that the pixels you draw be transparent. To draw transparent pixels, click the Transparent Color box with the left or right mouse button; the transparent color appears in the [Left Color box](#) or the [Right Color box](#).

Trim

■ [Related Topics](#)

Shape > Operations, drawing window

Splits selected objects at their intersections. It creates a new shape for each piece, preserving styles. Shapes you trim lose their fill.

Undo (Ctrl+Z)

 [_Related Topics](#)

Edit menu

Reverses the most recent action. You can reverse up to ten actions, one at a time.

You can also use the undo button on the [Standard toolbar](#). Use [tips](#) to identify the button.

You can undo most but not all actions. If an action can be undone, the command is Undo, followed by the type of action. When you cannot undo an action, this command changes to Can't Undo. You can reverse an undo action by using the [Redo](#) command from the Edit menu.

Ungroup (Ctrl+U)

 [Related Topics](#)

Shape > Grouping, drawing window

Ungroups the selected group, leaving the individual shapes that belong to the group selected. Also, converts a pasted or imported Windows metafile (.wmf) or an OLE object into individual shapes.

When you ungroup a group, Visio deletes the group's ShapeSheet spreadsheet and leaves the individual shapes' ShapeSheet spreadsheets intact.

You can also use the ungroup button on the Shape toolbar. Use tips to identify the button.

Tip: If a shape within the group is a group, it remains a group, and you must select and ungroup it to make individual shapes of its components.

Union

 [Related Topics](#)

Shape > Operations, drawing window

Creates one closed shape from overlapping shapes, which inherits the text and formatting of the first shape you select. If the shapes do not overlap, Visio creates a single shape that looks the same as the shapes you united, except that it uses the text and formatting of the shape you selected first.

When you unite two or more shapes, the [ShapeSheet spreadsheets](#) for the shapes you unite are deleted, and Visio creates a ShapeSheet spreadsheet for the new shape.

Unlink All Tasks

 [_Related Topics](#)

Project Timeline template, Project > Unlink All Tasks

Unlinks all tasks in a project timeline. A link is a dependency. Linking two tasks means that you can't start the later task until the earlier task is completed. Unlinking breaks the dependency.

Unlink Tasks

 [_Related Topics](#)

Project Timeline template, Project > Unlink Tasks

Or, right-click a task bar or horizontal grid line, then choose Unlink Tasks

Unlinks selected tasks in a project timeline. A link is a dependency. Linking two tasks means that you can't start the later task until the earlier task is completed. Unlinking breaks the dependency.

Unprotect Document

 [_Related Topics](#)

Tools menu, drawing window

Opens a dialog box where you can cancel the protection options set in the Protect Document dialog box. Available only if you used the [Protect Document](#) command with a password to lock a drawing file from editing.

DIALOG BOX OPTIONS

Password Type the password that was entered in the Protect Document dialog box. If you used a password, you must type it to cancel the protection.

Update Alignment Box

 [_Related Topics](#)

Tools menu, drawing window

Adjusts the selection rectangle of a group to fit its new dimensions. You can use this command after deleting or adding a shape to a group, or changing the size of a shape in the group, in the group window. You can also use this command after editing the vertices of a shape in the ShapeSheet spreadsheet.

Update Database Record

 [_Related Topics](#)

Right-click a selected shape linked to a database record

For this command to appear on a shape's shortcut menu, you must have previously run the [Database Wizard](#) to link the shape to a database record.

Updates cells in a database record to reflect changes to the Visio shape the record is linked to. Values for fields in the record's cells are updated to match values in the shape's linked ShapeSheet cells.

Update Icon

 [_Related Topics](#)

Master menu, stencil window

Updates the selected master shape icon to look like the [master shape](#).

If you specify automatic updating for the icon in the [Properties](#) or [New Master](#) dialog box, Visio changes the master shape icon to look like a miniature of the master shape when you change the master shape.

If you specify manual updating in the Properties or New Master dialog box and create a custom master shape icon, you can use the [Edit Icon](#) command to make the icon look different from the master shape. At any point, you can use the Update Icon command to change a custom icon to a miniature of the master drawing.

Values

 [Related Topics](#)

View menu, ShapeSheet window


Displays the values of [ShapeSheet](#) cells instead of formulas. To display formulas instead of values, use the [Formulas](#) command.

View End Date

 [Related Topics](#)

Project Timeline template, right-click Project Frame shape, then choose View End Date

Or, right-click the timescale or nonworking strip, then choose View End Date


Scrolls the timeline to the end date for the last task in a project timeline. You can also click the end date () toolbar button.

View Next Date

 [_Related Topics](#)

Project Timeline template, right-click Project Frame shape, then choose View Next Date

Or, right-click the timescale or nonworking strip, then choose View Next Date


Scrolls the timeline one unit (days, months, or quarters) forward. You can also click the next date () toolbar button.

View Previous Date

 [_Related Topics](#)

Project Timeline template, right-click Project Frame shape, then choose View Previous Date

Or, right-click the timescale or nonworking strip, then choose View Previous Date


Scrolls the timeline one unit (days, months, or quarters) backward. You can also click the previous date () toolbar button.

View Start Date

 [_Related Topics](#)

Project Timeline template, right-click Project Frame shape, then choose View Start Date

Or, right-click the timescale or nonworking strip, then choose View Start Date

Scrolls the timeline to the start date for the first task in the project. You can also click the start date  toolbar button.

View Timeline Range

 [Related Topics](#)

Project Timeline template, Project > View Timeline Range

Or, Right-click the timescale or Project Frame shape, then choose View Timeline Range

Opens the View Timeline Range dialog box where you can type the first and last dates that display on the timeline in the project frame for a project timeline. When you type new dates, the size of the project frame doesn't change. The timeline units may change, therefore, to accommodate the change in dates. For example, if a timeline originally has a first date of April 28 and a last date of May 17 and you change the first date to March 1, the scale units change from Days/Months to Months/Years so the entire date range can be displayed in the project frame.

To resize the project frame so more dates display, select the frame, then drag a side selection handle.

View toolbar

 [Related Topics](#)

View > Toolbars, Toolbar shortcut menu

Displays a Visio toolbar that provides buttons you can use as shortcuts for choosing menu commands. To switch the toolbar, choose View > [Toolbars](#) or right-click the toolbar, then choose View from the shortcut menu.

The tools available on the View toolbar are grid, guides, connections, layer properties, and shape layer list.

Note: Your toolbar may vary depending on the display resolution of your monitor, the size of your window, and which window is active.

Visio DWG Display Properties (General tab)

Double-click a displayed AutoCAD drawing to open the Visio DWG Display Properties dialog box

When you double-click an embedded AutoCAD drawing, Visio displays the Visio DWG Display Properties dialog box. The General tab in this dialog box describes the drawing's dimensions, including the size, number of entities, current space or model space limits, and extents.

DIALOG BOX OPTIONS

Name Shows the name of the AutoCAD file.

Location Shows the drive and path from which the file was opened.

Size Shows the size of the file.

Modified Shows the date the file was last changed.

Number of Entities Shows the number of graphic objects in the file.

Current View/Current Space Shows whether a named view or model space was selected in the displayed file.

Model Space Limits/View Limits Shows the user-defined size limits for the drawing.

Extents Shows the height and width of the drawing in AutoCAD units. Visio reads the size of the AutoCAD drawing extents to determine if the drawing can fit on the drawing page. If you display an AutoCAD file with drawing extents that exceed the Visio drawing page size, the portions of the drawing that fall outside the page won't print.

Visio Home Page

 [_Related Topics](#)

Help > Visio On The Web

Opens your World Wide Web browser application and displays the Visio home page on the Web <http://www.visio.com>. On the Visio Web site you can find the following:

- **Product information** The latest news about Visio products, white papers, sample drawings, and other information.
- **Visio Corporation** Information about the Visio Corporation's evolution, international contacts, career opportunities, and more.
- **Sales and service** Customer service, ordering information, including corporate, academic, and government sales information.
- **Resellers and partners** The reseller newsletter, distribution SKU list, sales tools, descriptions of the reseller and business partner programs, and applications for both.
- **Downloads and demos** Sample code for creating Visio add-ons and macros, stencils and templates contributed by third-party developers, and Visio patches and demo versions.

Visio Solutions Library

 [_Related Topics](#)

Help > Visio On The Web

Opens your World Wide Web browser application and displays a Web site, <http://www.visio.com/solutions>, that contains a variety of specialized drawing solutions—everything from job-specific shapes to time-saving utilities. You can purchase and download these solutions directly from the Web to anywhere in North America.

Visual Basic Editor (Alt+F11)

 [_Related Topics](#)

Tools menu, Macro submenu

Opens the Visual Basic Editor window, in which you can use Visual Basic for Applications (VBA) to debug, edit, or create a new [macro](#).

You can also use the Visual Basic editor button on the [Developer toolbar](#). Use [tips](#) to identify the button.

Web toolbar

 [Related Topics](#)

View > Toolbars, Toolbar shortcut menu

Displays a Visio toolbar that provides buttons you can use as shortcuts for choosing menu commands. To switch the toolbar, choose View > [Toolbars](#) or right-click the toolbar, then choose Web from the shortcut menu.

The tools available on the Web toolbar are insert hyperlink, back, forward, search the web, and [Shape Explorer](#).

Note: Your toolbar may vary depending on the display resolution of your monitor, the size of your window, and which window is active.

What's This? (Shift+F1)

 [Related Topics](#)

Help menu

Displays context-sensitive online help for the item you click after choosing the What's This command. For example, to display Help for the drawing page, choose What's This from the Help menu (the cursor becomes a question mark), then click the drawing page.

You can also use the help button on the [Standard toolbar](#). Use [tips](#) to identify the button.

Whole Page (Ctrl+W)

 [_Related Topics](#)

View menu, drawing and print preview windows

Displays the entire page in the drawing or print preview window.

You can also use the whole page button in the [print preview window](#). Use [tips](#) to identify the button.

Or, while working in the drawing window, you can choose Page from the zoom list on the [Standard toolbar](#).

Zoom (Custom) (F6)

 [Related Topics](#)

View > Zoom, drawing window

Adjusts the view of a page. You can choose from percentage options to display a page in proportion to its actual size (which corresponds to the 100% option) or choose Custom and type a percentage to specify the view. The range of the view depends on the drawing size.

Zoom to the size that best suits your work; for example, viewing a very small drawing probably requires magnification.

You can also use the zoom list on the [Standard toolbar](#). Use [tips](#) to identify the list.

DIALOG BOX OPTIONS

Magnification Choose [Whole Page](#) to display the entire page and part of the surrounding [pasteboard](#). Standard percentages from 50 to 400 percent, as well as Whole Page and [Page Width](#), are available with the Zoom command or in the zoom list; or type a number in the Percent box.

Options Specifies zoom options.

Zoom When Editing Text When this option is checked, Visio zooms in on text (depending on the font size and the current view) when you select a shape and type, double-click instances of certain master shapes, or select a shape with the text tool or text block tool.

Center Selection In Window If any shapes are selected when you adjust the view, Visio zooms in on the center of the selection. If nothing is selected, Visio centers the new view in the center of the previous view.

Tip: When you hold down the Ctrl+Shift keys, the pointer turns into a magnifying glass. Clicking the left mouse button enlarges the view; clicking the right mouse button reduces the view. Whether you enlarge or reduce, Visio centers the new view wherever you click.

Zoom %

 [_Related Topics](#)

View > Zoom; drawing window

Magnifies the page to the percent you choose. You can choose preset zoom levels or choose Custom to specify a zoom level.

You can also use the zoom in or zoom out buttons, or the zoom list on the [Standard toolbar](#). Use [tips](#) to identify the buttons and the list.

Zoom In

 [_Related Topics](#)

View menu, print preview window

Magnifies the page or [tile](#) to its actual size in the print preview window. [Zoom](#) to the size that best suits your work; for example, viewing a very small drawing probably requires increased magnification.

You can also use the zoom in button on the [Standard toolbar](#). Use [tips](#) to identify the button.

Zoom Out

 [_Related Topics](#)

View menu, print preview window

Returns the page or [tile](#) to the Whole Page view in the print preview window. [Zoom](#) to the size that best suits your work; for example, viewing a very large drawing probably requires decreased magnification.

You can also use the zoom out button on the [Standard toolbar](#). Use [tips](#) to identify the button.

AutoCAD

Array Shapes

Visio Glossary



Click a letter to go to that section.

A

[Action](#)
[Active document](#)
[Active page](#)
[Add-on](#)
[Alignment box](#)
[Anchor point](#)
[Angle of rotation](#)
[Angular units](#)
[Antiscaling](#)
[Attribute](#)
[Automation](#)

B

[Background](#)
[Begin point](#)
[Bitmap](#)
[Bow](#)

C

[Cell reference](#)
[Center of rotation](#)
[Chord](#)
[Class module](#)
[Client-side image maps](#)
[Clipboard](#)
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[Connector](#)
[Container](#)
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D

[Default font](#)
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Action

1. A user-defined menu item associated with a shape. When the shape is selected, the item appears on the shortcut menu and on the Actions submenu of the Shape menu. 2. A program or Visio command that runs in response to an event. See also event.

Active document

The document that is currently available for editing in an instance of Visio.

Active page

The drawing page that is currently available for editing in a Visio document.

Add-on

A program that extends Visio through Automation references to Visio objects, methods, and properties. When an add-on's .exe or .vsl file is installed in a folder along the Visio add-on's path, its name appears in the Macros dialog box.

Alignment box

The rectangle that appears around shapes and objects from other applications as you move them. See also selection rectangle.

Anchor point

A fixed point that anchors a "rubber band" line, whose other end is connected to a control handle. As the user moves the control handle, the rubber band stretches and shrinks to show the original location of the handle. The anchor point provides information to the user, but it does not affect the behavior of the control handle. See also control handle.

Angle of rotation

The angle of the orientation of a shape's local coordinate system with respect to its parent coordinate system. The angle of rotation is specified in the Angle cell of the ShapeSheet's Shape Transform section.

Angular units

The units in which angles are expressed in ShapeSheet

cells. See also default units, internal units.

Antiscaling

Behavior in which a shape is not sized according to the drawing scale of a page. Visio automatically antiscals shapes when the drawing scale of the master exceeds the range of eight. See also range of eight.

Attribute

Individual formatting elements, such as line color, fill color, and line weight, that you can apply to shapes. A style can have several attributes. See also format, style.

Automation

A means by which an application can incorporate or extend the functionality of another application by using its objects. Formerly known as OLE Automation. See also object.

Background

A page that you can assign to another page to create multiple layers in a drawing. You can see shapes on a background when the page it is assigned to is displayed, but you can't select or edit the background's shapes without displaying the background. See also foreground page, layer.

Begin point

The selection handle at the beginning of a 1-D shape. The begin point is marked by an X. Also called beginning point.

Bitmap

An image stored as a pattern of dots. A scanned photograph or graphic that you create in a paint program is usually stored as a bitmap.

Bow

The distance from the midpoint of a circular arc to the midpoint of the arc's chord.

Cell reference

Used in ShapeSheet formulas to calculate the value of

one cell on the basis of the value of another cell.

Center of rotation

The point around which a shape or text block rotates. When you select a 2-D shape with the rotation tool, its center of rotation is marked by a circle with a plus sign inside it. By default, the center of rotation is at the center of the shape. You can move the center of rotation by dragging it with the rotation tool. See also pin.

Chord

A line that connects the endpoints of an arc.

Class module

In a VBA or Visual Basic project, a module containing the definition of a class (its properties and methods). See also module.

Client-side image map

A graphic with different linked regions. All the information a Web browser needs to process a click on a linked region is stored in the HTML file with the image data. See also Server-side image map.

Clipboard

A temporary storage area in Windows that is used to transfer data between documents and applications. You can use the Clipboard to copy shapes and text and to copy shapes between drawings in Visio or between Visio and other Windows applications.

Code behind events

In a VBA program, code that is executed when an event occurs. For example, a button on a user form usually has code behind the Click event. See also event procedure.

Connection point

A point on a shape where a connector can be glued to a shape. You can create new connection points inside, outside, or on the perimeter of a shape by using the connection point tool. Each of a shape's connection points is marked with a blue X (■) when Connection Points is checked on the View menu.

Connector

Any one-dimensional shape that can be glued between two shapes in a drawing to connect the shapes. Some master shapes are connectors. You can also use lines and other shapes you draw as connectors. See also SmartConnector.

Container

An OLE application in which you embed or link information. For example, if you insert a Visio drawing into a Microsoft Word document, Microsoft Word is the container application. A container application is also known as a client. See also OLE.

Control

An object you can place on a user form or a Visio drawing page that has its own set of properties, methods, and events, such as a toolbar button.

Control handle

A handle that makes shapes behave in special ways. For example, you might use a control handle to adjust the roundness of a shape's corners, to reshape an arrow, or to drag a connector directly out of another shape.

Controller application

In Automation, the application (such as your program) that uses the objects exposed by a provider application. The controller application creates instances of the objects and then sets their properties or invokes their methods to make the objects serve the application.

Control point

1. The circle that appears on a line or an arc (or a line or an arc segment) when the line or arc is selected with the pencil tool. You can drag a control point to change the curvature of an arc or ellipse. 2. A point that influences the curvature of a spline segment. See also domain of influence.

Control polygon

A series of straight line segments that connect all the control points of a single spline.

Coordinates

A pair of numbers that indicates the position of a point in relation to the origin of a shape, a group, or the page. The x-coordinate indicates the horizontal distance and the y-coordinate indicates the vertical distance of the point. Most ShapeSheet formulas are expressed as coordinates for controlling the position and size of a shape. See also origin.

Crop

To reduce or expand an object from another application used in a Visio drawing. Although cropping appears to clip off parts of the object, Visio retains the clipped portions of the object in memory. You crop an object by selecting it with the crop tool and dragging one of its handles.

Crow's Foot

A specification language for describing data structures. Visio includes a Crow's Foot template. You can use the Crow's Foot entity and relationship shapes to diagram the structure of databases.

Custom color

A color in Visio that is stored with a shape as an rgb or hsl value rather than as an index to the document's color palette. A custom color is saved only with the shape to which it is applied.

Default font

The font that Visio uses by default to display text included in a shape. The default font can be specified in the [Application] section of visio.ini with settings for DefaultFontName, DefaultFontFamily, and DefaultFontCharset. If the [Application] section of visio.ini contains the line "ShowDefaultFont = 1", the default font is displayed with angle brackets in the Font dialog box.

Default units

The units of measure used to display a value in a ShapeSheet cell if no units of measure are explicitly specified. Default drawing and page units are properties of a drawing page. Default angular and text units are application settings.

Domain of influence

The portion of a spline, specified as a number of spline knots, whose curvature is influenced by a single control point.

Drag and drop drawing

Creating an instance of a master shape in a drawing by dragging the master shape from a stencil to the drawing. To drag a master shape, point to it with the mouse and hold down the left mouse button. Move the mouse until the shape is where you want it in the drawing, and then release the mouse button to drop the shape.

Drawing

All the shapes on the foreground page together with all the shapes on optional background pages.

Drawing file

A Visio file with a .vsd extension that contains a drawing. To create a drawing file, choose New from the File menu, and start the drawing from scratch, or base it on a template (drawing type). Then save the file.

A drawing file can contain one or more pages. Every drawing file has its own stencil, called a local stencil, which contains all the master shapes you used on any of the drawing pages in that file, even if you deleted them from the drawing page. You can view the local stencil by choosing Show Master Shapes from the Window menu.

Drawing page

The printable area in a drawing window that contains a drawing. A page can be either a foreground or a background page. Each page has a size, which usually corresponds to a standard paper size, and it has a scale. See also background page, foreground page.

Drawing scale

The ratio of a page scale to a specified number of drawing units, such as 1 cm = 1 m. Also called scale.

Dynamic Connector

A 1-D connector shape that changes its path to avoid

crossing through 2-D placeable shapes that lie between the two shapes the connector connects. (This type of connector is also called a "routable connector.") When you drag a Dynamic Connector's endpoints, it reroutes automatically. When you select the Dynamic Connector, it displays midpoints and vertices you can drag to manually change its route from one shape to the other.

Visio creates a Dynamic Connector when you use the connector tool or the Connect Shapes command, as long as a connector shape is not selected on the stencil. See also placeable shape.

Dynamic glue

A type of glue that allows the endpoint of a connector shape to move from one connection point to another as the connected shapes are moved. (When shapes are connected without dynamic glue, the endpoints of the connector are attached to specific connection points; in that case, instead of jumping to a new connection point, the connector will change shape to avoid crossing over the shapes when they're moved.)

Eccentricity handle

The circle that appears at each end of a dotted line when a control point of an elliptical arc is selected with the pencil tool. Eccentricity handles are dragged to change the angle and magnitude of an arc's eccentricity.

Embed

To insert a Visio drawing into another application's document (a container application) to establish a dynamic connection between the drawing and the other document through the object linking and embedding (OLE) protocol. In the container application, you can open the embedded drawing in Visio to edit it. You can also insert objects from other applications into Visio. When you embed an object based on an existing file, then edit the original file, the embedded object does not automatically reflect changes. See also OLE and In place.

Endpoint

Either of the square handles that appear at the beginning or end of a selected line, arc, or other one-dimensional shape. The endpoint at the beginning of the shape (begin point) is marked by an X. The endpoint at the end of the shape (end point) is marked by a plus sign (+). See also vertex, vertices.

Event

An occurrence in Visio, such as a change to a shape formula or the deletion of a page. See also action, code behind events.

Event object

A Visio object you create from a standalone Visual Basic, C, or C++ program to handle Visio events. An Event object pairs an event with an action—either to run an add-on or to notify an object in your program that the event occurred. When the event occurs, the Event object fires, triggering its action.

Event procedure

In a Visual Basic program, code that is executed when an event occurs. For example, a button on a Visual Basic form usually has an event procedure to handle the Click event. See also code behind events.

Event sink

See sink object.

Explicit units

Units of measure specified as part of a number-unit pair so that the result is always displayed using the units specified. For example, the value "3 mm" always appears in the ShapeSheet window as "3 mm." See also default units, implicit units.

Expression

A combination of values, operators, functions, and sheet references that results in a value. A logical expression compares two values and yields a true or false result.

Field

A placeholder in text that displays information such as dimensions, dates, and times. A field might display the date and time a drawing is printed, a shape's angle of rotation, or the result of a formula you write. Fields are automatically updated when you change a drawing. A field can also read information from Lotus Notes.

Fill

The color and pattern inside a closed shape. Visio's default fill is solid white.

Foreground

The top page of a drawing. Shapes on the foreground page appear in front of shapes on the background page and are not visible when you edit the background of the drawing. See also background.

Format

To affect the visual appearance of a shape (such as the thickness and color of its lines, the color and pattern inside the shape, and its font) either by using a style or by applying individual attributes. See also attribute, style.

Format picture

A set of symbols and abbreviations that Visio interprets and uses to format string output, such as in a custom text field formula. For example, "0.## UU" is a format picture that displays the input value "260.125 ft." as "260.13 FEET".

Formula

An expression that is entered in a ShapeSheet cell, which returns a value. See also expression.

Formula bar

The portion of the ShapeSheet window in which you enter a formula for the selected ShapeSheet cell.

Function

A calculation tool used for a variety of purposes in a ShapeSheet formula. Visio includes mathematical, trigonometric, geometric, event, date and time, color, logical, statistical, and other functions.

Geometry

An arrangement of vertices and segments that define a path.

Gesture recognition

A feature of the pencil tool. As you begin to move the mouse, Visio quickly calculates the path the mouse

pointer travels. If the path of the mouse is straight, the pencil tool draws a straight line segment. If the path curves, the pencil tool draws an arc.

Glue

A property of shapes that causes them to stay connected even when one of the shapes is moved. When you attach a connector to a shape, you are gluing the connector. If you move the shape, Visio adjusts the connector as needed. If you move the connector, the glue is broken and the shapes are no longer connected. See also dynamic glue.

Grid

Grids are non-printing horizontal and vertical lines displayed at regular intervals on the page.

Grid lines

The faint vertical and horizontal lines that appear in the drawing window when the grid is turned on. You can use grid lines to help position shapes precisely.

Grid origin

The point that defines the layout of grid lines on the drawing page. A vertical grid line and a horizontal grid line pass through the grid origin, and all other grid lines are drawn at specified intervals from these reference lines. By default, the grid origin is the lower-left corner of the drawing page.

Group

A shape that is composed of two or more shapes. A group can also include other groups and objects from other applications. A group can be moved and sized as a single shape, but its members retain their original appearance and properties.

Group window

A drawing window you can open to edit individual components of a group. The group appears unrotated in the group window even if it is rotated on the drawing page. To open the group window, select the group, then choose Edit > Open [group name].

Guide, guide point

A reference line that can be dragged into the drawing window to help position shapes precisely. A horizontal guide is dragged from the horizontal ruler, a vertical guide from the vertical ruler, and a guide point from the upper-left corner of the drawing window, where the horizontal and vertical rulers meet.

Handle

A control that appears when you select a shape. You can use handles to alter a shape. Handles vary with the type of shape and the tool you use to select it. For example, when you select a shape with the pointer tool, it displays selection handles that you can drag to change the shape's size and proportions. When you select a shape with the rotation tool, the shape displays rotation handles that you can drag to rotate the shape. See also control handle, eccentricity handle, rotation handle.

IDEF1X

A specification language for describing data structures. Visio includes an IDEF1X template. You can use the IDEF1X entity and relationship shapes to diagram the structure of databases.

Image map

A type of graphic used on the World Wide Web. An image map is divided into different regions, some of which are associated with links. See also Client-side image map and Server-side image map.

Implicit units

Units of measure specified as part of a number-unit pair in which the result is displayed using a specified measurement system, which may not coincide with the units originally entered. For example, the expression "1 [in.,d]" specifies that the value is initially interpreted as 1 inch, but the d indicates that the result is displayed using the default drawing units of the current page. If the drawing units are centimeters, the ShapeSheet displays "2.54 cm." See also default units, explicit units.

Index

A number corresponding to the position of a color in the Color dialog box. The index is displayed to the left of the color. Visio records stores a shape's color as the index for that color.

Inherited formula

A formula that is stored in a style or a master but used by an instance as if the formula were stored locally with the shape. A change to a formula in the style or master affects all shapes that inherit the formula and do not have an overriding local formula.

In place

Visio opens in place when you run it from within a container application. When you work in place, Visio menus and toolbars appear and replace some of the container's menus and toolbars.

Insertion point

The blinking vertical line that appears in text when you select a shape with the text tool and click the text with the mouse. Text you type appears at the insertion point. You can move the insertion point by clicking another location with the mouse or by pressing the arrow keys.

Instance

1. A copy of a master shape, which you create by dragging the master shape from a stencil to a drawing.
2. A running image of a Windows application.

Internal units

The units of measure that Visio uses internally to store dimensional values. Visio's internal units are inches for linear measurements and radians for angular measurements.

Jump

A hyperlink between a shape or drawing page and another page in the drawing file, a file in another application, or an Internet site. You can right-click the shape or drawing page to "jump" to the destination.

Library

See Visio library, Visio type library.

Link

To establish a dynamic connection between an object in a Visio drawing and another application's file through

the object linking and embedding (OLE) protocol. When changes are made to the original file, you can update the link so that the most current version of the object appears in the linked file. See also OLE.

Local coordinates

The coordinate system whose origin is the lower-left corner of a shape's width-height box. The geometry of a shape is expressed in local coordinates. See also page coordinates, parent coordinates.

Local formatting

Individual formatting attributes such as line width, fill color, or font size, that you apply to a selected shape by using a command on the Format menu, such as Line, Fill, or Text. Local formatting is most useful when you want to give a unique look to one shape, or to just a few shapes.

Local formula

A formula that is stored in a cell of a shape instead of being inherited from a master or a style. A local formula overrides changes to the corresponding cell in the master of which the shape is an instance. Also called local override. See also inherited formula.

Local stencil

A stencil stored in a drawing file, which contains an inventory of the master shapes used in all of the drawings in the file. Master shapes on the local stencil are linked to their instances in the drawings. To display the local stencil for the current drawing file, choose Show Master Shapes from the Window menu. See also stand-alone stencil.

Lock

A setting that limits the ways that users can change a shape. For example, a lock on a selection handle prevents the user from resizing a shape using the selection handle.

Macro

1. A Visual Basic for Applications (VBA) program that extends Visio through Automation by referencing Visio objects, properties, methods, and events. 2. A procedure that takes no arguments and is contained

within a module within a project stored in a Visio template, stencil or drawing.

Master shape

A shape in a stencil. You drag and drop a master shape from a stencil into a drawing to create an instance of the master shape. Many of the master shapes in the stencils provided with Visio are SmartShapes symbols—shapes with programming that controls how the shape behaves when it is moved or sized.

Modeless activity

A program activity that does not terminate when control returns to Visio. For example, an add-on may open a modeless window, which remains open after the add-on terminates.

Module

In a VBA or Visual Basic project, code that is a set of declarations followed by procedures. A standard module contains only procedure, type, and data declarations and definitions. See also class module, user form.

Multiplicity

The number of times a spline knot is repeated.

Nonperiodic spline

A spline with defined endpoints. If a spline's begin point and end point coincide, the spline is closed. See also periodic spline.

Notification sink

See sink object.

Number-unit pair

An expression that includes a number and a corresponding dimension. For example, "1 cm" is a number-unit pair.

Object

Information created in another application and imported, embedded, or linked in a Visio drawing. The term object is used to refer to objects from other applications and OLE objects. The application that the object is created

in is known as the server application. See also OLE.

Object linking and embedding (OLE)

A Windows protocol that makes it possible to embed an object created in one Windows application into a document created in a different Windows application, or to link an object to a file that contains the original object.

Offset

For a specified line or curve, Visio implements the offset as a pair of lines that are equidistant from the original line or curve. The offset from a straight line is a pair of straight lines, and the offset of a circular arc is a pair of circular arcs. If the offset to a curve is not a line, arc, or elliptical arc, then the offset is a spline, or series of splines that approximate the offset of the curve. This approximation comes as close as possible to fitting all the points that are a specified distance from a curve.

One-dimensional (1-D) shape

A straight line or arc you draw in Visio, a connector on a stencil, or any shape you define as a one-dimensional shape. A one-dimensional shape has a beginning point and an ending point and can be glued between two shapes to connect them. See also two-dimensional (2-D) shape.

ODBC (Open Database Connectivity)

A Microsoft interface that allows applications to access, view, and modify data from a variety of databases. Many database applications, including Microsoft Access 7.0, Microsoft SQL Server, and Oracle SQL Server, are ODBC-compliant.

Origin

The lower-left corner of the selection rectangle of a shape, of a group, or of the drawing page. The x- and y-coordinates of the origin are always 0,0. Dimensions of a shape, such as its width and height, and the center of rotation are measured from its origin. The location of a shape in relation to its parent (a group or the page) is measured from the parent's origin. See also coordinates.

Orthogonal

Intersecting or lying at right angles. You can rotate a

Visio drawing page so that every shape in your drawing—regardless of the angle at which it is drawn—can be drawn orthogonally; in effect, the drawing maintains a horizontal and/or vertical orientation to the Visio gridlines and rulers.

Page

The printable area in a drawing window that contains a drawing. A page can be either a foreground or a background page. Each page has a size, which usually corresponds to a standard paper size, and it has a scale. See also background, foreground, layer.

Page coordinates

The coordinate system whose origin is the lower-left corner of a drawing page.

Page scale

The number of page units that represent the number of drawing units specified in the drawing scale. For example, if the drawing scale is 1 cm = 1 m, the page scale is 1 cm. See also drawing scale, drawing unit, page unit.

Page sheet

A ShapeSheet that represents a page. See also ShapeSheet.

Pan

To move an OLE object with the crop tool by holding down the left mouse button and shifting the object within the object's border. See also handle, object linking and embedding (OLE).

Parametric

The ability of a Visio shape to adjust its geometry and other attributes according to the values of certain parameters.

Parent

The group that contains a shape is the shape's parent. If the shape is not in a group, its parent is the page.

Paste

To insert information from the Windows Clipboard into a Visio drawing or another Windows application.

Pasteboard

The area that surrounds a page in the drawing window. You can store shapes on the pasteboard. Each page has its own pasteboard.

Path

A series of contiguous line or arc segments in a shape. A shape can have more than one path. See also segment.

Periodic spline

A closed spline with no defined endpoints. See also nonperiodic spline.

Persistence

The lifetime of a variable, procedure, or object. For example, an object can persist while Visio is running. An object that can store Event objects between Visio sessions is said to persist events.

Pin

The point around which a shape or text block rotates. When you select a 2-D shape with the rotation tool, its center of rotation is marked by a circle with a plus sign inside it. A shape's pin expressed in parent coordinates (the PinX and PinY cells of the Shape Transform section) defines the shape's location on the drawing page. Also known as center of rotation.

Placeable shape

A 2-D shape that is set to work with routable connectors and automatic layout ([Lay Out Shapes](#)). If a shape is set as placeable, a routable connector can detect and avoid crossing through it. You can set a shape as placeable in the [Behavior](#) dialog box, by selecting Lay Out and Route Around. If you glue a routable connector, such as the Dynamic Connector, to a 2-D shape, Visio automatically sets the 2-D shape as placeable.

Pixel

An individual block of display information. The term pixel

is derived from the phrase "picture element."

Point

A single value that embodies a set of x- and y-coordinates for greater convenience in calculations.

Primary selection

The first selected shape in a multiple selection, indicated on the drawing page by green selection handles. When a multiple selection is combined, the formatting of the primary selection is applied to the new shape. In a Selection object, the primary selection is the first item in the object's Shapes collection. See also selection.

Procedure

A named sequence of statements executed as a unit. For example, Function, Property, and Sub are types of procedures.

Procedure template

The beginning and ending statements that are automatically inserted in the Code window when you specify a Function, Property, or Sub procedure in the Insert Procedure dialog box.

Project

In VBA, the code that you write that is saved with a Visio file. You can create only one project for a Visio document, but that project can consist of any number of modules, class modules, and user forms.

Provider application

An application that provides objects that can be controlled through Automation. A provider application makes the objects accessible to other applications and provides, or exposes, the properties and methods that control them. See also controller application.

Range of eight

A rule for handling instances whose scale is different from that of the drawing page. If the ratio of a master's drawing scale differs from that of the drawing page by less than a factor of eight, the instance is scaled appropriately for the drawing page. Otherwise, the

instance is antiscalded. See also antiscaling.

Resize

To change the dimensions of a shape.

Rotation handle

One of the round handles that appear at a corner of a shape's selection rectangle when you select the shape with the rotation tool.

Routable connector

A 1-D connector that automatically changes its path to avoid crossing through 2-D placeable shapes that lie between the two shapes the connector connects. When you select a routable connector, it displays midpoints and vertices that you can drag to edit the connector's path manually. The Dynamic Connector is a routable connector.

Scale

A measure of the relationship between actual distances and distances represented in a Visio drawing. For example, a floor plan might have a scale of one meter of actual distance to one centimeter in the drawing.

Scope

The extent to which a variable, procedure, or object persists in a running program. The scope of an item typically depends on where it is declared. For example, the scope of a variable declared in a procedure is the procedure-when the procedure finishes executing, the variable goes out of scope.

Segment

A straight line or curve that is part of a more complex shape.

Selection

Shapes in a drawing that are the focus of your next action. Selected shapes display handles. Selection also refers to text selected in a text block. Selected text is highlighted.

Selection handle

A square handle that appears on a shape selected with the pointer tool. Selection handles indicate that you can size or move the shape.

Selection net

A means of selecting more than one shape at a time by dragging the pointer tool to define a rectangular area that encloses all the shapes to be selected.

Selection rectangle

The dotted line that surrounds selected shapes or objects from other applications. See also alignment box.

Server-side image map

A World Wide Web graphic with different linked regions. A program on a Web server examines map data associated with the linked regions and processes the links. See also Client-side image map.

Shape

1. An open or closed object that is created using Visio's drawing tools or commands. 2. A grouped collection of shapes. 3. An instance of a master dropped in a drawing. 4. In a program, any item represented by a Shape object—a shape, group, guide, guide point, or page sheet of a drawing page or a master.

ShapeSheet

The spreadsheet that contains information about a shape—for example its dimensions, its angle and center of rotation, and the styles that determine the shape's appearance. ShapeSheets can contain formulas that define how the shape behaves when it is moved or sized.

Sink object

In a VBA program, a class that receives events fired by a particular kind of Visio object. In a standalone Visual Basic, C, or C++ program, an object that receives the notification sent by a Visio Event object and that enables two-way communication between a standalone solution and Visio. Also known as event sink, notification sink.

Size

To change the dimensions of a shape by dragging one of its handles after it has been selected with the pointer tool.

SmartConnector shape

A 1-D shape that behaves intelligently when it's used to connect other shapes. For example, if you use a SmartConnector shape to connect two shapes and you move one of the shapes, the SmartConnector shape repositions itself and in some cases can change its shape to avoid crossing over the shapes it connects. See also one-dimensional (1-D) shapegljs_OneDimensionalShape, Universal connectorgljs_UniversalConnector@visio.hlp.

SmartShape symbol

A shape that is programmed to behave predictably when you move or size it.

Snap

The ability of shapes, guides, grid lines, and other elements in Visio to pull shapes and other elements into position when they are moved and sized.

Spline

A freeform curve that is based on a polynomial equation.

Spline knot

A real number that marks the boundary between polynomial pieces on a spline.

Stacking order

Determines how shapes overlap other shapes on the page and the order in which shapes are selected. You can change the stacking order of shapes by using the Bring To Front, Bring Forward, Send To Back, and Send Backward commands on the Shape menu.

Stamp

To create an instance of a master shape with the stamp tool. To stamp a master shape, select the master shape in the stencil, choose the stamp tool, and click to where you want the instance to appear. To glue a connector with the stamp tool, select the connector in the stencil,

and then drag between connection points on the shapes you want to connect.

Stand-alone stencil

A Visio file with a .vss filename extension that contains a collection of master shapes and is usually referred to simply as a stencil. Unlike a local stencil, a stand-alone stencil usually does not have an accompanying drawing. See also `local stencil`, `LocalStencil`, `stencil`.

Static glue

A type of glue behavior in which the endpoint of a connector remains fixed to a particular connection point, no matter how the shape to which it is glued moves. See also `glue`, `dynamic glue`.

Stencil

A collection of master shapes that are associated with a particular drawing type. To create a drawing, you drag and drop shapes from the stencil to the drawing page. Stencils are stored in stencil files (with a .vss extension). When you create a new drawing based on a template, the template opens stencils that are related to the template's drawing type. By default, stencils appear docked on the right-side of the drawing window. You can also open a stencil file independently of a template. See also `template`, `Template@visio.hlp`.

Style

A collection of attributes that has a name and is saved with a template or drawing file. You can use a style to apply a set of attributes to a shape with a single action. Many of Visio's templates have styles that are included in the new drawings you create from a template. See also `attribute`.

Subdivision

The division between grid lines and between intervals of the ruler. This option is set using the Ruler & Grid command. The choices are Fine, Normal, and Coarse.

Subselect

To select individual shapes within a group.

Template

A Visio file that opens one or more stencils and can contain styles and settings for a particular kind of drawing, for example, the appropriate scale and grid. You can create a new drawing with a template's styles and settings by opening the template. See also `stencilglis_Stencil`.

Text block

The text area associated with a shape that appears when you click the shape with the text tool or select the shape and start typing. You can size a text block and move a text block in relation to its shape.

Tile

A printing technique whereby oversized drawing pages are printed on multiple sheets of paper. Also, a command on the Window menu that arranges open windows side by side in the Visio main window.

Toolbars

The rows of boxes, buttons, and tools that appears below the menu bar in the Visio window. On the toolbars, you can choose styles from lists, turn options such as snap and glue on or off, and choose tools to create and modify shapes.

Tip

When you pause the pointer (without the mouse button pressed) over an item on the toolbar, a control handle, or a master shape icon (when the stencil window is set to display icons only), a tip appears. To turn off tips, choose View > Toolbars > Toolbars, then uncheck the Show ScreenTips option.

Two-dimensional (2-D) shape

A shape that has corner selection handles that you can use to size the shape proportionally. Most rectangles, ellipses, and freeform shapes are defined as two-dimensional. See also one-dimensional (1-D) `shapeglis_OneDimensionalShape`.

Units of measure

The type of measurement system used in a drawing. In formulas, used after a number to specify the unit of measure that the number represents. You specify the default unit of measure for a document (inches, feet, miles, points, meters, and so on) in the Options box.

Unitless number

A number that is not associated with a unit of measure.

Universal connector

A master shape that is programmed to connect any two points without crossing over the shapes it connects. By default, an instance of the Universal Connector is created when you use the connector tool and the Connect Shapes command. See also connector, SmartConnector.

Unscaled drawing page

A drawing page whose drawing scale is 1:1.

User form

A file in a VBA or Visual Basic project with the file extension .frm that contains user interface controls, such as command buttons and text boxes.

Vertex, vertices

One of the diamond-shaped handles that appears between two segments on a multiple-segment shape or at the end of a segment. On most shapes, vertices appear when you select a shape with the pencil tool. On a Dynamic Connector, vertices appear when you select the shape with the pointer tool. You can reshape a shape or connector by dragging its vertices. See also endpoint.

Visio library

A special dynamic-link library (dll) that is loaded by Visio at run time and can implement one or more Visio add-ons. A Visio library has the filename extension .vsl.

Visio type library

A file that contains definitions of the objects, properties, methods, events, and constants that Visio exposes to Automation.

Workspace

A Visio file that contains information about the size and position of drawings and stencils at the time you save the workspace. When you open a workspace, Visio

recreates the arrangement of stencil and drawing windows for you. You can store a workspace with a drawing file or save a workspace as a workspace (.vsw) file.

Zero point

1. The location of the 0 on the horizontal or vertical ruler. 2. The point in the drawing window where the zero points of each ruler intersect. By default, the zero point is the lower-left corner of the drawing page.

Zoom

To increase or decrease the display size of a drawing in the drawing window. A display size of 100% (or Actual Size) displays the drawing at the same size it will be when it is printed, unless you reduce or enlarge the printed output in the Page Setup dialog box.

Docked stencil

A stencil that is attached to the side of the drawing window. By default, stencils are docked on the left side of the window. You can make stencils float, or you can dock them on the right side of the drawing window. See also floating stencil.

Floating stencil

A stencil that appears in the size and location you choose. By default, stencils are docked on the left side of the window. You can make stencils float, or you can dock them on the right side of the drawing window. See also docked stencil.

Custom property

A database field in which you enter information relevant to a shape. Many Visio masters come with custom properties already defined. You can edit or delete existing properties and add new properties.

To edit, add, or delete custom properties, choose Tools > Macro > Custom Properties Editor. To view a shape's custom properties, select the shape, then choose Shape > Custom Properties.

Drawing unit

Drawing units are sizes in the real world, and page units are sizes on the printed page. For example, in an architectural drawing that uses the scale 1 cm = 1m, 1

meter is the drawing unit and 1 centimeter is the page unit. The ratio of page units to drawing units is the drawing scale.

Page unit

Page units are sizes on the printed page, and drawing units are sizes in the real world. For example, in an architectural drawing that uses the scale 1 cm = 1m, 1 meter is the drawing unit and 1 centimeter is the page unit. The ratio of page units to drawing units is the drawing scale. See also drawing scale, drawing unit.

Wizard

A Visio tool that automates common tasks. For example, you can use the Org Chart Wizard to automate creating an organization chart.

To open Wizards, choose File > New, or Tools > Macro.

Layer

A named category of shapes. You can organize shapes in your drawing by assigning them to layers. You can selectively view, edit, print, or lock layers, as well as control whether shapes on a layer can be snapped to or glued to. See also background.

Polygonal line

The type of line you create when you draw a sequence of line segments in one stroke without lifting your pen. A closed polygonal line is a polygon. A polygonal line in Visio is represented in the ShapeSheet by a contiguous sequence of LineTo rows.

Command shortcuts

Keyboard shortcuts for some commands are listed on Visio's menus.

To choose this command:	Press:
Actual Size	Ctrl+I
Align Shapes	F8
Bring To Front	Ctrl+F
Cascade	Alt+F7
Copy	Ctrl+C
Cut	Ctrl+X
Duplicate	Ctrl+D
Field	Ctrl+F9
Fill	F3
Flip Horizontal	Ctrl+H
Flip Vertical	Ctrl+J
Font	F11
Glue (toggles on or off)	F9
Group	Ctrl+G
Help, display online Help	F1
Line	Shift+F3
Macros	Alt+F8
New Blank Drawing	Ctrl+N
Open	Ctrl+O
Page	F5
Paragraph	Shift+F11
Paste	Ctrl+V
Print	Ctrl+P
Page Properties	Shift+F5
Redo	Ctrl+Y
Repeat	F4
Rotate Left	Ctrl+L
Rotate Right	Ctrl+R
Save	Ctrl+S
Save As	F12
Save Workspace	Alt+F12

Select All	Ctrl+A
Send To Back	Ctrl+B
Snap (toggles on or off)	Shift+F9
Snap & Glue	Alt+F9
Spelling	F7
Tabs	Ctrl+F11
Tile Horizontally	Shift+F7
Tile Vertically	Ctrl+Shift+F7
Undo	Ctrl+Z
Ungroup	Ctrl+U
Visual Basic Editor	Alt+F11
Whole Page	Ctrl+W
Zoom	F6

Tip: To activate the menu bar, press Alt or F10.

You can use these shortcuts with text:

To insert a field in text:	Press:
Height field	Ctrl+Shift+H
Rotation angle field	Ctrl+Shift+A
Width field	Ctrl+Shift+W

Tip: To select a shape's text block if the text tool is selected or to toggle between text edit and shape selection mode, press F2.

Drawing tools

 [Related Topics](#)

Keyboard shortcuts for Visio's drawing tools are as follows:

To choose this tool:	Press:
Arc	Ctrl+7
Connection Point	Ctrl+Shift+1
Connector	Ctrl+3
Crop	Ctrl+Shift+2
Ellipse	Ctrl+9
Line	Ctrl+6
Pencil	Ctrl+4
Pointer	Ctrl+1
Rectangle	Ctrl+8
Rotation	Ctrl+Ø
Spline	Ctrl+5
Stamp	Ctrl+Shift+3
Text	Ctrl+2
Text Block	Ctrl+Shift+4

Hyperlink navigation

 [Related Topics](#)

After you add navigational links (jumps) to shapes or pages, use these keyboard shortcuts to navigate between Visio and the jump destination's program.

Forward	Alt+Right Arrow
Back	Alt+Left Arrow
Next Page	Ctrl+Page Down
Previous Page	Ctrl+Page Up

Special characters

 [Related Topics](#)

Use these key combinations to type commonly used special characters in text:

To type:	Press:
Beginning single-quote	Ctrl+[
Ending single-quote	Ctrl+]
Beginning double-quote	Ctrl+Shift+[
Ending double-quote	Ctrl+Shift+]
Bullet	Ctrl+Shift+8
En dash	Ctrl+=
Em dash	Ctrl+Shift+=
Discretionary hyphen	Ctrl+hyphen
Non-breaking hyphen	Ctrl+Shift+hyphen
Non-breaking slash	Ctrl+Shift+/ /
Non-breaking backslash	Ctrl+Shift+\ \
Section marker	Ctrl+Shift+6
Paragraph marker	Ctrl+Shift+7
Copyright symbol	Ctrl+Shift+C
Registered trademark	Ctrl+Shift+R

ANSI extended characters

[Related Topics](#)

You can type characters from the ANSI extended character set by using the numeric keypad on the keyboard. To type ANSI characters, hold down the Alt key, then using the keys on the numeric keypad, type 0 and the ANSI code for the character you want.

The following table lists codes for extended characters from the ANSI character set:

Character	ANSI code	Character	ANSI code
,	130	Ë	203
f	131	ì	204
”	132	í	205
...	133	î	206
†	134	ï	207
‡	135	Ð	208
^	136	Ñ	209
‰	137	Ò	210
Š	138	Ó	211
<	139	Ô	212
Œ	140	Õ	213
•	149	Ö	214
ı	161	×	215
¢	162	Ø	216
£	163	Ù	217
¤	164	Ú	218
¥	165	Û	219
¦	166	Ü	220
§	167	Ý	221
¨	168	Þ	222
©	169	ß	223
ª	170	à	224
«	171	á	225
¬	172	â	226
	173	ã	227
®	174	ä	228
¯	175	å	229
°	176	æ	230
±	177	ç	231

²	178	è	232
³	179	é	233
'	180	ê	234
μ	181	ë	235
¶	182	ì	236
¸	184	í	237
¹	185	î	238
º	186	ï	239
»	187	ð	240
¼	188	ñ	241
½	189	ò	242
¾	190	ó	243
¿	191	ô	244
À	192	õ	245
Á	193	ö	246
Â	194	÷	247
Ã	195	ø	248
Ä	196	ù	249
Å	197	ú	250
Æ	198	û	251
Ç	199	ü	252
È	200	ý	253
É	201	þ	254
Ê	202	ÿ	255

Toolbars

Related Topics

The toolbars provide buttons and tools you can use as shortcuts for choosing menu commands.

To display a tip about a specific button, pause with the pointer over the button. To display more detailed help about a specific button, click the Help button, and then click the toolbar button.

Status Bar

The status bar displays information about shapes and a status prompt. When you select a shape, the status bar displays its dimensions. When you pause the pointer over a shape on the stencil, the status bar displays a description about the shape.

For additional information about how to use a shape, right-click a shape (on the drawing page or a stencil), then choose Shape Help from the shortcut menu.

Scroll bars

 [_Related Topics](#)

Use scroll bars to scroll through a large drawing or to display more shapes in a stencil. The box on the scroll bars tells you where you are in the drawing.

Drawing page

[Related Topics](#)

You create a drawing on the drawing page, which is contained in the [drawing window](#). The drawing page is surrounded by a blue background called the pasteboard. The drawing page can display a grid, which consists of grid lines like those on traditional quadrille paper.

The drawing page title bar is located at the top of the drawing window. The title bar lists the page name and number. If you maximize the drawing window, the page name and number are displayed in the [Visio main window](#).

Tip: If you need help with a particular template, you can learn more from [Template help](#). Template help tells you how best to use Visio shapes, wizards, and other tools to create a particular type of drawing. It also points you to sources where you can find more information about the drawing type.

Rulers

Related Topics

The rulers show measurements at the scale of the drawing. You can also use the rulers as a source for guides and guide points.

Stencil

[Related Topics](#)

Stencils contain [master shapes](#). You create drawings in Visio by dragging shapes from a stencil and dropping them onto the drawing page.

Many of the master shapes in Visio stencils are [SmartShapes symbols](#). These shapes are designed to act the way you need them to in a particular context.



SmartShapes symbols

When you start a new drawing based on a template, by default, stencils open as read-only and docked within the [drawing window](#). You can also undock a stencil, to view it in its own [floating window](#).

You can open stencils separately, so that you can create drawings that include shapes from any stencil—not only the stencils that open with a template. To open a stencil separately, from the File menu, choose Stencils, then choose [Open Stencil](#). In the Open Stencil dialog box, open the folder that contains the stencil you want. Select the stencil, then click Open. The stencil opens docked, and other open stencils' title bars cascade behind it.

To close a docked stencil, right-click the stencil title bar, then choose Close from the menu.


To find out how to use a shape on a stencil, right-click it, then choose Shape Help from the shortcut menu.

If you open a copy or original stencil, Visio opens it in a floating [stencil window](#).

Tip: If you need help with a particular template, you can learn more from [Template help](#). Template help tells you how best to use Visio shapes, wizards, and other tools to create a particular type of drawing. It also points you to sources where you can find more information about the drawing type.

Visio title bar

 [_Related Topics](#)

The title bar has standard features, such as the Close button  and the Minimize/Maximize button, at the upper-right corner.

When a [drawing window](#) is maximized, the title of the open drawing appears on the Visio title bar.

Pasteboard

 [_Related Topics](#)

The pasteboard is the blue background located behind a drawing page in the drawing window. You can use the pasteboard to store shapes. When you print a drawing shapes on the pasteboard do not print. Each page has its own pasteboard.

Text block

 [Related Topics](#)

The box with a dashed line and a flashing I-beam cursor indicates the shape's [text block](#) is open. To close the text block, choose the [pointer tool](#), or press the Esc key.

You can add text to any shape (including lines and connectors). To add text to a shape, select the shape and type. If the shape contains text, the existing text is replaced by the text you type.

You can also select, edit, copy, and paste text from one shape to another, check the spelling of text, and search for and replace text much as you do with many word-processing programs.

Visio Workspace

 [_Related Topics](#)

When you have no drawings open, the Visio workspace appears as a gray area.

The Visio main window

[Related Topics](#)

When you start Visio, it displays the [Choose A Drawing Template](#) dialog box (similar to the New Drawing dialog box), in which you can choose options to create a new blank [drawing](#) or one based on a template, create a stencil file, or open an existing file. If you choose to create a drawing based on a template, the [drawing window](#) contains a [stencil](#) and a [drawing](#) page.

Menu bar and toolbars

The menu bar contains menus of [commands](#) that you can use to create and change drawings. The [toolbars](#) contain buttons that set and change Visio options and tools you can use to create and format shapes and text.

The toolbars and menu bar vary depending on the currently active window (drawing, ShapeSheet, stencil, edit icon, or print preview). In addition, the toolbars can vary depending on the display resolution of your monitor, which tools you are using, and the size of the main window.

Tips


A [tip](#) appears when you pause with the pointer over items on the toolbars, status bar, control handles on a shape, or master shapes on a stencil window when the stencil is set to display icons only.

You can turn the display of ScreenTips on and off by choosing View > [Toolbars](#) > Toolbars.

Status bar

The status bar at the bottom of the main window displays a status prompt. When the pointer is over the stencil window or when a menu is open, the status bar suggests possible actions that you can perform in Visio and displays information about what you are doing. Check the status bar frequently for helpful messages, such as information about a shape's position and angle.

Standard Windows features

The Visio main window has standard features, such as the Close button  and the Minimize/Maximize button, in the upper-right corner. You can also use scroll bars to scroll through a large drawing in the drawing window. For details about these and other standard Windows features, see your Windows documentation.

Drawing window

 [Related Topics](#)

You create a [drawing](#) in the drawing window. The drawing window displays a single drawing page on a blue background called the [pasteboard](#).

Drawing tools

You create a drawing by dragging and dropping master shapes from [stencils](#) or by using the drawing tools on the toolbars to create your own shapes.

Toolbars

You can format text and graphics quickly by using tools on Visio's [toolbars](#). The content of the toolbars varies depending on whether a drawing or stencil window is active, the display resolution of your monitor, which tools you use, and the size of the main window.

Rulers and grids

The drawing window has rulers that show measurements at the [scale](#) of the drawing. You can also use the rulers as a source for [guides](#) and guide points. The drawing page displays the [grid](#) like those on traditional quadrille paper.

You can turn the display of rulers and the grid on and off with the [Rulers](#) and [Grid](#) commands on the View menu. Intervals on the grid correspond to the unit of measure you set with the [Options](#) command on the Tools menu. You control the size of the intervals using the [Ruler & Grid](#) command on the Tools menu.

Stencil window

[Related Topics](#)

The stencil looks much like a traditional stencil. Master shape icons – small representations of master shapes that you drag and drop into the drawing – are displayed in rows on the stencil's characteristic green background. When you base a drawing on a template, stencil windows open alongside the drawing page. By default, stencils open as read-only and docked. You can view stencils as docked (on the right or left side of the drawing window) or as floating.

Opening additional stencils

When you want to include shapes from several different stencils in your drawing, you can open those stencils separately. To open a stencil separately, choose File > Stencil > Open Stencil. In the Open Stencil dialog box, navigate to the folder that contains the stencil you want. Select the stencil, then click Open. The stencil opens docked, and other open stencils' title bars cascade behind it.

Modifying stencils

If you want to modify master shapes, you need to open a copy or original stencil. To open an original stencil, choose File > Stencil > Open Stencil. In the Open Stencil dialog box, choose Original in the Open section. To open a copy, choose Copy in the Open section. When you open an original or a copy of a stencil file and activate the stencil window, menu commands for the stencil window are available.

Closing stencils

To close a stencil, right-click the stencil title bar, then choose Close from the menu.

Master shapes and icons

To find out how to use a shape that comes with Visio, right-click it (on the drawing page or stencil), then choose Shape Help from the shortcut menu.

Master shape icons can provide clues about how to use the shape. A yellow background identifies a connector – a 1-D shape that is designed for connecting two 2-D shapes.

Menu commands

View menu

[Icons And Names](#)

[Icons Only](#)

[Names Only](#)

[Arrange Icons](#)

[Auto Arrange](#)

Master menu

[New Master](#)

[Edit Master](#)

[Properties](#)

[Edit Icon](#)

[Update Icon](#)

Window menu

[Show Drawing Page](#)

ShapeSheet window

[Related Topics](#)

When you select a shape or an object from another application and choose [Show ShapeSheet](#) from the Window menu, Visio opens the [ShapeSheet](#) window.

When the ShapeSheet window is active, menus display commands for programming shape behavior and controlling formulas that the ShapeSheet displays.

What you see in the ShapeSheet window depends on the shape itself and what you have set to display. When a ShapeSheet cell is selected, a formula bar appears, which you use to enter and edit ShapeSheet formulas.



ShapeSheet formula bar

A Enter box. Accepts changes you make to a formula.

B Cancel box. Cancels changes you make to a formula.

C Formula bar. Visio displays formulas in the formula bar. To change a formula, click a cell and type.

Every [shape](#) you draw with Visio and [object](#) you insert from another application has a ShapeSheet. When you create a group, Visio retains the ShapeSheet for each shape or object in the group and creates a separate ShapeSheet for the [group](#). In the ShapeSheet you can change Visio's default formulas and set other properties to control the way the shape or object behaves.

Menu commands

Edit menu

[Delete Section](#)

[Delete Row](#)

[Change Row Type](#)

[Action](#)

View menu

[Values](#)

[Formulas](#)

[Sections](#)

Insert menu

[Section](#)

[Row](#)

[Row After](#)

[Name](#)

[Function](#)

Shape menu


[Custom Properties](#)

Edit icon window

 [Related Topics](#)

When a [stencil](#) window is active, and you choose [Edit Icon](#) from the Master menu, Visio opens a window in which you can edit the icon for the [master shape](#) selected in the stencil window. The window's title bar identifies the stencil and master shape.

Icon bitmaps

The window displays the master shape icon as a [bitmap](#) that you can edit [pixel](#) by pixel. As you edit the icon, changes appear in the stencil window. When you finish editing the icon, click  to close the window.

Window details and tools

The edit icon window displays the solid colors defined in Visio's default color palette plus the stencil background color. (The stencil background color is green unless you change it in the VISIO.INI file.) To edit an icon, use these tools:

[Left Color box](#)

[Right Color box](#)

[Icon pencil tool](#)

[Paint bucket tool](#)

[Lasso tool](#)

[Selection net tool](#)

Group window

Related Topics

When you select a group and choose the Open Group command from the Edit menu, Visio displays the group in the group window. The group is displayed as if it were an entire drawing of independent shapes. The shapes appear without rotation applied to the group so you can use the grid, guides, and rulers.

You can select and edit the shapes individually by using the same menus and tools as in the drawing window. Changes you make in the group window appear in the drawing window.

To readjust the width and height of the group so its selection rectangle contains all the group's shapes, choose Update Alignment Box from the Tools menu.

Print preview window

[Related Topics](#)

When you choose [Print Preview](#) from the File menu, Visio displays the active drawing page in the print preview window. Visio displays the drawing within the margins you set in the [Page Setup](#) dialog box.

If the drawing size is larger than the page size, the drawing is [tiled](#) and page breaks are displayed at the tile borders. To view a single tile, click the tile you want to see.

You can use the [First Tile](#), [Previous Tile](#), [Next Tile](#), and [Last Tile](#) commands to move from tile to tile or page to page.

To exit the print preview window, click the Close button or press the Esc key.

Toolbars

When the print preview window is active, the [toolbar](#) displays buttons you can use to change the display of the window.

For details about the toolbar buttons and tools, pause with the pointer over a button to display a [tip](#).

Or, click the Help button on the toolbar, then click the toolbar button you want.



Help button

Menu commands

View menu

[Single Tile](#)

[Zoom In](#)

[Zoom Out](#)

[Previous Tile](#)

[Next Tile](#)

Visual Basic Editor window

Related Topics

In the Visual Basic Editor you can use Visual Basic for Applications (VBA) to create a new macro, or debug or edit an existing one.

Macros you create with VBA use Automation to control Visio. This can help you determine how to customize Visio to fit the needs of your organization. You can use Automation to drag and drop shapes, link information between Visio and another application, or automate a complex process to make it available to a wider scope of users.

Welcome to Visio Online Help



Visio Help Contents

Overview information and step-by-step procedures; commands and tools, keyboard shortcuts, and ShapeSheet reference.



Using Templates to Create Drawings

Helps you create specific drawing types using Visio templates.



Automation Reference

Objects, properties, methods, and events Automation Reference.



Service and Support

Customer service and technical support information.

Using Visio Help

Related Topics

To display the Contents for the Visio online help, click the Contents button. For additional instructions on how to use Windows help, press F1 while the Help window is active.

For information about accessing help on specific shapes, see [Getting help on shapes](#).

For help creating specific drawing types, see [Using templates to create drawings](#).

Help windows

- **Visio 5.0 Online Help** displays overviews and command, toolbar, and dialog box reference information. Reference information appears in a window designed to stay on top of the Visio window, so you can read about any dialog box you have open.
- **Step-by-step procedures** displays procedures in a window designed to stay on top of the Visio window, so you can follow the numbered steps while working in Visio.
- **Glossary** includes a list of terms that display a definition when clicked. The glossary terms also appear throughout Visio help.

Tips

When you pause the pointer (without the mouse button pressed) over an item on the [toolbars](#), a [control handle](#), or a master shape icon (when the stencil window is set to display icons only), a tip appears.

Shapes with control handles have control handle help: select the shape, then place the pointer over the control handles to display the handle's tips.

To turn off tips, choose View > Toolbars > Toolbars, then uncheck the Show ScreenTips option.

Searching

To search for a particular term:

- In the help Contents tab, click the Index tab and follow the instructions.

Scrolling

Some help topics contain more information than can fit in the help window at one time. To see more information, scroll through the topic in the help window.

To scroll in the help window:

- Press the Up Arrow (↑) or Down Arrow (↓) key
or
- Use the scroll bars with the mouse.

To return to the previous topic:

- Click the Back button or press the B key.

To browse through topics:

- Click the << and >> buttons or press the < and > keys.

Exiting help

To close the help window:

- From the help window's File menu (not Visio's), choose Exit.

Context-sensitive help

While working in Visio, you can access help for menu commands, dialog boxes, toolbar buttons, and other screen elements.

To display help for a toolbar button or other screen element:

1. Choose the Help button on the toolbar and click anywhere on the screen.



Help button

To display help for a menu command:

1. Highlight the menu command using the keyboard. Press the Alt key followed by the underlined letter in the menu name, and then press the arrow keys to highlight the command.
2. Press F1.

To display help for a dialog box:

1. Choose a menu command that opens a dialog box.
2. Press F1 or click the Help button.

Getting help on shapes

[Related Topics](#)

You can quickly find out what a shape does and how you can use it.

To get help on shapes:

1. Right-click the shape (on the stencil or on the drawing page).
2. Choose Shape Help from the shortcut menu.
A popup window appears containing information about the shape.
3. To close Shape Help, click away from the popup window.
4. To print or copy the information, right-click inside the popup window, then choose Copy or Print Topic from the shortcut menu.

Tip: Shapes with control handles have control handle help: select the shape, then place the pointer over the control handles to display the handle's tips.

Getting help on templates

Related Topics

Each template has help explaining the most efficient way to draw, the best way to use and combine shapes, how to perform specific actions using shape and page right-mouse menus, how and when to access wizards that automate tasks, and more.

For help creating specific drawing types, see [Using templates to create drawings](#).

To get help for a particular template:

- Press F1, click Index, then type the name of the template, or choose Template Help from the Visio Help menu, then choose the type and name of the template you want.

Arranging Visio windows

[Related Topics](#)

By default, the Visio main window usually contains a drawing page and one or more stencils. You can undock stencils to make them float.

If you have more than one drawing open, you can arrange and resize the windows to see them all.

To arrange windows so each window is visible:

- Choose Window > Tile.

To arrange windows to see the title bar of each window:

- Choose Window > Cascade.

To size a window:

- Drag a window border.

Tip: For details about other ways to arrange windows, see your Windows documentation.

Checking drawings for macro viruses

A macro virus is a type of computer virus that's stored in the macros within a file.

When you open a file, by default, Visio does not check it for VBA macros (macros you created in Visio with Microsoft Visual Basic for Applications) that may have viruses. However, you can choose to have Visio display a warning message when you open a file that contains macros. You can then decide whether to open the file with or without its macros enabled.

To turn on Visio macro checking:

1. Choose Tools > Options.
2. In the Options dialog box, under General, check Macro Virus Protection, then click OK.

Note: If you frequently receive Visio files as attachments to e-mail messages or from a network or Internet site that isn't secure, it's a good idea to have Visio check files for macros that may have viruses.

If you disable a file's macros, you won't be able to run any macros or add-ons, use ActiveX controls to initiate events, or run event handlers—for example a macro that runs when you double-click a particular shape. You can still open the Visual Basic Editor to view and edit the file's macros. If you want to run the macros, close the file, then open it with macros enabled.

Microsoft Office 97 Compatible

[Related Topics](#)

Visio is a Microsoft Office 97 Compatible product, which means that its toolbars, menus, and accelerator keys are similar to those used by Microsoft Office. If you are already using Microsoft Office or an Office 97 compatible product, which includes Microsoft Excel, Word, Access, and PowerPoint, then many of the tasks you have learned to complete in Office can be completed in a similar manner in Visio. Visio and Microsoft hope these similarities will make it easier for you to use our products together and with other Microsoft Office 97 Compatible products.

Look for the Microsoft Office 97 Compatible logo when purchasing software. For more information about the Microsoft Office 97 Compatible program, and for a complete listing of Microsoft Office 97 Compatible products, please see the Office Compatible Web site at <http://www.microsoft.com/office/compatible>, or, in the United States, call Microsoft Customer Service at 1-800-426-9400. Customers outside the United States should contact their local Microsoft office.

Visio and Office Compatible Features

- Improved formatting toolbar buttons
Line, Fill, and Text formatting buttons on the toolbar now provide pop-up palettes, similar to those in Excel, from which you can select the formatting you want.
- Routing drawings through email
You can add a routing slip to a drawing that you send via email, or you can save a drawing directly to an Exchange folder.
- Recording activities in the Outlook Journal
In Journal, you can automatically record time you spend using Visio.
- Using the menus
The Visio menus, commands, and dialog boxes are designed to look and feel like Microsoft Office programs, so you can quickly be up and running with Visio.
- Using the keyboard shortcuts
The Visio keyboard shortcuts are designed to match Microsoft Office programs. For example, to cut a shape to the Windows Clipboard, press Ctrl+X; to copy it, press Ctrl+C; and to paste it, press Ctrl+V.
- Using wizards
Visio includes many wizards that automate your tasks. For example, the Organization Chart Wizard automates creating an organization chart; you can base your organization chart on an existing spreadsheet or text file, or you can enter your data directly into the Organization Chart Wizard.
- Checking the spelling of text
To ensure a professional diagram, check the spelling of text in your drawings. (Choose Tools > Spelling.) Use your Microsoft Office spell checker in Visio.
- Finding and replacing text
Make global changes to your diagram by finding and replacing text in your drawings. (Choose Edit > Find or Edit > Replace.)

Using Visio with Microsoft Office

- Cutting, copying, and pasting Visio into other programs
You can easily cut, copy, and paste your diagram from one program to another using the Cut, Copy, and Paste commands on the Edit menu.

- Using the Microsoft Office Binder program

In Microsoft Office 97, you can create a file that combines pages from multiple programs. For example, a single file can include pages from Microsoft Word, Visio, and Microsoft Excel.

- Sending Visio files through electronic mail

Within Visio, you can send your drawing through email by using the Send To command on the File menu. Visio supports Outlook, Exchange, and any other mail system that is compatible with the Messaging Application Programming Interface (MAPI).

- Object linking and embedding (OLE)

You can use object linking and embedding (OLE) to include a Visio diagram in another program, such as Microsoft Word, and to include objects from other programs in your Visio file.

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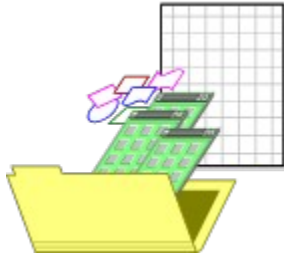
About creating and saving drawings

Related Topics

In general, here are the steps you take in Visio to create a drawing:

1. Start a drawing by opening a template.

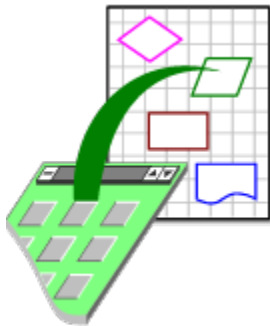
A template sets up your drawing page and opens stencils that contain master shapes.



Open a template.

2. Add shapes to your new drawing by dragging them from a stencil to the drawing page or by drawing your own.

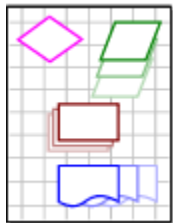
You can create additional shapes with the Visio drawing tools on the Standard toolbar, and open additional stencils to choose from a wider variety of shapes.



Add shapes.

3. Arrange shapes to create the drawing you want.

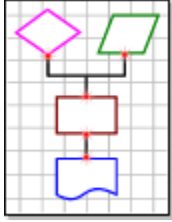
Onscreen, the grid helps you align shapes, and the rulers give you precise control. You can place guides and use the Align and Distribute commands for quick alignment, or use the Size & Position command to enter exact coordinates and dimensions.



Arrange shapes.

4. Glue shapes together, so they stay connected when you move them.

With glue, you can update your diagrams quickly, without selecting and dragging every line.



Glue shapes together.

5. Add text to your drawing.

You can add text to a shape by clicking a shape with the pointer tool, then typing. Or use the text tool to type anywhere on a drawing.

6. Modify the look of shapes.

Formatting shapes is quick with the tools and style lists on the toolbars and the commands on the Format menu. You can define your own styles in addition to the ones that come with the product.

7. Get your drawing to your audience.

Your drawing can stand on its own or become part of a larger document, such as a Microsoft PowerPoint slide show, a Microsoft Word publication, or a page on a World Wide Web site.

Displaying and hiding toolbars and windows

 [How To](#)

 [Related Topics](#)

In Visio, you can decide how you want to work by displaying only the toolbars you need and arranging your windows to see them all at once.

Displaying and showing toolbars

The tools in Visio are grouped on toolbars based on the type of task you perform with them. For example, the Shape toolbar contains tools such as the fill color and align shapes palettes, which you can use to format and arrange shapes. The View toolbar contains tools you can use to choose what you want to see onscreen.

The following toolbars are available in Visio:

Standard Primary tools for dragging, dropping, and drawing shapes, as well as standard Windows-program tools for opening, closing, saving, and printing files.

Text Style lists for text along with tools for choosing format, alignment, size, color, and bullets.

Shape Style lists for lines and fills along with tools for shadows, layout, grouping, stacking order, and rotation.

View Buttons for showing or hiding the grid, guides, connection points, and displaying particular layers or layer properties.

Page Buttons for paging forward or back, displaying a particular page, and for turning snap and glue off and on.

Web Tools for inserting hyperlinks, paging forward or back on the Web, opening Internet Explorer, and starting Shape Explorer.


Developer Tools for running macros, displaying the ShapeSheet spreadsheet, opening Visual Basic For Applications, and switching to design mode while working in VBA.

TIP To see what a tool is for, pause the pointer over the tool on the toolbar. A tip appears that describes the tool. If no tip appears, choose View > Toolbars > Toolbars and make sure the Show ScreenTips option is checked.

To show or hide toolbars:

1. Choose View > Toolbars > Toolbars.
2. Check the toolbars you want to view and uncheck those you don't, then click OK.

TIP You can also view and hide toolbars by choosing View > Toolbars or right-clicking the toolbar, then clicking to add or remove a checkmark next to the appropriate toolbar on the menu.

 Overview

Arranging windows

If you have more than one window open, you can arrange and resize them to see them all.

To display windows side by side:

- Choose Window > Tile.

To arrange windows to see the title bar of each window:

- Choose Window > Cascade.

■ Overview

Displaying, moving, and adding stencils

[Related Topics](#)

When you start a new drawing by opening a [template](#), Visio opens one or more task-related [stencils](#). Stencils store master shapes, or "[masters](#)," that you can drag to the drawing page to add shapes to your drawing. If you need masters that don't appear on an open stencil, you can open additional stencils. By default, stencils are docked to the drawing-page window, but you can display stencils as either docked or floating. Unlike a docked stencil, you can drag a floating stencil to a different location on the screen.

Methods for working with stencils

To	Do This
Switch between stencils	Click the name of the stencil to switch to that stencil. This applies to stencils that are docked .
Open additional stencils	Choose File > Stencils > Open Stencil , choose the stencil you want, then click OK.
Close a stencil	Right-click the stencil's title bar, then choose Close from the shortcut menu.
Make a stencil float	Click inside the stencil where there are no buttons or icons, then drag the stencil away from its docked position. Or right-click the stencil's title bar, then choose Float from the shortcut menu.
Dock a stencil	Click inside the stencil where there are no buttons or icons, then drag the stencil to the left or right side of the drawing window. Release the mouse button when an outline of the stencil appears.
Minimize a floating stencil	Click the minimize button on the stencil's title bar. To expand the stencil again, click the maximize button on the stencil's title bar.
Move a docked stencil from one side of the drawing window to another	Right-click the stencil's title bar, then choose Switch Sides from the shortcut menu.
Change how masters display on a stencil	Right-click the stencil, then choose Icons And Names to display both master shape icons and names, Icons Only to display only master shape icons, or Names Only to display

only the master shape names.

Change the order of masters on a stencil Open the original stencil and drag each master shape icon to arrange them in the order you want.

Basing new drawings on templates

 [How To](#)

 [Related Topics](#)

You can quickly create the type of drawing you want when you start with a Visio [template](#) (*.vst) file. A template includes everything you need to create a drawing, from the drawing page to shapes and styles. Using a template ensures consistency across your drawing files, so you can focus on what goes on the page while the template takes care of the rest.

When you start a drawing with a template, a Visio file opens that contains the following:

- One or more stencils containing related shapes.
- A blank drawing page using a grid and measurement system that's appropriate for the type of drawing you're creating, saving you the time it takes to set up pages.
- A drawing page set up with the correct scale and page size. This applies to scaled drawing types.
- Styles for text, lines, and fills appropriate to the type of drawing you're creating, saving you the time it takes to define your own styles.

NOTE Each template comes with help explaining the most efficient way to use and combine shapes, how to perform specific actions using shape and page right-click menus, how and when to run wizards that automate tasks, and more. To display template help, choose Help > [Template Help](#) > Visio Templates, then choose the appropriate template.

If the drawings you usually create require settings not available in any Visio template, you can open a drawing with no template, revise an existing template, or create one of your own.

To start Visio and open a new drawing file based on a template:

1. Start Visio by clicking Start, then choosing Programs > Visio.
2. Double-click to open the folder that contains the type of drawing you want to create, choose a template, then click OK.

To open a new drawing file without basing it on a template:

- Choose File > New > Drawing. An unscaled drawing page opens with no stencils.

To display help for a particular template:

- Press F1, click the Index tab, then type the name of the template, or choose Help > Template Help, double-click Visio Templates, then choose the type and name of the template you want.

■ Overview

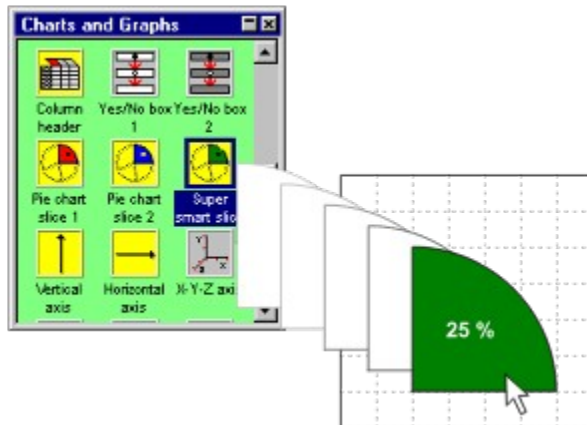
Adding shapes to drawings

- [How To](#)
- [Related Topics](#)

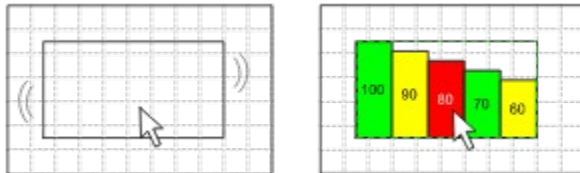
The easiest way to create a drawing is to drag master shapes (or "masters") from a stencil to the drawing page. When you drop a master on a drawing page, you create an "instance" of the master. The master itself remains on the stencil so you can use it again and again to create instances.

When you drop an instance, Visio snaps the shape to the nearest grid line or ruler subdivision so that you can position it precisely. To place shapes even more accurately, you can zoom in or out from the drawing page. You can also change what you snap to by choosing Tools > Snap & Glue.

If you want to create multiple instances of a master quickly, you can use the stamp tool.



Dragging and dropping to create a drawing is accurate and fast when you use the grid and rulers to position shapes.




To place the shape more precisely, pause while dragging to see the shape instead of the box or line representing it. The pointer turns white when it's over an object that you can drag.

To drag and drop a shape:

1. Choose the pointer tool (☞) from the Standard toolbar.
2. In the stencil, point to a master.
3. Hold down the left mouse button and drag the master from the stencil to the drawing page.
4. Release the mouse button to drop an instance of the master in the drawing.

■ Overview

To stamp multiple instances:

1. Choose the stamp tool () from the Standard toolbar.
2. In the stencil, click a master.
3. In the drawing window, place the pointer where you want the shape. The stamp tool places the shape's pin where the pointer is. In most shapes, the pin is in the center of the shape, so you would place the pointer where you want the center of the shape.
4. Click the left mouse button.
You can continue clicking the page to add as many instances of the stamped shape as you want.
5. When you're done stamping, press the Esc key.

■ [Overview](#)

To delete a shape from the drawing page:


1. Select the shape.
2. Do one of the following:
 - Choose Edit > Clear.
 - Press the Delete key on the keyboard.

■ Overview

To delete a shape from the drawing page and place a copy on the clipboard:

1. Select the shape.
2. Do one of the following:

Choose Edit > Cut.

Click the Cut button () on the Standard toolbar.

■ Overview

To display help for a particular shape:

- Right-click the shape, then choose Shape Help from the shortcut menu.

■ Overview

Saving drawing files

 [How To](#)

 [Related Topics](#)

When you work on a drawing, you should save the drawing file frequently. When you change a stencil or template, you should also save these files.

How you save a Visio drawing file (*.vsd) influences what happens when you next open it. You can

- Enter file properties, such as title, author, keywords, and descriptions. When you save a file for the first time, Visio prompts you for this information. Then, when you select the file name in the Open dialog box, these description and preview properties appear to help you identify the file before opening it. You can view all of the properties by right-clicking the file in Windows, then choosing Properties.
- Save a preview of the first page or all of the pages of the drawing so that you can identify the file before you open it. In the Open dialog box in Visio, you see only the first page. In Windows 95 or Windows NT 4.0 Quick View (right-click a file in Windows, then choose Quick View), you can see all of the pages. Saving previews of all of the pages can increase the file size considerably.
- Save a drawing file as a template (*.vst) that you can use as a model for other drawings.
- Save a drawing file in Visio 4.x format. When you open a 5.0 file in an earlier version of Visio, information specific to Visio 5.0 products will be lost or converted.
- Save a file as read-only to prevent it from being inadvertently edited or changed.
- Export a file in HTML, Windows Metafile, or another format.
- Save the workspace when you save a drawing file. When you next open the file, the stencil and drawing page windows will look just as they did when you saved the file. You can save a workspace as part of a drawing, stencil, or template, or as a separate file (*.vsw).

Saving a drawing file for the first time

The first time you save a drawing, Visio prompts you for document properties, including whether or not to save preview pictures, which are small thumbnails of drawing pages. Properties such as the description and the preview picture appear in the Open dialog box when you select the drawing file name.

TIP You can change a file's properties later by choosing File > Properties.

To save a drawing file for the first time:

1. From the File menu, choose Save or Save As.
2. For File Name, type a name for the drawing file.
3. Under Save In, open the folder in which you want to save the file.
4. Click Save.
5. Enter properties information, then click OK to close the Properties dialog box dialog box.

TIP To quickly save changes to a file you've already saved, click the Save button on the Standard toolbar or press Ctrl+S. By default, Visio saves existing files in the format in which they were opened. To save in a different format, including earlier versions of Visio, use the Save As command.

■ Overview

About working with pages

Related Topics

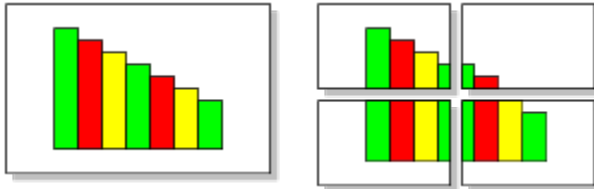
You can work with multiple pages in a single Visio drawing file to present and organize your information. Using pages, you can

- Keep related drawings in the same file. For example, for an office expansion project, you could keep the pages that contain office layout drawings in one file and drawings of the distribution of office equipment in another.
- Keep all revisions of a single drawing in one file on successive pages, so that you can show the progression from the beginning of the project to the end.
- Present a series of drawings at full screen view and navigate between them, like a slide show.
- Link pages together like a Web site. For example, you could jump from a workflow diagram shape to a detailed procedure on another page.
- Place items on background pages that you want to appear on every page, such as a company logo.
- Rotate pages to make it easier to edit information that's at an angle, such as a room that isn't square, or a city plan with some streets that are not perpendicular.

As you work with drawing pages in a Visio drawing file, keep the following distinctions in mind: The page you see on the screen is called the "drawing page." You print the drawing on the "printed page," which is the paper in the printer. And the result of printing is the "printed drawing."

Most Visio templates are set up so that the drawing page, printed page, and printed drawing sizes are all the same, so you don't have to change any settings or sizes to get the printed drawing you expect.

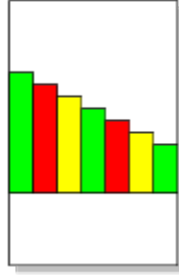
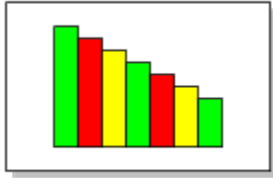
In some cases, though, you may change drawing-page settings, such as size, orientation, or scale, as you create your drawing, in which case you'll want to verify that your printed-page settings work with the new drawing-page settings.



If you print a drawing that is larger than the printed page, the drawing prints across multiple pages. This is called tiling. You can verify whether and where your drawing will break across pages by choosing **View > Page Breaks**. Gray lines indicate the page breaks.

To avoid printing a large drawing across several tiled pages, you can:

- Change the drawing orientation to see if everything will fit.
- Choose to reduce the drawing by a percentage in the Print dialog box when you print, so that it fits on the current page size.
- Set a drawing scale that represents larger real-world dimensions in a smaller scaled space.
- Choose a larger printed page size.



Changes you make to drawing-page settings aren't automatically reflected in printed-page settings. Before you print, make sure settings, such as orientation, are the same for both the drawing page and the printed page. For example, if you change a drawing page's orientation to landscape (left) without changing the printed-page settings from the default portrait orientation, the drawing prints on a portrait page (right).

Setting page orientation and scale

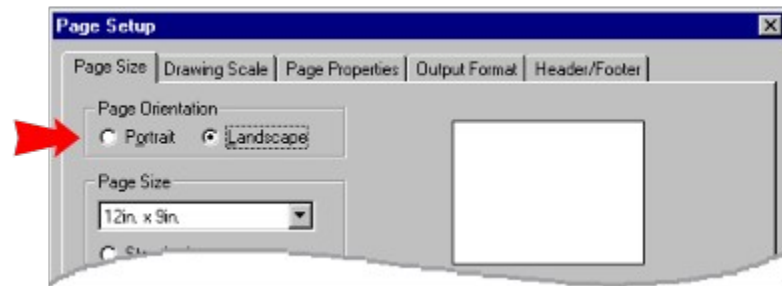
- [How To](#)
- [Related Topics](#)

When you start a drawing by opening a template, the template includes page settings for orientation and scale that affect how you work in a drawing and how it prints. Sometimes you may want to change these settings as you work in a drawing.

TIP Changes you make to drawing-page settings aren't automatically reflected in printed-page settings. If you change the drawing-page orientation or scale, check the printed-page settings in the [Page Setup](#) dialog box and change them if needed.

Setting page orientation

You can set the orientation of the drawing page to portrait (tall) or landscape (wide) in the Page Setup dialog box.



Portrait specifies a tall orientation; Landscape is a wide orientation.

Setting a scale

When you are creating a drawing that represents real-world objects too large to fit at their actual size on a piece of paper, or too small to depict, you must set a "drawing scale." The ratio of the shapes' dimensions as they appear onscreen (page units) to their real-world measurements (page units) defines the scale. For example, in an office plan, the drawing scale might be 1:10, where 1 inch onscreen represents 10 feet in the real world.

To set drawing orientation and scale:

1. Display the drawing page you want to change, then choose File > Page Setup.
2. On the Page Size tab, select the orientation option you want.
3. On the Drawing Scale tab, select the scale you want or enter a custom scale, then click OK.

■ Overview

To set printed page orientation:

1. Display the drawing page you want to change, then choose File > Page Setup.
2. On the Page Size tab, click Print Setup.
3. Choose the orientation you want for the printed page, then click OK.

■ Overview

Rotating and resizing pages

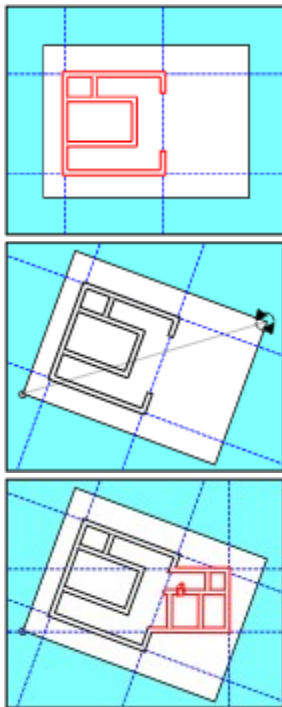
- [How To](#)
- [Related Topics](#)

You can rotate pages using the [rotation tool](#) and resize them using the [pointer tool](#).

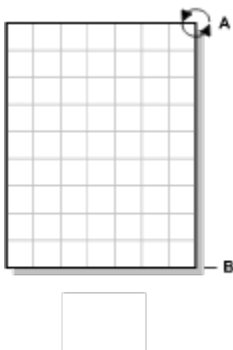
Using the rotation tool, you can easily create drawings in which part of the drawing is at an angle to the rest and work in each part orthogonally, that is, at right angles or parallel to the rulers. For example, you can draw a building that isn't square or a city plan in which some of the streets run at an angle from the rest. Rotating, similar to zooming, is simply a way of viewing your page. It doesn't affect printing or the page orientation you select in the [Page Setup](#) dialog box. When you print, the page prints just as it would if it were not rotated. Resizing pages, on the other hand, does affect printing and the settings in the Page Setup dialog box. You can resize pages when you want to add space to or remove space from a drawing.

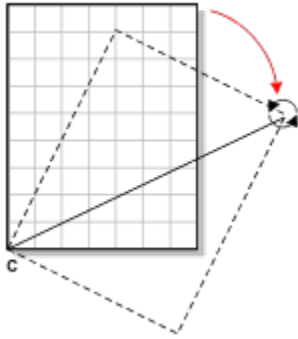
Rotating pages

When you rotate the page, existing shapes and guides rotate with it. However, the rulers and grid stay at their original angle. Page rotation is disabled by default in all versions of Visio except Visio Technical. You can enable page rotation in the [Advanced tab](#) of the [Options](#) dialog box.



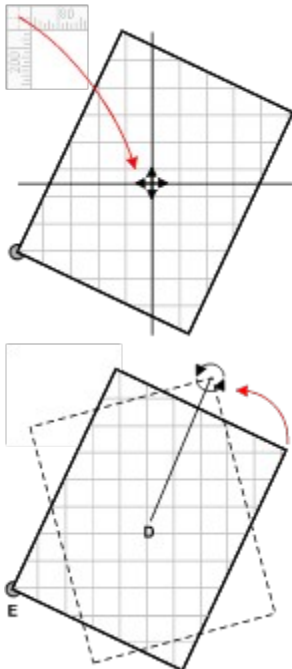
Rotating the page and using rotated guides make it easy to create an angled section in a drawing. You can glue and align shapes to any guide.





When you move the rotation tool over a page corner, it becomes a round rotation pointer (**A**). The page's drop shadow (**B**) indicates that the page is unrotated. Rotated pages have no drop shadow.

When you drag the round rotation cursor, the page rotates around the zero point (**C**), which is in the lower-left corner by default.



The origin of the rotation is the zero point of the rulers. To change the origin of rotation, move the zero point by Ctrl+dragging the crosshair from the intersection of the rulers to where you want the new zero point.



After you move the zero point (**D**) the center of rotation changes for the page. Rotated pages have a gray non-printing dot at the lower-left corner of the page (**E**). This dot indicates that the drawing is rotated so that you can tell the difference between a landscape page, for example, and a portrait page that has been rotated 90 degrees. When you rotate the page, the dot stays with that corner, so that if you rotated the page upside-down, the dot would then be at the upper-right corner of the page.

To enable page rotation:

1. Choose Tools > Options, then click the Advanced tab.
2. Check Enable Page Rotation, then click OK.

■ Overview

To rotate a page:

1. Make sure that page rotation is enabled, then display the page you want to rotate.
2. Choose the rotation tool  from the Standard toolbar.
3. Position the cursor over a corner of the page.
The cursor changes to a round rotation pointer .
4. Drag the corner of the page to the rotation angle you want, then release the mouse button.

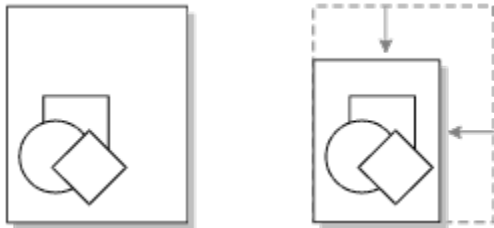
TIP To quickly rotate an angled section of your drawing so that it's orthogonal, right click on an angled guide and choose View As Horizontal or View As Vertical.

 Overview

Resizing pages

Resizing pages enables you to add space to a page where you need it and to remove empty space you're not going to use from a page, both without changing the drawing scale. There are two ways to resize pages:

- Use the Page Setup dialog box to add space to or remove space from the top and right sides of the drawing. For example, if you want more white space around a drawing on which a reviewer can write comments, you can increase the dimensions of the page to create a margin of space on those sides.
- Use the Ctrl key with the pointer tool to remove space from a particular side of the drawing. For example, if you set the page size to be 9 by 12 inches, but discover later that your drawing extends off the right side of the page, you can drag that side of the page out to give yourself more room to draw.



You can use Page Setup to remove an equal amount of space from the top and right sides of a page.



Use the Ctrl key with the pointer tool to remove space from only the side you drag. In this example, the left side was dragged in to remove extra space.

When you resize a page using either method, the shapes on the page stay in their positions relative to the rulers. In other words, the *x*, *y* coordinates of the shape remain the same.

When you print, the page prints starting in the top-left corner of the drawing page. Keep this in mind when you resize a drawing page to be larger than the paper you print it on, causing the drawing to be tiled on several pages when you print.

NOTE If the drawing page you resized has backgrounds assigned to it, you must resize each of the backgrounds individually if you want the page sizes to match.

To resize a page using Page Setup:

1. Choose File > Page Setup.
2. On the Page Size tab, type the page dimensions you want or select a page size option, such as Scale Page To Fit Drawing, then click OK.

To resize a page with the pointer tool:


1. Choose the pointer tool (☞) from the Standard toolbar.
2. Position the pointer at the edge of the page on the side you want to move, then hold down the Ctrl key.
The cursor changes to a double-ended arrow.
3. Drag the page edge to where you want it, then release the mouse button.
The new page size is reflected in the Page Setup dialog box.

To set the printed page size:

1. Display the drawing page you want to change.
2. Choose File > Page Setup, then on the Page Size tab, click Print Setup.
3. Choose the size you want for the printed page.

The display at the top of the dialog box shows the effect of your choices.

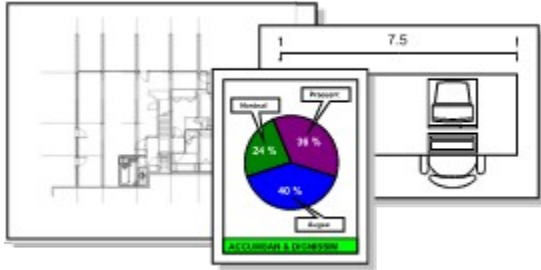
4. Click OK.

 Overview

Creating multiple-page drawings

- [How To](#)
- [Related Topics](#)

For some drawing projects, you may want to create a single drawing file that contains many drawing pages. For example, a file could represent a facilities project with the overall floor plan on one drawing page, a detailed view on another page, and the plan for equipment and furniture on another page. New drawings in Visio open with only one drawing page, but you can add as many new pages as you want.



Each page in a multiple-page drawing can have its own settings. For example, each page can have a different drawing scale. Print settings, however, affect all pages.

Creating and deleting pages

When you create a new drawing page, it inherits the size, orientation, scale, measurement unit, shadow offset, and grid settings of the page currently displayed in the drawing window. You can change these settings in the Page dialog box when you insert the page, or later in the Page Setup dialog box.

You can delete pages you no longer need. If you delete the last page in a file, Visio replaces that page with a blank page.

TIP To delete a background page, you first need to cancel its page assignment because a background page assigned to a foreground page cannot be deleted.

To create a new page:

1. Choose Insert > Page command to open the Page dialog box.
2. On the Page Properties tab, type a name for the page or use the default name provided by Visio.
3. If necessary, click the Drawing Scale tab to change the scale or the Page Size tab to change the page size for the new page.
4. Click OK.

To delete a page:

1. Choose Edit > Drawing Page > Delete Pages.
2. Choose the page you want to delete.
3. To update default page names to reflect the new page order, check Update Page Names.
Checking this option has no effect on pages without default names.
4. Click OK.

■ Overview

Navigating between pages

Visio stores pages in the order you create them and displays them one at a time in the drawing window. You can quickly navigate between pages and, if necessary, you can change page order. When you change the order, you can also change page names so they reflect the new arrangement.

You can also add navigational links to drawing pages or shapes that you can use to jump directly to another drawing page.

To navigate to a particular page:

- Choose the page that you want to go to from the Page list on the Page toolbar. You can also use the Next Page (↗) and Previous Page (↖)

(↗) buttons on the Page toolbar to navigate between pages.

NOTE The Page toolbar is not displayed by default. To display it, choose View > Toolbars > Page.

To rearrange pages:

1. Choose Edit > Drawing Page > Reorder Pages.
2. Choose the page you want to move.

The list displays the page names in the order they are stored in the file.

3. Click Move Up or Move Down to change the position of the page.
4. To update default page names to reflect the new page order, check Update Page Names.

Checking this option has no effect on pages for which you changed the names from the default.

5. Click OK.

■ Overview

Displaying pages simultaneously

If you want to view more than one drawing page at a time, you can open each page in its own window. Or you can open a new window so that you can display a new page you create and the original page at the same time.

To display a specific page in its own window:

- Choose Edit > Go To > Page. Select the page, check Open Page In New Window, then click OK.

To open a new drawing window and display a page in it:

1. Choose Window > New Window.

Choose New Window when a drawing window is open to open a new window that contains a duplicate of the open window's contents.

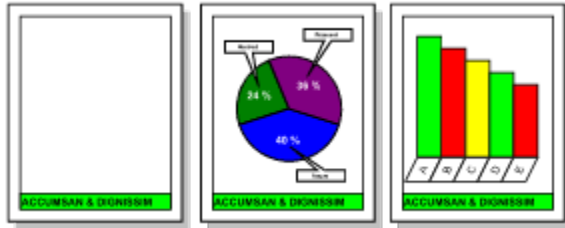
2. To see all the open windows, choose Window > Tile.

■ Overview

Using backgrounds for common page elements

- [How To](#)
- [Related Topics](#)

Each Visio drawing contains at least one foreground page and may also contain one or more backgrounds. A background is a page that appears behind another page. Create a background when you want the same shape to appear on more than one drawing page. For example, you can place a common graphical element, such as a company logo or a border, on a background. The element will appear on each page to which you assign the background.



Use a background to repeat a common element on several drawings. For example, on these three pages, the company name is repeated on each one.

You can assign only one background to each foreground, but each background can also have a background, so you can use backgrounds to create a layered effect.

When you assign a background to a foreground page, the shapes on the background are visible when you display the foreground page, but you cannot edit them from the foreground page. To edit the shapes on a background, you display that background in the drawing window, and then edit the same way you edit a foreground page.

TIP If you want to selectively view, edit, print, or lock shapes in a drawing, or if you want to have multiple depths of text and shapes within the same page, use layers instead of a background.

Creating and editing backgrounds

You can create a new page as a background or convert a foreground page to a background. When you create a background, Visio adds it to the list of available backgrounds in the Insert Page and Properties dialog boxes.

You edit the shapes on a background in the same way you edit the shapes on a foreground page. You can display the background in one window and the page it's assigned to in another window, so you can see how the changes affect the whole drawing. You cannot edit shapes on the background in the window that displays the foreground page.

NOTE If you use the [Page Layout Wizard](#) to set up a drawing, the wizard automatically creates a background and creates placeholders for elements such as title blocks, borders, and logos. If you want to add any of these elements, you must display the background page to modify it.

To create a background:

1. Choose Insert > [Page](#).
2. On the Page Properties tab, select Background for Type.
3. If necessary, click the Drawing Scale tab to change the scale or the Page Size tab to change the page size for the new page.
4. Click OK.

To convert a foreground page to a background:

1. Display the foreground page you want to convert to a background.
2. Choose File > [Page Setup](#), then click the [Page Properties tab](#).
3. For Type, select Background.
4. Click OK.

To display a background so you can edit it:

- Display the page to which the background is assigned, then choose Edit > Go To > [Background](#).

TIP You can also display a background in a new window so you can view the background and the pages it's assigned to at the same time. To display a background in a new window, choose Edit > Go To > [Page](#), check Open Page In New Window, then click OK. Then, choose Window > [Tile](#).

 [_Overview](#)

Assigning a background page

You can assign one background to each page in a drawing. You can assign the same background to as many pages as you want. If you no longer want a background assigned to a particular page, you can cancel the assignment.

To assign a background to a page:

1. Display the page to which you want to assign the background.
2. Choose File > Page Setup, then click the Page Properties tab.
3. In the Background list, select the name of the background that you want to assign.
4. Click OK.


The background displays behind the shapes on the foreground page.

To cancel a page's background assignment:

1. Display the page to which the background is assigned.
2. Choose File > Page Setup, then click the Page Properties tab.
3. In the Background list, select None.
4. Click OK.

■ Overview

Previewing drawings in full-screen view

 [How To](#)

 [Related Topics](#)

If you want to preview or present Visio drawings, you can use [full-screen](#) view to maximize the amount of space for your drawing. In full-screen view, the Visio toolbars, title bars, status bar, menus, scrollbars, and stencils are hidden and the drawing page takes up the entire screen. The drawing-page grid is also turned off. Full-screen view is a view-only mode—you cannot edit or change the pages you view.

To enter full-screen view:

- Choose View > [Full Screen](#).

To exit full-screen view:

- Press the Esc key.

To navigate between pages in full-screen view:

- Press the left arrow, Page Up, or P keys on your keyboard to display the previous page.
- Press the right arrow, Page Down, or N keys to display the next page.
- Click the left-mouse button (when it's not over a hyperlink) to display the next page.
- Right-click anywhere in the window and choose [Previous Page](#), [Next Page](#), or [Go To](#) > <page name>.

To navigate hyperlinks in full-screen view:

- Click hyperlinked shapes once to jump to the link.

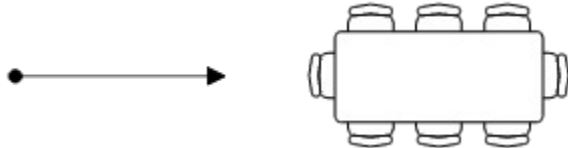
 [_Overview](#)

About working with shapes

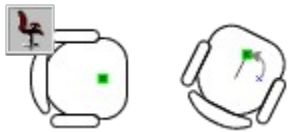
■ Related Topics

In Visio, the term "shape" can refer to one line, arc, or spline; a series of segments; or several shapes grouped together.

Shapes include master shapes, or "masters," that come with Visio, as well as shapes you draw yourself. Visio shapes are programmed to act the way you need them to in a particular context. For example, shapes for doors, windows, desks—things that are built to standard industry sizes—are locked against sizing so you don't accidentally stretch the shapes inappropriately as you are working with them.



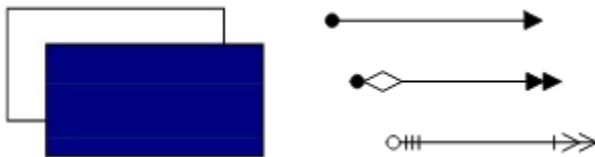
A single line is a shape and so is a rectangle. The table with chairs is a Visio master composed of simpler shapes grouped together.



The desk chair is programmed to be easy to rotate.

Closed and open shapes

A shape can be either closed or open. Shapes that are surrounded by a continuous outline, such as rectangles or circles, are closed shapes, which means that you can fill them with colors and patterns. Lines, arcs, or zigzag shapes are open shapes, which means that you can format their ends.



The rectangle, which is a closed shape, is filled with a pattern. The lines, which are open shapes, have line ends applied to them.

1-D and 2-D shapes

A shape can be either one-dimensional (1-D) or two-dimensional (2-D).

A 1-D shape behaves like a line, and displays endpoints that you can drag to resize the shape when you select it with the pointer tool. You can glue the endpoints of 1-D shapes to the sides of 2-D shapes to create connecting lines that stay in place when the shapes are moved.



A 1-D shape has only two endpoints. Some 1-D shapes also have other handles, such as this arc's control handle.

A 2-D shape behaves like a rectangle, and displays selection handles that you can drag to resize the shape when you select it with the pointer tool.



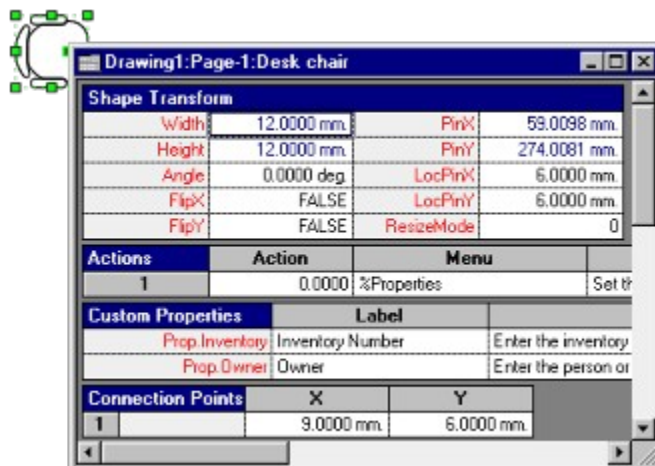
A 2-D shape has more than two handles and can be closed (like the ellipse) or open (like the zigzag line).

With all shapes, except those that are locked against specific behavior, you can do the following:

- Resize, move, flip, or rotate them.
- Change their stacking order relative to other shapes.
- Format and add text to them.
- Glue them to other shapes and guides.
- Snap them to a guide, guide point, grid, or the alignment box of another shape.
- Revise them by adding segments or changing the way they curve.
- Control how they appear onscreen, whether they print, and how they behave when you double-click them.
- Associate them with data and use the data to generate reports.
- Add jumps to them that go to other pages in the same drawing, to other files, or to World Wide Web sites.
- Control their behavior by modifying their ShapeSheet spreadsheets.

Customizing shapes in the ShapeSheet spreadsheet

To understand what makes a shape smart, it helps to know how shapes are drawn and stored in Visio. Every Visio shape is described in its own ShapeSheet spreadsheet, which contains information about the shape's geometry and other properties. For example, the ShapeSheet contains the coordinates of each shape vertex and the shape's dimensions. Much of this information can be defined by formulas rather than by hard-coded numbers. This is important because it's what makes a shape smart; formulas allow a shape to behave differently based on how it is used, rather than always behaving the same way.



To display a ShapeSheet spreadsheet, select a shape, then choose Show ShapeSheet from the Window menu.


Using shape handles

Related Topics

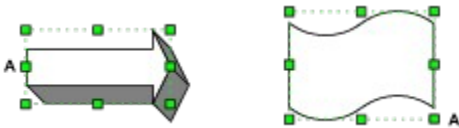
Visio shapes come with a variety of handles that you can drag to modify the shape's appearance, position, or behavior. For example, you can use handles to glue one shape to another, move a shape's text, or change the curve of an arc.

This section discusses the various types of shape handles and how to use them.



Selection handles and endpoints

Selection handles and endpoints appear when you select shapes with the pointer tool () on the Standard toolbar. To resize a shape, drag its selection handles or endpoints.

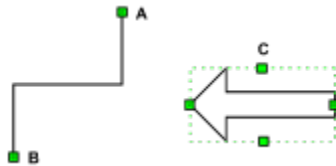
Most shapes are two-dimensional (2-D) shapes, which have corner selection handles that you drag to resize the shapes proportionally and side selection handles that you drag to resize that side of the shape.



Two-dimensional shapes. The small green boxes on the corners and sides of each shape (**A**) are its selection handles.


Some shapes, including all connector shapes, are one-dimensional (1-D) shapes. One-dimensional shapes have endpoints—a begin point () and an end point ()

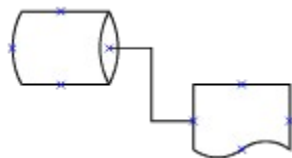
().



One-dimensional shapes. In addition to begin points (**A**) and end points (**B**), some 1-D shapes have two selection handles (**C**).


Connection points

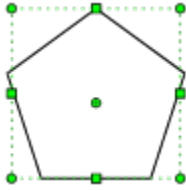
Some 2-D shapes have connections points, where you can glue the endpoints of a 1-D shape to the 2-D shape. You can create new connection points using the connection point tool () on the Standard toolbar.



A connection point appears as a blue x on a shape.

Rotation handles

Rotation handles appear when you select a shape with the rotation tool () on the Standard toolbar. They are indicated by green round corner handles, and a pin, which marks the center of rotation. To rotate a shape, drag a corner handle. To change the center of rotation, move the rotation pin.



Rotation handles appear as round corner handles. The rotation pin appears as a circle with a plus in the center.

Vertices

Vertices appear when you select a shape with the pencil (🖊), line (

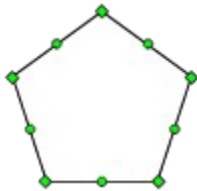
↘), arc (

↷), or freeform (

~) tool on the Standard toolbar. A vertex is marked by a green diamond-shaped handle. To change the form of a shape, drag a vertex with the tool used to create the shape. (The vertex turns magenta to indicate that it's selected.) To add or delete segments, you add or delete vertices using the pencil, line, arc, or freeform tool on the Standard toolbar.

Control points

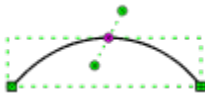
Control points appear on lines, arcs, and freeform curves when you select them with the pencil tool. These are green round handles that appear between two vertices. You can drag control points to change the curve or symmetry of a segment.



Vertices appear as green diamond-shaped handles. Control points appear as round handles.

Eccentricity handles

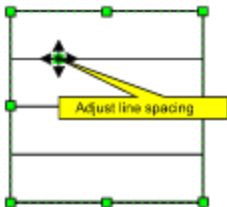
With eccentricity handles, you adjust the angle and magnitude of an elliptical arc's eccentricity. To display eccentricity handles, first select an arc. Then select the pencil tool and click the control point at the center.

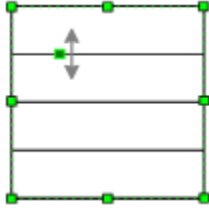


Eccentricity handles appear as circles on each end of a dashed line.

Control handles

Some master shapes have control handles that let you work with shapes in ways you can't with standard 1-D and 2-D shapes. The control handle looks like a selection handle with darker shading. Each control handle has a function unique to the shape on which it appears. For example, it may adjust the roundness of a shape's corners or reshape an arrow. To display a tip about what a control handle does, pause the pointer over the control handle.





Tips explain the use of control handles. In this example, dragging the control handle (■) adjusts the line spacing. This behavior is programmed into the shape's ShapeSheet spreadsheet.

Padlocks

Padlocks appear in place of corner handles when you select a shape to indicate that the shape is locked against specific changes. Some shapes are locked against flipping, rotating, sizing, or other changes that would destroy their specially programmed behavior. You can lock shapes using the [Protection command](#).

NOTE Padlocks only appear when a shape is locked against sizing or rotating. When a shape is locked against repositioning, deleting, or selecting, no padlocks appear, but you can't perform the action.




When you select a shape locked against sizing or rotating, the selection handles appear as padlocks.

Selecting shapes


[Related Topics](#)

To work with a shape you must select it. In most cases you select shapes by clicking them with the pointer tool, but you can also use other tools or drag the pointer tool to create a selection net around multiple shapes.

Methods for selecting shapes

To	Do this
Select one shape	Move the pointer over a shape. When the pointer changes from a black arrow to a white arrow, click to select the shape. The shape's selection handles appear in green.
Select multiple shapes by clicking	Select the first shape, hold down the Shift key, then click to select other shapes one at a time. The <u>primary</u> shape has green selection handles, and all other shapes have blue selection handles.
Select multiple shapes by dragging	Use the <u>pointer tool</u> () from the Standard toolbar and drag a selection net around all of the shapes you want to select.
Select all shapes on the page	Choose Edit > <u>Select All</u> . If there are more than 25 shapes, they appear with a magenta outline to show that they are selected. Otherwise, shapes appear selected as described earlier.
Select all of a particular kind of object	Choose Edit > <u>Select Special</u> , then check the type of object that you want to select, such as shapes, groups, or guides.
Cancel a selection	Click away from the selected shape or press the Esc key.
Cancel the selection of one shape when several are selected	Shift+click the shape.

Resizing and reshaping shapes

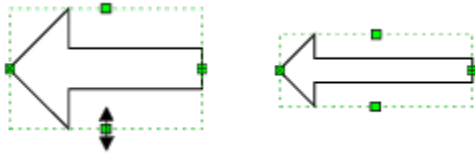
 [How To](#)

 [Related Topics](#)

You can change the size and shape of a shape. For example, you can

- Change the width and height of two-dimensional (2-D) shapes.
- Make one-dimensional (1-D) shapes longer, shorter, wider, or narrower.
- Add segments to and delete segments from shapes.
- Change the angle where two segments meet.
- Edit arcs—drawn with the arc tool, pencil tool, or freeform tool—with the [pencil tool](#).

NOTE To resize a shape exactly, use the [Size & Position](#) command and then type the shape's height and width dimensions.




If a 1-D shape has selection handles, you can drag them to change the width of the shape.

Resizing 2-D shapes

A 2-D shape, such as a rectangle, has corner selection handles you can use to resize the shape proportionally and side selection handles you can use to resize that side of the shape. Selection handles appear as green boxes. Examples include most rectangles, ellipses, and freeform shapes.

NOTE If you select a shape and its selection handles appear gray, the shape is part of a group.

To resize a 2-D shape:

1. Choose the pointer tool () on the Standard toolbar, then select the shape.
2. Drag a selection handle until the shape is the size you want. To resize the shape proportionally, drag a corner handle.

TIP If you see fewer than eight handles on a 2-D shape, zoom in on the drawing to see the rest of the handles and to size the shape more accurately.

 Overview

Resizing 1-D shapes

A 1-D shape has two endpoints: a begin point (■) and an end point (■).

You can change the size of a 1-D shape by dragging one of its endpoints. 1-D shapes that are not straight lines have selection handles you can use to resize the shape.

To resize a 1-D shape:

1. Choose the pointer tool (☞) from the Standard toolbar, then select the shape.
2. To adjust the shape's length, pause the pointer over an endpoint until it changes to a four-headed arrow, then drag to make the shape the length you want.
For 1-D shapes that can be adjusted in width, pause the pointer over a selection handle until it changes to a two-headed arrow, then drag until the shape is as wide or narrow as you want.
3. Release the mouse button.

NOTE Changing a 1-D shape's width is not the same as changing its line weight.

■ Overview


Adding or deleting shape segments


A segment is a straight line or curve that is part of a more complex shape. Between each pair of segments is a vertex. You can add segments to shapes to change the way they look. For example, you can turn a triangle into a rectangle. You add a segment by adding a new vertex to an existing segment. You can also delete segments you don't want. For example, you can delete a segment from a rectangle to make it a triangle.


When you delete a segment, Visio redraws the shape based on

- The order in which the shape's segments were created.
- Whether a vertex is at the beginning or end of an open shape.
- Whether the segment that follows the one you delete is a line or an arc.

To add a new segment to a shape:

1. Choose the pencil () , freeform (

) , line (

) , or arc tool (

) from the Standard toolbar, then select the shape.

2. Between two existing vertices on the shape's outline, point to where you want to add the segment.

3. Hold down the Ctrl key and click.

A new vertex appears where you clicked on the shape, creating a new segment. To make the shape look the way you want, you may need to adjust the shape by dragging vertices and control points.

TIP Zoom in on the drawing so you can clearly see when the pencil is over a line or arc segment.

To delete a segment:

1. With the pencil tool, select the shape.

2. Click the vertex at the end of the segment you want to delete.

When the vertex is selected, it turns magenta.

3. Press the Delete key, or choose Edit > Clear.


After you delete segments, you can adjust the shape by dragging vertices and control points.

 Overview

Changing the angle where two segments meet

By dragging a vertex, you can change the angle at which two segments meet. Dragging a vertex often makes a segment longer or shorter. You can also select several vertices and drag them all at the same time. The selected vertices maintain their position in relation to one another and move in relation to the rest of the shape.

To reshape angles by dragging a vertex:

1. Choose the pencil tool () from the Standard toolbar, then select the shape.
2. Click the vertex you want to move.
When the pointer is directly over the vertex, it changes to a four-headed arrow. When the vertex is selected, it turns magenta.
3. Drag the vertex to its new position.

To reshape angles by dragging multiple vertices:

1. With the pencil tool, select the shape.
2. Click a vertex that you want to move, then hold down the Shift key and click the other vertices with positions you want to change.
3. Place the pointer over one of the selected vertices, then drag.
The selected vertices move together, maintaining their relationship.

 [Overview](#)

Reshaping arcs

Every arc drawn with the arc tool (↶) follows the perimeter of an invisible ellipse. You can change the bow of an arc so the arc becomes a larger or smaller portion of the circle or ellipse—even flatten an arc to make it a line. You can also edit an arc by dragging its eccentricity handles to reshape the ellipse on which the arc is based. You can change the way the arc leans (the angle of eccentricity) or its flatness (the magnitude of eccentricity). An arc has an invisible snap point in the middle of an invisible line between its two endpoints. When you drag the control point to that snap point, the arc becomes a line.

To reshape an arc:

1. Choose the pencil tool (✎) from the Standard toolbar, then select the arc or the shape that contains the arc.
2. Point to the arc's control point.
3. Drag the control point until the arc looks the way you want.

To change an arc's eccentricity:

1. With the pencil tool, select the arc or the shape that contains the arc.
2. Click the control point on the arc to display the eccentricity handles.

On circular arcs, the eccentricity handles are under the control point.

If you don't see the eccentricity handles, hold down the Ctrl key and drag the pointer slightly away from the control point to display them.

3. Edit the arc by doing the following:

To change the arc's magnitude of eccentricity, drag an eccentricity handle farther from or closer to the control point.

To change the arc's angle of eccentricity, drag an eccentricity handle around the control point.

Moving shapes

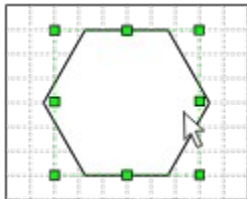
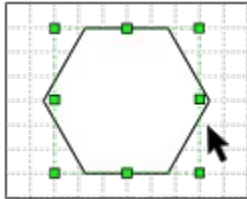
■ [How To](#)

■ [Related Topics](#)

You can change the location of a single shape or move multiple shapes so they keep their positions in relation to one another. You move shapes by dragging them. There are a number of ways to ensure that you place your shapes where you want them:

- Faint lines on each ruler indicate the location of the shape or group of shapes. You can also use the grid or guides to help you position shapes.
- If you drag the shape quickly, a rectangle (representing a 2-D shape) or a line (representing a 1-D shape) shows the location of the shape or group of shapes on the page.
- If you pause while dragging and continue to hold down the left mouse button, you'll see the shape or group of shapes instead of the rectangle or line that represents it, so you can position it more precisely.


If you want to place a shape or group of shapes exactly in a certain position, you can use the [Shape > Size & Position](#) command and then type the shape's x, y coordinates relative to the zero point of the drawing.



When you move a shape, watch the pointer. If the pointer is black, it's not positioned over the shape, so you cannot move the shape. The pointer turns white to indicate that you can move the shape.

Moving single shapes

To move a single shape:

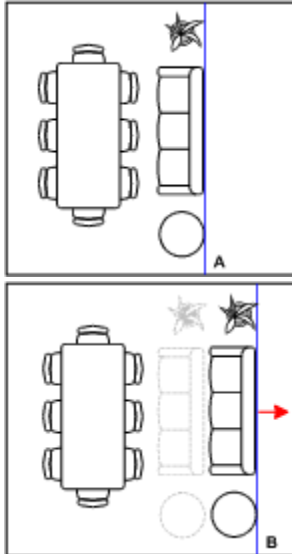
1. Choose the pointer tool () from the Standard toolbar, then point to the shape. The pointer turns white.
2. Press the left mouse button, then drag the shape to where you want it. To constrain the movement of the shape to vertical or horizontal, hold down the Shift key while you drag the shape. If snapping is on, the shape may jump into place.

TIP Be careful not to point to a selection handle. If you accidentally resize a shape, choose Edit > Undo (or press Ctrl+Z).

 Overview

Moving multiple shapes

If several shapes are related to each other, you may want to move them together. To keep them aligned as you move them, glue the shapes to a guide, then move the guide. You can group some shapes first, so that even shapes that don't actually touch the guide move with it.



When shapes are glued to a guide (**A**), you can move the guide to make several adjustments to the drawing at once (**B**). In this example, the shapes that represent the plant, couch, and side table are glued to a guide, which is then moved to the right to put more space between them and the table shape.

To move multiple shapes:

1. Select the shapes you want to move.
2. Place the pointer over one of the shapes. The pointer turns white.

If one of the objects you're moving is a group, the pointer needs to be over one of the shapes in the group in order to turn white.

3. Drag the shape to its new position. All selected shapes move the same distance and direction from their original positions.

TIP To constrain the movement of the shapes to vertical or horizontal, hold down the Shift key while you drag the shapes.

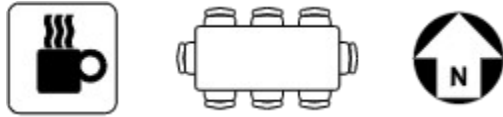
To use a guide to move several related shapes:

1. Choose Tools > Snap & Glue, then in the Snap & Glue dialog box make sure Guides is checked in the Snap To and Glue To lists.
2. Drag a guide from the appropriate ruler and glue shapes to the guide. Shapes' endpoints and selection handles turn red when glued.
3. Drag the guide to the shapes' new location.

Working with shapes in groups

[Related Topics](#)

In Visio, you can group shapes so they function as a unit. It's useful to group shapes when you regularly use them together. You can group any combination of Visio shapes and shapes you draw yourself. Groups can also include guides, other groups, and objects from other programs.



Some Visio shapes are groups—that is, a set of shapes grouped to form a single shape.

Keep these points in mind as you work with groups:

- You can manipulate groups or individual shapes, including formatting, moving, rotating, flipping, and reversing. You can also set behaviors for how an individual shape acts in relation to the group it belongs to.
- When you create a group, Visio builds a group [ShapeSheet](#) spreadsheet, which describes the group's attributes, but not those of the individual shapes within it. Each shape in the group retains its own ShapeSheet spreadsheet; Visio puts references to the group ShapeSheet spreadsheet into the individual shapes' ShapeSheet spreadsheets. When you ungroup shapes, Visio discards the group's ShapeSheet spreadsheet.
- If you add a guide and the shapes glued to it to a group, be sure to select both the guide and shapes before you add them to the group; otherwise the glue breaks. You can add guides to rotated groups only when the group is displayed in the group window, which is where you can edit the shapes that make up the group.
- Bitmaps or other imported objects cannot be rotated even when you rotate the group that contains them. To rotate an imported object that is not a bitmap, you must first convert it to a Visio group.
- After you reposition, add, or delete individual shapes within a group, the alignment box that appears when you select a group may no longer fit its dimensions. To adjust it, choose **Tools > [Update Alignment Box](#)**.

Methods for working with groups

To	Do this
Group shapes and objects	Select the shapes and objects you want to group. Choose Shape > Grouping > Group
Ungroup shapes and objects	Select a group, then choose Shape > Grouping > Ungroup .
Open a group so that you can work with the shapes in it	Select a group, then choose Edit > Open Group to open the group window.
Add a shape to a group	Select the group. Press the Shift key and select the shape you want to add. Choose Shape > Grouping > Add To Group . You can also open the group window as described above, then drag a shape from the drawing page or

Remove a
shape from a
group

a stencil into the group window.

Select the group, then click the
shape you want to remove to
subselect it. Choose Shape >
Grouping > Remove From
Group.

Flipping and reversing shapes

 [Related Topics](#)

You can change the direction shapes face by flipping or reversing them.







A Flipping shapes horizontally.

B Flipping shapes vertically.

C Reversing ends to flip shapes both horizontally and vertically.

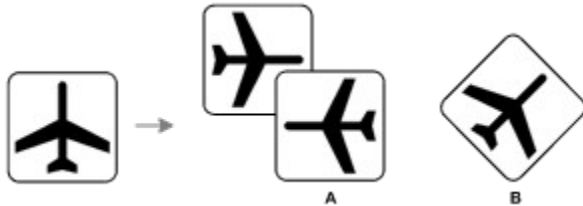
Methods for flipping and reversing shapes

To	Use this tool	Do this
Flip a shape		Select the shape. From the Shape menu, choose Flip Vertical (Ctrl+J) or Flip Horizontal (Ctrl+H).
	 	Or select the shape and click the flip vertical or flip horizontal button on the Shape toolbar.
Reverse a shape		Select the shape. Choose Shape > Reverse Ends .
Flip or reverse a group		Flip or reverse as you would any shape.
Flip or reverse a shape within a group		Select the group, then choose Edit > Open Group . In the group window, flip or reverse individual shapes as you would any shape. Click the group window's close box.

Rotating shapes

[Related Topics](#)


You can change the angle of shapes by rotating them in one of two ways: You can use commands or buttons to rotate in 90-degree increments, or you can use the rotation tool to rotate the shape at any angle. As you rotate shapes with the rotation tool, the status bar at the bottom of the Visio window displays the exact angle of rotation.






A Rotate Left and Rotate Right rotate a shape in 90-degree increments.

B With the rotation tool, you can rotate a shape at any angle.

Keep these points in mind as you rotate shapes:

- You can rotate a 1-D shape by dragging one of its endpoints with the pointer tool (). However, it's easy to resize the shape when you do this. If you don't want to resize the shape it's better to use the rotation tool.
- You cannot rotate imported bitmaps or OLE objects.
- For precise rotation of a shape, use the Shape > Size & Position command to enter a numerical value for angle.

Methods for rotating shapes

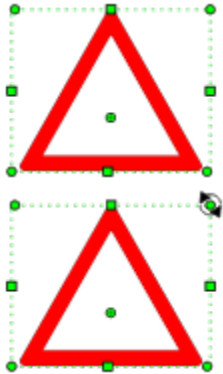
To	Use this tool	Do this
Rotate a shape 90 degrees	 	Select the shape. Choose Shape > <u>Rotate Left</u> (Ctrl+L) to rotate counterclockwise or <u>Rotate Right</u> (Ctrl+R) to rotate clockwise. Or select the shape, then click the rotate right or rotate left button on the Shape toolbar.
Rotate a shape by any amount		Click the shape to select it. Drag a rotation handle. For more control, drag the pointer farther from the rotation pin.
Rotate a group		Rotate as you would any shape.
Rotate a shape within		Select the group, then choose Edit > <u>O</u> pen.

a group

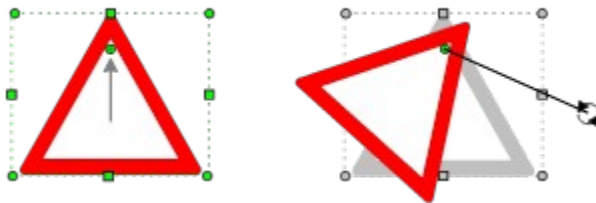
Group. In the group window, rotate individual shapes as you would any shape. Click the group window's close box.

Changing the center of rotation

When you select a 2-D shape with the rotation tool, a plus sign in a circle appears at the center of rotation, which is usually at the center of the shape's selection rectangle. You can move the center of rotation, called the pin, to rotate a 2-D shape around any point in the drawing window. To do this, select the shape with the rotation tool, then drag the pin to a new location.



When you select a shape with the rotation tool, rotation handles appear in the corners and a pin (center of rotation) appears in the center. As it moves over a rotation handle, the pointer changes to a round arrow indicating that you can rotate the shape.



You can rotate a shape around any point by moving the shape's pin to that point.

Duplicating shapes

[Related Topics](#)


You can duplicate shapes within the same drawing, or copy shapes from one Visio drawing to another or to a document in another Windows application. You can also drag shapes from one drawing to another or from Visio to another Windows application that is compatible with [OLE 2](#).

You can place shapes exactly where you want them in relation to one another as you duplicate them. For example, you can easily design an auditorium with dozens of rows of seats or a steel structure with regularly placed rivets.

Methods for duplicating shapes

To	Do this
Add several copies of a master to a drawing	Select the stamp tool from the Standard toolbar, then click a master on a stencil to select it. In the drawing window, click the pointer where you want the center of the shape to appear. Continue clicking where you want additional copies of the shape.
Duplicate a shape within the same drawing	Select the shape you want to duplicate, then choose Edit > Duplicate (Ctrl+D). The copy appears on the page slightly offset from the original.
Duplicate a shape at a specific location	Select the shape. Hold down the Ctrl key and drag to where you want the copy.
Repeatedly duplicate a shape and the offset between copies	Select the shape. Hold down the Ctrl key and drag to where you want the copy. Release the mouse button. Press F4 for each copy you want.
Drag and drop shapes from a Visio drawing into another application that supports OLE 2	Display the drawing page that contains the shape you want to copy. Open the document into which you want to copy the shape. Hold down the Ctrl key and drag the shape from Visio into the other document.
Copy and paste shapes from a Visio drawing into another application that doesn't support OLE 2	Select the shape you want to copy. Choose Edit > Copy . In the document in which you want to copy the shape, choose Edit > Paste .

Finding shapes on stencils

 [How To](#)

 [Related Topics](#)

When you want to find a shape, but aren't sure which stencil it's on, you can quickly search with [Shape Explorer](#) instead of opening multiple stencils. Shape Explorer provides an easy way to search for and catalog Visio shapes, stencils, and templates that are provided with Visio products, that are on the World Wide Web, or that are in databases you create.

For example, if you know a 3-D Box shape exists, but don't know where to find it, use Shape Explorer to determine which stencil contains the shape, then open the stencil or use Shape Explorer to add the shape to your drawing.

You search with Shape Explorer by typing the keywords you want to use in the Search For box on the Search tab. A keyword can be a shape or stencil name, or a word or phrase that describes the shape you're looking for, or the type of drawing you want to create.

To open the Shape Explorer:

1. Choose File > Stencils > Shape Explorer.
2. On the Search tab, in the Search For box, type a name, word, or phrase that describes what you want to find.
3. Click Find Now.

The status bar at the bottom of the Shape Explorer window indicates the progress of the search.

■ Overview

About formatting shapes

Related Topics

You can format shapes in your drawing by changing any one or all of their attributes, such as line weight and pattern, fill color and pattern, or text. For example, you might use color to make a drawing for a slide presentation more effective, or use line patterns to represent a specific type of connection between shapes.

The type of formatting you apply to a shape depends on whether the shape is open or closed. For example, you can add fills to closed shapes, such as circles or rectangles, but not to open ones. You can add line ends to open shapes, such as arcs or zigzag lines, but not to closed ones.

On open shapes, such as arcs, you can change

- Line ends (such as arrowheads).
- Line caps (round, square).
- Line pattern (solid, dashed), line weight, and line color.
- Shadow pattern and shadow color.
- Corners.

On closed shapes, such as rectangles, you can change

- Line pattern (solid, dashed), line weight, and line color.
- Fill color and pattern.
- Shadow pattern and shadow color.
- Corners.

The quickest way to change a shape's appearance is to

- Use Shape toolbar buttons to apply local formatting
- Use the Text, Line, or Fill style lists to apply a style.

For greater precision, you can use the commands on the Format menu.

Formatting shapes

- [How To](#)
- [Related Topics](#)

You can choose from among the following formatting methods according to the type of formatting you want to do.

Toolbar buttons

By using the [Shape toolbar](#) buttons to apply [local formatting](#), you can quickly change

- Line ends (such as arrowheads).
- Line patterns, weight, and color.
- Fill color and patterns.
- Shadow color.
- Corners on shapes.

NOTE Buttons S–V only appear at resolutions higher than 600x800.

Toolbar palettes

Some of the buttons on the Shape toolbar display palettes from which you can choose an attribute to apply to your shape. After you choose the option you want, the palette closes.



Line pattern palette

TIP If the option you want isn't available as a palette, you can use a command on the Format menu.

Format menu commands

Although formatting with toolbar buttons is faster, you may sometimes want to use the formatting commands on the Format menu. Format menu commands have options that are not on the toolbar. For example, you can only apply a pattern to a shadow using the Shadow or Fill commands on the Format menu.

Style lists

When you format shapes using the Text, Line, or Fill style lists, you're actually applying a style. Styles can contain line, fill, and text formatting attributes. It's best to use a style if you want to apply many formatting attributes to many different shapes. When you start a drawing with a Visio template, the template includes style definitions and the appropriate styles appear in the style lists on the toolbars.

To display the Shape toolbar:

- Choose View > Toolbars > Shape. A checkmark next to a toolbar name indicates that the toolbar is currently displayed.

■ Overview

To format shapes:

- Do one of the following:

Select the shape or shapes you want to format, then choose the appropriate button or style list from the Shape toolbar.

Select the shape or shapes, then choose the appropriate command from the Format menu.

■ Overview

Formatting multiple shapes

Related Topics

You can format several shapes at once by doing one of the following:

- Selecting multiple shapes at the same time.
- Selecting shapes in a group.

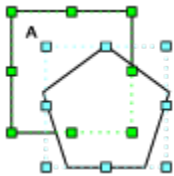
Selecting multiple shapes

When you select multiple shapes and then apply a command, the result depends on the primary shape, the order in which you select, and the stacking order of the shapes.

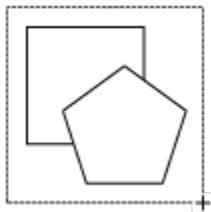
When you are working with multiple shapes, the primary shape determines

- How all the shapes align when you use the Align Shapes command.
- How the selected shapes are affected when you edit or position them.
- The attributes that appear in any dialog boxes or styles lists you open.
- The order in which shapes connect when you use the Connect Shapes command.

The shape that is primary is determined by one of two things: the selection order or the stacking order.



When you select multiple shapes by shift-clicking, the primary shape (**A**) is the first shape you select. The primary shape is indicated by green handles.




When you select shapes by dragging a selection net around them, the primary shape (**A**) is the one you dropped most recently on the page. The most recently dropped shape is at the front of the stacking order.

How a command affects multiple shapes in a selection is also determined by the stacking order of the shapes on the page. The first shape you draw or drop on the page is at the back of the stack; the most recently created shape is at the front. Stacking order determines

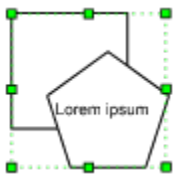
- Which shape is positioned in front of another if they overlap.
- How multiple shapes are affected by commands. For example, when you type in a group, the text appears on the frontmost shape in the stacking order.
- The selection order when you select multiple shapes by dragging a selection net around them. The shape at the front of the stacking order becomes the primary shape, displaying green handles. (When you select multiple shapes by Shift+clicking, the stacking order doesn't affect the selection order. The first shape you click becomes the primary shape.)

NOTE Shapes on a background always appear behind shapes on a foreground. Layers, however, have no effect on stacking order.

Methods for selecting multiple shapes

To	Do this
Select multiple shapes by clicking	Select the first shape, hold down the Shift key, then click to select other shapes one at a time. The primary shape has green selection handles; all other shapes have blue selection handles.
Select multiple shapes by dragging	Using the <u>pointer tool</u> () on the Standard toolbar, drag a selection net around all of the shapes you want to select. The shapes appear selected as described above.
Select all shapes on the page	Choose Edit > <u>Select All</u> . If there are more than 25 shapes, they appear with a magenta outline to show that they are selected. Otherwise, shapes appear selected as described above.
Select all of a particular kind of object	Choose Edit > <u>Select Special</u> , then check the type of object that you want to select, such as shapes, groups, or guides. The shapes appear selected as described above.
Cancel the selection of one shape when several are selected	Shift+click the shape.

When you group shapes using the Shape > Grouping > Group command, you can apply formatting to the group or to individual shapes in the group.



When you select a group and type text, the text appears on the frontmost shape in the stacking order.

Methods for selecting shapes in groups

To	Do this
Format all the shapes in a group	Select the group, then change the style or attribute.
Format a shape within a group	Select the group, then choose Edit > <u>Open Group</u> to open the group in the group window.

Select the shape and format it as you would any shape, then click the group window's close box.

Format several shapes at once

Select all the shapes, then change the style or attribute.

Changing the stacking order of shapes


 [Related Topics](#)

You can change the stacking order of shapes. For example, you can bring a specific shape to the front to act as the primary shape when you drag a selection net around multiple shapes.

Methods for changing a shape's position in the stacking order

To	Do this
Bring a shape forward one level in the stacking order	Select the shape, then choose Shape > Bring Forward .
Bring a shape to the front of the stacking order	Select the shape, then choose Shape > Bring To Front (or press Ctrl+F).
Send a shape backward one level in the stacking order	Select the shape, then choose Shape > Send Backward .
Send a shape to the back of the stacking order	Select the shape, then choose Shape > Send To Back (or press Ctrl+B).
Change the stacking order of a shape in a group	Select the group, then choose Edit > Open Group . Select a shape, change its position in the stacking order as described above, then close the Group window.

Formatting lines

 [How To](#)

 [Related Topics](#)

A line can be an open straight line, freeform line, or arc; or the border around a closed shape, such as a rectangle. You can format lines or arcs by adding a pattern or color, changing the line weight, adding or removing line ends, changing the line caps, or rounding the line's corners. You can also add a shadow and format the shape's text.

By applying line ends, you can turn any line or other open shape into an arrow. You can apply an arrowhead or other line end to the begin point, the end point, or both endpoints of a shape. You can also choose options for the size of line ends. You can turn an arrow into a straight line by removing any line ends that are applied to it.

Rounded corners can be applied to any corner where two segments meet on open or closed shapes.

To change formatting for a line:

1. Select the shape, then choose Format > Line.
2. Choose the options you want.

You can see how the options you select will look in the Preview box.

3. Click Apply to apply the formatting options you've chosen and view the change before closing the dialog box, or click OK to apply the formatting and close the dialog box.

■ Overview


Repeating and copying formatting

[Related Topics](#)


If you want to format several shapes the same way, you can select all the shapes and apply the formatting options you want. You can also experiment with one shape until it looks exactly the way you want and then use the Format Painter button to copy that shape's formatting to one or more other shapes in your drawing.

If you want to use the same formatting again and again in many drawings, you can create a style.

Methods for repeating or copying formatting

To	Do this
Format several shapes at once	Select all the shapes you want to format, then click the formatting buttons and choose the style list options you want, or use the appropriate command on the Format menu.
Quickly repeat one formatting change	Make one formatting change to a shape. Select other shapes, then press F4. The last formatting change you made will be used.
Copy one shape's formatting to another shape	Select the shape with the formatting you want to copy. Click the Format Painter button () , then click the shape to which you want to copy the formatting.
Copy only text attributes from one shape to another	Double-click the shape to select the text. Click the Format Painter button. Click the shape to which you want to copy the formatting.
Copy one shape's formatting to other shapes sequentially	Select the shape with the formatting you want to copy. Double-click the Format Painter button, then click the shapes to which you want to copy the formatting.
Copy one shape's formatting to several other shapes simultaneously	Select the shape with the formatting you want to copy, then press the Shift key and select the shapes to which you want to copy the formatting. Click the Format Painter button.

Adding color and shadows to shapes

 [How To](#)

 [Related Topics](#)

You can fill closed shapes and you can give shadows to both closed and open shapes.

Fills and shadows can be a solid or bitmap pattern. Fills can also be a gradient pattern. You choose colors and a pattern from set lists to which you can add custom colors or patterns you create.

Both fills and shadows function in the same way. The only difference is that a shadow is a copy of the shape that is offset from and behind the shape to which it's applied.

NOTE If your display driver supports 16 colors or fewer, colors may be dithered when you apply a solid or gradient pattern to a fill or shadow. When you apply a bitmap pattern, Visio uses the closest approximation of the specified color. For example, orange may be mapped to yellow.

To apply a fill to a closed shape:

1. Select the shape.
2. Choose Format > Fill.

NOTE You can also use fill formatting palettes on the Shape toolbar. Pause the pointer over the palettes to see tips that identify them.

3. In the Fill section, choose options from the Pattern, Foreground, and Background lists. (You can also choose the same options in the Shadow section.) You can see how the options you select will look in the Preview box.

There are 40 patterns included with Visio: 0 is no pattern (transparent); 1 is a solid one-color pattern; 2–24 are bitmap patterns; and 25–40 are gradient patterns (for fills only).

If you choose a bitmap pattern, Visio uses the foreground color for the pattern and the background color for the background.

4. Click Apply to apply the formatting options you've chosen and view the change before closing the dialog box, or click OK to apply the formatting and close the dialog box.

TIP To hide a shape completely, apply to it a 0 (transparent) fill in the Fill dialog box and a pattern of None in the Line dialog box. You can also create shapes with transparent holes by using the Combine command. To temporarily hide a shape, assign the shape to a layer, then hide the layer in the Layer Properties dialog box.

■ Overview

To apply a shadow to a closed or open shape:

1. Select the shape.
2. Choose Format > Shadow.
3. In the Shadow section, choose options from the Pattern, Foreground, and Background lists.
4. Click OK.

TIP To delete a shadow, choose None from the Pattern list for Shadow.

■ Overview

Changing the shadow offset for shapes

 [_Related Topics](#)

Although each shape can have a shadow of a different color and pattern, all shadows on the same page are offset the same amount because shadows are a page property. You can change the size and angle of the shadow offset for all the shapes on a page.


To change the shadow offset for a shape:

1. Choose File > Page Setup, then click the [Page Properties](#) tab in the Page Setup dialog box.
2. In the Shape Shadow Offset section, type values for the shadow offset in the Right and Down boxes.

To move shadows to the left or top of shapes, use negative values.

3. Click OK.

Applying custom line and fill patterns

 [How To](#)

 [Related Topics](#)

Visio includes a number of stencils that contain custom line and fill patterns and custom line ends. When you open these stencils, the patterns they contain appear as a choice in the Line and Fill dialog boxes. For example, you can open a custom hatch pattern stencil and then apply those hatch patterns as fills from the Fill dialog box. The custom patterns don't appear as masters on the stencil unless you open the original stencil, which gives you read/write access. This is because patterns are not true shapes, but attributes that you apply to shapes.

The way a custom pattern is created affects the way it behaves when you apply it to a shape. For example, some line patterns are set to scale with the line weight, so when a line is very fine, the pattern may be scaled so small that it's difficult to see. Also, some patterns may be set to take on the color of the shape they're applied to, while others are set to override the shape's colors with their own.

To apply a custom pattern:

1. Open the stencil that contains the custom pattern you want to apply.
2. Select the shape to which you want to apply the custom pattern.
3. Choose Format > Line to apply a line or line-end pattern, or Format > Fill to apply a fill pattern.
4. To apply a line-end pattern, choose the custom pattern's name from the Begin or End list in the Line dialog box. To add a line or fill pattern, choose the custom pattern's name from the Pattern list.
5. Click OK.

The shape displays the pattern.

NOTE If you apply a line pattern or line-end pattern and it doesn't look the way you expected it to (for example, you can't see it), try increasing the line weight.

■ [_Overview](#)

Creating custom line and fill patterns





-  [How To](#)
-  [Related Topics](#)

If you want to use a fill pattern, line pattern, or line-end not available in Visio, you can create your own. Once you've developed a master fill or line pattern, you can apply the pattern to other shapes. When you create a custom line or fill pattern, you create it initially as a master pattern, which then appears as a choice in the [Fill](#) or [Line](#) dialog box and can be applied to other shapes in the drawing.

You can create a master pattern from a shape you create in Visio, or a shape that already exists, and set its properties, which affect how the pattern behaves. For example, you can choose how the pattern will appear when it is applied to a shape, how it responds when the shape is resized, or how it responds when the drawing page scale changes.

For line patterns, you can set the following options.

Line pattern settings

To	Use
Bend the pattern to the line, so that the pattern is tiled and distorted along the path of the line. The original line is no longer visible.	
Tile multiple images along the line without distorting them	
Stretch a single image along the line	
Tile multiple images along the line without distorting them, while still retaining the line's original formatting	





You can use a shape like a triangle to create a line pattern. The line pattern's properties affect how Visio applies the shape to a line.



You can bend the pattern (A), tile it (B), stretch it the length of the line (C), or tile it while keeping the line's original formatting (D).

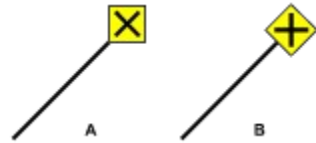
For line ends, you can set the following options.

Line-end settings

To	Use
Orient the line end to the direction of the line	
Orient the line end so that it is always upright	



You can use a shape like an X to create a line end. The line end's properties affect how Visio applies the shape to the end of a line.



You can orient the line end to the direction of the line (**A**) or keep the line end upright, regardless of the line's angle (**B**).

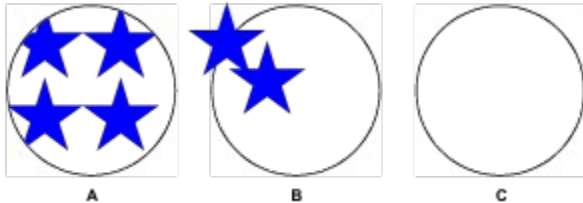
For fill patterns, you can set the following options.

Fill pattern settings

To	Use
Create multiple copies (tile) of the image to fill a shape	
Use a single, centered, image	
Stretch a single image to fill the shape	



You can use a shape like a star to create a fill pattern. The fill pattern's properties affect how Visio applies the shape to a line.



You can tile the pattern (**A**), use a single, centered image of it (**B**), or stretch it to fill the space (**C**).

For all types of patterns, you can choose to scale the pattern as the drawing page scale changes, or you can keep the pattern at a constant size.

Creating a pattern is a simple process, but keep in mind that developing a pattern that works a particular way requires a good understanding of how shapes work and may also require some trial and error testing.

To create a new master pattern and set its properties:

1. Open as an original file the stencil to which you want to add the new master pattern, or choose File > Stencils > Blank Stencil to open a new stencil.
2. On the drawing page, create the shape or shapes you want to designate as a pattern. You can create shapes from scratch or modify existing shapes. To create a pattern from multiple shapes, select them all, then choose Shape > Grouping > Group.
3. Drag the shape or group from the drawing page and drop it into the stencil window to create a new master.
4. Right-click the new master, then choose Properties from the shortcut menu.
5. Type a name for the pattern in the Master Name section, select the alignment, size, and update options for the master icon.
6. Select a type of master and behaviors you want for the shape, then click OK.
7. Save the stencil.

TIP You can also create a new master by right-clicking the green stencil background and choosing New Master from the shortcut menu. In the New Master dialog box, choose the options you want, then click OK. Right-click the new master and choose Edit Master to open a drawing window where you can draw the shape or shapes you want to make up the pattern.

■ Overview

About creating and revising connected drawings

Related Topics

Many drawings include lines, or one-dimensional (1-D) shapes, that indicate connections between two-dimensional (2-D) shapes. These drawings are called "connected drawings," like flowcharts, which use 1-D shapes to connect the stages in a process.

In Visio, these 1-D shapes are called "connectors," and they include special behavior to make it easier and faster for you to create, and later change, connected drawings. You can use this behavior—called "glue,"—to ensure that shapes that need to stay connected do so when you revise the drawing.

You can revise a connected drawing by using one of the following methods:


- Moving 2-D shapes.

When you reposition 2-D shapes, connections remain intact, so you don't need to redraw them.

- Manually editing the paths of routable connectors by moving, adding, or deleting endpoints, midpoints, and vertices.

You can change the path a routable connector takes around shapes that lie between the shapes it connects.

Using glue to maintain shape connections

 [How To](#)

 [Related Topics](#)

Glue is what keeps shapes connected when you move them. When you want to reposition shapes in your drawing, glue saves you the time it would take to drag each shape one at a time and re-attach connectors.

While you're working with glue, it helps to keep the following in mind:

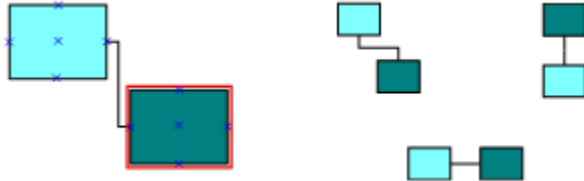
- You can use dynamic or static glue to create connections between shapes or specific points on them.
- You can change glue settings to determine the types of points that connectors and shapes can glue to.
- You can add new connection points to shapes to make your connections more precise.

Gluing connectors to shapes or to specific points on them

You can glue connectors to shapes with

- **Dynamic glue**, in which the connector is glued to the shapes and changes the points at which it's connected when you reposition the shapes. Dynamic glue keeps the shapes connected at the closest available points.

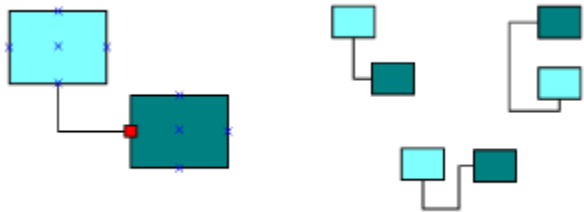
For example, dynamic glue is appropriate for a flowchart, which represents the flow of a process. Each subsequent step must be connected to the previous step, but the specific point on the shape representing the previous step doesn't matter. When you move a step, you want the connector to shift to the point on the previous step closest to the subsequent step's new location.



Dynamic glue When you glue a connector to an entire shape, a box appears around the shape before you drop the connector endpoint onto it. If you move one of the 2-D shapes, the connector adjusts to glue to the point that's closest to the other shape.

- **Static glue**, in which the 1-D connector is glued to one specific point on each 2-D shape, and stays glued to those specific points when you reposition the shapes.

For example, static glue is appropriate for an organization chart, which represents a reporting hierarchy. Position shapes appear under and are connected to the bottom center of Manager shapes. When you move a Position shape, you don't want the connector to shift to any other point on the Manager shape.



Static glue When you glue a connector to a specific point on a shape, a box appears around that point before you drop the connector endpoint on the shape. If you move one of the 2-D shapes, the connector remains glued at the specific points.

Whether shapes use static or dynamic glue depends upon the method you use to connect them and the type of connector you use. With connectors that glue both statically and dynamically, you can switch between static and dynamic glue. Not all connectors can glue dynamically. For example, control-handle connectors that you drag from shapes can only glue to a specific point.

TIP You can recognize a properly-glued connector endpoint or control handle by the color of its selection handle. When you select the connector, its glued endpoints or control handles are red. If an endpoint is light red and slightly larger than a normal selection handle, it's glued using dynamic glue. If it's darker red and is the same size as other selection handles, it's glued using static glue.

To switch from static to dynamic glue:

- Hold down the Ctrl key, then drag a connector endpoint away from the shape and then back to one of the shape's connection points.

When you drag the endpoint back to the shape, a box appears around the entire shape.

To switch from dynamic to static glue:

- Drag a connector endpoint away from the shape and then back to one of the shape's connection points.

When you drag the endpoint back to the shape, a box appears only around the connector endpoint.

■ [_Overview](#)

Setting glue options

You can control what types of objects shapes glue to and what their glue strength is. Glue strength is the amount of pull (measured in pixels) that a guide, selection handle, vertex, or connection point exerts. If you don't want endpoints to glue to guides or any points on shapes, you can turn glue off completely.

The glue settings you choose in the Snap & Glue dialog box apply to all shapes on the current drawing page. If you have more than one page in your drawing, you can set different glue options for each page.

TIP Options you set in the Snap & Glue dialog box don't affect connections you make with the Connect Shapes command or with the connector tool.

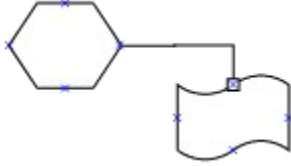
To set glue options:

1. Choose Tools > Snap & Glue.
2. Under Currently Active, make sure the Glue option is checked.
3. Under Glue To, check the options you want, then click OK.

 [_Overview](#)

Adding connection points to shapes

You can specify the points on a 2-D shape that connectors can glue to. If you need to show a connector attached to a particular location on a shape, you can add a connection point at that location. Connection points can lie on the perimeter, inside, or even outside the shape. They appear on the screen but don't print, and you can prevent connection points from appearing onscreen.



By default, 1-D endpoints and control handles glue to connection points (■) on shapes. You can also choose to have endpoints glue to selection handles and vertices, and you can add new connection points.

To add a connection point to a shape:

1. Select the shape to which you want to add a connection point.
2. From the toolbar, choose the connection point tool (■).
3. Hold down the Ctrl key and click on, inside, or outside the selected shape's boundaries.

TIP To delete a connection point, click the point with the connection point tool (it turns magenta), and then press the Delete key.

To prevent connection points from displaying onscreen:

- From the View menu, choose Connection Points.

When the command is unchecked, connection points do not display onscreen.

■ Overview

Adding connectors to your drawings

 [How To](#)

 [Related Topics](#)

Visio provides four main ways to add [connectors](#) to your drawings:

Drawing connectors with the connector tool You can choose the [connector tool](#) from the Standard toolbar and then drag [2-D](#) shapes from stencils to your drawing page. The shapes are connected when you drop them on the page. You can also draw connectors between shapes that are already on the page.

Pulling connectors from shapes Some 2-D shapes include control handles that you can click and drag to pull a connector from the shape.

Using the Connect Shapes command You can connect a series of shapes at once by choosing [Connect Shapes](#) from the Tools menu to add connectors between the shapes.

Dragging and dropping connector shapes Many Visio stencils include connectors that you can drag to your drawing page and drop in place.

Which method you use depends on the type of drawing you're creating, whether you expect to make extensive revisions later, and how much control you want over the connections you have.

Working with connectors

Connectors are 1-D shapes with endpoints. You glue these endpoints to 2-D shapes to create connections that are maintained when you reposition the 2-D shapes.



Connectors have begin points (**A**) and end points (**B**) that are indicated by an x and a + respectively.

Certain connectors, such as the Dynamic Connector and other routable connectors, also display midpoints and vertices when you select them. These points give you additional control over the connector's path from one shape to another. Vertices look the way they do on other shapes: green diamond-shaped handles. Midpoints look like control handles, that is, green squares with darker shading. You can set up a drawing so that routable connectors detect 2-D "placeable shapes" and draw paths around them rather than crossing through them.



Routable connectors display midpoints (**A**) and vertices (**B**) for additional editing capabilities.

To connect 2-D shapes with a Dynamic Connector using dynamic glue:

1. Display the drawing that contains the 2-D shapes you want to connect, and make sure a connector master is not selected on an open stencil (selected master icons are highlighted in blue).
2. Choose the connector tool (σ^D) from the Standard toolbar.
3. Position the connector tool over the center of the first shape, until a box appears around the entire shape, then hold down the mouse button and drag to draw a connector.
4. While holding the mouse button, position the connector tool over the center of the other shape, until a box appears around it, then release the mouse button.
NOTE If a box appears around a particular point on the shape, you'll create a connector that's glued using static glue.

To connect shapes with Visio connectors:

1. Drag a connector from the stencil, and position one of its endpoints on a 2-D shape's connection point. The endpoint turns red to indicate that the shapes are glued.
TIP In the Snap & Glue dialog box, you can also specify to glue endpoints to 2-D shapes' selection handles or vertices.
2. Drag the other endpoint to another 2-D shape.

Connecting shapes as you drop them on the page

You can connect shapes as you drop them on the page by using the connector tool as you drag and drop.

As long as the connector tool is selected, if a connector master is not selected on the stencil, Visio adds a Dynamic Connector between the selected shape and the next shape you drop onto the drawing page. To create new branches in a chart or diagram, select the shape from which you want to start the new branch, then drag a new shape to the drawing page.

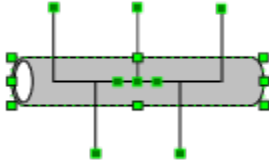
To connect shapes as you drag and drop them:

1. Make sure a connector is not selected on an open stencil. To cancel a master selection, click the green stencil background with the pointer tool.
2. Choose the connector tool (☰^D) from the toolbar.
3. Drag and drop a 2-D shape from the stencil onto the drawing page.
4. With the first shape still selected, drag and drop another 2-D shape onto the drawing page. Visio automatically connects the shapes with an instance of the Dynamic Connector.

■ Overview

Dragging connectors from control handles on shapes

Some 2-D shapes, such as organization chart position shapes and the network Ethernet and ring shapes, function as specialized connectors. These shapes have built-in connectors: control handles that you can drag and glue to other 2-D shapes.



Some shapes have control handles (■) that you can drag to glue to other shapes.

You can often tell which shapes contain control-handle connectors by looking at master icons in the stencil. Connectors appear as yellow lines extending from the main shape.

To drag a connector from a control handle on a shape:

1. Drag and drop organization chart shapes or a ring or Ethernet shape from a network diagramming stencil.
2. Select a shape and position the pointer over the shape's control handle (■).
3. Drag the control handle to a connection point on the other 2-D shape.

■ [_Overview](#)

Connecting a series of shapes at once

You can use the Connect Shapes command on the Tools menu to add connectors between multiple shapes at once in a drawing.


To connect a series of shapes at once:

1. Select the 2-D shapes in the order you want to connect them.

Click the first shape, then press the Shift key and click the other shapes.

2. If you want to use a particular connector, select its master icon in the stencil.

If you don't select a connector, Visio uses the Dynamic Connector. If a connector is selected and you want to cancel its selection, click the green stencil background with the pointer tool.

3. Choose Tools > Connect Shapes or click the Connect Shapes button .

Visio creates an instance of the connector and, if the connector you select can use dynamic glue, connects the shapes with dynamic glue.

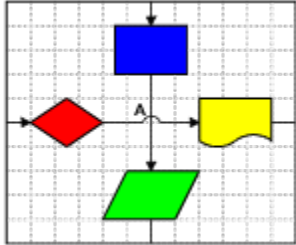
Displaying line jumps on crossing connectors

■ [How To](#)

■ [Related Topics](#)

In some drawings, such as flowcharts or network diagrams, connectors may cross over one another. In a complex drawing, it can be hard to follow the path of a connector if it crosses over another of the same type.

To make connections easier to follow when you or others analyze your drawing, you can have routable connectors display "line jumps," when they cross over other connectors.



Line jumps (**A**) clarify the shapes that a connector connects to.

To enable line jumps and specify which connectors show them:

1. Display the drawing in which you want to display connector line jumps.
2. Choose File > Page Setup, then click the Page Properties tab.
3. Under Add Line Jumps To, select the type of connectors that, when two lines cross, display a line jump. Choose one of the following:

None to turn off all line jumps.

Horizontal Lines to add a line jump to the connector that runs horizontally.

Vertical Lines to add a line jump to the connector that runs vertically.

Last Routed Line to add a line jump to the connector you added or modified most recently (default).

NOTE Changing this setting changes line jumps on connectors that already exist in the drawing, as well as those you add after changing the setting.

4. Click OK.

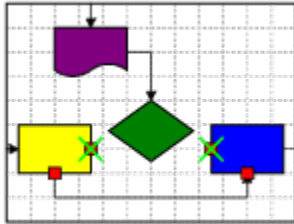
 Overview

Working with routable connectors and placeable shapes

- How To
- Related Topics

In some templates, such as those for creating flowcharts, organization charts, and network diagramming, the connectors are set up to draw a path around other shapes rather than crossing over them. These connectors are called "routable," and they work with 2-D shapes that are set to work with them, called "placeable shapes."

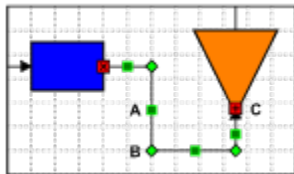
When a routable connector encounters a placeable shape between the two shapes it connects, it draws a path around the shape rather than crossing through it. Routable connectors can route around only shapes set as placeable.



A routable connector can detect placeable shapes and change its path to avoid crossing through them.

A routable connector changes its path from one shape to another when you drop a placeable shape on top of a connector that's already in the drawing.

After you glue a routable connector to a shape, you can manually edit the connector's midpoints and vertices to change the path it takes from one shape to the other.



To change a routable connector's path manually, you can edit its midpoints (**A**), vertices (**B**), and endpoints (**C**). Endpoints and vertices look the same as they do on other 1-D shapes. Midpoints look like control handles—green squares with darker shading—but function differently on routable connectors.

If you use the connector tool or Connect Shapes command, you can create routable connectors by first making sure a connector is not selected on the stencil. When you do not select a connector, Visio connects shapes with a Dynamic Connector, which is always routable.

To set a 2-D shape as placeable:

1. Select the shape, then choose Format > Behavior.
2. Under Layout Behavior, choose one of the following:

Layout And Route Around to set the shape as placeable.

Do Not Layout And Route Around to set the shape as non-placeable. (It does not become placeable even when you glue a routable connector to it.)

Let Visio Decide to have Visio determine when to make the shape placeable, according to the type of connector you glue to the shape. If you glue a Dynamic Connector to the shape, Visio makes it placeable.

3. Click OK.

■ Overview

About working with text

Related Topics

Text can clarify the meaning of your Visio drawings, list shape attributes, or document changes you or other Visio users make to a drawing. For example, you can

- Describe the process a shape represents in a process flow diagram.
- Add title blocks and bulleted lists to your drawings.
- Add page numbers or footers to every page of a multiple-page drawing.
- Annotate a technical drawing.

Adding text to shapes and drawings

 [How To](#)

 [Related Topics](#)






You can add text to any Visio shape, including [connectors](#), by selecting the shape and typing. You can also create text-only shapes to add titles and lists to a drawing. In a text-only shape, the shape has no line or fill, so only text you type in the shape is visible. Text-only shapes also enable you to add text to objects from other programs—position the text-only shape where you want to type text for the imported object.

The part of the shape in which you type text is called the [text block](#). A text block can differ from its shape in size, angle, and relative location, so you can place text where you want it in relation to a shape. Each shape has only one text block.

When you select a shape with a non-text tool, such as the [pointer tool](#), Visio selects all of the existing text so that when you type, the existing text is replaced with the new text. To select only a part of the existing text or to place an insertion point in the text, use the [text tool \(A\)](#). The text tool selects the shape and opens the shape's text block. After you highlight text within a text block, you can delete, cut, copy, or format the selection, or you can type or paste to replace it. To add text without replacing any of the existing text, click with the text tool to place an [insertion point](#) where you want to type new text.

To rotate, resize, or move an entire text block, select its shape with the [text block tool \(G\)](#).

Methods for selecting text

To	Use this tool	Take these steps
Select a text block		Click the shape with the text block you want to select. If the handles are gray, the shape is grouped. Use the Open Group command to view the shape in the group window.
Select all text in a block or, if there's no text, to display the insertion point		Double-click the shape. Or select the shape, then press F2.
Select part of the text in a text block		Click the shape, then drag the insertion point. Select all the text, then drag the insertion point.
Select a word or paragraph		Click the shape, then double-click a word or triple-click a paragraph.
Place the insertion point in text		Click the shape.

NOTE Visio zooms in on the drawing when you select text so that you can see what you are typing. To return to the original magnification, press the Esc key on your keyboard or click anywhere outside the shape or text block after you type the text.

To type text in a shape:

1. Select the shape, then type the text.
2. When you finish typing, press the Esc key or click outside the text block.

To create a text-only shape:

1. Choose the text tool (A) from the Standard toolbar.
2. Click where you want to start typing, or click and then drag until the text block is the size you want, then release the mouse button.
3. Type the text.
When you start typing, Visio creates a text-only shape and zooms in on its text block.
4. When you finish typing, press the Esc key or choose the pointer tool from the Standard toolbar.

To turn off automatic zooming when editing text:

1. Choose View > Zoom > Custom.
2. Uncheck Zoom When Editing Text.

■ Overview




Cutting, copying, and pasting text

 [_Related Topics](#)


You cut, copy, or paste text in Visio in the same way you do in many word-processing programs. You can also reverse text changes by using the Undo command.

NOTE When you paste text from another application, the formatting information is lost.

Methods for cutting, copying, and pasting text

To	Use this tool	Take these steps
Cut or copy selected text to the clipboard		Select the text, then press Ctrl+X to cut or Ctrl+C to copy.
Copy all text to the clipboard		Click the shape, then press Ctrl+C.
Paste text from the clipboard		Click to place the insertion point, then press Ctrl+V.
Repeat a text action, such as pasting text		Press F4.

Editing existing text

 [How To](#)

 [Related Topics](#)

After you've added text to a shape, you can edit it by placing an [insertion point](#) into the text and typing. You can also edit existing text in shapes that come with Visio.

NOTE Visio automatically zooms in on the drawing so that you can see what you are typing. To return to the original magnification, press the Esc key or click anywhere outside the shape or [text block](#) after you type the text.

To edit existing text:

1. Double-click the shape to open the text block, or click the text with the text tool (A) on the Standard toolbar.
2. Click where you want to place the insertion point.
You can move the insertion point by clicking anywhere in the text block or by using the arrow keys on the keyboard.
3. Type the new text, then press the Esc key.

NOTE Double-clicking a grouped shape opens the group window rather than opening the text block. In the group window, you can double-click shapes within the group to edit their text blocks.

■ Overview

To delete text from a shape:

1. Choose the text tool (A) from the Standard toolbar.
2. Click the shape that contains the text you want to delete.
When you click the shape, the text block opens and the insertion point appears at the end of the text.
3. Select the text to delete, or press Ctrl+A to select all text in the text block.
4. Press the Delete key.
5. Choose the pointer tool from the Standard toolbar to close the text block.

■ Overview

To delete a text-only shape:

- Select the shape with the pointer tool, then press the Delete key.

■ Overview

Adding and editing text in groups

■ [How To](#)

■ [Related Topics](#)

In grouped shapes, such as the 3-D bar shapes in the charting stencils, Visio adds any text you type to the frontmost shape in the shape's stacking order. The group itself doesn't have its own text block.

You can change the stacking order of a group by using the Edit > Open Group command, then using the Shape > Bring To Front command to make the shape you want the frontmost shape.

To add or edit text in a shape within a group:

1. Select the group.

Green selection handles appear on the group.

2. Click the shape you want to work with to subselect it.

Gray selection handles appear on the shape.

3. Type to add or edit the text just as you would in an ungrouped shape.

■ Overview

Setting, changing, and deleting tabs

- [How To](#)
- [Related Topics](#)

You can use tabs to align text in table form or to create bulleted or numbered lists. Tabs can be left-, center-, or right-aligned. You can also use decimal tabs to align columns of numbers. A text block can have up to ten tab stops.

29.95	29.95	29.95	29.95
4.630	4.630	4.630	4.630
134.29	134.29	134.29	134.29
.250	.250	.250	.250
A	B	C	D

Tab options in Visio include Left alignment (A), Center alignment (B), Right alignment (C), and Decimal alignment (D).

NOTE Tabs can only be applied to an entire paragraph, not to selections within a paragraph.

Tab positions are based on the width of the text block, not the width of the shape or the shape's distance from the edges of the page. If you are working at a scale of 1:1, you can make setting tabs easier if you move the horizontal ruler's zero point to the edge of the text block before you choose tab positions.

TIP If you're working at a scale other than 1:1, such as $\frac{1}{4}''=1'$, the rulers measure in drawing units (in this case, feet), while the tabs are measured in page units (in this case, inches). This difference can be confusing when you're trying to use the ruler to determine tab positions. You can use the rulers, it just requires a little math. For example, if your scale is $\frac{1}{4}''=1'$, every foot on the ruler is $\frac{1}{4}''$, so if you want to set a tab where the ruler reads 3', multiply 3 by $\frac{1}{4}$ and set your tab at .75".



Moving the zero point.

TIP To set a tab that applies to the entire text block, click an insertion point anywhere within the text (without highlighting the text) or select the whole text block with the pointer or text block tool (G).

Lorem	1	31	22
Ipsum	33.3	2.8	4
Dolor	16	24	06

Select specific paragraphs to set tabs for part of a text block.

Lorem	1	31	22
Ipsum	33.2	2.8	4
Dolor	16	24	06

Select a text block or place an insertion point in the text to set tabs for the whole text block at once.

To move the ruler's zero point to the left edge of a text block:

1. Select the shape with the text tool (A) so you can see the edge of the text block.
2. Hold down the Ctrl key and point to the vertical ruler to the left of the drawing window, then drag a vertical line to the left edge of the text block.
When you release the mouse button, the line disappears and the horizontal ruler's zero point appears at the left edge of the text block.

TIP To return the ruler's zero point to its original position after setting tabs, double-click the ruler intersection in the upper-left corner of the drawing page.

■ [_Overview](#)

To add tab stops to selected paragraphs:

1. Choose the text tool from the Standard toolbar, then select the shape to open the text block.
2. Select one or more paragraphs that you want to format.
3. Choose Format > Text to open the Text dialog box, then click the Tabs tab.
4. Click the Add button to open the Tab Properties dialog box, then type the position you want for a tab stop in the Position box. Choose an alignment option for the tab, then click OK in the Tab Properties dialog box.

The tab appears in the Tab Stops list.

5. Click OK in the Text dialog box.

TIP If you're working at a scale other than 1:1, such as $\frac{1}{4}''=1'$, the rulers measure in drawing units (in this case, feet), while the tabs are measured in page units (in this case, inches). This difference can be confusing when you're trying to use the ruler to determine tab positions. You can use the rulers, it just requires a little math. For example, if your scale is $\frac{1}{4}''=1'$, every foot on the ruler is $\frac{1}{4}''$, so if you want to set a tab where the ruler reads 3', multiply 3 by $\frac{1}{4}$ and set your tab at .75".

 Overview

To delete tab stops from selected paragraphs:

1. Select the shape.
2. Select one or more paragraphs that you want to delete tabs from.
3. Choose Format > Text to open the Text dialog box, then click the Tabs tab.
4. In the Tab Stop list, choose the tab stop you want to delete, then click Delete.
Repeat for other tab stops you want to delete.
5. Click OK.

■ Overview

To change the position of a tab stop:

1. Select the shape.
2. Select the paragraph that includes the tab you want to move.
3. Choose Format > Text to open the Text dialog box, then click the Tabs tab.
4. In the Tab Stop list, choose the tab stop you want to move.
5. Click Edit to open the Tab Properties dialog box, enter a new value in the Position box, then click OK.
The tab appears with its new value in the Tab Stops list.
6. Click OK.

TIP If you're working at a scale other than 1:1, such as $\frac{1}{4}''=1'$, the rulers measure in drawing units (in this case, feet), while the tabs are measured in page units (in this case, inches). This difference can be confusing when you're trying to use the ruler to determine tab positions. You can use the rulers, it just requires a little math. For example, if your scale is $\frac{1}{4}''=1'$, every foot on the ruler is $\frac{1}{4}''$, so if you want to set a tab where the ruler reads 3', multiply 3 by $\frac{1}{4}$ and set your tab at .75".

 [Overview](#)


To set tabs for table text:

1. With the text tool, select an existing text block or shape.
2. Choose Format > Text to open the Text dialog box, then click the Paragraph tab.
3. Set Horizontal Alignment to Left and Indents to zero, then click OK.
4. Move the vertical ruler's zero point to the left edge of the text block. To do this, hold down the Ctrl key and drag from the vertical ruler.
5. Choose Format > Text to open the Text dialog box again, click the Tabs tab, then drag the Text dialog box so that you can see the text block.
6. Click Add in the Text dialog box to open the Tab Properties dialog box, enter the position and set the alignment for the first tab in your table, then click OK.


Because you moved the zero point, you can set tab stops as the distance from zero.

7. Repeat step 6 for each tab in your table, then click OK in the Text dialog box.

TIP If you're working at a scale other than 1:1, such as $\frac{1}{4}''=1'$, the rulers measure in drawing units (in this case, feet), while the tabs are measured in page units (in this case, inches). This difference can be confusing when you're trying to use the ruler to determine tab positions. You can use the rulers, it just requires a little math. For example, if your scale is $\frac{1}{4}''=1'$, every foot on the ruler is $\frac{1}{4}''$, so if you want to set a tab where the ruler reads 3', multiply 3 by $\frac{1}{4}$ and set your tab at .75".

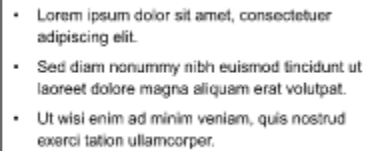
 Overview

Creating numbered and bulleted lists using tabs and indents

 [How To](#)

 [Related Topics](#)

You can create numbered and bulleted lists, using tabs and hanging indents. After you've set tabs and indents using the Format > Text command, you can type bullets or numbers before each paragraph.

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 - Sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.
 - Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper.

By using tabs in combination with paragraph indent settings, you can create bullet lists with hanging indents.



You can select the bullet and use the Font Size list on the toolbar to change its size.

NOTE To create bullet lists quickly and automatically, use the bullets button on the Text toolbar or the Bullets tab in the Text dialog box.

To create a numbered list using tabs and indents:

1. Use the text tool to select an existing text block or shape.
2. Choose Format > Text to open the Text dialog box, then click the Paragraph tab.
3. Set Horizontal Alignment to Left, then for Left enter a value that leaves enough room for a bullet and a blank space, such as 1 pica.
4. For First enter a negative value, such as 1 pica.
5. Click the Tabs tab, then click Add. For Position, enter the same value you used in step 3, then click OK.

To create a list item, type the number in the style you want, press Tab, then type.

■ Overview


To create a bulleted list using tabs and indents:

1. Use the text tool to select an existing text block or shape.
2. Choose Format > Text to open the Text dialog box, then click the Paragraph tab.
3. Set Horizontal Alignment to Left, then for From Left enter a value that leaves enough room for a bullet and a blank space, such as 1 pica.
4. For First Line enter a negative value, such as -1 pica.
5. Click the Tabs tab, then click Add. For Position, enter the same value you used in step 3, then click OK.

To create a list item, type the bullet (Ctrl+Shift+8) in the style you want, press Tab, then type. You can also add bullets using the bullet tool on the Text toolbar.

■ Overview

Creating bulleted lists automatically

 [How To](#)

 [Related Topics](#)

To create bulleted lists quickly and automatically, you can use the [bullet](#) button on the [Text toolbar](#) or choose an option in the [Bullets tab](#) in the [Text dialog box](#). When you apply bullet formatting to a piece of text, each paragraph in the text becomes a bulleted item with a hanging indent.

The bullets Visio uses for bulleted lists do not change shape when you apply a different font to the list text. For example, if you apply round bullets to a list and then change the list text to Zapf Dingbats, the bullets remain round. However, if you change the font size of the list text, the bullets increase in size with the text.

TIP To create custom bullets or bullets that are a different size from the list text, create them manually using tabs and indents.

To create a bulleted list using the Bullets tab:

1. Use the text tool to select the list text or place a cursor in a text block where you want to type a bulleted list.
2. Choose Format > Text to open the Text dialog box, then click the Bullets tab.
3. Select a bullet option, then click OK.

■ Overview


To create a bulleted list using the bullets button:

1. Use the text tool to select the list text or place a cursor in a text block where you want to type a bulleted list.
2. Click the bullet button on the Text toolbar.

The last bullet format that was chosen in the Bullets tab will be applied to the text.

■ Overview

Adding annotation layers to drawings

 [How To](#)

 [Related Topics](#)

During the life cycle of certain types of technical drawings, an engineer or architect creates the drawing and then may forward the file to a manager, client, or quality assurance person, who marks changes to be made. Using Visio, you can streamline this markup, or redlining, process by creating a separate layer for review comments. Placing the comments on a layer by themselves makes them easy to view, print, and color separately from the rest of the drawing, and makes the incorporation process easy and efficient.

To add and set up a separate layer for review comments:

1. In the drawing you want to add comments to, choose View > Layer Properties.
2. Click New, type Redlining, then click OK.
3. With the Redlining layer selected, click the Active button. A checkmark appears next to Redlining in the Active column.
4. With the Redlining layer selected, click the Color button, then choose a color from the Layer Color list. Click OK to close the dialog box.

TIP If more than one person is reviewing a drawing, create a redlining layer for each reviewer and give each layer a different display color.

 Overview

About formatting text

Related Topics

You can format text in your drawing by changing any one or all of the text's attributes, such as color, alignment, font, and size.

To change the appearance of your text:

- Use tools from the Text toolbar to apply local formatting.
- Use the commands on the Format menu to apply local formatting.
- Use the Text style lists to apply a style.

In addition to formatting text, you can format the text block that contains the text. You can change the background color, vertical alignment, margins, and rotation.

Applying text formatting

 [How To](#)

 [Related Topics](#)

You can choose from the following formatting methods according to the type of formatting you are doing.

The Text toolbar

By using the tools on the [Text toolbar](#) to apply local formatting to your text, you can quickly change size, color, font, style, indents, paragraph spacing, and bullets.

Format menu commands

Using the commands on the Format menu takes a little more time than using the toolbar, but you gain a degree of precision and a few additional options. For example, you can enter the precise font size you want and set text case and position in the [Text dialog box](#).

The Text style list

When you format text using the text style list on the Text toolbar, you're actually applying a [style](#). When you start a drawing with a Visio [template](#), the template includes style definitions and the appropriate styles appear in the style lists on the toolbar. It's best to use a style if you want to apply many formatting attributes to many different shapes. Using styles instead of [local formatting](#) can also reduce the file size of your drawing and increase its performance.

To display the Text toolbar:

- Choose View > Toolbars > Text. A checkmark next to a toolbar name indicates that it is currently displayed.

■ Overview

To quickly format individual paragraphs, words, or characters:

- Choose the text tool (A) from the Standard toolbar, select the text you want to format, then choose formatting options from the Text toolbar or Format menu.

■ Overview

To format all the text in a shape's text block:

1. Select the shape with any tool that can select shapes. Or choose the text tool from the Standard toolbar, then click to place an insertion point in the shape.
2. Choose the formatting options you want from the Text toolbar or Format menu.

■ Overview

To format text using the Text dialog box:

1. Double-click the shape to open the text block.

To format part of the text block, select the text you want to format.

2. Choose Format > Text, then click the Font tab.
3. Choose the formatting options you want.
4. Click Apply to apply the attributes and continue working in the dialog box, or click OK to apply the attributes and close the dialog box.

■ Overview

To format text using keyboard shortcuts:

1. Double-click the shape to open the text block, or click the text with the text tool.
2. To format part of the text block, select the text you want to format.
3. Use the following keyboard shortcuts to format the selected text.

Keyboard shortcuts

For	Type
Bold	Ctrl+Shift+B
Italic	Ctrl+Shift+I
Small caps	Ctrl+Shift+Y
Subscript	Ctrl+Shift+X
Superscript	Ctrl+Shift+Z
Underline	Ctrl+Shift+U

■ Overview

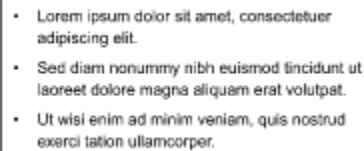
Changing the horizontal alignment, indentation, and spacing of paragraphs

■ [How To](#)

■ [Related Topics](#)

The alignment of text in shapes is determined in relation to the text block, not the shape or the drawing page.

You can change the alignment and indentation of any paragraph with respect to its text block. For example, if you want to create a bulleted list or a table, you begin by aligning the text on the left side of the text block. If you want to create a hanging indent for your bullet list, you set the indentation of the left side and first line of each paragraph. And if you want to ensure that there are always four points of space after each bulleted item, you set the paragraph spacing.

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- Lorem ipsum dolor sit amet, consectetur adipiscing elit.
 - Sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.
 - Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper.

This list uses left alignment, indentation to create hanging indents, and paragraph spacing after each item.

To change horizontal alignment of a paragraph:

1. Double-click the shape to open the text block, or click the text with the text tool (A) on the standard toolbar.
2. Select the paragraph you want to format.
3. Choose Format > Text, then click the Paragraph tab.
4. For Horizontal Alignment, choose Left, Center, Right, Justify, or Force Justify.
5. Click Apply to apply the formats without closing the dialog box, or click OK to apply the formats and close the dialog box.

■ Overview

To change the indentation of a paragraph:

1. Double-click the shape to open the text block, or click the text with the text tool (A).
2. Select the paragraph you want to format.
3. Choose Format > Text, then click the Paragraph tab.
4. For Indentation, specify the indentation you want:
Enter a value for Left, such as 3p2 (3 picas, 2 points) to indent the whole left side of the paragraph.
Enter a value for Right, such as 1in (1 inch) to indent the whole right side of the paragraph.
Enter a value for First, such as 2cm (2 centimeters) to indent the left side of the first line of the paragraph.
5. Click Apply to apply the formats without closing the dialog box, or click OK to apply the formats and close the dialog box.


■ Overview

To change the line spacing of a paragraph:

1. Double-click the shape to open the text block, or click the text with the text tool (A).
2. Select the paragraph you want to format.
3. Choose Format > Text, then click the Paragraph tab.
4. For Spacing, specify the paragraph spacing you want:
Enter a value for Before to set the amount of space before the paragraph.
Enter a value for After to set the amount of space after the paragraph.
Enter a value for Line to set the amount of space between each line in the paragraph.
5. Click Apply to apply the formats without closing the dialog box, or click OK to apply the formats and close the dialog box.

■ Overview

Changing vertical alignment and margins of text blocks

 [How To](#)

 [Related Topics](#)

In most cases, the vertical alignment of text within a [text block](#) is set to Middle by default, but you can change the alignment of any text block. You can also change the margins of a text block to add or delete space between the text block and the boundary of the shape.

Using the commands on the Format menu gives you more precise control than dragging the borders of the text block, allowing you to ensure that your text is positioned properly with respect to the shape, even when you change the text. For example, you can set exact margins or make sure your text starts at the top of the text block instead of being aligned in the middle.

TIP If you want a shape's text to resize when you resize its shape, you can use the [SmartShape Wizard](#) to add formulas that change the default text behavior.



You can use the toolbar buttons on the [Text toolbar](#) to align text vertically at the top, middle, or bottom of the text block.

To change vertical alignment of text within a text block:

1. Select the shape you want to format.
2. Choose Format > Text, then click the Text Block tab.
3. From the Vertical Alignment list, choose a text alignment option.
4. Click OK.


■ Overview

To change the margins between the text and the edge of the text block:

1. Select the shape you want to format.
2. Choose Format > Text, then click the Text Block tab.
3. In the Margins section, enter values such as 3p1 or .5in in the Top, Bottom, Right, and Left boxes to set the text block margins.
4. Click OK.

■ Overview

Rotating, resizing, and moving text blocks

 [How To](#)


 [Related Topics](#)

When you rotate, resize, or move a shape, its [text block](#) rotates, resizes, or moves with it. You can also rotate, resize, and move a text block separately from its shape using the [text block tool](#) on the Standard toolbar. This tool moves or rotates only the text block, whereas the rotate tool and pointer move or rotate the whole shape.

In addition, Visio [masters](#) often include a [control handle](#) that you can use to reposition the text block, but if you draw your own shape or want to change the text block size, you can move or resize a text block manually.

To rotate text independently of its shape:


1. Select the text block tool ()

The text block cursor is a page ()

2. Click the shape to select its text block.

Green handles appear around the shape, indicating that it is selected. If the handles are gray, the shape is grouped. Choose Edit > Open Group to view the shape in the group window.

3. Drag a corner handle to rotate the text block.


When it is over a rotation handle, the pointer changes to a pair of arrows forming a circle () . If the text block is so small that you don't see rotation handles, drag the selection handle at the center of the shape to resize the text block until you see the rotation handles.

TIP To rotate text in 90° increments, use the rotate text 90° tool () instead of the text block tool.

 Overview

To resize a text block independently of its shape:

1. Select the text block tool ()

The text block cursor is a page ()

2. Click the shape to select its text block.

Green handles appear around the shape, indicating that it is selected. If the handles are gray, the shape is grouped. Choose Edit > Open Group to view the shape in the group window.

3. Drag a side selection handle until the text block is the width or height you want.

 Overview

To move a text block independently of its shape:

1. Select the text block tool (🌐).

The text block cursor is a page (+📄).

2. Click the shape to select its text block.

Green handles appear around the shape, indicating that it is selected. If the handles are gray, the shape is grouped. Choose Edit > Open Group to view the shape in the group window.

3. Point to the dotted green line that indicates that the text block is selected.

When it is over the dotted line, the pointer changes to a double rectangle.

4. Drag the text block to a new position.

The text block remains part of the shape, so you can move the text block completely outside the shape's borders and it will still move, rotate, and resize with the shape, keeping its new position relative to the shape.

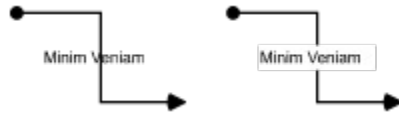
■ Overview

Changing the background color of text blocks

[How To](#)

[Related Topics](#)

In most Visio shapes, the area around the text, or "text background," is transparent. You can apply color to text backgrounds to make them opaque, so elements of the shape don't show through and make the text unreadable. For example, you can add a text block background to "break" a connector line when it crosses through the text.



Changing the text background to solid white makes the connector line appear to "break" before and after the text block, ensuring the text is readable.

NOTE Because the background color fills in the area around the text, the color only appears when the shape contains text.

To change the color of a text background:


1. Select the shape.
2. Choose Format > Text, then click the Text Block tab.
3. For Text Background, select Solid Color, then choose a color from the list.

The color fills the area around the text, not the whole text block.

4. Click OK.

■ Overview

Copying text formatting to another shape

 [How To](#)

 [Related Topics](#)

If you're pleased with the text formatting of a particular shape, you can quickly transfer that formatting to another shape. With the [Format Painter tool](#) you can copy all text formatting—the font, size, color, style, alignment, spacing, and text block background—in one step, rather than having to change each setting individually on the new shape.

To copy text formatting from one shape to another:

1. From the Standard toolbar, select the text tool (A), then click the shape to open the text block with the text formatting you want to copy.

TIP If Visio automatically zooms in on the text so that you can no longer see the other shape you want to format, press Ctrl+W to zoom out and display the entire drawing page in the Visio window.

2. Click the format painter button (🖌) on the Standard toolbar.

The pointer changes to an arrow with a paint brush.

3. Click the new shape you want to format.

NOTE This procedure copies text formatting only. To copy all shape formatting, in step 1, use the pointer tool instead of the text tool to click the shape with the formatting you want to copy.

■ Overview

About including other programs' data in Visio drawings

Related Topics

You can use any one of the following methods to insert other programs' objects or files in Visio drawings:

- Embedding
- Linking
- Converting
- Importing

The method you choose depends on the type of object or file you want to include in your Visio drawing, and what you want to do with the object or file once it's there.

Embedding objects in drawings

■ [How To](#)

■ [Related Topics](#)

Embed an object in your Visio drawing when you want to keep all the data you want to work with in one file, or if you want to transfer the file to other computers. You can embed data from programs that support OLE.

For example, if you want to distribute data about a department's computer equipment along with a network diagram you created in Visio, you can quickly embed a Microsoft Excel spreadsheet into the network diagram.

When you embed data from another program, Visio becomes the "container" for that data. The object embedded in the Visio drawing becomes part of the Visio file and, when you edit the data, you open its program from within the Visio drawing.

The changes exist only in the Visio drawing, so it's not necessary to keep that data in a separate file. If the data does exist in a separate file, the original file does not change when you change the embedded object in Visio. Also, changes to the original file do not affect the embedded object in the Visio drawing.

To embed another program's object in a Visio drawing:

1. Open the file that contains the data you want.
2. In the file, select the data you want to embed in the Visio drawing.
3. Choose that program's command to place data on the Clipboard.

Usually the command is Edit > Copy.

4. In the Visio window, display the drawing in which you want to embed the object.
5. Choose Edit > Paste or click the Paste button (📄) on the Standard toolbar.

The data on the Clipboard is pasted into the drawing as an embedded object. The object appears in the center of the view, but you can select and move it as you would any Visio shape.

■ Overview

To embed an object from an existing file within Visio:

1. Choose Insert > Object, then, in the Insert Object dialog box, select Create From File.
2. Type a path and file name in the text box.
Click Browse to look for the file if you're not sure of its path or file name.
3. Check Display As Icon if you want that program's icon to appear in the drawing instead of the data.
4. Click OK.

The first page of the file appears in the Visio drawing, unless you chose to display it as an icon. You can select the object and drag to reposition it.

■ Overview

To create a new embedded object from within Visio:

1. Choose Insert > Object, then, in the Insert Object dialog box, select Create New.
2. From the Object Type list, select the type of object you want to create, then click OK.

The program for creating that object opens within Visio. If the program is compatible with OLE 2, it opens in place in the Visio drawing, otherwise the program opens in its full window.

3. Create the object in the other program.
4. If the program is running in place, click anywhere outside the embedded object to close the program. If it's running in its full window, from the program's File menu, choose Exit.

■ Overview

Linking objects to drawings

 [How To](#)

 [Related Topics](#)

If another program supports OLE, you can link its data to Visio drawings. Use linking when you want to include the same data in many files. When you update the data, all links to other files reflect the changes.

For example, if you created your company logo in an OLE-compatible drawing program, and you want to include the logo in every flowchart, organization chart, and network diagram you create in Visio, you can link the logo to each Visio drawing. When you change your original logo in the drawing program, the Visio drawings update automatically.

When you link data from another program, the Visio drawing stores only a reference to the location of the file in which you created the data. You link data from a saved file, so Visio can find the data and display it.

Because linking adds only a reference to a file, the data does not significantly increase the file size of the Visio drawing. However, links require a little more maintenance. If you move any of the linked files, you need to update links. In addition, if you want to transport linked data, you must include all linked files.

You can update a linked object automatically every time you open the drawing or choose to do so only when you explicitly request it. Any time a link is updated, changes made to the object in its original file appear in the Visio drawing, and will appear in the original file if the changes were made through Visio.

To link a file to a Visio drawing:

1. Save the original file.

Because a link consists of a reference to the original file, you must save the file before you can link to it.

2. Select the data you want in the Visio drawing.
3. Choose the command used by that program to place data on the Clipboard.

This is usually the Edit > Copy command.

4. Display the Visio drawing to which you want to link the file.
5. In Visio, choose Edit > Paste Special, then, in the Paste Special dialog box select Paste Link.
6. Click OK.

■ Overview


To create a linked object from within Visio:

1. Display the Visio drawing in which you want to display the linked object.
2. Choose Insert > Object.
3. In the Insert Object dialog box, select Create From File.
4. Type a path and file name in the text box.
Click Browse to look for the file if you're not sure of its path or file name.
5. Check the Link box.
6. Check Display As Icon if you want that program's icon to appear in the drawing instead of the data.
7. Click OK.

The first page of the file appears in the Visio drawing, unless you chose to display it as an icon. You can select the object and drag to reposition it.

■ Overview

Updating and managing linked objects

 [How To](#)

 [Related Topics](#)

When you include linked objects in a Visio drawing, you need to decide how you want to update the objects when the original file changes. If you move or rename the original file, you also need to update the links in the Visio file.

By default, [links](#) for an object update automatically when you open a drawing that includes the object. If you open a drawing that includes a linked object for which Visio cannot find the original file, Visio prompts you to update links manually. If the object's program is not available—for example, if you open a drawing on a system that doesn't have that program installed—Visio displays another prompt. The visible representation of the object in the drawing is not affected, but because the object's program is not available, there isn't a working link between the Visio drawing and the object's file, so you cannot edit it.

To set a link so you can update it manually:

1. Choose Edit > Links.
2. Select the link you want to update manually.
3. Select Manual, then click Close to close the dialog box.

■ Overview

To update a link manually:

1. Choose Edit > Links.
2. Select the link you want to update.
3. Click Update Now, then click Close.

■ Overview

To change a link:

1. Choose Edit > Links.

2. Choose the link you want to change.

3. Choose the appropriate settings.

To have Visio update the link automatically, choose Automatic.

To update the link by using the Links command, choose Manual.

To open the object's program and edit the object, click Open Source.

To link a different file to the Visio drawing, click Change Source.

When you finish viewing and changing links, click OK in the Change Source dialog box.

4. In the Links dialog box, click Close.

■ Overview

To break a link:

1. Choose Edit > Links.
2. Choose the link you want to break.
3. Click Break Link.


Visio displays a warning that breaking the link will disconnect the object from its source. Click Yes to proceed. Visio converts the object to a metafile in the drawing and discards the reference to its original file.

4. Click Close.

NOTE You can also break a link between an object and its original file by converting it to a Visio shape with the Convert To Group command.

■ Overview

Pasting data in particular formats

 [How To](#)

 [Related Topics](#)

Most OLE-compatible programs place data on the [Clipboard](#) in more than one format to make the data usable to more programs. When you [paste](#) another program's data into Visio, by default it's embedded into the Visio drawing in its original format. That way, you can open the embedded data in its native program from within the Visio drawing.


Sometimes you may want to use a different format. For example, if you typed text in a Microsoft Word document, and want it to appear within a Visio shape's text block, you can copy the text in Word, then paste it into the text block as ANSI text rather than embed it as a Word document. In this example, the text is formatted according to the styles set for the shape's text block.


To paste data into a drawing in a particular format:

1. In the other program, choose the command to copy the data you want to paste into the Visio drawing.
This command is usually Edit > Copy.
2. Display the Visio drawing that you want to paste the data in.
3. Choose Edit > Paste Special.
4. In the Paste As box, select the format you want, then click OK.

■ Overview

Editing objects from other programs

 [How To](#)

 [Related Topics](#)

After you embed or link an object from another program into a Visio drawing, you can modify the object in several ways. You can

- Edit the object in place so you can see how changes affect the way it fits into the drawing.
- Convert the object to another format.
- Change the appearance of the object's border.

Editing an embedded or linked object from within Visio

You can modify an embedded or linked object in its original program from within Visio. When you modify an embedded object, you change only the object in Visio, not its original file (if you pasted the object from an existing file). When you modify a linked file, you open and change the original file.

Most programs include a submenu of actions you can perform on an embedded or linked OLE object. Usually, the commands for editing OLE objects are Edit and Open. If the object is embedded and its program supports in-place editing, the Edit command opens the object in place. The Open command opens the object in the full program window. In Visio, this command appears at the bottom of the Edit menu.

To edit an embedded or linked object:

- In the Visio drawing, double-click the object.

If the object is embedded and the program in which you created the object supports in-place editing, the object opens in place. If the object is linked, or its program does not support in-place editing, the other program opens in its full window and displays the object.

TIP To open an object in its full program window, even if it supports in-place editing, select the object, then choose Edit > [Object Name] > Open.

■ [_Overview](#)

Converting pasted or imported metafiles to Visio shapes

You can convert pasted or imported metafiles to Visio groups or shapes. If a linked or embedded object is represented by a metafile, you can also convert the object; however, doing so breaks the object's link to its original file, so you can no longer edit it in its original program.

To convert a pasted or imported metafile:

1. Select the object you want to convert.
2. Choose Shape > Grouping > Convert To Group.

TIP If you want to edit individual components of the object after you convert them, choose Ungroup rather than Convert To Group.

A metafile may contain a bitmap as a component or may consist solely of a bitmap. Bitmaps cannot be converted to Visio shapes because, in a bitmap, Visio cannot determine what part of the object is a line, what is text, and so on.

A metafile that consists of a single bitmap usually stores the bitmap in segments. When you convert such a metafile to Visio shapes, each segment of the metafile becomes an individual bitmap object. In this case you may want to convert the metafile to a group rather than ungrouping it to keep the bitmaps together.

■ [_Overview](#)

Changing an object's appearance

You can format an object from another program in the following ways:


- You can apply a line style or attribute to change the appearance of the object's border. For example, you might choose a distinctive outline for embedded or linked objects to indicate they can be edited from within a drawing.
- You can apply a fill style or attribute to change the fill color and pattern of the object. For the fill color and pattern of an object to be visible, there must be some empty space around the object, or background, within its border.

To format an object from another program:

1. Select the object you want to format.
2. From the Format menu, choose
 - Line to change the appearance of the object's border.
 - Fill to change the appearance of the object's background.
 - Shadow to add a drop shadow to the object.
3. Click OK.

■ Overview

Importing non-Visio files as graphic images

 [How To](#)

 [Related Topics](#)

Importing provides an alternative to linking or embedding an object when you want to include data from another program that is not compatible with [OLE](#). When you import data into a Visio drawing, it only exists in Visio as a picture. That is, the only editing capabilities you have are resizing, repositioning, and [cropping](#).

To do this, you export the other program's file to a format Visio can import. When you export, the file's data is directed through a filter that translates it and saves it to a separate file in a different format. Then, when you import the file into the Visio drawing, Visio uses a filter to translate the data and display the file.

Importing also works well if you only want to view or annotate the image in the Visio drawing, or if file size is your primary concern.

Because the data can go through up to two translations before it appears in the Visio drawing—one when you export from the other program, and one when you import into the Visio drawing—the picture may not look exactly the way it does in the original program.

Compatible file formats

In Visio you can import files of these formats:

- ABC FlowCharter 2.0, 3.0, 4.0 (.af3, .af2)
- Adobe Illustrator File Format (.ai)
- AutoCAD Drawing File Format R10-R13 (.dwg)
- AutoCAD Drawing Interchange (.dxf)
- AutoCAD Drawing Web Format (.dwf)
- CompuServe Interchange Format (.gif)
- Computer Graphics Metafile (.cgm)
- Corel Clipart (.cmx)
- CorelDRAW! Drawing File Format, version 3.0, 4.0, 5.0, 6.0 and 7.0 (.cdr)
- CorelFLOW 2.0 (.cfl)
- Encapsulated PostScript (.eps)
- Initial Graphics Exchange Specification (.igs)
- Joint Photographic Experts Group (.jpg)
- Macintosh Picture File Format (.pct)
- Micrografx Designer Version 3.1 File Format (.drw)
- Micrografx Designer Version 6.0 File Format (.dsf)
- Portable Network Graphics (.png)
- Tag Image File Format (.tif)
- Text and Comma Separated Variable (.txt and .csv)
- Windows Bitmap (.bmp and .dib)
- Windows Metafile (.wmf)
- ZSoft PC PaintBrush Bitmap (.pcx)

Most files you import into Visio drawings as graphic images appear as metafiles. However, bitmap files, such as .dib, .bmp, .pcx, and so on, remain bitmaps in the Visio drawing.

With some vector-based graphics, such as Adobe Illustrator (.ai), CorelDRAW! (.cdr), Encapsulated PostScript (.eps), and Micrografx Designer (.drw) files, lines may appear jagged in the Visio drawing. You may get better results with these file formats if you convert rather than import them.

For most files you import, Visio displays an import settings dialog box where you can specify how you want the imported file to appear in a drawing. For example, if you're importing a file in .pct format, you can specify whether to retain gradients and background and how to translate colors.

To import a non-Visio file as a graphic image:

1. Display the Visio drawing that you want to import the graphic into, then choose Insert > Picture.
2. Under Files Of Type, select the file format you want to import, then, under File Name, type the path and file name of the file you want to import, then click Open.

If you don't know the path and file name, you can look for the file in the Look In section of the dialog box.

TIP If you want to modify a graphic image after you import it, and if the image is a metafile, you can ungroup it. Ungrouping converts the picture to Visio shapes you can use the way you use shapes that come with your Visio product. This procedure works only for metafiles—Visio cannot convert bitmaps to shapes. To make the converted graphic easier to edit, you can use the Fit Curve command.

■ [_Overview](#)

Viewing AutoCAD DWG files in Visio

If you collaborate with AutoCAD users in the process of creating a drawing, you may need to review and annotate the drawing, then return it to your colleague to incorporate your ideas. With Visio, you can view .dwg drawings created in AutoCAD R10–13, then add your comments on a separate annotation layer in Visio.

To view an AutoCAD drawing in Visio:

1. In Visio, choose File > Open.
2. Under Files Of Type, select AutoCAD Drawing (*.dwg).
3. Under Look In, find the folder that contains the file you want and select the file, then click Open.

To add a separate annotation layer:


1. While the AutoCAD drawing you want to annotate is open, choose View > Layer Properties.
2. Click New. In the New Layer dialog box, type Redlining, then click OK.
3. In the Redlining row of the Layer Properties dialog box, click the column titled Active. A check mark appears in the column.

NOTE Make sure not to click the Active button at the top of the column. This checks all rows, not only the Redlining row.

4. In the Redlining row, click to check the Color column.
5. In the Layer Color box at the bottom of the dialog box, select the color for your comments, then click OK to close the Layer Properties dialog box.

■ Overview

Converting non-Visio files to shapes and drawings

 [How To](#)

 [Related Topics](#)

When you open a file of a format compatible with Visio, Visio converts the file to a drawing with SmartShapes symbols. Convert data to Visio shapes when you want to transfer shapes you created in another program to a Visio drawing, so you can edit them in ways other than resizing or repositioning, as well as save them as masters onto stencils.

You can edit the converted shapes as any other Visio shapes using the Visio formatting and drawing tools. You can also flip, rotate, and resize them. However, with bitmap formats (BMP, DIB, PCX, and so on), Visio pastes the contents of the bitmap into the drawing without converting it.

Files you convert are larger in size than files you import as graphic images. If file size is your main consideration, you may want to import the data.

Converting ABC FlowCharter and CoreIFLOW! files

For ABC FlowCharter 2.0, 3.0, and 4.0 and CoreIFLOW 2.0 files, Visio includes masters that match shapes provided with those programs (all of the FlowCharter shapes, and many of the CoreIFLOW shapes). When you open a file of one of these formats, Visio converts the FlowCharter or CoreIFLOW images to the shape equivalents.

To convert a file to a Visio drawing and shapes:

1. In Visio, choose File > Open.
2. Under Files Of Type, select the file type you want to open, then under File Name, type the path and file name, then click Open.

If you don't know the path and file name, you can find it in the Look In section of the dialog box.

■ Overview

About printing drawings

[Related Topics](#)

For the most part, you can print your Visio drawings by choosing [Print](#) from the file menu, and then clicking OK. Most Visio [templates](#) are set up so that the drawing-page and printed-page sizes are the same, so you don't have to change page settings to get the printed drawing you expect.

Sometimes, however, you may want to change the size, orientation, or scale of the drawing page as you create your drawing. If so, you'll need to keep the following terms in mind as you set up your drawing for printing:

- The "drawing page"—the white page you see onscreen.
- The "printed page"—the paper in the printer on which you print your Visio drawing.
- The "printed drawing"—your end result: the image on your drawing page printed onto one or more printed pages.


If you change drawing-page settings, to make sure the drawing prints correctly, you may need to change the printed-page settings as well.

For example, if you base a new drawing on a flowchart template with a portrait (tall) drawing-page orientation, but you create a left-to-right flowchart, you may want to change the drawing-page orientation to landscape (wide). To print the drawing the way it appears on the screen, you also need to change the printed-page orientation.

If you work with large drawings, it's possible to have a drawing page that's larger than the printed page. For example, if you want to create a large network diagram, you may want to increase the size of the drawing page that opens with the network template. If you increase the drawing-page size but don't change the paper in your printer, when you print the drawing, Visio "tiles" it, or prints it over multiple pages.

For multiple-page drawings, you can choose to add headers, footers, and page numbers to the printed drawing.

Previewing drawings before you print

 [How To](#)


 [Related Topics](#)

Before you print a drawing, you can preview it to see whether the shapes on the drawing page fit as you intend on the printed page. In the print preview window, gray lines indicate where the drawing continues onto multiple pages, or "tiles."

If the print preview window shows that the drawing will tile, you may want to reposition some shapes so they print on the correct page. To see how repositioning shapes on the drawing affects the printed page, you can display the drawing window alongside the print preview window.

If, after you see the print preview, you want to make changes to the drawing page or printer settings, such as orientation, size, margins, and so on, choose [Page Setup](#) from the File menu.

To preview a drawing before printing:

- From the Standard toolbar, choose the Print Preview button ()

TIP While working with your drawing you can quickly determine whether it fits within the printable area by choosing View > Page Breaks.

 Overview

To edit a drawing while in Print Preview:

1. In the print preview window, choose Window > New Window.

Visio opens a new drawing window and displays the drawing.

2. Choose Window > Tile.


Visio displays the drawing in the print preview window and the drawing window.

3. In the drawing window, edit the drawing using the Visio tools and commands.

Changes you make to the drawing appear in the print preview window.

■ Overview

Changing margins and centering drawings

 [How To](#)

 [Related Topics](#)

To fine-tune a drawing's placement on the page, you can center it on the drawing page before you print, or you can adjust the margins or center the drawing on the printed page only.

To center a drawing on the drawing page:

- Choose Tools > [Center Drawing](#).

Visio centers the drawing. If the drawing page and printer paper are the same size, the drawing will be centered on the printed page as well.

Repositioning a drawing on the printed page

Before you can reposition a drawing on the printed page, you must adjust the drawing-page size to eliminate all the white space around the drawing. It's best to use this method when you want to print a completed drawing.

To adjust the drawing-page size to fit the drawing contents:

1. Choose File > [Page Setup](#).
2. For Page Size, select Size Page To Fit Drawing, then click OK.

The page size changes to fit the drawing without any surrounding white space. Onscreen it may appear as though you zoomed in on the drawing.

NOTE If you want to add shapes later, you may need to open the Page Setup dialog box again to set the drawing page back to its original size.

After you size the page to fit the drawing, you can adjust the drawing's placement on the printed page by changing margins or centering the drawing.

To change margins or center a drawing on the printed page:


1. Choose File > Page Setup, then, in the Page Setup dialog box, click [Print Setup](#).
2. For Margins, type the margin settings you want.

To center the drawing, under Center, check Left/Right, Up/Down, or both.

TIP To preview the drawing as it will appear on the printed page, choose File > [Print Preview](#).

■ [_Overview](#)

Printing drawings to paper or files

 [How To](#)

 [Related Topics](#)

For many drawings, you can use the default printer settings. You can print an entire drawing or a range of pages and you can center a drawing on a page before you print. You can also print to a PostScript file if you want to send a drawing to another printer or deliver a file to a service provider to produce.

Visio templates are set up to print to your default Windows printer. However, you may sometimes want to print to a different printer or change the properties set for your default printer.

To choose a printer or change printer settings:

1. Choose File > Page Setup.
2. Click Print Setup, then click Printer.
3. For Name, select a printer from the list, then click OK.
4. In the Print Setup dialog box, choose the settings you want, then click OK.
5. Click OK in the Page Setup dialog box.

Visio redraws the drawing page with the new settings.

■ Overview

To print a drawing:

1. Choose File > Print.
2. In the Print Range section, choose an option for which pages to print:

Choose All or Current Page, or specify a range of pages in the Pages From and To boxes.

If a foreground page is displayed, choosing the Current Page option prints the foreground page, its background, and subsequent background layers. If a background is displayed, Current Page prints that background page and subsequent background pages.

3. For Copies, enter the number of copies you want.
4. For Printer, specify to print to a file or to print all colors as black.
5. Click OK.

TIP In Windows 95, to send a file to a printer, you can also drag the file icon from the desktop or from Windows Explorer and drop it on a printer icon.

■ Overview

To print a drawing to a PostScript file:

1. Choose File > Print.
2. For Name, select a PostScript printer from the list.
3. Check Print To File, then click OK.
4. In the Print To File dialog box, choose a location and type the name of the file, then click Save.

■ Overview

Printing large and small drawings

[How To](#)

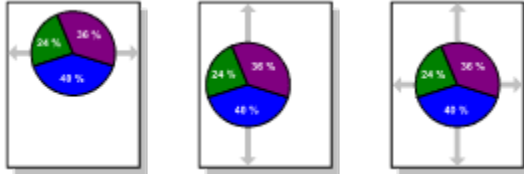
[Related Topics](#)

If the size of a drawing is larger than the paper in your printer, Visio tiles the drawing—that is, the drawing prints across several sheets of paper. Visio does not crop a drawing to fit within the margins.



A drawing on a large drawing page will print by tiling across several sheets of printer paper.

Small drawings print on part of a page. By changing margin settings, you can print a small drawing at various locations on a sheet of paper.



You can control where the image on a small drawing prints on a printed page.

Printing large drawings

You can control the way large drawings tile. For example, you can control the amount the drawing overlaps on adjacent pages. You can also specify the number of pages across which a drawing tiles. Visio reduces or enlarges the drawing to fit the number of pages you specify.

To determine whether a large drawing will tile:

- Choose View > Page Breaks.

Gray lines appear on the drawing page, indicating the printed page size and margins selected in the Print Setup dialog box.

To increase the area where tiled drawings overlap:

1. Choose File > Page Setup, then, in the Page Setup dialog box, click Print Setup.
2. Type larger amounts for the margin settings, then click OK.
The larger the margins, the greater the overlap.
3. Click OK in the Page Setup dialog box.

To specify the number of pages for a tiled drawing:

1. Choose File > Page Setup, then, in the Page Setup dialog box, click Print Setup.
2. For Reduce/Enlarge, select Fit On, and then specify the number of sheets across and down.

TIP Choose the number of pages that represents an area proportionate to the drawing page. For example, if the drawing is square and you specify two sheets down and four sheets across, Visio fits the drawing on an area that is no more than two sheets either way so the drawing stays in proportion.

3. Click OK in both the Print Setup and Page Setup dialog boxes.

■ Overview

Printing small drawings

If your drawing onscreen is smaller than the size of the paper you're printing it on, you can specify its position on the printed page. Before you can control its position, you must adjust the drawing-page size to eliminate all the white space around the drawing.

To adjust the drawing-page size to fit the drawing contents:

1. From the File menu, choose Page Setup.
2. For Page Size, select Size Page To Fit Drawing, then click OK.

The page size changes to fit the drawing without any surrounding white space. Onscreen it may appear as though you zoomed in on the drawing.

NOTE If you want to add shapes later, you may need to set the drawing page back to its original size.


After you size the page to fit the drawing contents, you can specify the drawing's placement on the printed page.

To specify where on the page a small drawing prints:

1. Choose File > Page Setup, then, in the Page Setup dialog box, click Print Setup.
2. Select the combination of margin and center settings to place the drawing at the location you want, then click OK.
3. Click OK in the Page Setup dialog box.

■ Overview

Reducing and enlarging drawings for printing

 [How To](#)

 [Related Topics](#)

To print a drawing at various sizes, or to fit a drawing within the printable area of the paper, you can reduce or enlarge a drawing for printing.

Because Visio treats the drawing page itself as part of the drawing, you must adjust the drawing-page size onscreen to eliminate all white space around the drawing to get the results you expect when reducing or enlarging a drawing.

To reduce or enlarge a drawing:

1. Choose File > Page Setup.
2. For Page Size, select Size Page To Fit Drawing, then click OK.

The page size changes to fit the drawing without any surrounding white space. Onscreen it may appear as though you zoomed in on the drawing.

3. Choose File > Page Setup, then click Print Setup.
4. For Reduce/Enlarge, select one of the following options:

To specify a percentage, select Scale, then type the percentage by which you want to enlarge or reduce the drawing. To reduce the drawing, type a number less than 100; to enlarge it, type a number greater than 100.

To specify a number of pages, select Fit On, then type the number of pages across and down on which you want the drawing to print.

5. Click OK in both the Print Setup and Page Setup dialog boxes.
6. Choose File > Print Preview to make sure the drawing is the correct size and prints where you want it to on the page, and on the correct number of pages.

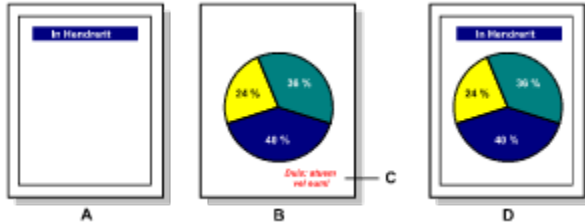
NOTE If you want to add shapes to the drawing later, you may need to set the drawing page back to its original size.

■ Overview

Printing selected shapes or pages

- [How To](#)
- [Related Topics](#)

When you don't want to print your entire drawing, you can print only pages you specify, only the currently displayed page, or only a page's background. You can also define shapes or layers as non-printing so they show up on the screen but not on the printed page.



The printed page includes all background and foreground shapes except the non-printing shape.

- A** Background shapes
- B** Foreground shapes
- C** Shape assigned to a non-printing layer
- D** Printed page

To print only the pages you specify:

1. Display the drawing you want to print, then choose File > Print.
2. Under Page Range, click Pages, then type the page number range in the From and To boxes.

To print only the page that's displayed onscreen, click Current Page.

■ Overview

To print a background separately:

1. Display the background you want to print.
2. Choose File > Print.
3. Under Page Range, click Current Page, then click OK.

TIP To print a page without its background, display the page and cancel its background assignment before printing. To cancel a background, choose File > Page Setup, then click the Page Properties tab. Under Background, select None, then click OK. After printing, you can reassign the background by selecting it from the list of backgrounds on the Page Properties tab.

 [_Overview](#)


To set a shape as nonprinting:

1. Select the shape, then choose Format > Behavior.
2. Check Non-Printing Shape, then click OK.

TIP To set all shapes on a layer to nonprinting, you can choose View > Layer Properties to set the layer to nonprinting.

■ Overview

Printing headers, footers, and page numbers

 [How To](#)

 [Related Topics](#)

When you print a multiple-page drawing you may want certain information, such as the name of the drawing file, a border, or your company logo, to appear on each page. You may also want each page numbered automatically.

By using backgrounds and data [fields](#), you can easily set up items that automatically appear and print on every page of a drawing. In addition, for certain common items, such as page numbers, the drawing file name, and the date and time, you can apply headers, footers, and page numbers that appear in the printed drawing only.

Adding headers, footers, and page numbers to the printed drawing only

You can add automatic headers, footers, and page numbers on the Headers/Footers tab of the Page Setup dialog box. You type formatting codes for common elements, such as page number, time, and date, and specify whether you want the elements to appear in the upper or lower left, center, or right portion of the page.

A formatting code is simply an ampersand (&) followed by a letter. For example, to add a page number, type &p.

Header and Footer formatting codes

For	Type
Page number	&p
Current time	&t or &T
Current date	&d (short) or &D (long)
Ampersand	&&
File extension	&e
File name	&f
File name and extension	&f&e
Page name	&n
Total printed pages	&P

To add headers, footers, or page numbers to the printed drawing only:

1. Open the drawing, and choose File > Page Setup, then click the Header/Footer tab.
2. For Header and Footer, type the formatting code you want in the box that corresponds to the section of the printed page on which you want the header or footer to appear.
3. For Margins, type a value to specify how far the header or footer prints from the top or bottom of the page.
4. To open the Font dialog box and edit the header or footer text, click Choose Font.
5. Click Apply to apply the header/footer settings and continue working in the dialog box. Click OK to apply the settings and close the dialog box.

To add a custom header or footer that appears on the drawing page and the printed page:

1. Start a new drawing and, on the Page Properties tab in the File > Page Setup dialog box, make the first page a background.

Note the name of this page—you'll need to use it when assigning the background to a foreground.

2. On the background, add any shapes you want to repeat on each page of the drawing, for example, a company logo, a border, or a text field that displays up-to-date drawing information.

TIP For border shapes, choose File > Stencils > Visio Extras > Borders.

3. Insert a new page, and, on the Page Properties tab in the File > Page Setup dialog box, make this page a foreground. Under Background, assign the background you just created.
4. Click OK.

NOTE Setting up drawing elements that repeat on each page works best when you're starting a new drawing. If you start by creating the background and assigning it to the first foreground page, it is

automatically assigned to each subsequent page you add within the file.

■ Overview

About converting shapes and drawings to HTML

Related Topics

You can easily prepare Visio drawings so they can be viewed using a World Wide Web browser. You can prepare drawings in two ways:

- Save them as HTML pages. For example, you have a new departmental organization chart you want everyone in the company to see. To immediately make the chart available on the intranet, save it as an HTML page.
- Export them in .jpg, .gif, or .png format. For example, you have a Web page on the intranet where you've explained the complex process your department uses to handle customer inquiries. Recently, you created a block diagram that makes the process easier to understand. To include the graphic on your existing Web page, export it as a .gif, and add an tag to your Web page HTML code.

Save drawings as HTML pages when

- You want to simultaneously export more than one page of a multiple-page drawing.
- Shapes in your drawing include navigational links (hyperlinks) and you want to make your drawing an image map on the Web page.
- You want Visio to create an HTML-coded page and convert a drawing to a format Web browsers can use.

Export drawings in .jpg, .gif, or .png format when

- You already have an HTML-coded page in which you want to insert a Visio drawing.
- You want to export only a portion of a drawing.

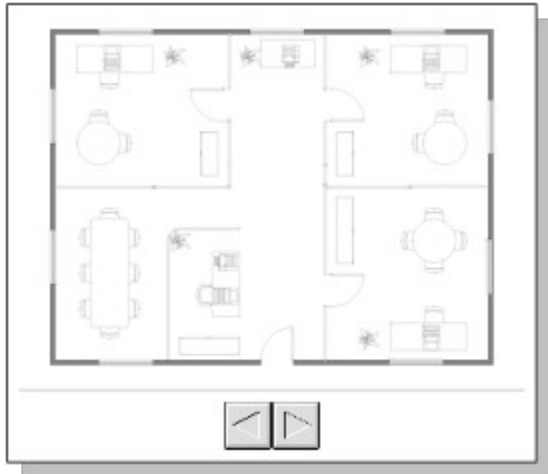
Saving drawings as HTML pages

■ [How To](#)

■ [Related Topics](#)

When you save a drawing as an HTML page, Visio creates a Web page that contains the drawing and HTML source code. You can immediately view the HTML page(s) using a Web browser.

If your drawing has multiple pages, Visio creates an HTML page for each drawing page and adds navigation buttons to each page.



Visio adds navigation buttons to each page of a multiple-page drawing when you save it as an HTML page.

By default, if shapes in your drawing have navigational links to other Visio drawing pages, files created in different applications, or to Web sites, Visio preserves these links as active on the HTML page. The Visio drawing becomes a "[client-side image map](#)." An image map is a graphic with different regions, some of which are "hot." In client-side image maps, all the information a Web browser needs to process a click on a hot region is stored in the HTML file with the image data.

You can also save a drawing with navigational links as a "server-side image map". In server-side image maps, a program on the Web server examines map data associated with the hot regions and processes the links.

Visio formats the saved HTML files with a template. The template is an HTML file with HTML tags and codes that correspond to elements from the drawing, such as page number, the page graphic, and anchors or jumps to other HTML pages or files. You can create your own template for saving Visio drawings as HTML files by modifying the default template.

To save a drawing as HTML pages:

1. In Visio, display the drawing you want to save.
2. Choose File > Save As.
3. Type a name for the HTML file using the .htm extension, such as Drawing.htm.
4. For Save As Type, choose HTML files (*.htm, *.html), choose where to save the file, then click Save.
5. In the Save As HTML dialog box, choose the graphics format and the drawing pages you want the HTML file to include.
6. Click Filter Settings to control the on-screen image size of the saved drawing or to choose options specific to the graphics format, then click OK twice.
7. Visio prompts you to view the HTML pages. Click Yes to open your Web browser and view the first HTML page.


■ Overview

To save a drawing as HTML pages without preserving links:

1. In Visio, display the drawing you want to save.
2. Choose File > Save As.
3. Type a name for the HTML file using the .htm extension, such as Drawing.htm.
4. For Save As Type, choose HTML files (*.htm, *.html), choose where to save the file, then click Save.
5. In the Save As HTML dialog box, choose the graphics format and the drawing pages you want the HTML file to include, then click Options.
6. In the Export Options dialog box, uncheck Enable Image Maps, then click OK twice.
7. Visio prompts you to view the HTML pages. Click Yes to open your Web browser and view the first HTML page.

■ Overview

Creating templates for saving and formatting HTML pages

 [How To](#)

 [Related Topics](#)

Visio formats saved HTML pages with a template. The template is an HTML page with regular HTML tags and special substitution codes that correspond to elements from the drawing, such as page number, the Visio graphic, and links (or anchors) to other HTML pages or files. When you export, Visio substitutes drawing elements for the codes.

You can create a custom template for saving and formatting HTML pages by modifying the Visio default template and by including [substitution codes](#). When you save a drawing as an HTML file, you can choose which template you want to use.

To create a custom template:

1. Copy the default HTML template, Dfltdoc.htm, which is located in the \Visio\Solutions\Visio Extras folder.
2. Open the copy in a program that can open and edit HTML files, such as Notepad.
3. Change or delete the existing HTML tags or add new ones. Rearrange or delete the substitution codes.
4. Save the revised template under a new name with an .htm extension.


■ Overview

To use a custom template when you save a drawing as HTML pages:

1. In Visio, create or open the drawing you want to save, then choose File > Save As.
2. Type a name using the .htm extension, such as Drawing.htm.
3. For Save As Type, choose HTML files (*.htm, *.html), choose where to save the file, then click Save.
4. In the Save As HTML dialog box, choose the graphics format and the drawing pages you want the HTML file to include, then click Options.
5. In the Export Options dialog box, under HTML Template, check Use Custom Template, click Browse to locate your custom template, then click OK.
6. In the Save As HTML dialog box, click OK. Visio prompts you to view the HTML pages. Click Yes to open your Web browser and view the first HTML page.

■ Overview

Exporting shapes and drawings in .jpg or .gif format

 [How To](#)

 [Related Topics](#)

When you export a Visio drawing as a .jpg (Joint Photographic Experts Group) or .gif (Graphics Interchange Format) graphic, you convert it to a format you can distribute over the Internet or intranet. The .jpg and .gif formats are supported by virtually all Web browsers.

Once the Visio drawing is exported, you can include it in an HTML page by adding the HTML tag (for example,) to the page.

If a drawing includes shapes with navigational links to other Visio drawing pages, to files created in different applications, or to Web sites, the links are lost when you export.

To export a drawing in .jpg or .gif format:

1. In Visio, select the shape or drawing you want to export.
2. Choose File > Save As.
3. For Save As Type, choose .jpg, .gif, or .png, then click Save.
4. In the Output Filter Setup dialog box, choose the options you want, then click OK.

■ Overview

About Visio and Microsoft Office 97

[Related Topics](#)

Visio products are fully compatible with Microsoft Office 97 programs, so you don't need to spend time getting used to a new environment when you work with Visio.

Full Office 97 compatibility means Visio toolbars, menu commands, and accelerator keys are similar to those you find in Office programs. It also means you can easily exchange shapes, text, and other objects between Visio and Office programs.

Some features in Visio that provide improved Office 97 compatibility include

- **Full-screen view** When you view your Visio drawing in the full-screen, Visio hides the menus, toolbars, and everything but the drawing page so you can view the drawing in the maximum space your screen allows. You can use the left and right arrow keys or the mouse to navigate between pages. Full-screen view is read-only, so to edit your drawing, press the Esc key to return to the normal view.
- **Improved formatting toolbar buttons** Line, Fill, and Text formatting buttons on the toolbars now provide pop-up palettes, similar to those in Microsoft Excel, from which you can select the formatting you want.

If you are running Office 97, you can use the following features in Visio:


- **Routing drawings through email** You can add a routing slip to a drawing that you send through email so that you are notified when the drawing is routed from one person to the next, and the drawing is returned to you when the last person on the list finishes reviewing it.

You can also save a drawing directly to an Exchange folder.

- **Recording activities in the Outlook Journal** In Journal, you can automatically record time you spend using Visio.

NOTE Visio is also an Office 95-compatible program.

Displaying and editing Visio drawings in Internet Explorer

 [How To](#)

 [Related Topics](#)

From Internet Explorer you can open and work on your Visio drawings without leaving the Internet environment. You can open a Visio drawing (.vsd) file by using the Open command—the same way you open an HTML or Office 97 program file. Visio opens the drawing with Visio menus and toolbars, and opens stencils you saved with the drawing. When you open a drawing from within Internet Explorer, Visio provides the same tools that are available when you work with it as a standalone program.

After the Visio drawing is open within Internet Explorer, you can navigate between the drawing and other Office documents or Web pages by clicking the Forward and Back buttons on the Internet Explorer toolbar.

To open a Visio drawing from within Internet Explorer:

1. In Internet Explorer, choose File > Open.

2. Under Open, type the path and name of the Visio file, or click Browse to find it.

If you click Browse, the Open dialog box appears. Under Files Of Type, select All Files to display Visio files in the list.

3. When you find the file, select it and click Open.

The file opens in Visio in the Internet Explorer environment.

4. Click the Tools button on the Internet Explorer toolbar to display the Visio toolbar and menus.

TIP You can navigate between the Visio drawing, other documents, and Web pages by clicking the Forward and Back buttons on the Internet Explorer toolbar. You can also type the URL of the Web site or path and file name of the document in the Address box.

■ [_Overview](#)

Exchanging data between Visio and Microsoft PowerPoint

Related Topics

You can include Visio drawings in your Microsoft PowerPoint presentations to strengthen and clarify your ideas, as well as to take advantage of the PowerPoint slide features. You use OLE to embed or link Visio shapes and drawings into PowerPoint slides. You can open Visio from within PowerPoint to create new drawings, or you can copy and paste or drag and drop existing shapes and drawings.

You can also include PowerPoint shapes and clip art in your Visio drawings by importing them as graphic images.

Including Visio drawings in Microsoft Binder reports

 [How To](#)

 [Related Topics](#)

You can use Microsoft Office Binder to include a full-page or multiple-page Visio drawing in a larger report.

For example, a report you've composed for a bid on a building project includes a narrative written in Microsoft Word, a budget calculated in Microsoft Excel, and an extensive floor plan and project timeline created in Visio. By including the Word, Excel, and Visio documents in a Binder in the order you want them to appear in the report, you can save, move, print, and distribute them as a single file. You can also add consecutive headers and footers to each Binder page.

By gathering documents into a Binder, rather than dealing with them separately, you can

- Add headers, footers, and other elements from within the Binder to ensure a consistent look across documents (Office 97).
- Paginate the entire Binder at one time.
- Preview the entire Binder before printing it (Office 97).
- Print the entire Binder at one time.

To use the Microsoft Office Binder, you must have Microsoft Office 95 or Office 97. For details about the Binder, see Microsoft Office Binder online help.

To include a Visio drawing in a Binder:

1. In Windows 95 or Windows NT 4.0, from the Start menu, choose Programs, then choose Microsoft Binder.
2. Drag the Visio drawing you want to include from the Desktop or from Windows Explorer into the left pane of the Binder window.
3. From the Binder File menu, choose Save Binder As to save the Binder file.

TIP Although you can create a Visio drawing from within the Binder, it's more efficient to use the Binder to assemble finished documents.

■ [_Overview](#)

About including Visio data in other programs' documents

Related Topics

You can use any one of the following methods to include Visio data in a document created in another program:

- Embedding
- Linking
- Exporting

The method you choose depends upon the capabilities of the other program and how you want to work with the Visio data once you've placed it in the other document.

NOTE Every method except exporting uses OLE to integrate data from different programs. With OLE, you can open Visio from within the other program to modify the Visio shapes and drawings.

Embedding shapes and drawings

- [How To](#)
- [Related Topics](#)

When you embed Visio data, it becomes part of the other program's file, and when you edit it, you edit only the version that's embedded in the other program.

Embedding is useful in cases when you don't want to keep a separate Visio file for the data you include in the other document. Or, if you want to transfer the file to other computers, you can transfer all the data in one file. Embedded objects, however, increase the file size; if you want to keep the data in a separate Visio file, you have to update the data in both places.



When you embed Visio data in another OLE-compatible program, it becomes part of the other program's document.

From within a document in a program that supports OLE, such as a Microsoft Word document, you can create a new embedded Visio drawing or embed an existing Visio drawing.

To create a Visio drawing in another document:

1. In the document, choose Insert > Object (or the appropriate command for that program).
2. In the dialog box, click the options for creating a new file, then, under Object Type, choose Visio 5 Drawing, and click OK.
3. In the Visio Choose A Drawing Template dialog box, open the folder that contains the drawing type you want, select the template for the drawing type, then click Open.
4. Create the Visio drawing.
5. If Visio is running in its own window, choose File > Exit. If it's running within the other document (in place), click somewhere in the document outside the Visio drawing to close Visio.
6. To edit the Visio drawing from within the document, double-click the drawing.

TIP You can also embed an existing Visio drawing from within another document. Follow step 1 above, then, in the dialog box, click the option for creating an object from an existing file.

■ Overview

To embed selected Visio shapes:

1. In Visio, select the shapes you want to embed.
2. Choose Edit > Copy (or press Ctrl+C).
3. Open the document in which you want to embed the shapes, then choose Edit > Paste (or the equivalent command).

■ Overview

To embed an entire Visio drawing:

1. In Visio, make sure nothing is selected.
2. Choose Edit > Copy Drawing.

This command copies the entire drawing, including shapes on other drawing pages and on backgrounds.

3. Open the document in which you want to embed the drawing, then choose Edit > Paste (or the equivalent command).

When you embed a multiple-page Visio drawing, only the page displayed at the time you choose Copy Drawing appears in the container document.

■ Overview

Editing an embedded Visio object in place

Related Topics

In many OLE 2-compatible programs, you can edit an embedded Visio object without leaving the program (or "container application")—this is called "in-place editing." A special set of Visio menus and toolbars temporarily replaces most of the menus and controls in the active window while you edit the Visio object.

To edit an embedded Visio object in place:

1. In the container application, double-click the embedded Visio object.
A special set of Visio menus and controls appears.
2. Edit the Visio drawing.
3. Click anywhere outside the drawing window to exit the in-place editing controls.

Linking shapes and drawings

- [How To](#)
- [Related Topics](#)

The way you link shapes and drawings is similar to the way you embed them. However, when you link a Visio shape or drawing to another document, the other document contains only a reference to the Visio drawing file, rather than the actual drawing. You link data in a saved Visio file so the other program can find the data and display it.

Linking works well when you want to include the same Visio data in more than one document. When you update the data, you only need to update it in one location. The versions that are linked to other documents reflect the changes automatically.

Linking a Visio file to another document does not increase the file size the way embedding a Visio object does. However, links require a little more maintenance. If you want to transport the data, you must make sure to transfer all linked files to the other computer.



When you make changes to a drawing that's linked to another document, the changes appear in the other document simultaneously.

To link a Visio file to another document:

1. Open the drawing you want to link. If it's a multiple-page drawing, display the page you want to appear in the other document.

NOTE Because a link is a reference to a file, you can only link files that are saved to a location on a disk. If you haven't saved the drawing you want to link, choose File > Save.

2. Make sure nothing on the drawing is selected, then choose Edit > Copy Drawing.
3. Without closing Visio, open the document in the other program in which you want to include the Visio drawing.
4. Choose that program's command for linking objects.

In Microsoft Office programs, choose Edit > Paste Special.

5. In the dialog box, make sure Visio 5 Drawing Object is selected, select Paste Link, then click OK.
The drawing you copied appears in the document, with a link to the original Visio file.

■ Overview

Dragging Visio shapes and drawings into other programs

[How To](#)
[Related Topics](#)




If the other program in which you want to include Visio data is compatible with OLE 2, an alternative to using menu commands to paste Visio shapes is to drag shapes from a Visio drawing or stencil into the other document. Dragging and dropping shapes does not use the Windows Clipboard, so data on the Clipboard is not affected.

You can drag shapes from the drawing page or masters from stencils. When you drop a master, an instance of the master appears in the document and the master is not removed from the stencil. If you drag multiple shapes from a drawing page, they are treated as one object in the other document.

Pointer tool changes

When you drag shapes between programs, the pointer tool changes in response to the action you take.

How the pointer tool changes

Pointer appearance	Action
	Press Ctrl and then drag to move the selected shapes to the other document.
	Press Ctrl+Shift and then drag to copy the selected shapes to the other document.
	Cannot drop shapes in that document.

TIP Before you drag shapes, position the Visio window and the other program's window so you can see the shapes and the document in which you want to drop them.

To position program windows quickly:

1. Open Visio with the drawing or stencil that contains the shapes you want to drag into another document, then, without minimizing the Visio window, open the other program.
2. Right-click the Windows taskbar and choose Tile Vertically.

■ Overview

To drag and embed shapes into another document:

- Select the shapes, then press Ctrl and drag the shapes into the document.

Dragging the shapes from the drawing page copies them into the other document. To move the shapes (so they no longer appear on the drawing page), don't press Ctrl as you drag.

To drag and link shapes to another document:

- Select the shapes and, when you select the last shape, hold the mouse pointer down. Then press Ctrl+Shift and drag the shapes into the document.

NOTE If you press Ctrl+Shift before pressing the mouse button to drag the shapes, the pointer becomes a magnifying glass for zooming in on the drawing, and you will not be able to drag the shapes.

■ [_Overview](#)

Exporting shapes and drawings

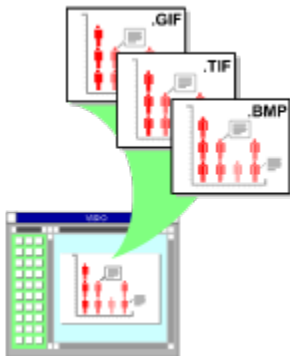
[How To](#)
[Related Topics](#)

When you export Visio data, it is directed through a filter that converts the Visio data to an independent non-Visio file. You then open that file or import it as a picture in the other program. Exporting works best when you want to include Visio data in a document that is not compatible with [OLE](#), or if you want to include a Visio drawing in an HTML document you want to post on the Web.

After you export a Visio drawing to another format and insert it in another document, it's considered a static picture. That means you will not be able to open Visio to edit it from within the other program. In addition, because your Visio file can go through up to two translations before it appears in the other program—one when you export from Visio, and one if you import into the other program—the graphic image may not look exactly the way it does in the Visio drawing.

For example,

- By exporting a Visio drawing in .ai format, you can open it in Adobe Illustrator and edit it using that program's tools.
- By exporting a Visio shape as a Windows bitmap, you can open the bitmap in any program that supports .bmp format.
- By exporting a Visio drawing in a format another program can open, you can include Visio data as a graphic image in the other program's documents.



Exporting translates a file to a non-Visio format that the other program can import.

TIP If the other program in which you want to include Visio data supports OLE, it's best to link or embed the Visio data rather than export it. OLE produces more consistent results and allows you to edit the data after you include it in the other program.

To export shapes or drawings to another file format:

1. To export all the shapes on a page, display the page you want to export.

To export specific shapes, select the shapes you want to export. (Use Shift+click to select more than one shape.)

2. Choose File > Save As, then

For Save As Type, choose the format you want.

For File Name, type a name for the file.


3. Click Save.

Visio exports the shapes or page in the format you choose. You can use the file in any program that can read files in that format.

4. If necessary, in the Filter Setup dialog box, choose the export settings you want, then click OK.

■ Overview

Sending drawings through electronic mail

 [How To](#)

 [Related Topics](#)

You can send a Visio drawing to another user via e-mail. Visio products are compatible with electronic mail programs that support the Messaging Application Program Interface (MAPI) protocol.

Visio also takes advantage of Microsoft Office 97 routing features, including sending drawings to Microsoft Exchange folders, adding routing slips to drawings you send through e-mail, and adding journal entries to Outlook.

To include a drawing file in an e-mail message:

1. While the drawing file is open, choose File > Send To > Mail Recipient.

If your mail program hasn't been running, it starts; then a new e-mail message containing the Visio icon and the file name appears.

2. Address the message, type any accompanying data, and send the e-mail message as you would any other message.

■ Overview

To view a Visio file sent by e-mail:

- Open the e-mail message, then double-click the Visio icon.

NOTE Visio must be installed to open drawings you receive in e-mail.

■ [Overview](#)

Microsoft Office 97 document-routing support

If you use Office 97, you can send a drawing with a routing slip or send a drawing directly to a folder in Microsoft Exchange.

To send a drawing with a routing slip:

1. Display the drawing you want to send, then choose File > Send To > Routing Recipient.
2. Click Address to open your post office address list and select the individuals or groups to whom you want to route the drawing. When you've finished adding to the recipient list, click OK.
3. If you need to route the drawing to people in a specific order, select a person's name, then click the up or down arrow in the Move section to change that person's position on the list.
4. Under Route To Recipients, select whether to route the drawing to one person at a time or to everyone at once.

If you choose to route the drawing to one person at a time, the first person on the list views or updates the drawing, then routes the drawing to the next person, and so on.

If you route a drawing to a group alias, everyone in the group will receive the drawing at the same time. To send the drawing to one group member at a time, list each of their names rather than the group alias.

5. Check Track Status or Return When Done to receive an update as each person on the list passes the drawing to the next person or to have the drawing sent back to you after everyone has seen it.
6. Under Message Text, type the text you want in the email message. When you're finished, click Add Slip.
7. Choose File > Send To > Next Routing Recipient to send the drawing to the first person on the routing list.

NOTE You can choose to send the drawing (step 7) later. If you try to close the file before sending the drawing, Visio displays a message reminding you that it contains a routing slip. You can then choose to route the drawing, send it without the routing slip (you won't be able to track its status and it won't automatically be returned to you), or not to send it at all.

TIP If you receive a routed drawing and want to route it to the next person, choose File > Next Routing Recipient. If you want to route the drawing to someone who isn't on the list, choose File > Other Routing Recipient, and then follow steps 2–7 above.

For details about routing files, see your Microsoft Office 97 documentation.

 [Overview](#)

To send a drawing directly to a Microsoft Exchange folder:

1. Display the drawing you want to send, then choose File > Send To > Exchange Folder.
2. Select the folder in which you want to place the drawing, then click OK.

Visio saves the drawing in the Microsoft Exchange folder as an embedded object, so you can open the drawing in Visio from within Microsoft Exchange.

■ Overview

About working with styles and templates

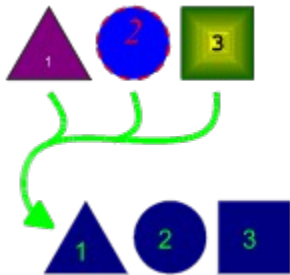
■ [Related Topics](#)

You can use styles and templates in Visio to create drawings that can be quickly and efficiently revised.

Using styles

A "style" is a named collection of formatting attributes—for example, blue fill and magenta bold text—that you can apply to your shapes to give them a consistent look and make them easier to revise. By editing the style, you can simultaneously change the look of all shapes formatted with that style.

A style can contain line, fill, and text formatting attributes—a single attribute or any combination of the three. Visio templates come with styles built in, but you can also define your own.



Select three shapes and apply one style to make them look the same.

Creating templates

When you know that you'll be creating multiple drawing files that need a consistent look, consider creating a template on which to base all the drawings. Creating your own template eliminates the need to open the appropriate stencils, create styles, and establish page settings for each drawing file, because they are all contained in one place.

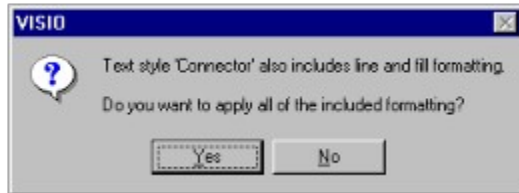
Also, you can increase your efficiency by creating your own templates when

- Your drawings require customized settings for page size or scale, window size and position, shape or text styles, color palette, snap and glue, or printing, create a template with the appropriate settings in place.
- Your drawings often use a standard background or set of layers—for example, you place your company logo in every drawing—create a template with the background or layers in place.

Applying styles

- [How To](#)
- [Related Topics](#)

Some styles include formatting for all three attributes (line, fill, and text); others are specific to one attribute. For example, one style may contain text formatting, such as the font, size, and color, as well as fill color and pattern, and line color and pattern. Another style may contain only text formatting.



When you apply formatting to a shape by choosing the style from one of the style lists (for example, the Text style list) on the toolbars, if the style also includes line or fill formatting, Visio asks if you want to apply all of the style's formatting, rather than just the text formatting. Click Yes to apply all formatting to the shape. Click No to apply formatting for the single attribute you initially chose from the list.


To apply a style:

1. Select one or more shapes you want to format.
2. From the Line or Fill style lists on the Shape toolbar, or from the Text style list on the Text toolbar, choose the style you want to apply.

TIP You can apply styles to a shape by choosing Format > Stye, then selecting the style you want from the lists. All the styles available in a drawing, both those pre-defined in a template and those you define yourself, are listed in the Style dialog box.

■ Overview

Defining and editing styles

 [How To](#)

 [Related Topics](#)

In the [Define Styles](#) dialog box, you can edit and rename existing styles, define your own styles from scratch, and delete styles you no longer need.

When you define or edit styles in a drawing file, the changes you make are available only in the current drawing. To make a style available across many future drawings, you can define or edit it in an existing template, or save the drawing file in which you created the style as a new template. The style will be included in every new drawing you create using that template.

When you edit or define a style, the colors you can choose are determined by the color palette in the template on which you base your drawing. All Visio templates use a default color palette. You can change the color palette a drawing uses, or modify the colors within the default color palette.

To define a new style:

1. Choose Format > Define Styles.
2. Type a name for the new style.
3. If you want to base the new style on an existing style, choose that style under Based On.
4. Under Includes, check the attributes that your style includes. A style can include formatting from any combination of the three attributes.
5. Under Change, click Text, Line, or Fill to change the settings for that attribute. Choose the settings you want for each attribute you included in step 4.
6. When the style contains the settings you want, do one of the following:
 - Click Apply to add the new style, apply it to selected shapes, and close the dialog box.
 - Click OK when no shapes are selected to add the new style and close the dialog box.
 - Click Add to add the new style and continue working in the dialog box.

 Overview

To edit a style:

1. Choose Format > Define Styles.
2. In the Style list, select the style you want to edit.
3. To rename the style, click Rename, type a new name for the style, then click OK.
4. To change the style settings, under Change, click the attributes you want to edit. When you finish editing the attributes, do one of the following:

Click OK (when no shapes are selected) or Apply (when shapes are selected) to add the changes to the style and close the dialog box.

Click Change to add the changes and continue working in the dialog box.


■ Overview

To delete a style:

1. Choose Format > Define Styles.
2. Choose the name of the style you want to delete.
3. Click Delete, then click OK.

■ Overview

Copying styles from one drawing to another

 [How To](#)

 [Related Topics](#)

If you want to transfer a style you created in one drawing to another drawing, you can copy and paste a shape to which the style is applied from the first drawing into the second.

NOTE If a style with the same name already exists in the second drawing, the style of the shape you copy does not replace the original style. Instead, it inherits the formatting of the style as it is defined in the second drawing. In this situation, if you want to copy the style, rename the style in either of the drawings before you begin.

To copy a style from one drawing to another:

1. Select a shape in the first drawing, and apply to it the style or styles you want to copy to the new drawing.
2. Choose Edit > Copy (or press Ctrl+C).
3. Open the new drawing.
4. Choose Edit > Paste (or press Ctrl+V).

The shape is copied to the new drawing, along with the styles you assigned to it in the original drawing.

■ [_Overview](#)

Preserving individual shape formatting

 [How To](#)

 [Related Topics](#)

You can apply special, or local, formatting to an individual shape even when the shape has a formatting style assigned. For example, if a computer in a network diagram has the Net-Normal style assigned, you can change the computer shape's text from normal to italic. If a Process shape in a flowchart has the Flow-Normal style assigned, you can change the fill color of the shape from white to blue.

If you apply a new style to a shape for which you've defined local formatting or edit the style already assigned to the shape, the style's attributes will replace any local formatting you've applied.

To prevent a style from overriding a shape's local formatting, you can choose to assign all of the style's attributes except those you assigned locally. Or you can preserve a shape's local formatting when you create or apply a style in the [Define Styles](#) and [Style](#) dialog boxes.

If you experiment with local formatting and then decide you preferred the formatting the shape originally displayed, you can revert to the styles associated with the shape's master.

To preserve local formatting when applying a style:

1. Select the shape, then choose Format > Style.
2. Choose the styles you want to apply.
3. Check Preserve Local Formatting.
4. Click OK.

TIP In the Define Styles dialog box, the setting is called Choose Preserve Local Formatting on Apply.

■ Overview

To revert to a master's style:

1. Select the shape, then choose Format > Style.

2. In the Style dialog box, choose Use Master's Format from the Text, Line, or Fill style lists.

The Use Master's Format item appears at the top of each style list; you may need to scroll up to see it.

3. Click OK.

■ Overview

Creating new templates

■ [How To](#)

■ [Related Topics](#)

You can create your own [template](#) to set up the most common stencils, styles, and page settings you use. Then you can base new drawings on this template and distribute the template to other Visio users in your organization.

The easiest way to create a template is to set up a drawing file the way you want, open the stencils you want, and then save the settings as a template (.vst) file. If you simply want to change some of the settings of an existing Visio template, you can base a drawing on that template, save it with a new name, and make your changes.

TIP If you want to preserve an original drawing file but also base a new template on it, you can open a copy of the drawing file. Choose File > Open. In the [Open](#) dialog box, select the drawing you want, then under Open, click Copy.

To create a template from a drawing file or an existing template:

1. Open the drawing or start a new drawing based on the template you want to modify.
2. Open any additional stencils you want to save with the template.
3. Modify drawing page settings and styles you want to use in future drawings you base on this template.

For example, if you want to have a background page that displays your company logo, or a title block that contains fields such as the date a drawing is created and so on, create it and assign it to the foreground page.

4. Choose File > Save As, then do the following:

For Save As Type, select Template (*.vst).

For File Name, type a name for your template.

For Save, make sure Workspace is checked.

For Save in, select the folder in which you want to save the template.

TIP If you want the template to display when you choose New from the File menu, save it in the Solutions folder or one of its subfolders.

5. Click Save.

■ Overview

About layers

■ Related Topics

You can use Visio layers to organize related shapes on a drawing page. A layer, in Visio, is a named category of shapes. Using layers, you can

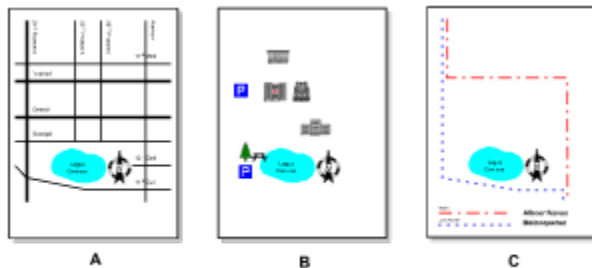
- Show, hide, or lock shapes and guides on specific layers so you can edit certain layers without viewing or affecting others.
- Select and print shapes based on their layer assignments.
- Temporarily change the display color of all shapes on a layer to make them easier to identify.
- Assign a shape to more than one layer, as well as assign the member shapes of a group to different layers.
- Control whether shapes on a layer can be snapped to or glued to.
- Create reports based on data stored in shapes assigned to a particular layer.

For example, if you're drawing an office layout, you can assign walls, doors, and windows to one layer, electrical outlets to another layer, and furniture to a third layer. That way, when you plan the electrical system, you don't have to worry about accidentally rearranging the walls.

After locking the wall and electrical outlet layers, you can distribute the office layout to co-workers, who can arrange the furniture in their offices without disturbing the underlying office layout.

Some shapes, such as those in the [Office Layout Template](#), are already assigned to pre-existing layers. If you want to use layers with shapes from other stencils, you need to create the layers and assign the shapes to them.

A shape can be assigned to multiple layers or no layers, and every page in a drawing can have a different set of layers.



Shapes can belong to more than one layer. Here, the lake and compass shapes belong to the Streets layer (A), the Landmarks layer (B), and the Routes layer (C).

NOTE Visio layers do not determine how shapes appear on the page. The way shapes overlap is determined by their stacking order and whether or not there are backgrounds assigned to the page.

Using layers on backgrounds

[Related Topics](#)


A background is a page that appears behind another page. It can have its own set of layers. Because a background can be shared by more than one page, but layers cannot, you may want to use layers on background pages. For example:

- In a drawing where the same map is used on multiple pages, you can put the map on the background and assign its parts to different layers, such as the Road layer or River layer. If you want to hide the roads on all the pages, you can then hide the background's Road layer.
- In a drawing with a title block on the background, you can assign it to a Revision History layer and then hide that layer if you don't want to print it.
- If the background includes information you don't want modified, such as your company logo and name, but you need to give the file to your client modifications, you can assign those shapes to a Corporate layer, lock it, then pass the file on to your client.



Background page elements (**A**) appear on the foreground pages to which they are assigned (**B** and **C**). When you open a Visio file, the drawing page on the screen is a foreground page. If you want to use backgrounds, you need to create them.

Creating, removing, and renaming layers

 [How To](#)

 [Related Topics](#)

Many Visio masters are already assigned to layers so, when you drop them on the page, the layer is added as well. You can create new layers to organize custom categories of shapes, then assign your shapes to those layers, as well as to the layers that Visio provides. For example, when you open the Office Layout Template, the masters are already assigned to the layers. As you drop instances of the masters, the layout layers are set up for you.

Creating layers

When you create a new layer, Visio adds it only to the current page, not to all pages in the file. Similarly, when you create a new page, you must define its layers; the new page does not inherit layers from the previous page. However, when you copy a shape with a layer assignment from one page to another, whether in the same drawing or between drawings, Visio adds the layer to the new page. If the page already has a layer with the same name, the shape is added to the existing layer.

To create a layer:

1. Choose View > Layer Properties.
2. Click New.
3. In the New Layer dialog box, type a name for the layer, then click OK.
4. In the Layer Properties dialog box, click to place a checkmark below properties you want the layer to have, then click OK.

■ Overview

Removing and renaming layers

When you no longer need a layer, you can remove it. If you remove a layer, all shapes assigned only to that layer are removed as well. If you don't want to remove the shapes along with the layer, change or remove each shape's layer assignment before you remove the layer.

When you rename a layer, only the layer's name is changed—the shapes on the layer are not removed or changed.

TIP To see how many shapes are assigned to a layer, choose View > Layer Properties, then click the number button (#) in the Layer Properties dialog box.

To remove a layer:

1. Choose View > Layer Properties.
2. Select the layer you want to delete, then click Remove.
3. Click OK.

TIP To delete all unused layers, check Remove Unreferenced Layers.

To rename a layer:

1. Choose View > Layer Properties.
2. Select the layer you want to rename, then click Rename.
3. For Layer Name, type a new name, then click OK.
4. Click OK.

■ Overview

Assigning shapes to layers

[How To](#)

[Related Topics](#)

You can assign shapes to one or more layers by selecting the shapes, then choosing which layer you want to assign them to. For example, you can add walls and furniture, then assign them to corresponding layers.

When you drop an instance of a master that is pre-assigned to a layer, the instance inherits the master's layer assignments. If a layer of that name does not already exist on the drawing page, dropping the instance adds the layer. If you have designated an active layer for the page, that instance is assigned only to the layer it inherited from its master shape, although you can later assign it to the active layer or to another layer.

TIP You can check Preserve Group Member Layers to specify that individual shapes in a group retain their current layer assignments. For example, you might assign a desk to the furniture layer and a computer to the electronics layer, then group them. If you then assign the group to the den layer, the desk and computer retain their previous layer assignments as well. When this option is unchecked, when you assign a group to a layer, all of the group members become members of the new layer. Their previous layer assignments are canceled.

To assign a shape to a layer:

1. Select the shape.

If the shape is part of a group, click to select the group (indicated by green selection handles), then click to subselect the shape in the group (indicated by gray selection handles).

2. Choose View > Shape Layer.

3. Choose the layer to which you want to assign the shape, then click OK.

TIP To assign a shape to more than one layer, press Ctrl to choose multiple layers.


 Overview

To assign a group to a layer:

1. Select the group.
2. Choose View > Shape Layer.
3. Click the layer to which you want to assign the group, check Preserve Group Member Layers, then click OK.

■ Overview

Making a layer active

 [How To](#)

 [Related Topics](#)

When you create a shape that doesn't already have a pre-defined layer assignment, it is automatically assigned to the active layer. You can change the active layer as you work to make sure that new shapes are added to the appropriate layer. For example, if you are going to add electrical wiring shapes to a drawing of an office layout, you can make the electrical layer active. All the shapes you add from then on are assigned to the electrical layer. When you begin to add windows, you can designate the wall layer as the active layer.

In a drawing with many shapes and layers, you may find it more efficient to designate one or more active layers, so that all shapes you subsequently draw or drop are automatically assigned to those layers.

To designate a layer as active:

1. Choose View > Layer Properties.
2. Click in the Active column to add a check for each layer you want to make active.
3. Click OK.

TIP If a layer is locked against editing, you cannot make it the active layer.

 Overview

Controlling shape behavior using layers

 [How To](#)

 [Related Topics](#)

After you've assigned shapes to a layer, you can control the behavior and appearance of the shapes as a group. You can

- Select all shapes on a layer.
- Show or hide the shapes on a layer. For example, in a garden diagram, you can view the layers that contain the flowerbed and the spring-blooming plants, and hide the layers that contain summer- and fall-blooming plants, to see what will be blooming in the spring.
- Lock shapes on a layer, so that you cannot select, move, or edit the shapes on the locked layer. To identify these shapes, you can also temporarily change their color by setting color property for the locked layer. You cannot add shapes to a locked layer.
- Specify whether other shapes can snap or glue to the shapes assigned to a layer. If a shape is on a layer that has Snap or Glue unchecked, you can still snap or glue it to other shapes, but you can't snap or glue other shapes to it.
- Use color to highlight shapes on a layer. For example, in an office layout you can create a layer for each department, then assign each layer a unique color so that, at a glance, you can see which department owns different equipment.
- Print only the shapes assigned to particular layers.

TIP The color you assign to shapes on a layer temporarily overrides each shape's original color. If you turn off the layer color, each shape returns to its original color. If you have assigned a shape to more than one layer, the shape will not use a layer color, but instead will appear in its original color. Layer colors are temporary and intended for display only, but they can affect printed output.

To select all the shapes on a layer:

1. Choose Edit > Select Special.
2. For Selection By, click Layer, then choose the layer with the shapes you want to select. Or, choose No Layer to select shapes that are not assigned to any layer. To choose multiple layers, press Ctrl, then click the layers you want.
3. Click OK.

■ Overview

To control shapes on layers:

1. Choose View > Layer Properties.
2. Check the options you want. Uncheck an option to deactivate it for that layer.
3. Click OK.

 Overview

About automatic layout

[Related Topics](#)

With certain types of connected drawings, such as flowcharts and network diagrams, you can use the [Lay Out Shapes](#) command to have Visio position, then reposition, shapes. Having Visio reposition shapes can help you revise large drawings more quickly than using the pointer tool to select and drag each one to the new location. For example, if you're updating a large flowchart to include a new process, you can add and connect the shapes that make up the process, then use the Lay Out Shapes command to have Visio lay out the updated drawing for you.

Preparing for automatic layout

For best results with automatic layout, use the following guidelines when you create connected drawings:

- Connect shapes using connectors that Visio can route.

Most connectors are [routable](#). A routable connector can detect certain [2-D](#) shapes that lie in its path from one shape to another, and change its route to avoid crossing through them. Some connectors that are designed for a specific purpose, such as the tree and crow's-foot connectors, or control-handle connectors that you can drag out directly from other shapes, are not routable.

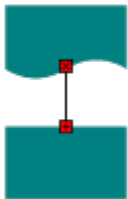
- Set all 2-D shapes so that connectors can detect them.

Routable connectors can detect and route around only the shapes set as "placeable." To quickly set all 2-D shapes as placeable, select them all (shift+click to select multiple shapes), then choose Format > [Behavior](#) and, for Layout Behavior, select Layout And Route Around.

- Orient connectors so that begin and end points direct the flow of your drawing.

Visio determines where to position shapes based on begin and end point locations. A connector may have an arrow on one or both ends but the direction the arrow points doesn't necessarily indicate the begin and end point locations.

- Ensure that begin and end points of connectors are properly glued to other shapes. When you select a glued connector its begin and end points turn red.



In this diagram, the begin point is connected to the top shape, and the end point is connected to the bottom shape. If the points are reversed in this example, Visio will lay out the shapes in the opposite order.

Lay Out Shapes works best with the flowchart, network diagramming, organization chart, or other typical connected-drawing types. If you try to use automatic layout with a drawing that you did not create with these shapes, an alert appears to let you know that the results may not look as you expect. You can choose to continue or cancel the layout process. If you continue and are not satisfied with the results, you can use the Undo command to undo it (choose Edit > Undo Lay Out Shapes).

Setting layout style, depth, and routing

 [How To](#)

 [Related Topics](#)

When you have Visio lay out a drawing, you can specify the style of layout you want, as well as the layout depth and the connector routing style.

Layout style

You can choose one of three styles: Top To Bottom, Left To Right, and Radial. Choose Top To Bottom or Left To Right for directed drawings, such as organization charts and process flow diagrams. Choose Radial for undirected drawings such as some types of network diagrams.

Depth

The Depth setting determines the number of levels of the drawing Visio looks at before creating the layout. When choosing depth settings, Shallow means a shallow layout. That is, in a top-to-bottom organization chart, a shallow layout requires more horizontal space than a deep layout.

In addition, depth settings refer to the type of layout you want. If you set the depth to Shallow, Visio checks more levels of the drawing than it does if you set the depth to Deep. The more levels Visio checks, the better it can determine, in a top-to-bottom chart, how much space to leave between top-level shapes so that shapes in lower levels can fit on the same horizontal line. In this case "shallow" refers to the layout, because it requires more horizontal and less vertical space than it would if you had set the depth to Deep.

Whatever the Depth setting, the number of levels Visio looks at depends upon the style and complexity of the drawing you're working on. You may want to try different depth settings on the same drawing to find the one that produces the result that works best for your drawing.

Routing style

The routing style determines the path automatic layout takes to connect 2-D shapes. You can choose one of two routing styles: Flowchart and Right Angle. The Flowchart routing style uses both straight and right-angle connectors; the Right Angle routing style uses only right-angle connectors.

To lay out shapes and change layout style, depth, and connector-routing style:

1. Display or create the drawing you want to lay out.
2. Choose Tools > Lay Out Shapes.
3. Select the layout style, the depth, and the routing style you want, then click OK.

Lay Out Shapes works best with the flowchart, network diagramming, organization chart, or other typical connected-drawing types. If you try to use automatic layout with a drawing that you did not create with these shapes, an alert appears to let you know that the results may not look as you expect. You can choose to continue or cancel the layout process. If you continue and are not satisfied with the results, you can use the Undo command to undo it (choose Edit > Undo Lay Out Shapes).

■ Overview

Customizing shape spacing and connector routing settings

- [How To](#)
- [Related Topics](#)

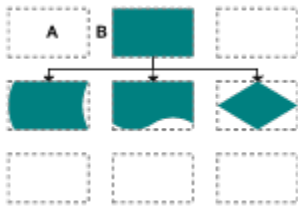
When you use automatic layout, you can fine-tune the way Visio places shapes (or "nodes") and connectors (or "lines"). You can

- Change shapes' placement settings to affect the way Visio routes connectors between shapes.
- Change the minimum amount of space you want between shapes and connectors, and between connectors' parallel segments.

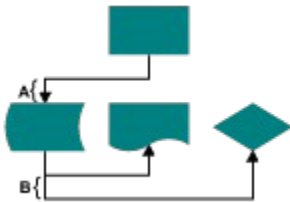
The settings on the Advanced tab of the [Lay Out Shapes](#) dialog box are based on the layout grid. You turn on the grid by checking the Enable Grid box on the General tab. The layout grid is set up with blocks and avenues, like a city map. On the [Advanced tab](#), you can set the Block Size to the size of the shapes in your drawing, and the Avenue size to the amount of space you want between them.

Note that the grid you create here serves as an internal guide only—it does not correspond to the drawing page grid, and does not appear on the drawing page when you enable it.

Avoid using the grid if your drawing contains shapes of various sizes, particularly shapes that exceed the size of the grid blocks. Visio can position these shapes more precisely when they do not need to fit within a fixed grid block.



When you enable the grid, shapes are placed within the blocks (**A**) and connectors are routed through avenues (**B**).



To make connections easier to see in a large drawing, you can increase the amount of spacing between connectors or between shapes and connectors.

A Line to node spacing

B Line to line spacing

To customize routing and grid options:

1. Choose Tools > Lay Out Shapes to open the dialog box.
2. Click General to display the General tab, then check Enable Grid.
3. Click Advanced, and on the Advanced tab:

Under Line To Line Spacing, set the minimum amount of space you want between connectors' parallel segments.

Under Line To Node Spacing, set the minimum amount of space you want between connectors and shapes.

Under Block Size, type values that match the size of the shapes in your drawing.

Under Avenue size, type the minimum amount of space you want between the shapes (this should be at least twice the values of the Line To Node settings).

4. When you've finished fine-tuning the settings on the Advanced tab, click OK to close the dialog box and create the automatic layout, or click Apply to create the automatic layout without closing the dialog box.

TIP If you are not satisfied with the layout, choose Edit > Undo Lay Out Shapes (or press Ctrl+Z).

■ Overview

About positioning shapes precisely

■ [Related Topics](#)

When precision counts, you can use the Visio rulers, [guides](#), [grid](#), and alignment and positioning tools to draw and place shapes accurately. By default, shapes snap, or pull, to ruler subdivisions, guides, guide points, grid lines, and other shapes, so lining them up is quick and easy. Which element you snap shapes to depends on what you want to do. For example, to position shapes at regular intervals, you can snap them to the grid. To align shapes, snap them to a guide.

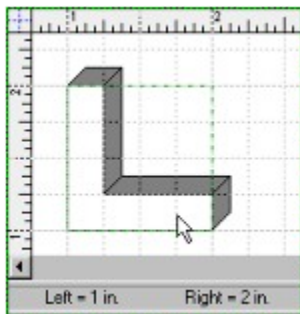
Methods for snapping shapes into position

Position for shape	Snap to
Align several shapes	Guides
Align shapes by their corners	Guide points
Position shapes equidistant from one another	Grid, ruler subdivisions, or guides
Position 1-D shapes against 2-D shapes	Shape geometry, handles, vertices, or connection points
Position 2-D shapes against one another	Shape's alignment box

■ To place a shape more accurately, pause while dragging its line or outline (shown on the left), without releasing the mouse button. The line or outline changes to the shape itself (shown on the right).

Other ways you can position shapes include the following:

- The [Align Shapes](#) command aligns several shapes to one shape.
- The [Size & Position](#) command positions shapes using numerical x, y coordinates.
- The position information that appears on the status bar when you select a shape. This information changes as you drag the shape.

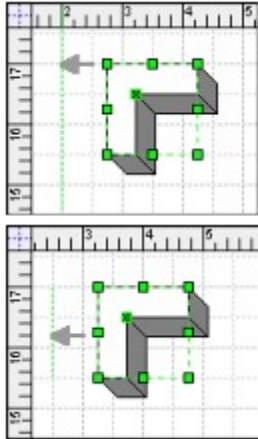


When you drag shapes, guides, or guide points on the drawing page, precise coordinates for the object's position appear in the status bar at the bottom of the Visio window. On the rulers, faint lines appear and track the shape as you move it to help you position the shape precisely.

Snapping shapes for automatic alignment

- [How To](#)
- [Related Topics](#)

You can rely on snap behavior to position and align shapes exactly. Snapping pulls shapes to one another or to ruler subdivisions, grid lines, guides, or guide points so you can control placement and alignment. You can control what types of objects shapes snap to and the snap strength, which is the amount of pull that an object exerts.



By default, shapes snap to both ruler subdivisions and grid lines. To snap shapes more easily to ruler subdivisions, turn snapping to grid lines off.

TIP You may not always want to snap shapes. For example, by turning off snapping, you may find it easier to draw a smooth freeform curve.

Setting snap options

The snap settings you choose apply to all shapes in the current drawing. When you set snap options, set only the options you need. For example, if you want to snap to guides, you do not need to set the Grid option.

To set how shapes snap:


1. Choose Tools > Snap & Glue.
2. In the Snap To section of the dialog box, check the options you want.

The Ruler Subdivisions, Grid, and Guides options are useful for positioning and aligning shapes.

The Shape Handles (selection handles), Shape Vertices, and Connection Points options are useful for gluing shapes together.

3. Check the Snap option in the Currently Active section, then click OK.

TIP To place shapes as precisely as possible, set the snap strength to a high setting, press Ctrl+Shift and click the left mouse button to zoom into the drawing, then move shapes into place.

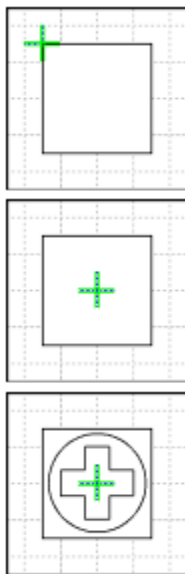
 [_Overview](#)

Creating guides and guide points

[Related Topics](#)

You can use guides and guide points when you want to position shapes precisely or align several shapes and keep them in the same position even when you move them. Guides are useful in ways rulers and grid lines are not. For example:

- You can rotate existing guides by rotating the entire page or by rotating a single selected guide using the [Size & Position](#) command.
- You can glue shapes to guides so that when you move the guides the shapes move too.
- You can place guides anywhere on the page and use the [Snap & Glue](#) command to make shapes snap to the guides.
- Guides don't print.



Guide points are two short, crossed guides that you can use to align shapes at their corners or to center shapes on top of one another.

Methods for creating guides and guide points


To	Do This
Prepare to create guides and guide points	On the View menu, check both Guides and Rulers .
Place a guide on the drawing page	Drag a guide from the horizontal or vertical ruler onto the drawing page, then release the mouse button.
Place a guide point on the drawing page	Drag from the intersection of the two rulers onto the drawing page, then release the mouse button.
Delete a guide or guide point	Click to select the guide or guide point you want to delete. Press the Delete key, or choose Edit >

Clear.

Rotate a guide

Select the guide, then choose Shape > Size & Position. In the Size & Position dialog box, select Rotated, then type values for X, Y, and Angle. The x, y coordinates and angle are relative to the zero point. Negative values for Angle rotate the guide counterclockwise; positive values rotate the guide clockwise.

Controlling grid spacing and origin

 [How To](#)

 [Related Topics](#)

Each drawing page is crisscrossed by grid lines like those on traditional graph paper. You can control the grid spacing, set whether the grid is variable or fixed, or change the grid origin. You can even set spacing separately for the horizontal and vertical grid lines. The grid helps you position shapes visually. You can also snap shapes to the grid.

The intervals of the grid correspond to the unit of measure you set in the [Options dialog box](#). You set the size of the intervals in the [Ruler & Grid](#) dialog box and you type settings for the horizontal and vertical grid lines.

NOTE If you rotate your page, the grid doesn't rotate with it, but stays parallel to the rulers.

Using a variable grid

By default, Visio uses a "variable" grid. Variable grid lines change depending on the magnification at which you are viewing your drawing. If you zoom in on your drawing, grid lines may be closer together; if you zoom out, they may be further apart. (You can check this by changing the magnification and then looking at how the grid lines line up with the rulers.) Visio determines the best grid spacing for the view. Variable grids are useful when you want to zoom in to align something precisely.

To set grid spacing between lines for a variable grid:

1. Choose Tools > Ruler & Grid.
2. In the Grid Spacing Horizontal and Vertical list boxes, select Fine, Normal, or Coarse. Fine is the smallest grid spacing and Coarse is the largest.
3. Click OK.

To hide the grid:

- Choose View > Grid to uncheck the Grid command.

■ Overview

Using a fixed grid

For some drawings, such as space plans and engineering diagrams, you may want to set a fixed grid, so that grid lines stay the same distance apart regardless of magnification. For example, you can set the grid to match the size of ceiling tiles. If you set a fixed grid for tiles that are 40cm by 40cm, you'll notice that the grid lines always match this distance on the ruler, regardless of the magnification.

To set a fixed grid:

1. Choose Tools > Ruler & Grid.
2. In the Grid Spacing Horizontal and Vertical list boxes, select Fixed.
3. For Minimum Spacing, type the spacing you want for the fixed grid, then click OK.

To change the point where a fixed grid originates:

1. Choose Tools > Ruler & Grid.
2. For Grid Origin, enter x- (horizontal) and y- (vertical) coordinates for the point from which you want the grid to originate, then click OK.

■ Overview

Setting ruler units and the zero point

[Related Topics](#)

Each drawing window has vertical and horizontal rulers that show measurements at the scale of the drawing. The intervals of the ruler correspond to the unit of measure you set in the Options dialog box. You can specify both the units that appear on the ruler and where the zero point, or starting point, for both rulers is located in the Ruler & Grid dialog box.

The zero point is typically in the lower-left corner of the page, but sometimes it's helpful to move it to make it easier to measure the distances in a specific drawing. For example, you might want the zero point to line up with a wall in a floor plan. When you move the zero point on a ruler, the grid origin does not move with it so the grid and ruler increments might become misaligned, making it difficult to snap to ruler increments. You can adjust the grid to match or turn the grid off.

If you rotate your page or a guide, Visio uses the zero point as the center of the rotation.

Methods for setting rulers

To	Do this
Set ruler measurement units	Choose File > Page Setup, then click the Page Properties tab. Under Measurement Units, choose the units you want, then click OK.
Change the position of the zero point on both rulers	Hold down the Ctrl key, then drag from the intersection of the two rulers to where you want the new zero point.
Change the position of the zero point on one ruler	Hold down the Ctrl key, then drag from the other ruler.
Return the zero point to the lower-left corner of the page	Double-click the intersection of the two rulers.
Change ruler subdivisions	Choose Tools > Ruler & Grid . Under Rulers, choose the kind of subdivisions you want.
Hide the rulers	Choose View > Rulers to uncheck the Rulers options. To create guides and guide points, rulers must be visible.

Using guides to reposition multiple shapes

 [Related Topics](#)

When you need to precisely align several shapes and keep them in the same position even when you move them, guides and guide points are very useful. You can glue shapes to guides and guide points so that when you move the guide the shapes move with it.

NOTE You can glue shapes to rotated guides, but if you rotate a guide after a shape is glued to it (whether the guide was rotated when you glued the shape to it or not) the glue breaks.

Methods for using guides to reposition multiple shapes

To	Do This
Align shapes with a guide or guide point	Drag shapes until their selection handles, endpoints, or connection points align with the guide or guide point.
Glue a 1-D shape to a guide	Make sure the glue options are set appropriately in the Snap & Glue dialog box. Drag one of the shape's endpoints to the place on the guide where you want to glue it. When the shape is successfully glued, the endpoint turns red.
Glue a 2-D shape to a guide	Drag the shape to the place on the guide where you want to glue it. When the shape is successfully glued, the selection handles on the glued part of the shape turn red.

Specifying exact size and position for shapes and guides

 [How To](#)

 [Related Topics](#)

With the Shape > [Size & Position](#) command, you can

- Set the position and degree of rotation of shapes and guides on the page, as well as the dimensions of shapes, using precise numerical values.
- Obtain precise size and position information about selected shapes or guides.
- Resize and move one shape or several shapes at once.

For a [1-D](#) shape, use the Size & Position command to

- Resize a shape vertically, horizontally, or in both directions.
- Change the position of a shape's begin point while keeping the end point stationary.
- Change the position of a shape's end point while keeping the begin point stationary.
- Change the height or angle of rotation of a shape.

For a [2-D](#) shape, use the Size & Position command to

- Change the width and height of a shape.
- Change a shape's angle of rotation.
- Flip a shape vertically or horizontally.
- Move a shape by changing the x - and y -coordinates of its pin, or point of reference.
- Change the position of a shape's pin on the shape.

For a [guide](#) or guide point, use the [Size & Position](#) command to set the orientation and position.

To set a 1-D shape's size or position precisely:

1. Select the shape.
2. Choose Shape > Size & Position, or click the status bar.
3. In the Show section, choose one of the following options:

To change the position of the shape's begin and end points or to change the shape's height, choose Begin And End Points (the default option).

To change the position of the shape's begin point (the end point remains stationary) or to change the length, angle of rotation, or height of the shape, choose Begin, Length, Angle.

To change the position of the shape's end point (the begin point remains stationary) or to change the length, angle of rotation, or height of the shape, choose End, Length, Angle.

4. In the Parameters section, specify values for any or all of the options:

If you chose Begin And End Points in the Show section, specify a value in the Begin X or End X box to resize the shape horizontally; specify a value in the Begin Y or End Y box to resize the shape vertically; or specify a value in the Height box to change the shape's height.

If you chose Begin, Length, Angle in the Show section, specify a value in the Begin X or Begin Y box to change the position of the shape's begin point, or specify a value in the Length, Angle, or Height box to change the size and position of the shape.

If you chose End, Length, Angle in the Show section, specify a value in the End X or End Y box to change the position of the shape's end point, or specify a value in the Length, Angle, or Height box to change the size and position of the shape.

5. Click Apply to see the results before you close the dialog box, or click OK to apply the changes and close the dialog box.

TIP To move a shape without resizing or rotating it, change the values in the Begin X and End X or Begin Y and End Y boxes by the same amount. For example, to move a shape down one inch, decrease the values of Begin Y and End Y by one inch each. To resize and rotate the shape at the same time, enter new values for both the x- and y-coordinates.

 [Overview](#)

To set a 2-D shape's size or orientation precisely:

1. Select the shape.
2. Choose Shape > Size & Position, or click the status bar.
3. In the Size section, specify values for the shape's width, height, and angle of rotation. You can also check options to flip the shape vertically or horizontally.
4. Click Apply to see the results without closing the dialog box, or click OK to apply the changes and close the dialog box.

■ Overview

To set a 2-D shape's position or reference point precisely:

1. Select the shape.
2. Choose Shape > Size & Position, or click the status bar.
3. To move the shape, specify values in the X and Y boxes in the Position section.
4. To change the shape's reference point, or pin, click the grid section on the shape diagram that corresponds to the point to which you want to move the pin.

The X and Y coordinates in the dialog box indicate the location of the shape's pin on the drawing page. Therefore, when you change the location of the pin on the shape, the shape's position on the drawing page changes.

5. Click Apply to see the results without closing the dialog box, or click OK to apply the changes and close the dialog box.

■ Overview

To set a guide's position or rotation precisely:

1. Select the guide or guide point.
2. Choose Shape > Size & Position, or click the status bar.
3. To change the orientation of a guide, choose Horizontal, Vertical, or Rotated in the Guide Orientation section.
4. To move the guide or guide point, specify values in the X or Y boxes (or both) in the Guide Parameters section.
5. To set the angle of rotation for a rotated guide, type a value for Angle in the Guide Parameters section.
6. Click Apply to see the results without closing the dialog box, or click OK to apply the changes and close the dialog box.


■ Overview

To set the size and position of multiple shapes precisely:

1. Select all of the shapes you want to size.
2. Choose Shape > Size & Position, or click the status bar.
3. Type values or select options that you want, then click OK.
4. Click Apply to see the results without closing the dialog box, or click OK to apply the changes and close the dialog box.

■ Overview

Aligning and distributing shapes

 [How To](#)

 [Related Topics](#)

As you move shapes, you can align them with ruler intervals and grid lines. You can also

- Align shapes to other shapes. You can align the tops, bottoms, left sides, right sides, or centers of shapes.
- Create guides or guide points and align shapes to them. When shapes are glued to a guide, the aligned shapes move with the guide.
- Distribute three or more shapes to create an equal distance between the ends or centers of the shapes.

When you're aligning shapes to one another, the primary shape, indicated by green handles, is the shape to which other shapes align. You can establish a certain shape as primary by selecting that shape first, then Shift+clicking to select the other shapes you want to align to the primary one. If you drag a selection net around several shapes, the top shape in the stacking order is the primary shape.


Aligning shapes






When you move the shapes, faint lines on the vertical and horizontal rulers indicate where you're moving the shapes. If you don't see the rulers, make sure Rulers is checked in the View menu.

By default, the ruler zero point is at the lower-left corner of the drawing page. Sometimes it's useful to change the position of the zero point. For example, you might want to measure the distances between shapes that aren't near the current zero point.

To align shapes to a primary shape:

1. Select the shape to which you want to align other shapes, then Shift+click to select the shapes you want to align.
2. Choose Tools > Align Shapes.

NOTE You can also use one of the six align shapes buttons on the Shape toolbar: align left () , align center (

) , align right () , align top () , align middle () , or align bottom ().

3. Select the alignment options you want.

Each alignment option is represented by an illustration. Choose an Up/Down Alignment or a Left/Right Alignment option, or one of each. To cancel the selection of either Alignment option, click the red X in that section.

4. To create a guide and glue the shapes to it, check Create Guide And Glue Shapes To It.

If you choose this option, you can move all the shapes and maintain their alignment by selecting and moving the guide.

5. Click OK.

To align shapes to a guide:

1. Drag a guide from a ruler onto the drawing page. The guide appears as a green line (it appears as a blue line when deselected).
2. Choose Tools > Snap & Glue to make sure that Glue is checked under Currently Active and Guides is checked under Glue To, then click OK.

TIP You can automatically create a guide and glue shapes to it using the Align Shapes command. Simply check Create Guide And Glue Shapes To It in the Align Shapes dialog box.

To align shapes to a guide point:

1. Point to the crossbar at the intersection of the two rulers, then drag to where you want the guide point. The guide point appears as two blue crossed lines.
2. Position shapes you want to align with their centers, selection handles (for 2-D shapes), or endpoints (for 1-D shapes) on the guide point.


 Overview




Distributing shapes

You can distribute three or more shapes to create an equal distance between the ends or centers of the shapes. When you distribute shapes vertically, the top and bottom shapes in the selection define the boundaries of the distribution. For horizontal distribution, the boundaries are defined by the leftmost and rightmost shapes.

To distribute shapes using the Distribute Shapes command:

1. Shift+click to select three or more shapes.
2. Choose Tools > Distribute Shapes.

You can also use one of four Distribute Shapes buttons on the Shape toolbar: distribute centers horizontal () , distribute horizontal spacing (

) , distribute centers vertical () , or distribute vertical spacing () .

3. Choose a distribution option.
4. To add guides and glue the shapes to them, check Create Guides And Glue Shapes To Them.
If you choose this option, you can move an outermost guide to redistribute all the shapes.
5. Click OK.

Visio distributes the shapes evenly between the two outermost shapes.

To distribute shapes using evenly spaced guides:

1. Drag the first guide from the appropriate ruler.
2. To create the second guide, hold down the Ctrl key and drag from the first guide to where you want the second guide.
3. Press F4 to create additional guides.
4. Glue shapes to the guides so they're distributed the way you want.

TIP You can create a guide and glue shapes to it using the Distribute Shapes command. Check Create Guides And Glue Shapes To Them in the Distribute Shapes dialog box.

 [_Overview](#)

About measuring and scaling in drawings

[Related Topics](#)

When the drawings you create represent real-world objects that are larger than the paper size, such as a potted plant or a grand piano, you need to draw to scale. For example, 1mm on the drawing page of an office layout might represent 50mm of the actual office.

In Visio, the units of measure that appear on the rulers, or "drawing units," are sizes in the real world. In the example above, 50mm is the drawing unit.

"Page units" are sizes on the printed page 1mm in the office layout example. The ratio of page units to drawing units is the "drawing scale."

When you start a drawing by opening a template, the drawing scale and units of measure are already set up for you. Some templates, such as the Basic Flowchart Template, have no drawing scale, because you use them to create abstract drawings that don't represent actual objects in the real world.

You can change the units of measure and the drawing scale settings to accommodate the particular type and size of drawing you want to create.

Setting drawing scales

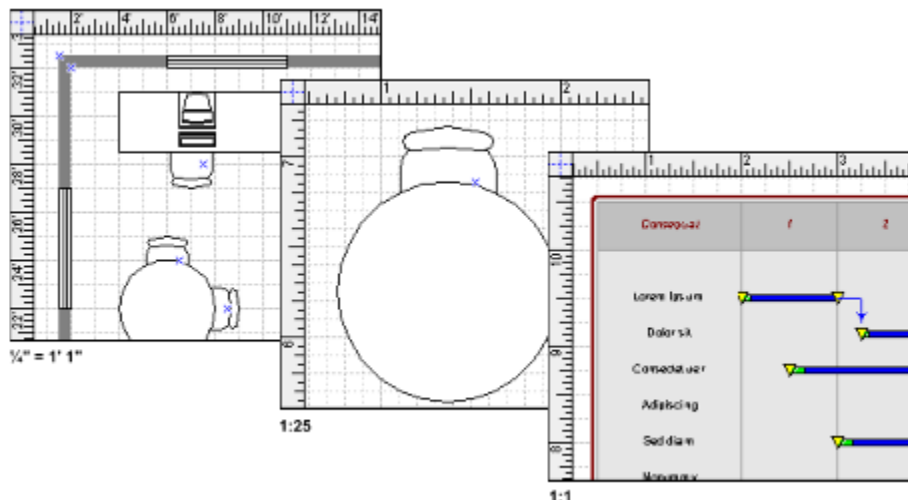
- How To
- Related Topics

Whenever you need to recreate the exact spatial relationships of very small or very large objects in the space of a drawing page, you need to set a drawing scale.

You can set a drawing scale in any drawing. Some templates, such as the Office Layout Template, open with a drawing scale already set. If you want to work with a different drawing scale, you can change the setting.

When you set a drawing scale, keep the following points in mind:

- Changing the scale of a drawing page does not change any background pages assigned to it, so you must set their scale separately if you want the foreground and background pages to match. This feature allows a single drawing to contain multiple scales.
- Most masters are designed for drawings with a scale of 1:1. Visio adjusts an instance of a master automatically if its drawing scale is more than eight times larger or smaller than the drawing scale of the page. If the scales differ less, Visio doesn't adjust the shape.



Scale is a page property. In a multiple-page drawing, each page can have a different scale. The rulers in each of these drawings reflect a change in scale.

Because drawing scale is the ratio of page units (measurements on the printed page of drawing) to drawing units (units of measure) that appear on the rulers and represent the real-world measurements), you need to make sure that you choose the appropriate measurement unit for each before you set your drawing scale.

For example, a drawing of a bolt may have a drawing scale of 10:1, meaning that every 10mm on the printed drawing represents 1mm on the actual bolt. In that case, you would set both the page units and the drawing units to millimeters.

In some cases, however, you may want to have a drawing scale where the ratio is made up of two different measurement units. For example, in a landscape layout, 1 inch on the printed drawing may need to represent 3 feet or even 3 yards. If you set the drawing scale as 1:3 and both the page and drawing units are set to inches, you won't get the scale you want. Instead, 1 inch on the page will represent 3 inches in the landscape, which would require an enormous drawing!

To set default page units:

1. Choose Tools > Options, then click the Default Units tab.
2. For Page, choose the units of measure you want.

You can also set default Text, Angle, and Duration units.

3. Click OK.

■ Overview

To set drawing units for a particular page:

1. Display the page for which you want to change the drawing units.
2. Choose File > Page Setup, then click the Page Properties tab.
3. Choose the units of measure you want, then click OK.

The rulers will show the new measurement units.

■ Overview

To set a drawing scale:

1. Display the page for which you want to set a scale.
2. Choose File > Page Setup, then click the Drawing Scale tab.
3. Choose a standard architectural or engineering scale, or enter a custom scale in the Drawing Scale edit box, then click OK.

Visio redraws the page and adjusts the rulers to reflect the new settings.

■ Overview

About protecting shapes and files


[Related Topics](#)

If you plan to share drawings, stencils, or templates with other people, you may want to protect the files, the shapes you create, or certain aspects of a drawing to prevent inadvertent changes.

You can protect shapes and drawings using the following methods:

- Lock shapes to prevent them from being modified in specific ways. For example, you can lock a shape against rotation or resizing.
- Lock a layer so no shape on that layer can be modified. For example, if you give an office layout to an electrical wiring planner, you can lock all layers except the one for the wiring so that no other aspects of the layout are available for editing.
- Place shapes, such as logos or title blocks, on a background so they won't be affected by changes made to the drawing page.
- Prevent attributes of a drawing, such as styles, from being modified.
- Save a file as read-only, so it can't be modified in any way.

Locking shapes against changes

 [How To](#)

 [Related Topics](#)

You can lock shapes using the [Protection](#) command to protect them from resizing, repositioning, rotating, deleting, and selecting.

When a shape is locked against resizing or rotating, it displays padlocks where the resizing and rotation handles usually appear, to indicate that those handles cannot be selected.



Padlocks over a shape's selection handles indicate that the shape is locked against changes. Some Visio shapes are locked against editing in this way, such as the Auto-size shape on the Block Diagram stencil, which is locked against manual sizing because its size is determined by the amount of text you type in the shape. Unlocking and changing these shapes may cause them to behave in unexpected ways.

NOTE The Protection section in the ShapeSheet spreadsheet includes protection options not available in the Protection dialog box, such as locking against cropping, editing with any drawing tool, text editing and formatting, group editing, and recalculation of height and width when you size the shape.

To lock a shape against selection:

1. Select the shape you want to protect.
2. Choose Format > Protection.
3. Check From Selection, then click OK. When a message box appears, click OK.
4. Choose Tools > Protect Document. Check Shapes, enter a password if you want, then click OK.

NOTE After you click OK, you won't be able to see your password, so make sure you memorize it or write it down.

■ Overview

To unlock shapes so you can select them:

1. Choose Tools > Protect Document, then uncheck Shapes.
2. Choose Format > Protection, then uncheck From Selection.

■ Overview

To lock or unlock other shape behaviors:

1. Select the shape.
2. Choose Format > Protection.
3. Check the shape behaviors that you want to lock or uncheck the behaviors you want to unlock, then click OK.

TIP You can also use the SmartShape Wizard to lock shape behaviors. To run the wizard, choose Tools > Macro > Visio Extras > SmartShape Wizard.

■ Overview

Saving files as read-only to prevent changes

■ [How To](#)

■ [Related Topics](#)

When you base a drawing on a template, or open a stencil separately, the stencil opens as read-only by default. That way, if you share a stencil you created with other Visio users, they can't accidentally change masters on your stencil. However, unless you save the stencil as read-only, other users have the option to open it in read/write mode by clicking the Original button in the [Open Stencil](#) dialog box.

To prevent others from changing an original stencil, template, or drawing file you create, you can save it as read-only. If a Visio stencil, template, or drawing file is saved as read-only, you can open a copy of the file for editing, but the only way to change the original file is to reset the file properties through Windows. For details about resetting the file properties through Windows, see your Windows documentation.

If you plan to save a stencil as read-only, you must have the original stencil open.

To open an original stencil:

1. Choose File > Stencil > Open Stencil.
2. Highlight the file icon for the stencil name you want to open.
3. Under Open, select Original, then click Open.

■ Overview

To save a file as read-only:

1. Open the file and make the appropriate window active. For example, if you're saving a stencil, open the original stencil, then click the stencil window title bar.
2. Choose File > Save As.
3. For Save In, navigate to the folder you want to save the file in.
4. For File Name, type a file name for the read-only file.
5. For Save As Type, choose the type of file you want to save, for example, Stencil (*.vss).
6. Under Save, check Read Only.
7. Click Save.

TIP After you have saved a file as read-only, to make the file read/write again use the Save As command to save the file to another name.

■ [_Overview](#)

To open a copy of a read-only file:

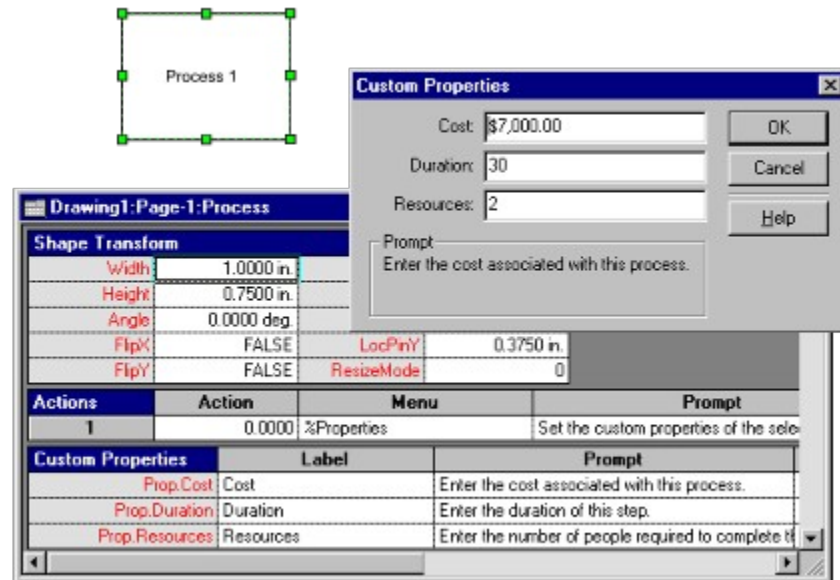
1. Choose File > Open.
2. Highlight the file icon for the read-only file you want to open.
3. Under Open, check Copy, then click OK.

■ Overview

About storing data in shapes

Related Topics

A Visio drawing is more than a picture—it's a valuable medium for storing data. A shape can act as a visual database field that stores data you can retrieve in a report. For example, a shape in a flowchart can store data about the cost, duration, and resources involved in the process the shape represents.



Shape Transform	Value
Width	1.0000 in
Height	0.7500 in
Angle	0.0000 deg
FlipX	FALSE
FlipY	FALSE
LocPinY	0.3750 in
ResizeMode	0


Actions	Action	Menu	Prompt
1	0.0000	%Properties	Set the custom properties of the sele

Custom Properties	Label	Prompt
Prop.Cost	Cost	Enter the cost associated with this process.
Prop.Duration	Duration	Enter the duration of this step.
Prop.Resources	Resources	Enter the number of people required to complete t

Custom-property fields are stored in their own section of the shape's ShapeSheet spreadsheet. You can add fields using the [Custom Properties Editor](#).

To store data with a Visio shape, give the shape custom-property fields into which others can enter custom-property data. Many Visio shapes come with some custom-property data already assigned in custom-property fields.

Adding data to shapes' custom-property fields

 [How To](#)

 [Related Topics](#)

Many masters already include custom-property fields. All you have to do is enter the data. For example:

- Flowchart masters include custom-property fields in which you can enter cost, duration, and resources.
- Office layout masters include fields for inventory number and owner.

You can also create custom-property fields if the fields you want don't already exist.

To find out if a shape has custom-property fields:

- Select the shape, then choose Shape > Custom Properties.

If the shape has property fields, the Custom Properties dialog box appears, listing the property fields and describing their purpose. If the shape doesn't contain custom-property fields, a message appears to that effect.

■ Overview

To enter values in a shape's custom-property fields:

1. Select the shape to which you want to add the data.
2. Choose Shape > Custom Properties.
3. Enter the data you want in each field, then click OK.

TIP You can also enter custom-property data by right-clicking the shape then choosing Properties or, for some shapes, a "Set..." command for setting a particular property.

■ Overview

Adding, editing, and deleting custom-property fields

 [How To](#)

 [Related Topics](#)

To develop your own custom solution, you may want to edit existing custom-property fields, add new ones, or delete fields you don't need. You may also want to add custom-property fields to new shapes you create. You can do all these things with the [Custom Properties Editor](#).

With the Custom Properties Editor, you can make changes only to masters on stencils. You can edit shapes on the following stencils:

- A standalone stencil that comes with your Visio product.
- A stencil that you created.
- A particular drawing's local stencil. Changing the shapes on a drawing's local stencil updates the instances on the drawing page.

Choosing where to edit custom-property fields

Where you edit custom-property fields depends on what you intend to do with the shapes. If you want to reuse a master with updated custom-property fields in several drawings, edit the master's properties in the standalone stencil. If you want to apply the updated properties to the current drawing only, edit the master's properties on the local stencil.

Editing in a standalone stencil A standalone stencil is a file with a .vss extension. Stencils that open with templates are standalone stencils. You can also open standalone stencils separately to use with any drawing.

If you edit custom-property fields for a master in a standalone stencil, the changes are available in new drawings you create after saving the new property fields for the master.

Editing in a local stencil A local stencil is the stencil associated with a particular drawing. It contains all the masters you've dragged from standalone stencils to that drawing, even if you've deleted the instance of the master from the drawing. Unless you save a local stencil as a file (so it becomes a standalone stencil), it's available only when you open the drawing with which it's associated.

A shape on a drawing page inherits its styles and properties from the master on the local stencil. Therefore, if you edit custom properties for a master on the local stencil, you also edit all the instances of that master in the drawing. In addition, each new instance you create by dropping the master from the standalone stencil to the same drawing inherits the custom-property edits you made.

To edit, add, or delete custom-property fields:

1. Choose Tools > Macro > Custom Properties Editor.
2. On the first screen, choose the location of the masters you want to edit, then click Next.
3. Follow the remaining screens.

NOTE Many Visio shapes come with custom-property fields already assigned. It's best not to delete these fields because they can affect other aspects of shape behavior.

To see the changes you've made to a shape's custom-property fields:

1. If you edited a master on a standalone stencil, drop an instance of the master with the custom properties you edited onto a drawing page.
If you edited a master on a local stencil, select an instance of that master on the drawing page.
2. With the shape selected, choose Shape > Custom Properties, or right-click the shape and choose Properties.

The Custom Properties dialog box appears, showing the changes you made.

After you add, edit, or delete custom-property fields, you can add data to the fields.

■ Overview

Creating reports from custom data

[How To](#)

[Related Topics](#)

If shapes have custom-property fields in which you have entered data, you can generate inventory and numeric reports based on that data. Visio places your report data in a spreadsheet, which you can save as a Microsoft Excel worksheet (.xls) or a text file (.txt). The results appear in one or more report shapes in your drawing.

Property Report	
Created: 5/2/97, 10:55:40 AM	CONFIDENTIAL
ITEM	TOTAL
Cost	1000
Duration	9
Resources	8

A numeric report can include calculations for totals, averages, maximums, minimums, and medians, as well as any advanced calculations you can perform using formulas in a spreadsheet. This report shape shows totals for the cost, resources, and duration properties.

Layers and reports

When you want to generate more than one report for a drawing, you can use layers to assign your shapes to separate categories, and then create reports based on the categories. For example, in a process flowchart, you can assign the shapes associated with each subprocess to a separate layer. Then you can easily generate an inventory report for the entire process that lists the cost, time, and resources associated with each step. You can also generate separate numeric reports for each subprocess that calculate the total or average costs for each step in the subprocess.

If you generate a report on shapes not on a layer, Visio creates a new layer and assigns the selected shapes to it. The layer doesn't affect the appearance of your drawing—it places the shapes in a category that you can select, hide, lock, print, or color separately. Having shapes on a layer also makes it easier to update a report.


Generating numeric and inventory reports

You have options for limiting and presenting reports. For example, you can report on all shapes in a drawing or only on selected shapes, and you can choose the properties you want the report to include. You can decide which drawing page to place the report shape on and you can add subtotal reports to each drawing page. Your report shapes can include document information, such as creation date and time.

To generate a numeric or inventory report:

1. Choose Tools > Property Report.
2. On the first screen of the Property Reporting Wizard, click Next.
3. On the second screen, choose the shapes you want to report on, then click Next.
4. Follow the wizard screens.

TIP When you run the Property Reporting Wizard, you have the option of saving the spreadsheet. If you save it, you can open it in any program, such as Microsoft Excel or Windows Notepad, that can open .xls or .txt files.


 Overview

Generating quick inventory reports

For certain types of drawings in which you may incorporate data frequently, such as network diagrams, office layouts, and organization charts, you can quickly export an inventory report based on the shapes you specify and their custom properties. You save the exported information in a Microsoft Excel file, a Microsoft Access file, or a Text file.

To generate a quick inventory report:

1. Select the shapes you want to report on.
2. Choose Tools > Export [data].
3. Click the Properties button to choose which properties to include in your report.
4. Choose whether to report on all pages in the document, whether to report on all shapes or selected shapes, and whether to create a report in Excel, Notepad, or Access.
5. Type a name for, or navigate to locate, the report file, then click OK.

 Overview

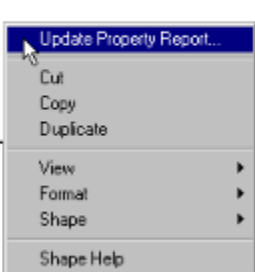
Updating and revising reports

■ [How To](#)

■ [Related Topics](#)

When you run the [Property Reporting Wizard](#) to create an inventory report, it creates a report shape that contains the data you specified. Once a report shape is on a drawing page, you can edit the shape data to update the report.

Property Report		
Created: 5/2/97, 10:55:40 AM		CONFIDENTIAL
ITEM		TOTAL
Cost		1000
Duration		9
Resources		8



When you update a report, you also update the spreadsheet if you saved it when you first generated the report. You can save the revised spreadsheet under a new name or replace the original.

To update a report:

- Right-click the report shape, then choose Update Property Report from the shortcut menu.

If you saved the spreadsheet when you first generated the report, the wizard opens a new spreadsheet that includes the revised report results. You can save the revised spreadsheet under a new name or replace the original one.

■ [_Overview](#)

To replace the title for a report shape:

1. Select the report shape.
2. Choose the text tool from the Standard toolbar, click the existing title, select the text, then type a new title.

■ Overview

Creating databases from shape properties

- How To
- Related Topics

You can run the [Database Export Wizard](#) to export data from shapes into a database table. For example, you can create an inventory report for shapes in an office layout or network diagram. In the process of running the wizard, you can select the ShapeSheet cells from which you want data exported.

You can either generate a new database, overwrite data in an existing database table, or insert a new table into an existing database. The wizard works with any ODBC-compliant database application.

If you want to insert a table into an existing database, the database must be defined as an ODBC-data source. You can define the database as a data source within the Database Export Wizard. When you create a new database in the wizard, you also define it as a data source.

You can export data for every shape in the drawing or for selected shapes. You can select the shapes with data you want to export by placing those shapes on a separate layer. The wizard prompts you for the appropriate layer.

When you export, the wizard determines the most appropriate data type for the information in each cell or field you're exporting. You can change the data type settings and you can specify how you want to interpret the data (for example, as a formula, value, number, or number with a particular set of units).

ShapeKey	FillForegnd	ShapeText	PropCost	PropDurat	PropResou
1	6	Process 1	250	2	2
2	3	Decision	100	1	2
3	7	Report	150	3	1
4	6	Process 2	300	2	2
5	7	Storage	200	1	1



Each shape in the drawing is represented by a record (or row) in the database table and each custom-property field or ShapeSheet cell is represented by a field (or column). Data you enter in the custom-property fields in Visio or in ShapeSheet cells appear as values in the database table cells.

To create a database from shape properties:

1. Open the drawing with shape data you want to export.
2. Choose Tools > Macro > Database > Database Export.
3. On the first wizard screen, click Next.
4. Follow the wizard screens.

TIP When you run the Database Export Wizard to export shape data, the wizard stores export-related information with the drawing page. If you make changes to the shapes and want to re-export the data, you can right-click the drawing page and choose Database Table Export.

■ Overview

About creating drawings from data

[Related Topics](#)

You can use data created in programs other than Visio to generate drawings. The data is represented graphically by Visio shapes. Drawings and shapes created in this way are called "data-driven."


The data can be in text (.txt), Microsoft Excel (.xls), or Microsoft Project exchange (.mpx) format, or it can exist in a database created in an ODBC-compliant database application. ODBC stands for Open Database Connectivity, which is a standard Microsoft interface that allows applications to access, view, and modify data from a variety of databases.

For example, from

- A human-resources employee database, you could generate a corporate organization chart.
- A data file that lists project tasks, resources, start dates, and end dates, you could generate a project timeline.
- A text file that includes information about shapes and links, you could generate a flowchart.

You can also create data-driven shapes and drawings by establishing links between Visio objects and records in database tables.

Creating organization charts from data files

 [How To](#)

 [Related Topics](#)

Visio includes stencils with shapes that make it easy for you to create organization charts. Often, however, electronic data files already exist that include the information about your corporation or group that you'd want the organization chart to convey. For example, many corporations have human-resources data files that list employee names, job titles, managers, and more. Using the Organization Chart Wizard, you can use the data from such a data file to generate an organization chart.

The Organization Chart Wizard can read data files in the following formats:

- Microsoft Excel (.xls)
- Org Plus (.txt)
- Text (.txt), tab- or comma-delimited
- The file format for a database created in an ODBC-compliant database application, such as Microsoft SQL Server, Microsoft Access, and Oracle SQL Server. The database must be a "flat file," that is, all the data the wizard requires must reside in one database table.

If you don't have such a data file, the wizard provides templates you can use to create one in Microsoft Excel or text file format.

Setting up an organization chart data file

In the data file, each row represents a box (or employee) in the organization chart. Each column represents data about the employee. The data file must include at least three columns that provide

- An ID number or name that uniquely identifies each employee.
- Employee name.
- Who the employee reports to.

The data file can also include additional columns for other data, such as telephone number, office location, and more. When you run the wizard, you can add the optional columns to the organization chart shapes as custom property fields.

If you have custom shapes you want the wizard to use when it creates the organization chart, you must include a column named Master_Shapes in the data file. In each row, type the name of the shape you want to use.

You'll get the best results by setting up the data file you want the Organization Chart Wizard to read so that it conforms to certain requirements. The following comma-delimited text (.txt) file illustrates how to set up your data file.

A	B	C	D	E	F
	a,Ben Wyss,Financial Controller,e,Finance,555-4300,Position				
	b,Chris Klustner,Commercial Director,d,Marketing,555-4400,Position		a		
	c,Dave Vollan Cole,Dir. Client Services,e,Finance,555-4500,Position		b		
	d,Geraldine Gigot,Vice-Pres. Marketing,f,Marketing,555-4444,Manager		c		
	e,Eric Philip,Vice-Pres. Finance,f,Finance,555-5555,Manager		d		
	f,Susan Jaech,CEO,,,555-6666,Executive		e		

Your data file must include the following:

- A** Information broken out under the column headings Unique_ID, Name, and Reports_To, or equivalent columns with different names. If your data file uses different heading names, the wizard prompts you to indicate which columns it should use to find this information. You can include additional columns, as shown here, but they are not required by the wizard.
- B** A field that uniquely identifies each record from the database. If each employee has a unique name, the Name field can serve as the unique identifier field. Otherwise, you must provide another field, such as Unique ID or Employee Number.
- C** Placeholders for columns with no data in them. In a spreadsheet or database table, leave the columns blank.
- D** Entries in the Reports_To column for all the records except one (the one for the person at the top of the chart). Use the unique identifier in the Reports_To column to indicate to whom a person reports.
- E** In an Excel data file, use a single quotation mark before any telephone numbers you want to include. For example, enter a telephone number in Excel as '555-4497. The single quotation mark tells Excel to treat the number as a string (rather than as an integer).
- F** Shape names in this column for any shapes (including custom shapes you create) you want the organization chart to substitute for its own default shapes while creating the chart.

NOTE You can add comment lines to a text file. Use a single quotation mark as the first character in a comment line to tell the wizard that the line does not contain data.

To draw an organization chart from an existing text or Microsoft Excel file:

1. In Visio, choose File > New > Business Diagram > Organization Chart Wizard.
2. On the first screen, click Next.
3. On the second screen, click Read Data From Existing File, then type the file location and name, or

click Browse to locate the file.

4. Follow the wizard screens.

■ Overview

Creating an organization chart from a database table

With the Organization Chart Wizard, you can create an organization chart from a database table and link the chart and the table so that you can pass information back and forth to keep the two files synchronized. For example, you can change an employee's phone number and manager information in the database and then refresh the chart to reflect the changes.

In the wizard, you can choose options that control which direction information flows. For example, if the database table is the human resources database for your corporation, you may not want changes you make in the organization chart to affect the database.

NOTE The Organization Chart Wizard requires that the database you are linking to be defined as an ODBC-compliant data source. You can define the database as a data source by clicking Create Data Source on one of the wizard screens.

To create an organization chart from a database table and link the two files:

1. In Visio, choose File > New > Business Diagram > Organization Chart Wizard.
2. On the first screen, click Next.
3. On the second screen, click ODBC Data Source.
4. On the third screen, choose the data source you want the wizard to read, then click Next.

If your database does not appear in the list, it is probably not defined as an ODBC data source. Click Create Data Source, then follow the instructions onscreen until you are returned to the wizard, then choose your database in the list.

5. Follow the wizard screens.

■ Overview

Creating a data file using a template

If you haven't already created a data file, you can run the Organization Chart Wizard to open a data file template in text (.txt) or Microsoft Excel (.xls) format. The template is set up with the correct column heading structure so that you can enter your data.

NOTE You can also open the templates without running the wizard. Both template files are named Org Chart Data Template and are located in the \Visio\Solutions\Business Diagram folder. Check the file icon to determine which template you want to open.

To create a data file using a template:

1. In Visio, choose File > New > Business Diagram > Organization Chart Wizard.
2. On the first screen, click Next.
3. On the second screen, click Enter Data In New Text File or Enter Data In New Microsoft Excel Workbook, then click Next.
4. Follow instructions on the wizard screens for entering data into a text or Excel template.
5. After entering the data in the template, name and save the file. Choose Tools > Macro > Business Diagram > Organization Chart Wizard to restart the Organization Chart Wizard and, on the second screen, choose Read Data From Existing File.

■ Overview

Organization Chart Wizard troubleshooting

If the Organization Chart Wizard is unable to read your data file or produces an unexpected result, check your file for the following:

- Missing tabs or commas from your data file.
- Any records that are not uniquely identified.
- Circular references—that is, a person who reports to him or herself or to a subordinate.
- More than one record without an entry in the Reports_To column. Only the Reports_To record for the person at the top of the chart should be left blank.

To simplify working with data files, create your files using one of the two [organization chart data-file templates](#) that ship with Visio.

■ [_Overview](#)

Creating project timelines from data files

- [How To](#)
- [Related Topics](#)

Using the Project Timeline Wizard, you can generate a timeline from a data file created in another application that contains task names, start and end dates, dependencies, resources, and other information.

The wizard requires that the data file be in comma- or tab-delimited text (.txt), Microsoft Project exchange (.mpx), or Microsoft Excel (.xls) format.

If you haven't already created a data file, you can run the Project Timeline Wizard to open a data file template in text (.txt) or Microsoft Excel (.xls) format. The templates are set up with column headings in place so that you can simply enter your data.

NOTE You can also open the templates without running the wizard. Both template files are named Timeline Data Template and are located in the \Visio\Solutions\Business Diagram folder. Check the file icon to determine which template you want to open.

Even if you don't have a data file, you can run the Project Timeline Wizard and create a project timeline to which you add data later. While running the wizard, you can choose format (for example, whether or not to display vertical and horizontal lines) and style (for example, taskbar color) options.

Setting up a project timeline data file

You'll get the best results by setting up the data file you want the Project Timeline Wizard to read so that it conforms to certain requirements. The following comma-delimited text (.txt) file illustrates how to set up your data file.

A	Task#,Task Name,Duration,Start Date,End Date,Dependency,Resource
	1,Develop Timeline Wizard,30 d,7/17/95,8/15/95,,Jason
B	2,Beta I,,7/26/95,,Program Team
	3,Develop Layout Wizard,16 d,7/17/95,8/1/95,,Matt
	4,Beta II,,8/9/95,,Program Team
C	5,Develop Orgchart Wizard,23 d,7/17/95,8/8/95,,Keri
D	6,Write Documentation,2 w,8/9/95,8/22/95,5,User Ed
	7,Beta III,,8/23/95,,Program Team
	8,Print Manuals,1 w,8/23/95,8/29/95,,Media Now
	9,Assemble Product,2 d,8/30/95,8/31/95,8,Media Now
	10,Ship Visio,,9/1/95,,9,Visio Corporation

Your data file should adhere to the following guidelines:

- A** Information should be broken out under the column headings Task#, Task Name, Duration, Start Date, End Date, Dependency, Resource. (If a task includes a Start Date and a Duration, you don't have to include an End Date.)
- B** For milestones, specify only a Start Date.
- C** Include placeholders for columns with no data in them.
- D** For Dependency, use the number of the task that the current task is dependent upon.
- E** Abbreviate durations as follows: "d" for days, "w" for weeks, or "m" for months.
- F** For Resource, you can use anything you want, including names or number of people. Data in the Resource column doesn't automatically appear in your project timeline drawing. You can choose to display Resources in timeline bars when you run the Project Timeline Wizard, or you can add a Resource column to the project timeline on the drawing page.

To create a project timeline from an existing data file:

1. Choose File > New > Business Diagram > Project Timeline Wizard.
2. On the first screen, click Next.
3. On the second screen, click Import MPX File to import a Microsoft Project exchange file or Read Data From Existing File to have the wizard read a text (.txt) or Microsoft Excel (.xls) file.
4. Type the file location and name or click Browse to locate the file.
5. Follow the wizard screens.

■ Overview

To create a data file using a template:

1. Choose File > New > Business Diagram > Project Timeline Wizard.
2. On the first screen, click Next.
3. On the second screen, click Enter Data In New Text File or Enter Data In New Microsoft Excel Workbook, then click Next.
4. On the third screen, type a name for the data file, then click Next.
5. If you chose to enter data into a new text file, the wizard opens a comma-delimited text file with column headings in Notepad. Enter your data, name and save the file, and exit Notepad. In Visio, choose Tools > Macro > Business Diagram > Project Timeline Wizard. On the second screen, confirm that the text file listed is the one you just created, then follow the wizard screens.

Or, if you chose to enter data into a new Excel workbook, the wizard opens an Excel workbook with column headings. Enter your data. Name and save the file, then choose Tools > Macro > Business Diagram > Visio Timeline Wizard and follow the wizard screens.

■ Overview

Creating connected drawings from text files

[Related Topics](#)

If you have a large amount of existing data in text files, you can import the data using the Visio text import filter, and then convert it to drawings. The text files must be in Comma Separated Variable (.csv) or Text (.txt) format.

You can create the files in a spreadsheet application, a word-processing application, or a text editor such as Notepad. For example, you can use a spreadsheet application, such as Microsoft Excel, to create an employee list that you can convert to an organization chart. Then you can export that data to .csv or .txt format and import it into Visio to convert the data to a drawing.

To import a text file and create a drawing, you must set up the text file in a certain way. The example below shows you a text file that has been set up correctly and the drawing the text file creates. Following the drawing, you can find additional details about text file structure, text delimiters, record delimiters, comment lines, and record types.

This text file:

```
;Shape, ID, Master, Text, X, Y, Width, Height, Property
Shape, PATRICIA, , Patricia Rodman
Shape, STEVE, , Steve Melvin
Shape, TROY, , Troy Morris
Shape, ELIZABETH, , Elizabeth Davis
Shape, SARAH, , Sarah Wright

;Link, ID, Master, Text, From, To
Link, , , , PATRICIA, TROY
Link, , , , PATRICIA, STEVE
Link, , , , TROY, ELIZABETH
Link, , , , TROY, SARAH
```

Becomes this Visio drawing:



Text file structure

To compose a file that the Visio text import filter can translate, create records of various types, each containing individual fields. Generally, each line of text in the file is considered a separate record, and the first field in a record identifies the record type. In the example file above, there are five "Shape" records and four "Link" records. Shape and Link are the record types. Each record is divided into fields by a field separator character. In .csv files, the default field separator character is the comma; in .txt files, the default character is the tab.

Text delimiters

The Visio import filter interprets anything enclosed in double quotation marks as text, including numbers and characters that may otherwise have a special meaning, such as the End-of-Line character. Using text delimiters is optional—if you do not enclose a text field within quotes, the filter assumes any field that isn't a number or special character is text.

Record delimiters

To begin a new record, type an End-of-Line character, or hard carriage return. (Press the Enter key on your keyboard.) If a hard carriage return is part of a text field enclosed in double quotes, it is not interpreted as a record delimiter.

Comment lines

If you want to add comments to the file that aren't part of the drawing, type a semi-colon (;) at the beginning of a line, then type your comments. In the example above, the comment lines help you remember the order of the fields by listing the field headings.

Record types

To code a text file for importing into Visio, you should be familiar with the record types that the Visio text import filter recognizes and the fields used with each type.

About data-driven shapes and drawings

 [How To](#)

 [Related Topics](#)

By establishing connections between shapes and database records, you can create Visio drawings that function as visual representations of data. You can also generate new masters from database records. Once you've established a shape-record connection, you can pass information back and forth between Visio and the database and keep the two versions of the data synchronized.

For example:

- From a personnel database, you can generate business cards for all of your employees.
- From a parts-specifications database, you can generate masters for your employees to use in drawings.
- By connecting an inventory database to an office space plan, you can track furniture and equipment. If you delete a chair from the office plan, you also delete a record from the database.

You can use the Database Wizard to connect Visio drawings to databases created in applications compliant with the Open Database Connectivity (ODBC) standard, a Microsoft interface that allows applications to access, view, and modify data from a variety of databases. ODBC-compliant applications include Microsoft SQL Server, Microsoft Access, and Oracle SQL Server.

Before you can connect Visio shapes and drawings to database records, you must have the appropriate ODBC components and database drivers installed on your computer. (Choose Complete while installing Visio to install the ODBC components and drivers.) In addition, the database you want to connect to must be defined as an ODBC data source.

Defining a database as an ODBC data source

You can define a database as an ODBC data source through the Windows control panel. Or you can run the Database Wizard to link a shape or drawing to a database and define your database as a data source without leaving the wizard.

To define a database as an ODBC data source:

1. From the Windows 95 Start menu, choose Settings > Control Panel.
2. In the Control Panel, double-click the ODBC icon. The icon may be called 32-bit ODBC.

If the icon doesn't appear, you may have chosen Custom or Minimum when you installed Visio. To install the ODBC components, begin the Visio installation process again. Choose Custom for the type of installation, then choose to install only Database Tools.
3. If you're using Office 95, in the Data Sources dialog box, the databases that are set up as data sources appear under User Data Sources. If your database isn't listed, click Add.

If you're using Office 97, in the ODBC Data Source Administration dialog box, the databases that are set up as data sources appear under User Data Sources. If your database isn't listed, click Add.
4. If you're using Office 95, in the Add Data Source dialog box, select the driver for the application in which you created your database, then click OK.

If you're using Office 97, in the Create New Data Source dialog box, select the driver for the application in which you created your database, then click Finish.
5. In the Setup dialog box for the driver, locate the database you want to link to a Visio shape or drawing. Supply other information and options as needed, then click OK.
6. In the Data Sources dialog box, click Close. Click OK.

■ Overview

ODBC Settings

If you connect to databases in multi-user environments, you may want to control certain ODBC settings, such as how many times the wizard attempts to update the database or how long it waits before the operation fails.

To control ODBC settings:

1. In Visio, choose Tools > Macro > Database > Database Settings.
2. Choose the number of retries, retry interval, or time out interval you want, then click OK.

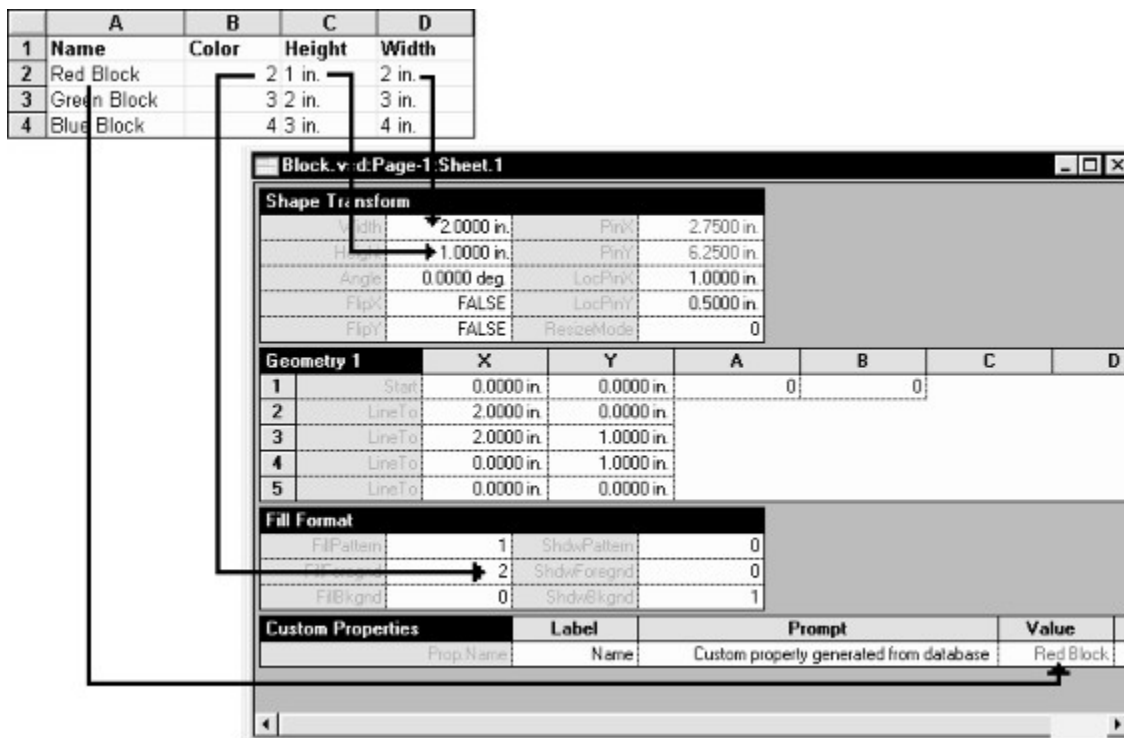
■ Overview

About shape-database connections

Related Topics

When you connect a shape to a database, you actually connect cells in the shape's ShapeSheet spreadsheet to fields in a database table. The Database Wizard lets you choose which ShapeSheet cells link to fields in the database. If no appropriate ShapeSheet cells exist, the wizard creates new cells in the Custom Properties section of the ShapeSheet spreadsheet.

As a simple example, assume you had a database for colored blocks that includes fields for Block Name, Color, Height, and Width. In the Shape Transform section, the ShapeSheet spreadsheet includes cells for Height and Width. In the Fill Format section, the ShapeSheet spreadsheet includes a cell called FillForegnd. In the process of linking a master to the colored blocks database, you can choose to connect the Height, Width, and FillForegnd cells in the ShapeSheet spreadsheet to the Height, Width, and Color fields in the database. Because the ShapeSheet spreadsheet contains no cells that correspond to Block Name, you can have the wizard create such a cell in the ShapeSheet spreadsheet's Custom Properties section.



	A	B	C	D
1	Name	Color	Height	Width
2	Red Block		2 1 in.	2 in.
3	Green Block		3 2 in.	3 in.
4	Blue Block		4 3 in.	4 in.

Shape Transform			
Width	2.0000 in.	PinY	2.7500 in.
Height	1.0000 in.	PinX	6.2500 in.
Angle	0.0000 deg	LocPinY	1.0000 in.
Flip	FALSE	LocPinX	0.5000 in.
Flip2	FALSE	ResizeMode	0

Geometry 1		X	Y	A	B	C	D
1	Start	0.0000 in.	0.0000 in.	0	0		
2	LineTo	2.0000 in.	0.0000 in.				
3	LineTo	2.0000 in.	1.0000 in.				
4	LineTo	0.0000 in.	1.0000 in.				
5	LineTo	0.0000 in.	0.0000 in.				

Fill Format			
FillPattern	1	ShowPattern	0
FillForegnd	2	ShowForegnd	0
FillBgnd	0	ShowBgnd	1

Custom Properties			
Prop.Name	Label	Prompt	Value
Prop.Name	Name	Custom property generated from database	Red Block

Values in ShapeSheet cells match values in the database records the cells are connected to. If you change the shape, you can pass the new values to the database. If you change the database, you can pass the new values to the shape's ShapeSheet spreadsheet.

When it links a shape to a database, Visio also creates a User-defined Cells section in the ShapeSheet, if that section doesn't already exist for the shape. In this section, the wizard stores information about the primary key for the database table, which database fields are associated with which ShapeSheet cells, and the last valid data retrieved from the database. The rows Visio creates include:


- **ODBCDataSource**, which contains the ODBC data source name.
- **ODBCQualifier**, which stores the name of the database or directory that contains the linked table. This cell contains a value only for ODBC data sources in which a single data source can support multiple databases or directories.
- **ODBCTable**, which contains the name of the linked data source table or view.

- **ODBCKeyField1 to ODBCKeyField5**, which contain the names of the fields (key fields) that comprise the primary key for the linked table.
- **ODBCKeyCell1 to ODBCKeyCell5**, which contain the names of the custom properties in the ShapeSheet that are used to store the values for the key fields named in the ODBCKeyFields cells.
- **ODBCLink1, ODBCLink2**, and so on (one row per linked field), which specify which data source table fields correspond to which ShapeSheet cells. Information about how Visio evaluates data copied from the field to the cell (that is, as a string or as a number) is also stored here and, if the number is a measurement, the row includes measurement units.

Information about how Visio evaluates data is stored in the form of numeric codes. Value (string) is indicated by a 0, Formula (string) is indicated by a 1, and Number is indicated by 32. For a list of the numeric codes corresponding to measurement units, in the online Visio Automation Reference, search for "[result property](#)."

- **ODBCKeyMirror1 to ODBCKeyMirror5**, which contain the last valid key values used when transferring information to or from the data source. The wizard monitors these cells to determine which record a shape was linked to when you changed its key values. Changes to key values in a monitored shape are reflected in the corresponding data source table record.
- **ODBCMirror1, ODBCMirror2**, and so on, which store the last valid values retrieved from linked data source table fields. There is one ODBCMirror cell for each cell-field link defined in the ODBCLink cells. The wizard uses these cells to determine whether values have changed, in the database or shape, since the most recent synchronization of the data.

Connecting shapes to database records

 [How To](#)

 [Related Topics](#)

The first step in establishing a connection between Visio and a database is to connect a shape to a database record. You can connect a shape instance, a master on the local stencil, or a master on a standalone stencil.

- When you connect a shape instance, no other shapes are affected. If you make copies of the shape, the copies are also linked.
- When you connect a master on a local stencil (the stencil made up of all the masters you've used in a drawing file), you also automatically connect all instances of that master in the drawing.
- When you connect a master on a standalone stencil (one of the stencils that came with Visio or one you created), each time you drop the master, the new instance is also connected.

To connect a shape to a database record:

1. In Visio, choose Tools > Macro > Database > Database Wizard.
2. On the first wizard screen, click Next.
3. On the second screen, choose Link A Shape To A Database, then click Next.
4. Follow the remaining wizard screens until you've completed the connection.

■ Overview

Creating drawings that represent database tables

- [How To](#)
- [Related Topics](#)

After you've connected a master on a stencil to a database, you can run the [Database Wizard](#) and create a drawing in which each database record is represented by a shape on the Visio drawing page. When you create a drawing with one-to-one connections to database records, the wizard launches a drawing monitor. The monitor manages the connections between the Visio shapes and database records. If you delete a shape, the monitor informs the database table, which deletes the corresponding record. If you add a shape, the monitor informs the database table and a record is added. If you change a shape, the monitor passes on the changes and values in the database table are updated.

When you run the Database Wizard to create a drawing that represents a database table, you can control how the drawing monitor will behave when you subsequently open the drawing. You can also establish a connection that allows you to pass changes from the database to the drawing, but not from the drawing to the database.

With a global setting that affects all [ODBC](#) database-drawing connections, you can set the drawing monitor to refresh shapes (that is, pass any changes made in the database to the shapes' ShapeSheet cells) at regular intervals (the interval you set depends upon how frequently you update the database). In the Database Wizard, when you're creating a particular drawing, you have the option of turning the refresh-interval setting off for a particular master-database table link. Turning global refresh off for one link doesn't affect any other links.



In the Database Wizard, you can set an option for opening the drawing monitor automatically each time you open a drawing connected to a database. You can also add a Launch Monitor action to the drawing page so you can launch the monitor by right-clicking the page and choosing the action command.

To create a drawing that represents a database table:

1. Run the Database Wizard and connect a master shape to a database record. Link each database field to a ShapeSheet cell.
2. After the master shape is connected to a database record, choose Tools > Macro > Database > Database Wizard to run the wizard again.
3. On the first wizard screen, click Next.
4. On the second screen, choose Create A New Linked Drawing Or Modify An Existing One, then click Next.
5. On the third screen, choose Create A Drawing Which Represents A Database Table, then click Next.
6. Follow the wizard screens to create the drawing.

TIP If you want to open an existing drawing that is connected to a database or add events and right-mouse actions to synchronize the database and drawing, run the Database Wizard. On the second screen, choose Create A New Linked Drawing Or Modify An Existing One, and on the third screen, choose the option you want.

To set a global refresh interval for the drawing monitor:

1. In Visio, choose Tools > Macro > Database > Database Settings.
2. Check Automatically Refresh Drawing Page, type the number of seconds in the interval, then click Save.

TIP When you run the Database Wizard to create a particular drawing, you have the option of turning the refresh setting off for a particular master-database table link.

■ Overview

Creating new masters from database tables

 [How To](#)

 [Related Topics](#)

Using the [Database Wizard](#), you can generate a set of masters that graphically represents the records in a database table, then save the masters on a stencil.

For example, if you maintain an inventory database of bookcases that your company manufactures, you can generate a master for each specific bookcase, save the masters on a new stencil, then distribute the stencil so everyone in the company can include bookcase shapes in their drawings and other documents.

If you expect to revise the database table, you can save the connections between the masters and the database records. Then, when you revise the table, you can refresh the masters so the values in their ShapeSheet cells match the values in the database records.

NOTE If you don't save the connections, the masters' ShapeSheet cells contain a snapshot of the data that existed in the database fields at the time you created the new masters, but no information about which database records the data came from. If you make changes to the database, you can't refresh the existing masters to reflect the changes. You must run the Database Wizard again and generate new masters.

To generate new masters from a database table:

1. In Visio, choose Tools > Macro > Database > Database Wizard.
2. On the first wizard screen, click Next.
3. On the second wizard screen, choose Generate New Masters From A Database, then click Next.
4. Follow the screens until you create the masters.

■ Overview

Synchronizing drawings and databases

[Related Topics](#)

When you run the [Database Wizard](#) to connect a shape or drawing to a database, you can add right-mouse actions and ShapeSheet events to shapes or to a drawing page. You can use these actions and events to pass information between Visio and the database application.

- Right mouse-click actions are available on a shortcut menu that appears when you right-click a shape or page.
- Events represent Visio's responses to a user action, such as opening a drawing.

NOTE If you create a drawing that is a graphical representation of a database table, you can also use the [drawing monitor](#) to pass information between the drawing and the database.

Right-mouse actions and events

Action or event	Added to shape or page	Result
Refresh shape on-drop event	Shape	When you drop a master or copy a shape, the values in the linked ShapeSheet cells for that shape (or instance) are automatically refreshed to match values in the database.
Select record on-drop event	Shape	When you drop a master or copy a shape, you're prompted automatically to select the database record that links to the shape instance.
Refresh linked shapes on document-open event	Page	Refreshes ShapeSheet cell values for all the shapes in your drawing each time you open the drawing.
Refresh based on the NOW function event	Page	Allows you to switch on or off refreshing ShapeSheet cell values for all the shapes in a linked drawing at specific intervals as defined by the NOW function.
Select database record action	Shape	Allows you to select the database record to which you want a shape linked.

Refresh shape cells action	Shape	Refreshes the values in the shape's linked ShapeSheet cells to match the values in the database.
Refresh shapes on page action	Page	Refreshes the values in the shapes' linked ShapeSheet cells to match the values in the database for all the shapes on the drawing page.
Update database record action	Shape	Updates the values in the database to match the values in the shape's linked ShapeSheet cells.
Update shapes on page action	Page	Updates the values in the database to match the values in the shapes' linked ShapeSheet cells for all the shapes on the drawing page.
Delete shape and database record action	Shape	Deletes the shape and the database record to which the shape is linked.

About using Lotus Notes with Visio

[Related Topics](#)

Visio supports a two-way exchange of data between Visio and Lotus Notes. You can

- Write data from a Visio shape, a custom formula, or the [Properties dialog box](#) to a Lotus Notes field.

For example, you can combine Lotus Notes and Visio to keep track of a company's processes, such as writing and prototyping specifications. In Lotus Notes, you embed a Visio diagram for each process. Then you create a table that shows only the titles of the processes (which is data you wrote from Visio to Lotus Notes). Anyone who needs to see the process can click the flowchart's title to see the embedded Visio diagram. Then, to edit it, the user can double-click the embedded Visio diagram to start Visio.

- Read data from a Lotus Notes Field and display it in Visio.

For example, in a timeline, you can have a Lotus Notes date field automatically update the Visio timeline.

Because of the way Lotus Notes and Visio interact, incompatibilities can arise when one of the programs is 32-bit and the other is 16-bit. The following combinations are compatible:

- 32-bit Visio products and 32-bit Lotus Notes 4.x on any 32-bit Windows platform.
- 32-bit Visio versions and Lotus Notes 3.x on Windows 95. (This combination is not compatible on Windows NT 3.51.)

Writing data from Visio to a Lotus Notes field

■ [How To](#)

■ [Related Topics](#)

You can pass data from a Visio diagram to a Lotus Notes database field. Each field in Lotus Notes that contains Visio data is based on either the Visio diagram's [Properties](#) dialog box, a shape, or a custom formula.

NOTE Make sure the fields in both programs have exactly the same name.

To include Visio data in a Lotus Notes field:

1. In Lotus Notes, set up the fields you want to fill in with Visio data. Note the names of these fields, because you will use them in Visio.
2. Choose Insert > Object, and insert a Visio drawing. You can create a new Visio drawing or insert an existing file.
3. If the Lotus Notes fields are not based on the drawing's Properties dialog box, add the shapes that will be associated with the Lotus Notes fields.
4. Select one of the shapes that will be associated with a Lotus Notes field, then choose Format > Special. Note the shape's ID (you'll use it in step 8).
Complete this step for each shape that will be associated with a Lotus Notes field.
5. Choose Insert > Lotus Notes Fields, then, for Field Name and Direction, type a name for the field that exactly matches the name of the field you defined in Lotus Notes.
6. Check Write To Notes.
7. For Data Type, select the type of data you want to exchange: Text, Time, or Number.
8. If you select Text under Data Type, type the Shape ID from step 4. The data you write to Lotus Notes can be the shape's name, text, copyright, or data you enter in the Data 1, 2, and 3 sections of the Special dialog box.
If you select Time or Number, enter a custom formula in the Custom Formula box.
9. Click Add, then click OK.

Here is an example that uses the Number data type (in step 8 above). In the equation below, "sheet.1" is a shape representing an office plan's perimeter. The office plan is set up in inches. The formula multiplies the width and height of the walls, then divides that total by 144 to get the square footage of the office.

```
=(sheet.1!Width*sheet.1!Height)/144
```

■ Overview


To include the Visio Properties dialog box data in a Lotus Notes field:


- In Lotus Notes, use field names that correspond with settings in the Visio Properties dialog box (File > Properties). The Visio drawing's properties are then automatically included.

The Properties dialog box fields are Title, Subject, Author, Manager, Company, Category, Keywords, Description, and Hyperlink Base.

■ Overview

Displaying Lotus Notes data in Visio

 [How To](#)

 [Related Topics](#)

You can read data from a Lotus Notes database field, then display it in a Visio diagram. You can also use the Lotus Notes field data in formulas.

TIP You may want to lock the Visio shape in which you place data from Lotus Notes so that users cannot edit it.

To display data from Lotus Notes in Visio:

1. In Lotus Notes, set up the fields you will read into Visio. Make sure you note the names of these fields, because you will use them in Visio.
2. In Visio, open or create a drawing with which you want to exchange data with Lotus Notes.
3. Choose Insert > Lotus Notes Fields, then, in the Field Name and Direction section, type a name for the field that exactly matches the name of the field you defined in Lotus Notes.
4. Check Read From Notes.
5. In the Data Type section, select the type of data you want to exchange: Text, Time, or Number.
For Number, choose the units for the number (such as centimeters) so that the user knows how to interpret the number. For example, a number might represent inches or centimeters; the distinction for the user may be very significant.
6. Click Add, then click OK.
7. Follow one of the next procedures to either insert the Lotus Notes field in a shape as a text field or insert it in a shape's ShapeSheet spreadsheet.

■ Overview

To insert a Lotus Notes field in a shape as a text field:

1. Select the shape in which you will insert the Lotus Notes data.
2. Press F2 to open the shape's text block, then place the insertion point where you want to insert the data.
3. Choose Insert > Field.
4. Under Category, select Lotus Notes Field. Under Field, select the specific Lotus Notes field. Under Format, select the way you want to view the data, then click OK.

Data is passed between Visio and Lotus Notes when the programs are started, so the next time you open this Visio drawing file, these fields will include data from the Lotus Notes fields you inserted.

■ Overview

To insert a Lotus Notes field into a shape's ShapeSheet spreadsheet:

1. Select the shape, then choose Window > Show ShapeSheet.
2. Select the cell in which you want to insert the Lotus Notes field, place the insertion point in the formula bar, then choose Insert > Function.
3. Under Select Function, choose LOTUSNOTES, then click OK.
4. In the edit area, for "notename," type the name of the Lotus Notes field.

Data is passed between Visio and Lotus Notes when the programs are started, so the next time you open this Visio drawing file, the ShapeSheet will include data from Lotus Notes.

■ Overview

About creating your own shapes


[Related Topics](#)


There are several ways to create your own shapes. You can

- Draw a shape from scratch using the Visio drawing tools. For example, if you want to add a freeform arrow to a block diagram, you can draw the arrow with the [freeform](#) tool.
- Merge a shape with other shapes to create a new, unique shape. For example, if you want to create a round sign with an arrow cut out of its center, you can place an arrow shape on top of a circle, then use the [Combine](#) command to create the shape you want.
- Revise an existing Visio shape. For example, if your company uses a special Process shape in its flowcharts, you can modify the Visio Process shape, save it on the Flowchart stencil, and use it in all the flowcharts you draw.

You can revise an individual shape for use in a specific drawing, or you can revise all instances of a shape in a drawing at the same time. You can also convert a new shape you create into a [master](#) and place the master on a stencil so you can reuse the shape in many drawings.

Drawing shapes

 [How To](#)

 [Related Topics](#)

To draw a shape, use one or more of the drawing tools on the Standard toolbar. While you're drawing shapes, you can use the View > Toolbars > [Toolbars](#) command to hide other toolbars and display only the Standard toolbar

TIP When drawing shapes, it's often helpful to use [guides](#) and [grid lines](#) to help you position the shapes.

Drawing lines or arcs

(■) If you move the pencil tool in a straight line, it draws a line. If you move it in a curve, it draws an arc. Each arc is a portion of a circle; its size is determined by the distance you move the mouse.

(■) The line tool is best for drawing shapes composed only of straight lines. To constrain a line to any 45-degree angle, hold down the Shift key as you drag.


(■) The arc tool draws arcs that are always one quarter of an ellipse. The direction you drag the mouse determines which way the arc bows.

To draw a line or an arc:

1. Choose the pencil tool from the Standard toolbar.
Or choose the line tool or the arc tool.
2. Point to where you want to start the line or arc.
3. Drag to draw the line or arc, then release the mouse button.

■ Overview

Drawing freeform shapes

() The freeform tool works like a pencil on paper. Select it and drag to draw splines and freeform curves. For smoother curves, turn snapping off before you draw (choose Tools > Snap & Glue, then under Currently Active, uncheck Snap).

To draw a freeform shape:

1. Choose the freeform tool from the Standard toolbar.
2. Hold down the left mouse button as you drag in various directions to draw a freeform shape, then release the mouse button.

 Overview

Drawing rectangles and squares

(□) The rectangle tool draws rectangles and squares.

To draw a rectangle or square:

1. Choose the rectangle tool from the Standard toolbar.
2. Point to where you want a corner of the shape.
3. Drag until the shape is the size you want, then release the mouse button.

To draw a square, hold down the Shift key as you drag.

■ Overview

Drawing ellipses and circles

(☞) The ellipse tool draws ellipses and circles.

To draw an ellipse or circle:

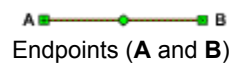
1. Choose the ellipse tool from the Standard toolbar.
2. Point to where you want to start drawing the shape.
3. Drag until the shape is the size you want, then release the mouse button.

To draw a circle, hold down the Shift key as you drag.

■ Overview

Drawing shapes with multiple segments


Shapes with multiple segments are 2-D shapes. To draw a 2-D shape, start each new segment at one of the endpoints or at a vertex of another segment. After you complete a shape, you can add, adjust, or delete segments.



Vertices (A) and control points (B)

To draw a shape with multiple segments:

1. Choose the pencil tool () from the Standard toolbar.

Or, choose the line tool (), arc tool (

), or freeform tool (

).

2. To draw the first segment, point to where you want to start the shape. Press the mouse button and drag until the segment is the size you want, then release the mouse button. This first segment is a 1-D shape with endpoints.

3. To draw the second segment, point to the endpoint of the first segment (the pointer looks like a plus sign) and drag, then release the mouse button.

When you are creating the second and subsequent segments, be careful not to click the endpoint of the first segment, which selects it. A selected endpoint turns magenta. Dragging the selected endpoint resizes the existing segment instead of starting a new one. (If you resize a segment, rather than draw a new one, choose Edit > Undo.)

After you draw the second segment, the shape displays vertices instead of endpoints, to indicate that it's a 2-D shape.

4. To draw additional segments, point to the vertex at the end of the last segment you added, then drag to draw the next segment.

5. If you want to close the shape, drag the endpoint of the last segment you create over the vertex at the beginning of the first segment, then release the mouse.

TIP You can use the freeform or ellipse tool to create a closed shape that is composed of only one segment.

To undo a segment while drawing:


- Before you release the mouse button at the end of a segment, draw back to the vertex at the beginning of the segment. Make sure you hit the vertex precisely or you might not completely delete the segment.

To undo several segments:

- After you've drawn one or more segments, but before you do anything else, choose Edit > Undo. Keep choosing Undo until you've deleted all of the segments you no longer want. Segments are deleted in the reverse order in which they were drawn. By default, you can undo up to ten actions.

You can also undo an action, such as drawing a segment, by clicking the Undo button on the Standard toolbar, or pressing Ctrl+Z or Alt+Backspace.

Merging shapes to create new ones

 [How To](#)

 [Related Topics](#)

The easiest way to create a complex shape is to draw its simple parts, then use the Boolean operation commands to merge the parts into one complex whole. The result of a merge operation depends partly on the shape you select first (the primary shape). The primary shape's formatting is used in the resulting shape, and, in some cases, it even determines the shape of the new shape (with the Subtract command, for example). You can also use Boolean operation commands to convert polygonal lines and polygons to lines, arcs, and freeform curves (or "splines").

Merging operations create new shapes. The old shapes, including ShapeSheet spreadsheets that define smart behavior, are discarded. The new shape gets its own ShapeSheet spreadsheet.

Union

Union creates a new shape from the perimeter of two or more overlapping shapes. The new shape is a set of all the points that were either in one original or another. Union is the equivalent of the Boolean operator "OR."



Union

NOTE Take care not to use the Union command when you simply want to group shapes together. Group and Union are two separate operations in Visio and do not produce the same results. Union is also different from Combine, which deletes areas where the combined shapes overlap.

To unite shapes:

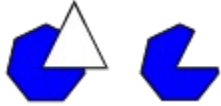
1. Arrange the shapes that you want to unite on the drawing page.
2. Select the shapes.
(Remember that the new shape will inherit the text and formatting of the first shape you select.)
3. Choose Shape > Operations > Union.

NOTE If the shapes do not overlap, the Union command creates one shape, but the shapes appear unchanged. If a shape is open, Visio discards the open shape when you choose Union.

■ Overview

Subtract

Subtract creates a new shape by "subtracting" from the primary selection the areas where subsequent selections overlap. For example, if you overlap a square and a circle and select the square, then the circle, Subtract will remove the overlapping segment of the circle from the square.



Subtract

To subtract shapes:

1. Arrange the shapes you want to subtract on the drawing page.
2. Select the shapes.
(Remember that Visio subtracts from the first shape you select.)
3. Choose Shape > Operations > Subtract.

■ [_Overview](#)

Intersect

Intersect forms a new closed shape from the area where selected shapes overlap, eliminating non-overlapping areas. Because Visio doesn't define specific points on a line, nothing is left if you intersect two overlapping lines.



Intersect

To intersect shapes:

1. Arrange the shapes you want to intersect on the drawing page.
2. Select the shapes.

(Remember that the new shape will inherit the text and formatting of the first shape you select.)

3. Choose Shape > Operations > Intersect.

■ Overview

Fit Curve

Use the Fit Curve command to create a spline from a polygonal line. The spline goes exactly through the polygonal line's vertices. If the polygonal line is a closed polygon, the result is a periodic (seamless) spline.



Fit Curve

To create a spline from a polygonal line:

1. Select the polygonal line.
2. Choose Shape > Operations > Fit Curve.

■ Overview

Custom Fit

Use the Custom Fit command to reduce the number of segments in clip art or other shapes you import. Custom Fit makes an imported shape easier to edit and may reduce its size.

When a shape is imported, the exchange process converts it into a relatively unintelligent format. For example, an imported clip art shape is a dense series of points that is almost impossible to edit. Using the Custom Fit command, you can convert polygonal lines into splines. By dragging the control points on a spline, you can edit the converted clip art shape.

When you use the Custom Fit command, you can specify the error tolerance. The more loosely you set the tolerance (that is, the greater the acceptable error), the more likely you are to reduce the size of the converted shape.

Some shapes on which you use the Custom Fit command occupy less disk space because Custom Fit replaces the many LineTo rows in the shape's ShapeSheet spreadsheet with fewer SplineKnot rows. When enough LineTo rows are replaced, the shape requires less disk space.

To convert an imported object into an editable format:

1. Select the shape. If the shape is a group, choose Shape > Grouping > Ungroup to ungroup it.
2. Choose Shape > Operations > Custom Fit.
3. Choose the options you want, then click OK.

■ [_Overview](#)

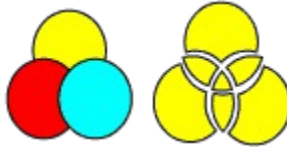
Fragment

The Fragment command can break a shape into smaller parts. You can also use it to create new shapes from intersecting lines or from 2-D shapes that overlap. The Fragment command provides an ideal way to create Venn diagrams and marketing pyramids. Fragment can:

- Divide selected shapes into smaller shapes.



- Create a new closed shape where two or more closed shapes overlap.



- Create new shapes from the enclosed spaces of three or more intersecting lines.



To break a 2-D shape into smaller parts:

1. Draw lines through the shape where you want to break it.
2. Select the shape and the lines.
3. Choose Shape > Operations > Fragment.

To create new shapes where 2-D shapes overlap or where lines intersect:

1. Select the overlapping shape or intersecting lines.
2. Choose Shape > Operations > Fragment.

TIP After you fragment shapes, delete the pieces you don't need.

■ [_Overview](#)

Trim

You can create new shapes from existing intersecting shapes by trimming them. Trim resembles the trim operation in Autodesk AutoCAD, although in Visio you can trim more than two objects. Trim splits selected objects at their intersections, including where a shape intersects itself. It creates a new shape for each piece, preserving the styles. If closed shapes are split open, they lose their fill.



Trim

To trim shapes:

1. Select the shapes you want to trim.
2. Choose Shape > Operations > Trim.

■ [_Overview](#)

Join

Join assembles individual 1-D segments into one or more continuous paths. The number of paths depends upon the configuration of the selected shapes. For example, if the segments lie along a straight line, the new shape will have one path. If the segments lie in the form of a 2-D shape such as a rectangle, the new shape will become a closed 2-D shape that you can fill.



Join

To join shapes:

1. Select the segments you want to join.
2. Choose Shape > Operations > Join.

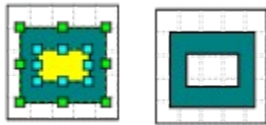
■ Overview

Combine

Combine creates a new shape from selected shapes. If the selected shapes overlap, Visio cuts out, or discards, the area where they overlap. This creates holes in the new shape that make the drawing page grid visible through the shape. Combine converts multiple shapes into one shape with multiple paths, represented by the same number of geometry sections in the ShapeSheet spreadsheet (rather than multiple ShapeSheet spreadsheets).

You can also combine 1-D shapes with each other and combine 1-D and 2-D shapes. In these cases, Visio creates one shape from the selected shapes, but the new shape might not look different from the old ones. The difference is that the new shape has one ShapeSheet spreadsheet with multiple sections so that when you apply a style, such as a fill, the style formats the entire shape. This is different from using the Group command, where each shape in the group retains its own ShapeSheet spreadsheet, in addition to the group's ShapeSheet spreadsheet.

NOTE Take care not to use the Combine operation when you simply want to group shapes together. Group and Combine are two separate operations in Visio, and do not produce the same results. Combine is also different from Union, which creates a new shape from the perimeter of two or more overlapping shapes, without deleting any areas of the shapes.



In this example, selecting the large rectangle first makes it the primary shape, so that when the two rectangles are combined, the small rectangle will be discarded, leaving a hole in the large rectangle.

For example, to create a picture frame shape (a rectangle with a hole in the middle through which you can see what's beneath), place a small rectangle in the middle of a larger one. Select the large rectangle first, then the small one, and then choose Shape > Operations > Combine to combine them.

To combine shapes:

1. Arrange the shapes you want to combine on the drawing page.
2. Select the shapes.

(Remember that the new shape will inherit the shape and formatting of the first shape you select.)

3. Choose Shape > Operations > Combine.

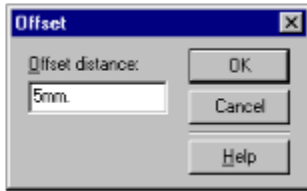
Offsetting shapes to create parallel lines and curves

- [How To](#)
- [Related Topics](#)

The **Offset** command creates a set of parallel lines and curves to the right and left of the original shape. For example, you can create a representation of a two-way road by offsetting a line. Or, you can choose to delete any line or curve you want, even the original, which is always positioned between the offset lines or curves.

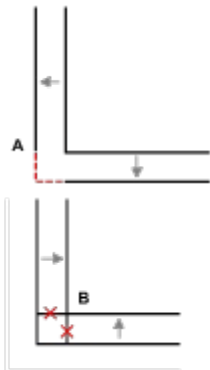
You can set the distance you want between the original shape and the offset shapes.

NOTE Offset shapes inherit line styles from the original shapes. They do not inherit any fill patterns or text from the original shapes.



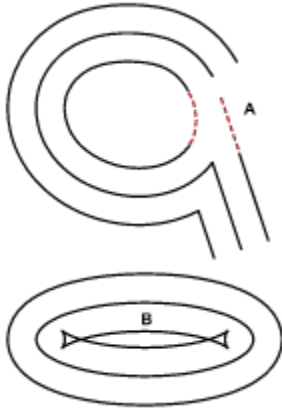
The Offset command positions the offset shapes on either side of the original shape, at a distance that you specify.

The Offset command reproduces the points of a line at a fixed distance from the line and then attempts to connect those lines, based on where they intersect. If the offset lines don't intersect, Visio extends them until they do.



When creating an offset shape such as the one left of this angle (**A**), Visio extends the duplicate lines to make them meet.

When creating an offset shape such as the one right of this angle (**B**), Visio deletes a portion of the duplicated lines to prevent them from crossing.



In this example **(A)**, extending the arc and the line doesn't result in an intersection, so Visio creates offset duplicates of each shape and leaves them unconnected.

If the offset is wide, especially inside curves, the offset may not look like the original **(B)**.

Once you've offset a shape, the two new shapes each have their own ShapeSheet spreadsheets and you can work with them independently. For example, if you only want one duplicate, you can delete the other.

To create an offset shape:

1. Select the shape from which to create the offset shape.
2. Choose Shape > Operations > Offset.
3. Type a value for the distance you want between the duplicate and the original, then click OK.

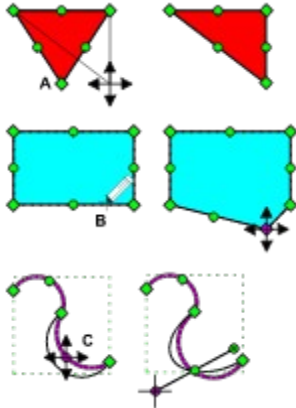
■ Overview

Revising existing shapes

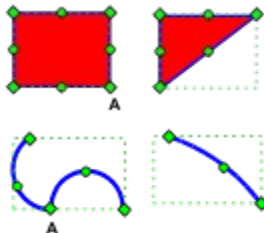
▣ Related Topics

You can revise any Visio shape or shape you draw from scratch as long as the shape isn't locked to prevent changes.

To revise a shape, select it with the pencil tool (▣), then drag, add, or delete vertices. To change curves, drag a control point or a point's eccentricity handles.



To reshape a shape, you can drag a vertex (**A**), add, then drag, a vertex (**B**), or drag control points to edit curves (**C**).



Deleting vertex **A** in either of these shapes deletes the segment with which the vertex is associated. The remaining segments are reshaped accordingly.

Methods for revising shapes

To	Do this after selecting the shape with the pencil tool
Select a vertex or control point	Click the <u>vertex</u> or <u>control point</u> you want to select. The selected item turns magenta.
Reshape angles	Select one or more vertices and drag. (Hold down the Shift key to select more than one.)
Add a segment	Point to where you want to add a segment, hold down the Ctrl key, and click.
Delete a segment	Select a vertex associated with the segment you want to delete, then press the Delete key.
Change the curvature of an	Drag a control point until the segment looks the way you want.

arc or freeform
curve

Change the
eccentricity (or
symmetry) of an
arc

Select a control point, hold down the Ctrl key, and drag the pointer slightly away from the point to display the eccentricity handles, then release the mouse button. Drag one handle farther from or closer to the control point or rotate it around the control point until the arc is shaped the way you want.

Move the end of
a freeform curve

Select the curve, then drag a handle associated with the curve's endpoint.

TIP If you select a shape with the pencil tool and don't see any vertices or control handles, the shape is probably a group. To find out if the shape is a group, select it, choose Format > Special, then check the Special dialog box to see if Group is listed for Type. To revise the group, select it, then choose Edit > Open Group. A group window opens in which you can revise the shape using the pencil tool.

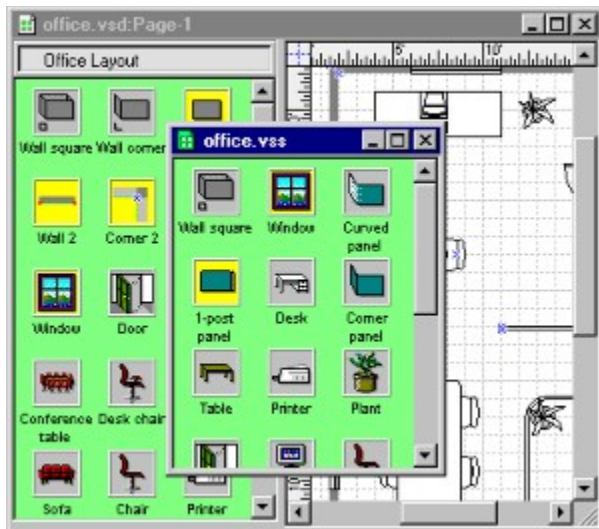
Revising several identical shapes at once

- [How To](#)
- [Related Topics](#)

When you create a drawing, Visio creates a stencil specific to that drawing file called the "local stencil." Each time you drag a master to the drawing page, Visio copies the master to the local stencil, and then creates an "instance" of the master on the drawing page. Instances inherit formatting and other properties from masters on the local stencil.

In the local stencil, you can

- Track which shapes you've used in your drawing.
- Quickly revise all instances of a shape on all pages in a drawing file by revising the master on the local stencil.
- Save the local stencil as a standalone stencil so you can distribute it to others who want to use the shapes in other drawings.
- Add shapes to the local stencil directly to make them easier to reuse later.



When you first open the local stencil, it lines up along the left side of the screen. You can drag the stencil's title bar to move it anywhere you want, and you can drag a side or corner to change the stencil's size.

To open a local stencil and display the shapes you've used in your drawing:

- Choose Window > Show Master Shapes.

■ Overview

Revising all shape instances at once

Local stencils provide a way for you to update all instances of a shape at once. Each shape instance in a drawing is linked to its master in the local stencil, so to change all shape instances at once, you simply modify the master. For example, in an organization chart, if you want to change the color of all the Position shapes' text to blue, you can simply modify the Position master on the local stencil. All instances of the Position shape in the drawing inherit the changes.

Shape instances in the drawing remain linked to their masters in the local stencil unless you perform an action that severs the link, such as ungrouping the shape in the drawing. In this case, a message appears onscreen letting you know the action will sever the link, and you can choose to continue or cancel the action.

NOTE In some cases, applying local formatting to a shape instance on the drawing page may break that individual attribute's link to the master on the local stencil. For example, if you resize an instance on the drawing page and then, in the local stencil, size its master, all instances except the one you resized manually inherit the new size.

To revise a master on the local stencil and all of its instances on the drawing page:

1. Open the drawing you want to modify, and choose Window > Show Master Shapes.
2. Click the local stencil's title bar to make sure it's the active window, then double-click the master you want to modify to open it in the master drawing window.
3. In the master drawing window, revise the master.

When you're finished revising, close the master drawing window by clicking the close box. When Visio asks if you want to update the master and its instances, click Yes.

The instances of the shape update to show the changes.

Saving a local stencil for use in other drawings

Unlike the stencils that are individual .vss files, a local stencil is stored as part of a drawing's .vsd file. A drawing's local stencil contains a copy of every master that you dragged and dropped from a standalone stencil to the drawing, even if you deleted it from the drawing.

You can save a local stencil as a standalone stencil (.vss) file. After you save it, you can use it with any drawing, or distribute it, just as you do stencils that come with Visio products.

To save a local stencil as a standalone file:

1. Click the local stencil's title bar to make it the active window.

If the local stencil isn't open, display the drawing to which it's associated, then choose Window > Show Master Shapes.

2. Choose File > Save As, then, in the Save As dialog box:

Under Save In, find the folder in which you want to save the stencil. (If you save the stencil in a Solutions sub-folder, it appears when you choose File > Stencils.)

Under File Name, type a name for the stencil.

Under Save As Type, select Stencil (*.vss).

Under Save, uncheck the Workspace box if it's checked.

3. Click Save.

■ Overview

Adding shapes to the local stencil

You can add shapes you draw to the local stencil. Not only does this make revising instances of those shapes easier, it also makes it easy to quickly reuse a shape by dragging it from the local stencil. If you plan to add a shape you draw to the local stencil, it's best to do so before duplicating and copying the shape—revising the shape on the stencil doesn't revise copies of the shape that are on the page before you add the shape to the local stencil.


To add a shape to the local stencil:

1. Open the local stencil by choosing Window > Show Master Shapes. To arrange the windows, choose Window > Tile.
2. Press Ctrl, then drag the shape and drop it onto the local stencil.

TIP To align the new master shape icon with the existing ones, right-click the green stencil background, then choose Arrange Icons.

■ Overview

Creating shapes for charts

 [How To](#)

 [Related Topics](#)

Most charts use bars or lines to compare amounts or indicate change. By creating an extendable or stackable shape, you can show an amount and at the same time add special effects to charts. For example, you can use the People shape included with Visio to indicate an increase in employees. When you stretch the shape, the people duplicate. Or you can use the Growing Flower shape to indicate a company's growth. When you stretch the shape, the flower's stem grows longer.

Visio includes stackable shapes, such as People and Stack Of Papers, and extendable shapes, such as the Growing Flower and the Pencil. You can also create your own stackable or extendable shapes.

Stackable shapes

You can create a stackable shape from any Visio shape or piece of clip art. Stackable shapes can stack horizontally or vertically. You can fix the number of shapes in a stack or make the number change as the stack is stretched. Shapes in a stack can have spaces between them and their alignment can vary.



When you increase the size of a stackable shape, the shape duplicates itself.

To create a stackable shape:

1. Drop the shape you want to stack onto the drawing page. Make sure the shape is selected.
2. Choose Tools > Macro > Business Diagram > [Chart Shape Wizard](#).
3. On the first wizard screen, click Next. On the second screen, choose Stackable Shapes, then click Next.
4. On the third screen, choose the options you want. Click More Info if you need help with an option.

NOTE The higher the value you enter for Number Of Shapes, the more disk space the drawing will occupy. For each shape in the stackable shape, Visio adds a new Geometry section to the ShapeSheet spreadsheet.

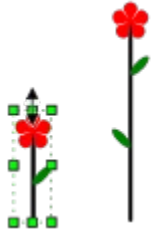
5. On the last wizard screen, click Finish.

TIP You can modify a stackable shape after you've created it. Right-click the shape, then choose Configure to change the height, the width, the offset between the shapes, or the stack's background color.

[Overview](#)

Extendable shapes

The extendable shapes that you create can be two- or three-part shapes. Each part can be a shape from a Visio stencil, a shape you draw, or a piece of clip art. Where you place the parts determines which part extends. In a two-part shape, the left (for horizontal shapes) or bottom (for vertical shapes) part extends. In a three-part shape, the middle part extends. Simple shapes make the best extendable parts. Complex shapes may distort when they extend. Extendable shapes can be solid or they can include gaps between the parts.



When you increase the size of an extendable shape, only one part of the shape extends.

To create an extendable shape:


1. Assemble the parts of the extendable shape you want to create. Place the extendable part on the left, for a two-part shape, or in the middle, for a three-part shape. Click the drawing page to make sure no shapes are selected.
2. Choose Tools > Macro > Business Diagram > [Chart Shape Wizard](#).
3. On the first wizard screen, click Next. On the second screen, select Extendable Shapes, then click Next.
4. On the third screen, choose the options you want, then click Next.
5. Follow the instructions in the Select Shapes dialog boxes.
6. On the last wizard screen, click Finish.

TIP You can modify an extendable shape after you've created it. Right-click the shape, then choose Configure to change the height, width, or spacing between the parts.

To create an extendable shape from parts of a single shape:

1. Drop the single shape you want to use onto the drawing page.
2. Select the shape, then choose Edit > Copy.
3. Choose Edit > [Paste Special](#).
4. Choose Windows Metafile Data, then click OK.
5. Repeat steps 3 and 4 to make more Windows Metafile copies of the original shape. Make two copies if you're creating a two-part extendable shape. Make three copies if you're creating a three-part extendable shape.
6. Choose the crop tool from the Tools toolbar and crop each Windows Metafile copy until it looks like the part of the extendable shape you want it to represent.
7. Choose Tools > Macro > Business Diagram > Chart Shape Wizard. Follow the steps described above for creating an extendable shape.

Creating master shapes

 [How To](#)

 [Related Topics](#)

If you want to create a new shape and reuse it in many drawings, create the shape as a master. To create a master, you can

- Convert a shape to a master by moving it onto an existing Visio stencil or onto a new stencil you create.
- Develop a new master from scratch.
- Revise an existing master.


Before you can create a master, you must open a stencil as an original file, with read/write access. Normally, stencils open with read-only access. To work with a read-write stencil while maintaining the original, open a copy of the original.

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To open an original stencil:

NOTE You cannot open an original stencil if a read-only copy of the stencil is open already. If a read-only copy of a stencil is open, close it, then open the original.

1. Choose File > Stencils > Open Stencil.

You can also click the open stencil button () on the Standard toolbar.

2. Open the folder that contains the stencil you want.

3. Select the stencil to which you want to add the new shape.

4. Click Original in the Open section, then click Open.

The stencil window opens, undocked, with read/write access.

TIP To open a copy of the original stencil, click Copy instead of Original in step 4.

 [_Overview](#)

Converting shapes to masters

You can use shapes you draw or revise, or objects from other applications, as masters. You may not be able to edit an object, however, in all the ways you can edit a Visio shape.

When you drag a shape to a stencil, a master shape icon based on the shape and a default name for the master appear in the stencil window. You can then name the master, align its name, choose options for the icon size, and write a prompt that provides information about how to use the master.

To convert a shape to a master:

1. In the drawing window, display the shape you want to convert to a master, or draw a shape to convert.
2. Open the stencil file in which you want to store the new master.

Make sure to open the original stencil or a copy.

3. Click the drawing page to make it active, then drag the shape from the drawing page and drop it on the stencil. You can create a copy of the shape by holding down the Ctrl key while you drag.

The shape icon appears, with a label "Master.X," where X is a number representing the number of shapes on the stencil.

4. Choose View > Arrange Icons.

Visio rearranges the existing icons to align the new icon.

5. Choose File > Save to save the changes to the stencil.

■ Overview

Developing masters from scratch

When you develop a master from scratch, you can change or specify the way the master displays in the stencil. For example, you can rename the master's icon and choose options for how the name aligns.

TIP You can also change the way any master on an original stencil displays by right-clicking the master and choosing Properties.

To develop a new master from scratch:

1. Open the stencil file to which you want to add a master or open a blank stencil.

Make sure to open the original stencil or a copy.

2. With the stencil selected, choose Master > New Master.

3. Specify characteristics for the master:

In the Master Name section, specify the name of the new master and how to align the name.

In the Icon section, choose an option for the size and how to update the master shape icon.

In the Prompt section, type information about the master that appears when you point to it.

For Match Master By Name On Drop, check to preserve the formatting you've applied to the stencil's masters.

4. Click OK.

A blank master shape icon appears in the stencil window. (You may need to scroll to see it.)

5. Choose Master > Edit Master, or double-click the master to open the master drawing window.


6. Create the master.

You can create it just as you would in a regular drawing page by using shapes from different stencils, drawing the shape with the drawing tools, or pasting an object from another application.

7. Click to close the master drawing window. When Visio prompts you to update the master, click Yes.

8. While the stencil is still active (that is, the stencil title bar is blue), choose File > Save to save the changes to the local stencil.

Revising existing masters

 [How To](#)

 [Related Topics](#)

You can revise the way an existing master will look when you drop it on the drawing page by dragging, adding, or deleting vertices, or by editing the master's text. For example, you can add arms to an office chair master or change its model number.

To revise every instance of a master in a drawing, edit the master stored in the local stencil. When you edit the master locally, you change each instance of the shape in the drawing file. You do not, however, change the master in any standalone stencil you may have used to create the drawing.

You can also revise a master on a standalone stencil so that every time you use that stencil to create a drawing, the revised master appears on the local stencil.

If you no longer need a master, you can delete it. Deleting a master breaks the connection between the master and any instances in a drawing.

To revise the way a master will look on the drawing page:

1. To revise a master on the local stencil, make sure the drawing window is active by clicking the title bar, then choose Window menu > Show Master Shapes to display the local stencil.

To revise a master on a standalone stencil, open the stencil as an original or as a copy that contains the master you want to change, then click in the stencil window to make it active.

2. Double-click the icon of the master you want to edit, or select it, then choose Master > Edit Master.

The master opens in the master drawing window.

3. To modify the master, use the same tools and techniques that you use to create and edit shapes in a drawing.
4. When you've finished revising the master, click the close box to close the master drawing window.

■ Overview

To delete a master:

1. Open the stencil file that contains the master you want to delete.

Make sure to open the stencil as an original or a copy.

2. Select the stencil window, then select the master.

3. Choose Edit > Clear.

When Visio prompts you, click OK to delete the master or Cancel to cancel the deletion.

4. Choose File > Save.

■ Overview

Saving shapes you create on stencils

[Related Topics](#)

It's worthwhile to create a new stencil if

- You've created shapes of your own that you plan to reuse or share with others.
- You frequently use shapes from several different Visio stencils, and you want to consolidate them on one stencil.

Creating a custom stencil involves either adding or deleting shapes from an existing Visio stencil, or building an entirely new stencil using shapes that you create from scratch and save in the stencil file.

There are two types of stencils:

- A standalone stencil is a stencil file with the extension .vss that can be opened separately or with a template. If you save a stencil with a template, the stencil opens with the template, along with a drawing page that has the scale, styles, and other features appropriate for the shapes on the stencil.

When you add or edit masters in a standalone stencil, the new or revised masters become available for any new drawing you create using that stencil or a template that opens the stencil. Instances of the masters in existing drawings are not affected.

- A local stencil is a stencil stored in a drawing file. It contains copies of the masters used in that drawing file.

When you add or edit masters in a local stencil, the changes affect only that drawing file. The masters are linked to their instances in the drawing, so changes you make to masters in a local stencil are reflected in each instance of the shape in the drawing.

Methods for creating new stencils

To	Do this
Base a new stencil on an existing stencil	Choose File > Stencils > <u>O</u> pen <u>S</u> tencil. In the Open Stencil dialog box, open the folder that contains the stencil on which you want to base the new stencil. Select the stencil and, in the Open section, click Copy. Click the Open button.
Create a new stencil from scratch	Choose File > <u>S</u> tencils > Blank Stencil.
Create a new stencil from a drawing file's local stencil	With the local stencil window selected, choose File > <u>S</u> ave <u>A</u> s, type the file name you want, choose Stencil (*.vss) for Save As Type, then click Save.
Copy a master from one stencil to another	Open both stencils, then drag the master from one stencil to another.
Move or copy a shape from the drawing page to a stencil	To move the shape, drag it from the drawing page to the stencil. To copy the shape, hold down the Ctrl key as you drag the

shape.

Change the order of the stencil's icons

Open the original stencil file, then drag each master shape icon to arrange them in the order you want.

Align the icons in rows on the stencil

Open the original stencil file, then choose View > Arrange Icons to align the icons vertically and horizontally.

Set the stencil so that its icons stay in rows even when the window is resized or when icons are added or deleted

Open the original stencil or a copy, then right-click the stencil and choose Auto Arrange from the shortcut menu.

Save a new stencil as a local stencil

Save the drawing that includes the local stencil. The stencil is stored in the drawing. Choose File > Save As, choose Drawing (*.vsd) for Save As Type, name the file, then click Save.

Save a new stencil as a standalone stencil

Click the stencil title bar to make it active. Choose File > Save As. For Save As Type, choose Stencil (*.vss), name the file, then click Save.

About using hyperlinks

Related Topics

You can add a hyperlink, or jump, to each Visio shape and drawing page. The link can jump to

- Another page in the same Visio drawing.
- Another Visio drawing.
- A non-Visio document.
- A World Wide Web location (URL).

For example, from a process shape in a flowchart, you can jump to a drawing page that shows the detailed steps the process involves.

After you add a link, right-click the shape or drawing page and choose Hyperlink > Open to jump to the destination. In full-screen view, you can click the shape or page to open the hyperlink. (Keep in mind that, for the URL links to work, you must have a Web browser installed on your computer.)

If you intend to save a drawing as HTML pages using the Save As HTML add-on, you can preserve your hyperlinks as image maps.

In a Web browser, the linked shapes will be "hot." (Links to other Visio drawing pages remain active in the HTML file only if you save the page that the shape is linked to, as well as the page the linked shape is on, in HTML format.)

You can also paste objects created in other applications into Visio drawings as hyperlinks and paste Visio shapes and drawings into other documents as hyperlinks.

Adding, modifying, and deleting hyperlinks

 [How To](#)

 [Related Topics](#)

When you add a navigational link, or "jump," to a shape or drawing page, you can navigate to the link by right-clicking the shape or page, then choosing Hyperlink > Open. Once you've added a link to a shape or page, you can modify or delete the link.

Relative versus absolute paths to hyperlinks

When you link a shape or page, you can decide whether the path to the link should be relative or absolute. A relative path describes the location of the linked file in relation to the Visio drawing or a hyperlink base. You can move the Visio drawing and the linked file together (that is, move the entire path structure) without breaking the link. An absolute path spells out the exact location of the linked file in terms of drives, directories, and folders. You can move the Visio drawing file without affecting the link but if you move the linked file, you must reset the path. To specify an absolute path, uncheck Use Relative Path For Hyperlink.

If you want to use a relative path that is not based on the location of the Visio drawing, you can set a base path in the Properties dialog box for the file. Choose File > Properties, then type the base path that you want in the Hyperlink Base box. This base path is then displayed in the Insert Hyperlink dialog box.

To link a shape or page to another Visio drawing page, a Web URL, or a non-Visio file:

1. In Visio, create or open a Visio drawing. To add a link to a page, display the page with nothing selected. To add a link to a shape, select the shape.
2. Choose Insert > Hyperlink.
3. Under Link To File Or URL, click Browse to locate the local file or Internet address (URL) you want to link to. The path to the linked file is displayed under Path.

If you want to link to a shape or page in the current drawing, skip to step 4.

4. Optionally, if you're jumping to a Visio file or URL, under Named Location In File, type the page name within the file or anchor on the Web page you want to link to. If you're jumping to the current open file or another Visio file that is open, you can click Browse to see a list of the pages in that file.
5. Under Descriptive Name Of Link, type a name for the link that identifies the location you're linking to.
6. Choose whether you want a relative path for the hyperlink, then click OK.

NOTE If you've set a base path for the hyperlink in the Properties dialog box for the file, that path will appear as the Base in the Hyperlink dialog box.

■ Overview

To paste a Visio shape or drawing into another document as a hyperlink:

1. Right-click the hyperlinked shape, then choose Hyperlink > Copy Hyperlink.
2. In the destination document, choose Edit > Paste As Hyperlink.

NOTE Some applications, such as Microsoft Office 95 applications, do not support the Paste As Hyperlink command.

■ Overview

To paste an object into Visio as a hyperlink:

1. After you've copied the hyperlinked object, go to the drawing page on which you want to paste it.
2. Choose Edit > Paste As Hyperlink.

■ Overview

To modify a hyperlink:

1. To modify a link on a page, display the page, with nothing selected. To modify a link on a shape, select the shape.
2. Right-click the page or shape, then choose Hyperlink > Edit Hyperlink.
3. Make the changes you need, then click OK.


■ Overview

To remove a hyperlink from a shape or page:

1. In Visio, create or open a Visio drawing. To remove a link from a page, display the page with nothing selected. To remove a link from a shape, select the shape.
2. Choose Insert > Hyperlink.
3. Click Remove Link, then click OK.

■ Overview

Jumping between hyperlinked shapes and pages

 [How To](#)

 [Related Topics](#)

You always jump from a linked shape or drawing page by right-clicking the shape or page, then choosing Hyperlink > Open. How you get back to the original location in Visio depends upon the destination of the jump.

NOTE You can only use the forward and back tools to navigate between a Visio drawing and other ActiveX documents, such as other Visio drawings, Office 97 documents, and HTML pages loaded into Internet Explorer 3.01 and later.

To activate a hyperlink on a shape or page:

- Right-click the shape or page and choose Hyperlink > Open. If you want to be able to see both the drawing page and the link destination, choose Hyperlink > Open In New Window. If you are in full screen view, click the shape or page.

■ Overview

To go to the next hyperlink:

- Click the forward tool (→) on the Web toolbar or press Alt+right arrow.

To return from another Visio page in a drawing or another document, application, or Web site:

- Click the back tool (←) on the Web toolbar or press Alt+left arrow.

NOTE You can only go to and return from Visio drawings and Office 97 documents. To navigate to and from other document types, such as text (*.txt) files, you must host the files in Internet Explorer 3.01 or later.

■ Overview

About customizing shape behavior

[Related Topics](#)

If you've used Visio shapes, you already know they're smart—that is, programmed to act the way you need them to in particular contexts. For example, the desks in the Office Planning Template are built to standard industry sizes and locked against resizing so you can't accidentally stretch them inappropriately.

But what if you want to program a shape to behave the way *you* decide it should behave? You can take advantage of another aspect of Visio shapes' smart behavior: you can change it. For example, you can define the actions that affect the way a shape displays onscreen, how a shape responds when you double-click it, or how its text behaves. You can also run the SmartShape Wizard to customize a shape's text, add built-in connectors to a shape, or protect shape attributes so they can't be changed.

Visio provides several methods that you can use to customize shape behavior:

- Use the [Behavior](#) or [Double-Click](#) commands on the Format menu.
- Run the [SmartShape Wizard](#).
- Modify formulas in a shape's [ShapeSheet](#) spreadsheet.
- Add a command to a shape's or drawing page's shortcut menu.
- Associate an event with a shape.
- Write a program that controls Visio or its shapes through Automation.


ShapeSheet spreadsheets are representations of shapes. As you make changes to a shape on the drawing page, Visio updates mathematical formulas in the ShapeSheet spreadsheet. The ShapeSheet spreadsheet stores the shape's attributes, such as the width and height, the angle and center of rotation, and the formatting attributes that determine the shape's appearance. The ShapeSheet spreadsheet also contains information such as the *x*- and *y*-coordinates of each vertex relative to the shape's origin.


By associating an event with a shape, you can define how the shape responds to a particular action. An "event" is an occurrence, such as the mouse being double-clicked or the shape being dropped on the page, that the shape can detect and respond to. You can quickly associate any of a number of actions with a double-click event, so that when you double-click a shape, it performs that action. For example, you can define a double-click event that causes a shape to start an add-on, display its ShapeSheet spreadsheet, or jump to another page in the drawing file.

If you want to use a shape you've customized in many drawings, you can convert the shape to a [master](#) and save it on a stencil.

For details about customizing shape behavior using the ShapeSheet window, actions, events, or Automation, see [Visio and Automation](#).

Controlling how shapes display onscreen

 [How To](#)

 [Related Topics](#)

You can control whether or not a shape's [selection handles](#), [control handles](#), and [selection rectangle](#) display on the screen. (The handles and rectangle never appear in a printed drawing.)


To change a shape's display options:


1. Select the shape, then choose Format > Behavior.
2. Under Selection Highlighting, uncheck the items that you do not want to appear on the selected shape, then click OK.

NOTE If you uncheck all of the Selection-Highlighting options, you won't be able to tell when the shape is selected.

 Overview

Setting double-click behavior

 [How To](#)

 [Related Topics](#)


You can specify what happens when you double-click a shape. By default, double-clicking a shape opens the shape's text block so you can edit it. However, you can change double-click behavior to display a different page in the same drawing, for example, or to open the shape's [ShapeSheet](#) spreadsheet.

To specify a shape's double-click behavior:

1. Select the shape for which you want to change double-click behavior, then choose Format > Double-Click.
2. Choose a double-click action for the shape, then click OK.

■ Overview

Changing shapes from 1-D to 2-D or from 2-D to 1-D

 [How To](#)

 [Related Topics](#)

You can convert a two dimensional (2-D) shape to a one dimensional (1-D) shape so you can use it as a connector to glue to 2-D shapes. Or you can change a 1-D shape to a 2-D shape so you can glue 1-D connectors to it or size it proportionately when you drag its corner selection handles.

Changing a shape between 1-D and 2-D changes the underlying structure of the shape and may produce unexpected results. For example, if a 1-D shape is glued to another shape, changing the 1-D shape to a 2-D shape breaks the glue. If you're not sure of the results of changing a shape's behavior, it's best to make a copy of the shape first, then change the behavior of the copy.

To change 1-D or 2-D shape behavior:

1. Select the shape you want to change from 1-D to 2-D or from 2-D to 1-D.
2. Choose Format > Behavior.
3. Under Interaction Style, select Line (1-Dimensional) or Box (2-Dimensional), then click OK.

■ Overview

Adding built-in connectors to shapes

■ [How To](#)

■ [Related Topics](#)

If you always connect a certain shape to other shapes, you can use the [SmartShape Wizard](#) to add a built-in connector without having to learn complex formulas. Then, when you want to connect the shape to another, you can drag the connector directly from the shape. For example, in a data flow diagram, if you always glue a Data Process shape to another shape, you can add a connector to the Data Process shape so you don't need to drag a separate connector each time you add a new Data Process shape.


To use the SmartShape Wizard to add a built-in connector to a shape:

1. Select the shape to which you want to add a connector, then choose Tools > Macro > Visio Extras > SmartShape Wizard.
2. On the main wizard screen, under SmartShape Options, check Create Built-In Connectors, then click Change Option.
3. On the Built-In Connectors screen, select the type of connector you want to create, then click Next.
You can select each option to see a graphic representation of the type of connector the selected option creates.
4. If you selected an option other than Radial, the next screen prompts you to choose where to put the bends in the connectors and how much space to allow before bending the line. Choose whether to have the bend appear closer to the shape or closer to the control handle that represents the connector's end point. Then specify how much space you want to allow, then click Next.
5. On the main wizard screen, click Finish.
6. On the next screen, select whether to apply the connector to a copy of the shape (recommended) or the original shape, then click Create SmartShape.

NOTE Do not use the SmartShape Wizard to add a connector to a shape that already has built-in connectors, such as the Ethernet shape. Adding a connector this way invalidates the formulas for the existing connectors, making them unusable.

 Overview

Adding hidden notes to shapes

 [How To](#)

 [Related Topics](#)

Generally, you add text to a shape by selecting the shape and then typing the text you want. This creates text that is visible in the drawing. But, for some drawings, you might want to add text to a shape that gives more information, but doesn't appear in the drawing unless you need it. For example, on a shape in a large organization chart, you can type a note that describes how to get to that person's workspace, and hide the note when you want to print the chart. You can also choose to display the data in a shape's custom-property fields. For example, on a shape in a network diagram, you can add a note that displays the manufacturer, serial number, and so on, of a piece of equipment, and hide it when you want to view only the network layout.

With the [SmartShape Wizard](#), you can quickly add a hidden note to a shape. After you add the note, you can show or hide it by right-clicking the shape.

To use the SmartShape Wizard to add a hidden note to a shape:

1. Select the shape to which you want to add the note, then choose Tools > Macro > Visio Extras > SmartShape Wizard.
2. In the main wizard screen, under SmartShape Options, check Create A Hidden Note, then click Change Option.
3. In the Hidden Note screen, type the text for your note.

If the shape has custom properties, you can also select the custom-property fields you want to include in the note.

For helpful tips about typing certain text characters, such as a line break, click Show Hints.

4. When you've completed typing the note or selecting custom property fields, click Next. In the main wizard screen, click Finish.
5. In the final screen, select whether to add the note to a copy of the shape (recommended) or to the original shape, then click Create SmartShape.

NOTE For more information while performing any of the steps above, click Show Hints in the wizard screen.

■ Overview

Adding commands to shapes' and drawing pages' shortcut menus

■ [How To](#)

■ [Related Topics](#)

All Visio shapes and drawing pages have shortcut menus from which you can choose commands that change the way the shape looks or behaves. For example, if you frequently work with layers, you can right-click a shape to open the [Layer Properties](#) dialog box.

You can add an item to a shortcut menu by using the Actions section and command in the [ShapeSheet](#) window. For example, if you switch back and forth between pages in a Visio drawing, you can add a Go To Page command to each page's right-click menu.

To add a right-click command to a shape's or drawing-page's shortcut menu:

1. Select the shape or drawing page to which you want to add a right-click command, then choose Window > Show ShapeSheet.

The menu bar changes to show menus associated with the ShapeSheet window.

2. Choose Insert > Section, check Actions, then click OK.
3. In the ShapeSheet window, scroll to the Actions section, select one of its cells, then choose Edit > Action and do the following:

Under Menu, type the command you want to appear on the shape's or page's right-click menu.

Under Prompt, type the instructions you want to appear on the status bar when you hold the mouse over the command.

Under Action, select the action you want to perform when you right-click the shape or page. For details, click Help on the dialog box.


4. When you've completed the changes in the Action dialog box, click OK.
5. Close the ShapeSheet window.

When you right-click the shape or page, the command you just added appears at the top of the menu.

NOTE You can add your own commands on a shape's shortcut menu.

■ Overview

Controlling how shapes respond to events

 [How To](#)

 [Related Topics](#)

You can easily define a double-click event for a shape by choosing Double-Click from the Format menu. In the [Double-Click](#) dialog box, you can choose from among several events, but there may be other events not included there which you want to add. For example, you can choose to open a separate file when you double-click the shape.

You can also define other events, such as one that triggers an action when you drop a shape on the drawing page. For example, you can run a macro when you drop a certain shape.

To define how a shape responds when you drop it on the page, you type a function into the [EventDrop](#) cell of the [Events](#) section of a shape's ShapeSheet spreadsheet.

To program an action in the EventDrop cell:

1. Select the shape, then choose Window > Show ShapeSheet to open its ShapeSheet window.
2. Choose View > Sections, click Events, then click OK.
3. In the Events section, select the EventDrop cell, then place the insertion point in the formula bar.
4. Choose Insert > Function, then select the function you want to insert, and click OK.

The function appears in the formula bar.

5. If the function you insert requires arguments, add them in the appropriate section in the formula bar, then press Enter.

The function appears in the cell.

6. Close the ShapeSheet window and test the shape. To trigger the event, you can drag and drop the shape from the stencil, copy and paste it, or duplicate it by pressing Ctrl+D or by Ctrl+dragging it.

■ Overview

Useful functions to associate with events

- OPENFILE("filename")

Opens a Visio file in a new window.

- GOTOPAGE("pagename")

Displays the page in the currently active window. For example:

```
GOTOPAGE ("Page-2")
```

A page's name appears in the title bar of its window in the Page Setup dialog box (Page Properties tab). You can also use GOTOPAGE with a URL to display a Web site.

- HYPERLINK("address")

Navigates to a URL address.

- OPENPAGE("pagename")

Displays the page in a new window.

- RUNADDON("name")

Runs the specified macro or add-on (including those that are wizards). To pass arguments to a macro, include them in the string. To pass arguments to a standalone add-on, use the RUNADDONWARGS function.

For additional events and functions you can use in the Events section and advice on how to use events effectively, see the [Automation Reference](#).

■ [_Overview](#)

Controlling shapes through Automation

[Related Topics](#)

With Automation, you can write macros and programs that control Visio or extend its capabilities. A macro or program uses Automation to automate repetitive tasks, whether simple or complex, or to incorporate Visio drawing and diagramming capabilities into larger solutions. For example, you can create a program that generates an organization chart from a list of names and positions in a database.

To write macros, you can use Microsoft Visual Basic for Applications (VBA). VBA comes with Visio; you write and edit programs in the Visual Basic Editor. A macro is stored only in the drawing you are working with when you create the macro, rather than as a separate program. You can write standalone programs in Visual Basic, Visual C/C++, or any other programming language that supports Automation.

A program controls Visio by accessing its objects and then using their properties, methods, and events. Here is a brief overview:

- Objects represent items you work with in Visio, such as documents, drawing pages, shapes, and formulas.
- Properties are attributes that determine the appearance or behavior of objects. For example, a Shape object has a Name property, which represents the name of that shape.
- Methods are actions that can be performed with an object. For instance, a program can use the Copy method of a Window object to copy a selected shape to the Clipboard. This method is equivalent to selecting a shape on the drawing page and using the Copy command on the Edit menu in Visio.
- Events are occurrences or notifications that can trigger responses. For example, you can programmatically trigger code when a document is opened or you can trigger a program by double-clicking a shape.

For details about Visio objects, properties, methods, and events, see the [Automation Reference](#).

About customizing text behavior

[Related Topics](#)

With the [SmartShape Wizard](#), you can quickly add smart formulas to [ShapeSheet](#) cells that change the default text behavior for a shape. For example, you can

- Change the text position in relation to the shape and add a text-block control handle that you can drag to reposition the text.
- Determine whether or not a shape's font size changes along with the shape size.
- Set the way you want text to behave when the shape is rotated.

The SmartShape Wizard can also guide you through changing other aspects of a shape, such as creating built-in connectors or a hidden note.

NOTE To make more significant and detailed changes to a shape's behavior, such as adding a shortcut menu to a shape, use the ShapeSheet spreadsheet instead of the SmartShape Wizard.


Adding control handles that move text

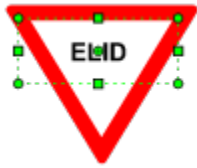
[How To](#)

[Related Topics](#)

With the SmartShape Wizard, you can reposition a text block with respect to its shape, and you can add a control handle that you or others can use later to move the text block independently of the shape.

When you use the wizard to reposition the text block, you choose from a limited number of new positions, such as directly above or below the shape. When you use the control handle to drag the text block to a new position, you can choose any position you want.

NOTE You can also use the text block tool () to move a text block independently of its shape.



You can choose a new placement for the text that enhances the usefulness of the shape.

To reposition text and add a text-block control handle:

1. Choose Tools > Macro > Visio Extras > SmartShape Wizard.
2. In the main wizard screen, check Customize Shape's Text, then click Change Option.
3. In the SmartShape Wizard Text Position screen, click the position you want for the text block, and select Add Control Handle To Shape.
4. Click Next until the main wizard screen appears, then click Finish.

■ Overview

Setting text-rotation behavior

[How To](#)

[Related Topics](#)

With the [SmartShape Wizard](#), you can determine how a [text block](#) behaves when you rotate it. For example, when rotated, the text can

- Rotate with the shape.
- Stay level and upright regardless of how its shape is rotated.
- Rotate with the shape, but flip in certain circumstances to ensure the text is never upside down.



Using the SmartShape Wizard, you have a number of options for the rotation behavior of text. For example, you set the text to rotate with the shape, but never be upside down.

To determine how text is rotated when the shape is rotated:

1. Choose Tools > Macro > Visio Extras > SmartShape Wizard.
2. In the main wizard screen, check Customize Shape's Text, then click Change Option.
3. In the Text Position screen, click next, then select the rotation behavior option you want.
4. Click Next until the main wizard screen appears, then click Finish.

■ Overview

Setting text to resize with shapes

[How To](#)

[Related Topics](#)

With the [SmartShape Wizard](#), you can determine whether the font size of text changes or stays the same when you change the size of its shape.



Certain shapes, such as those that model objects in the real world, should contain text that automatically resizes when the shape is resized.

To set a shape's text to change when the shape is sized:

1. Choose Tools > Macro > Visio Extras > SmartShape Wizard.
2. In the main wizard screen, check Customize Shape's Text, click Change Option, then click Next until the SmartShape Wizard - Text Size screen appears.
3. Select the text sizing option you want.
4. Click Next until the main wizard screen appears, then click Finish.

■ Overview

Visio wizards and other tools

[Related Topics](#)

Wizards and other automated tools in Visio create special drawing types from scratch, automate routine tasks, and perform unique functions.

When you open certain templates, such as the Project Timeline Wizard Template, a wizard that you can use to create the drawing starts automatically. When you open other templates, Visio adds a command you can choose to start a wizard to the top of the Tools menu. For example, when you open the Organization Chart Template, Visio adds a command so that you can choose Tools > Organization Chart Wizard.

Regardless of the template you start with, you can run any wizard or automated tool by choosing Tools > Macro > Macros, or in some cases by choosing it from the Tools menu.

TIP You can display background information about certain wizard screens by clicking the More Info button onscreen.

Visio wizards

Wizard	What it does	How you run it
Build Region	Assembles selected geographic shapes into a region.	Tools > Macro > Maps > Build Region
Chart Shape Wizard	Creates stackable and extendable shapes you can use to add special effects to charts.	Tools > Macro > Business Diagram > Chart Shape Wizard
Custom Properties Editor	Edits, adds, or deletes custom property fields from master shapes.	Tools > Macro > Custom Properties Editor
Database Export	Generates a database table that reflects the data in custom property and other ShapeSheet cells.	Tools > Macro > Database > Database Export
Database Wizard	Links Visio shapes and drawings to databases created in ODBC-compliant database programs. After establishing links, you can pass information between a drawing and	Tools > Macro > Database > Database Wizard


database, create drawings that represent database tables, and generate new master shapes that represent data stored in database records.

<u>Export [data]</u>	Exports an inventory report based on shape properties. The Export [data] command is available in the network diagram, office layout, and organization chart templates.	Tools > <u>Export [data]</u>
<u>Flowchart-TQM Diagram Wizard</u>	Guides you through the process of laying out and formatting a Cause/Effect, Force Field, Top Down, or Cross Functional (Rummler-Brache) diagram.	Tools > Macro > Flowchart > Flowchart-TQM Diagram Wizard
<u>Office Layout Wizard</u>	Guides you through the process of setting the drawing scale, choosing the page size and orientation, and creating the basic wall structure for an office layout diagram.	Tools > Macro > Business Diagram > Office Layout Wizard
<u>Organization Chart Wizard</u>	Generates an organization chart from a data file in Microsoft Excel (.xls), Org Plus (.txt), or comma or tab-delimited text (.txt) format, or from a database table created in an ODBC-compliant program. Or, generates a basic organization chart structure into which you can add data.	Tools > Macro > Business Diagram > <u>Organization Chart Wizard</u>
<u>Page Layout Wizard</u>	Automates setting up the drawing-page size, orientation, and scale. Assists you in	Tools > Macro > Visio Extras >

	adding a title block and border to the pages in a new or existing drawing.	<u>Page Layout Wizard</u>
Print ShapeSheet	Opens the Print ShapeSheet dialog box, where you can choose which sections of the <u>ShapeSheet</u> to print and whether to print the ShapeSheet to a printer, the Clipboard, or a file.	Tools > Macro > Visio Extras > Print ShapeSheet
<u>Project Timeline Wizard</u>	Generates a project timeline from a data file in Microsoft Excel (.xls), comma- or tab-delimited text, or Microsoft Project Exchange (.mpx) format. Or, generates a project timeline structure into which you can enter data.	Tools > Macro > Business Diagram > <u>Project Timeline Wizard</u>
<u>Property Reporting Wizard</u>	Generates inventory reports, such as bills of materials or equipment and furniture inventories; and numeric reports, such as cost totals or averages, from data stored in shapes.	Tools > <u>Property Report</u>
<u>Shape Explorer</u>	Locates specific shapes and stencils in Visio products. You can open stencils and templates from within Shape Explorer.	Tools > Macro > <u>Shape Explorer</u>
<u>SmartShape Wizard</u>	Customizes the appearance or behavior of a selected shape's text, connectors, notes, or protection.	Tools > Macro > Visio Extras > <u>SmartShape Wizard</u>
Stencil Report Wizard	Generates a Visio drawing of the masters on a selected stencil.	Tools > Macro > Visio Extras > <u>Stencil Report</u>

Wizard

Saving drawings with hyperlinks as server-side image maps

 [How To](#)

 [Related Topics](#)

By default, when you save drawings with navigational links as HTML pages, Visio converts the drawing into a [client-side image map](#). In server-side image maps, a program on the Web server examines map data associated with the linked regions and processes the links. If you know that your server is set up to support server-side image maps, you can save your drawings that include navigational links in this way.

When you save Visio drawings as HTML files, Visio saves the .htm, graphics and map (.map) files in the folder that you specify in the [Save As HTML](#) dialog box. You must move the .map files from this local folder to the CGI (Common Gateway Interface) directory on the Web server for links on the server-side image maps to work.


To save a drawing as a server-side image map:

1. In Visio, create or open the drawing you want to export.
2. Choose File menu > Save As.
3. In the Save As dialog box, type a name using the .htm extension (for example, Drawing.htm).
4. For Save As Type, choose HTML files (*.htm, *.html), then click Save.
5. In the Save As HTML dialog box, choose the location where you want to save the file, the graphics format, and the drawing pages you want the HTML file to include, then click Options.
6. In the Export Options dialog box, choose Server Side, type the URL to the CGI directory on the Web server, choose the format you want, then click OK twice.
7. Visio prompts you to view the HTML pages. Click Yes to open your Web browser and view the first HTML page.

NOTE Hyperlinks in the image map won't be active until you move the .map files from your local folder to the CGI folder on the Web server.

 [_Overview](#)

Customizing HTML pages

 [How To](#)

 [Related Topics](#)

In the process of saving a drawing as HTML pages, Visio creates several files and saves them in the location you specify. The files include:

- An HTML file for each exported page (Page1.htm, Page2.htm, and so on).
- A graphics file for the Visio drawing on each page (Page1.jpg or Page2.gif).
- Graphics files for the Next and Back buttons Visio adds to each HTML page (Back.gif and Next.gif).
- Image map files, if you save your drawing as a server-side image map (Page1.map, and so on).

You can customize the HTML files by opening them in Notepad or any other HTML editor. If you modify or move the .htm files, remember to update pointers to the graphics files.

Substitution codes for customizing the Save As HTML template

The following table describes the substitution codes you can include in the template and the information the codes are replaced by when you save a Visio drawing in HTML format. Some of the information comes from the Visio Properties dialog box. The first time you save a file, Visio opens the Properties dialog box and you can type information, such as keywords or a description, that help you identify and locate the file in the future. You can access the dialog box at any time by choosing File > [Properties](#).

Substitution Codes

Code	Replaced by
<!--CREATOR-->	Creator in the Visio File Properties dialog box.
<!--DESCRIPTION-->	The description listed in the Visio Properties dialog box.
<!--FULL_NAME-->	Full Visio drawing file name, including drive and path.
<!--KEYWORDS-->	Keywords in the Visio File Properties dialog box.
<!--SUBJECT-->	The subject listed in the Visio File Properties dialog box.
<!--TITLE-->	The title listed in the Visio File Properties dialog box.
<!--x-->	x can be Category, Company, Manager, or Hyperlink_Base.
<!--PAGE_NAME-->	Name of the Visio page to be saved in HTML format (Page-1, etc.).
<!--IMAGE-->	The Tag for the page's Visio graphic (for example, tag, where Page2.GIF is the Visio drawing on page-2 saved in .gif format).
<!--NEXT_PAGE_BTN-->	 Tag for a Next button graphic.
<!--BACK_PAGE_BTN-->	 Tag for a Back button graphic.
<!--NEXT_ANCHOR-->	Anchor <A > Tag to make the Next button a navigational link to the next page.
<!--BACK_ANCHOR-->	Anchor <A > Tag to make the Back button a navigational link to the previous page.
<!--NEXT_ANCHOR-->	Ending anchor Tag for the Next button.

R_END >	
<!-- BACK_ANCHO R_END >	Ending anchor Tag for the Back button.
<!-- FILE_NAME-- >	Visio drawing file name.
<!-- FILE_PATH-- >	Visio drawing file path.
<!-- PAGE_INDEX-- >	Page number relative to other pages in the Visio drawing.
<!-- PAGE_COUNT-- ->	Total number of pages in the Visio drawing.
<!-- HTML_PAGE_I NDEX-- >	HTML page number relative to other HTML pages.
<!-- HTML_PAGE_C OUNT-- >	Total number of HTML pages.
<!-- CS_IMAGE_MA P-- >	If any of the shapes in your Visio drawing include navigational links to other pages, files, or URLs, and you have enabled client-side image mapping, map data about links replaces this code on the HTML page. This map data tells your Web browser which regions of the graphic have links, the URLs the regions are linked to, and more.

Zooming in on or out from pages

[Related Topics](#)

In Visio, the magnification at which you view and work on a drawing is independent of the scale you set for a drawing page. To position shapes exactly or do precise work, you may need to zoom in on a portion of a drawing—especially if you're working with a scaled drawing.

You can zoom in and out from a drawing by using the [Zoom](#) tool on the Standard toolbar, or you can use the shortcuts listed here:

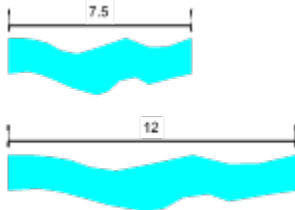
- Zoom in: Ctrl+Shift+left-click
- Zoom out: Ctrl+Shift+right-click
- Zoom in on a selected area: Hold down Ctrl+Shift+left-mouse button and drag a rectangle around the area you want to zoom in on.
- Scroll: Hold down Ctrl+Shift+right-mouse button and drag the page.

TIP You can also choose [Last Zoom](#), [Actual Size](#), [Page Width](#), [Whole Page](#), or [Full Screen](#) from the View menu.

Using dimension lines to display shape size

- [How To](#)
- [Related Topics](#)

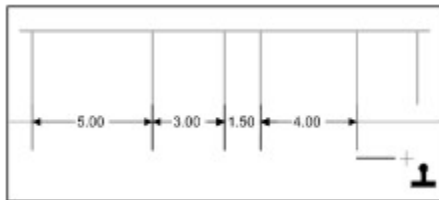
When you select a shape, its dimensions appear on the left side of the status bar, which is at the bottom of the Visio window, and change as you resize the shape. Sometimes, though, you want dimension information to appear in your drawing.



Dimension lines show the dimensions of a shape in drawing units, rather than page units. For example, this shape is shown in meters, while a football field might be shown in yards, or a civil engineering plan in kilometers.

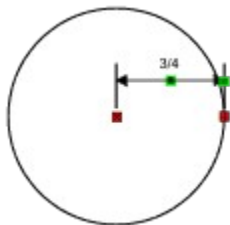
Depending on which Visio product you're using, you may have one or more dimension line masters that calculate and display linear and angled dimensions. You can glue one of these dimension lines to another shape so that, when you resize the shape, dimensions are calculated automatically.

You can also use dimension lines to ensure that several distances total a certain length. To measure a series of distances, form dimension lines into a chain.



Draw a chain of dimension lines with the stamp tool.


You can change how dimension values appear on dimension line shapes by choosing the unit of measure, fractional or decimal values, and the precision of decimal values. The unit of measure for a dimension line can differ from the unit set for the drawing scale.



You can use a dimension line to measure the radius of a circle by gluing the line's endpoints to the center and perimeter of the circle. To make the measurement easy to read, you can move, rotate, and format the line's text block.

To glue a dimension line to a shape handle:

1. Choose Tools > Snap & Glue.
2. Under Currently Active, check Glue.
3. Under Glue To, check Shape Handles.
4. Under Snap & Glue Strength, drag the box along the Points slider bar to increase or decrease the strength of the glue, then click OK.
5. Drag a dimension line shape from the stencil to the drawing page and glue its endpoints to selection handles on the shape you want to measure.

 Overview

To form dimension lines in a chain:

1. Open the Callouts stencil and a drawing page.
2. If you want, place guides on the page to mark off a series of distances.
3. Choose the stamp tool (■) from the Standard toolbar.
4. On the Callouts stencil, click the Automatic Dimension shape.
5. Click the page where you want the first dimension line to start (at the first guide), then drag to extend the dimension line to the second guide.
6. Press the Esc key to deselect the dimension line.
7. Position the stamp tool on the second guide and drag to the third guide.
8. Repeat steps 6 and 7 for subsequent dimension lines until all the dimension lines in the series are on the page.


■ Overview

To change the format of dimension line values:

1. Select the dimension line shape, then choose Insert > Field.
2. Under Format, choose the units you want displayed, then click OK.

■ Overview

Calculating and displaying shape dimensions

 [How To](#)

 [Related Topics](#)

If you want specifications to appear in shapes in a drawing, you can add text fields that display a shape's geometry. A field is a placeholder in text that displays information such as a date, time, or measurement. A text block can contain as many fields as you want. You can use fields from existing categories or create your own formulas for fields, and you can format or delete fields just as you format or delete other text.

After you've added a dimension field, when you resize or rotate a shape, Visio automatically calculates and displays a new height, width, angle, or rotation. For example, you can add a rotation-angle dimension field to a shape so that, when you rotate the shape, the field displays the rotation angle in positive or negative numbers.

NOTE When you cut or copy a field and then paste it, the pasted text is no longer a field. The field text becomes static.

To add height and width dimension fields to a shape:

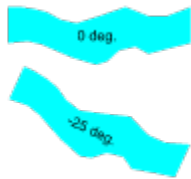
1. Choose the text tool (■) from the Standard toolbar, then select the shape to which you want to add dimensions and place the insertion point where you want to display the field.
2. Choose Insert > Field, then
Under Category, choose Geometry.
Under Field, choose Width.
Under Format, choose the format in which you want the field information to appear.
3. Click OK.
4. Place the insertion point after the width number and type "x" or "by".
5. Follow steps 2 through 4 above, but choose Height instead of Width.
6. Choose the pointer tool, then resize the shape.
The dimensions change automatically.

■ Overview


To add a rotation-angle field to a shape:

1. Select the text tool (A) from the Standard toolbar, then select the shape to which you want to add a rotation-angle field and place the insertion point where you want to display the field.
2. Choose Insert > Field, then
Under Category, choose Geometry.
Under Field, choose Angle.
Under Format, choose the format in which you want the field information to appear, then click OK.

TIP If you display the angle in degrees, you can add the degree symbol (for example, 30°) instead of displaying the label "deg." To display the degree symbol instead of text, in step 2 of the procedure above, choose General under Format, then click OK. Make sure the NumLock key is turned on, then press Alt+0176.



As you rotate a shape, its rotation-angle field records the angle of rotation in positive or negative numbers.

 [Overview](#)

Revising master shape icons

 [How To](#)

 [Related Topics](#)

When you create a master, Visio creates an icon that resembles it on the stencil. You can revise the existing icon in two ways. You can use the Master > Properties command to change the icon's size, text, and status bar prompt. Or you can use the icon editing window to change the shape and colors of the icon itself.

It's important to check the properties of an icon before you begin revising it in the icon editing window. First, the size of the icon determines the size of the area that you can use to create the icon in the edit icon window. Second, the update option controls how Visio updates the master shape icon. If you are creating a custom icon, choose Manual as the update option so you don't accidentally replace the custom icon when you edit the master shape.

Changing the stencil icon in the icon editing window doesn't affect how the actual shape looks. To edit and format the master shape you need to open it in the master drawing window.

After you've ensured that the properties of a shape are set the way you want them, you can open the master icon in the icon editing window and change its shape and colors. The icon editing window is bitmap-based, meaning that instead of working with segments and vertices, you change the icon pixel by pixel.

To change the properties of a master icon:

1. Open the stencil that contains the master you want to change, then click in the stencil window to make it active.

Make sure to open the stencil as an original or a copy.

2. Select the master icon, then choose Master > Properties.
3. In the Master Name section, type or change the name for the master and choose an option to align the master name.

4. In the Icon section, choose an option for the icon size.

The default size is Normal. You can also choose Tall, Wide, or Double.

5. In the Icon section, choose an option to update the master icon.

Choose Automatic to have the icon automatically reflect changes you make to the master shape it represents. Choose Manual to update the icon with the Update Icon command.

If you plan to create a custom icon for the master shape, choose Manual, so you won't accidentally replace the custom icon when you edit the master shape.

6. In the Prompt section, type information that will appear on the status bar when you point to the master shape icon.
7. Check Match Master By Name On Drop to preserve the formatting you've applied to the stencil's master shapes.
8. Click OK.
9. Choose File > Save to save the changes to the stencil.

■ Overview

To edit a master icon in the icon editing window:

1. Open the stencil that contains the master you want to change, then click in the stencil window to make it active.

Make sure to open the stencil as an original or a copy.

2. Select the master icon, then choose Master > Edit Icon.

The icon editing window opens, and the icon appears in the window. The icon editing tools appear on the toolbar.

3. Use the tools to change the colors and shape of the icon.
4. After you've edited the icon, click the close box to close the editing window. When Visio prompts you to save the changes to the stencil, click Yes to accept them or No to close the window without saving the changes.

NOTE You cannot cancel changes you make to an icon after you close the edit icon window. However, you can use the Undo command to undo changes to the icon while the edit icon window is still open.

■ Overview

To change the colors of a master icon:

1. In the icon editing window, choose the pencil tool to change the color one pixel at a time. Choose the fill color tool to change an area of color.
2. In the color palette, point to the color you want to use.
3. Click the color with the left or right mouse button.

The color appears in the Left Color box or the Right Color box on the toolbar.

4. Point to the pixel you want to change and click with the mouse button that is assigned the color you want.

If you're using the pencil tool, only the pixel you click on will change color.

If you're using the fill color tool, all of the pixels contiguous to the pixel you clicked will change color.

TIP To create icons that appear to have holes cut in them, use the stencil background color.

■ [_Overview](#)

To move or delete part of a master icon:


1. In the icon editing window, choose the lasso tool or selection net tool.
2. Select the area you want to move or delete.
3. To move the selection, drag it to where you want it. To delete the selection, choose Edit > Clear or press the Delete key.

The area from which the icon part was moved or deleted is replaced with the stencil background color.

■ Overview

Quitting Visio

 [How To](#)

 [Related Topics](#)

When you finish working in Visio, quit Visio before you quit Windows. If an unsaved file is open when you choose to quit Visio, Visio prompts you to save the file before quitting.

To quit Visio:


1. Choose File > Exit.


Or click the close box to close the main Visio window.

2. If an unsaved file is open when you quit Visio, Visio prompts you to save the file before quitting. Click Yes to save changes and then quit; click No to quit Visio without saving changes; or click Cancel to continue working in Visio.

■ Overview

Opening existing drawings

 [How To](#)

 [Related Topics](#)

You can open existing Visio drawing (*.vsd) files to edit them. When you select a file name in the [Open](#) dialog box, information about the file appears, which allows you to identify the drawing you want to open.

You can choose whether to open the original file, a copy, or a read-only version that you can't edit.

To open an existing drawing file:

- Choose File > Open, choose the drawing you want to open, then click Open.

■ Overview

Saving workspace (*.vsw) files

■ [How To](#)

■ [Related Topics](#)

If you like to have two or more drawing files open at a time, as well as multiple stencils, you can save all the open files as a workspace (*.vsw) file. Then, when you open the workspace file, all of the drawings and stencils you had open will be intact. Workspace files contain only pointers to all of the files you have open, so you still need to save your drawing as a drawing (*.vsd) file.

To save a workspace file:

1. Save the files you have edited.
2. Choose File > Save Workspace.
3. For File Name, type a name for the workspace file.
4. In the Save In box, choose the folder in which you want to save the file.
5. Click Save.

■ Overview

Saving a Visio 5.0 file as an earlier version


[Related Topics](#)


You can save Visio 5.0 drawings in Visio 4.x formats so that you can share files with others who have the earlier version of Visio. If you save a Visio 5.0 file in a Visio 4.x format, the file will lose information that the earlier version does not support.

If you save a Visio 5.0 file in a Visio 4.x format:

- Some SmartShapes won't be as "smart." For example, if you've associated actions or events with any of the new marketing shapes, they will be lost.
- Dynamic connectors become universal connectors.
- Any named connections you've created are lost.
- Hyperlinks are lost.
- Email routing lists are lost.
- ActiveX controls won't function as expected.
- Custom patterns convert to a solid pattern.
- Custom line ends convert to a line end of None.
- Rotated Guides are no longer rotated and all associated glue is lost.

Typing special characters

 [How To](#)

 [Related Topics](#)


You can insert ANSI characters into text. The ANSI character set consists of 256 characters established by the American National Standards Institute. How ANSI characters look onscreen depends on which font you are using.

To type ANSI characters:

1. Make sure you have NumLock on.
2. Hold down the Alt key. Using the keys on the numeric keypad, type 0, then the ANSI code for the character you want. For example, to type an em dash (–), press Alt + 0151.

■ [_Overview](#)

Checking spelling

 [How To](#)

 [Related Topics](#)

You can check the spelling of any text in a drawing. When you check spelling, Visio searches all shapes, including text-only shapes and data fields. You can specify whether Visio searches an entire drawing, a particular page, or selected text only.

If you use industry or company words that aren't in a standard dictionary, you can create a user dictionary that includes these words. Then, when Visio checks your spelling, it will be able to check the spelling of those words against the spelling you set. You can even create different user dictionaries for different purposes and activate each as you need it.

To check spelling in a drawing:

1. Choose Tools > Spelling, click the spelling tool (🔍), or press F7.

If Visio encounters any words not found in its dictionary, it displays the Spelling dialog box. Click Options to ensure that the spelling options are set the way you want.

2. When Visio has finished checking spelling (or if it doesn't find any misspelled words), a message box appears indicating that it has finished checking. Click OK.

TIP To set spelling checker defaults, choose Tools > Options, then click the Spelling tab and set the options you want.

■ Overview

To create a user dictionary and make it active:

1. Choose Tools > Options. In the Options dialog box, click the Spelling tab.
2. Under User Dictionaries, click Add.
3. In the Add User Dictionary dialog box, under File Name, type a name for the dictionary, then click Open.
4. Click OK.

To make an existing dictionary active:

1. Choose Tools > Options. In the Options dialog box, click the Spelling tab.
2. Under User Dictionaries, click add, select the dictionary you want to make active, then click Open.
3. Click OK.


To make a user dictionary inactive:


1. Choose Tools > Options. In the Options dialog box, click the Spelling tab.
2. Under User Dictionaries, choose the dictionary you want to make inactive, then click Remove. This doesn't delete the file, but keeps it from appearing in the Add Word To list in the Spelling dialog box. You can make the dictionary active at another time.
3. Click OK.

NOTE If you're using the Visio dictionary, user dictionaries are stored in the Visio\System\Spelling folder. If you're using a Microsoft Word dictionary and Windows, see your Word documentation to find where dictionaries are stored.

■ [_Overview](#)

Finding and replacing text

 [How To](#)

 [Related Topics](#)

You can search for text or replace specified text with another word or phrase. When you search for text, Visio searches all shapes, including text-only shapes and data fields. You can specify whether Visio searches an entire drawing, a particular shape, or selected text only.

To search for a word or phrase:

1. Choose Edit > Find to open the Find dialog box.
2. Type a word or phrase you want to find or click Special to specify a special character, such as a tab or caret.
3. Choose the search and match options you want, then click Find Next.
4. Click the Close button to close the Find dialog box to edit the word or phrase, or click Find Next to find its next occurrence.

■ Overview

To replace a word or phrase:

1. Choose Edit > Replace to open the Replace dialog box.
2. Type the word or phrase you want to replace or click Special to specify a special character, such as a tab or caret.
3. Choose the search and match options you want, then click Find Next or Replace All (to replace all instances of the word or phrase).
4. When Visio has finished replacing text, a message box appears. Click OK, then click the Close button to close the Replace dialog box.

NOTE In international English versions of Visio, you can also specify whether you want to search for double-wide characters, single-wide characters, or both.

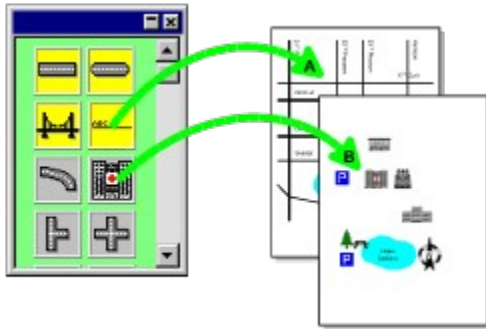
 [_Overview](#)

Modifying layer assignments for masters

- [How To](#)
- [Related Topics](#)

If you create multiple drawings that use the same layers, the most efficient way to assign shapes to layers is to assign the masters on your stencils to layers first. When you create an instance in your drawing, the instance inherits the master's layer assignment, and the layer is automatically added to the page. You can also change the layer assignments for masters that have pre-defined layers.

Assigning masters to layers works particularly well if you have standard categories to which groups of shapes belong, such as roads, signs, water, and buildings in a directional map diagram or wall, fixtures, and dimensions in a space plan.



Assign masters to layers so that when you drop the shapes on the page, they automatically appear on the correct layer.

- A** The Thin road master is assigned to the Streets layer.
- B** The Hospital and other building masters are assigned to the Landmarks layer.


You can edit an existing stencil and modify the layer assignments of its masters. You must open the stencil as an original file to do this. If you have already created a drawing, you can edit the masters on the drawing's local stencil, then save it as a new stencil for the next time you need to create a drawing using those shapes.

To create or modify master layer assignments:

1. To modify an existing stencil, choose File > Stencils > Open Stencil, select the stencil you want, click Original, then click OK. To modify a drawing's local stencil, choose Window > Show Master Shapes.
2. Click the stencil's title bar to activate the window, then double-click a master to open it in the master drawing window.
3. Select the master.
4. If the master is already assigned to a layer that you want to rename, Choose View > Layer Properties.
In the Layer Properties dialog box, choose the layer you want to rename, then click Rename. Type a new name for the layer, then click OK. Click OK in the Layer Properties dialog box.
5. Choose View > Shape Layer.
6. Choose the layer to which you want to add the shape, click OK, then close the master drawing window. When Visio prompts you to update the master, click Yes.

■ Overview

Protecting drawing-file attributes

 [How To](#)

 [Related Topics](#)

You can protect certain attributes in a drawing file so they can't be changed. Others can open the file to look at the drawings, but they cannot edit the attributes you protect. If you want to allow certain people to make changes, you can set a password.

For example, you can

- Protect a background containing a company logo so people can edit shapes on the drawing page without inadvertently changing the logo.
- Password-protect a drawing file's styles so only specific people can change the way standard shapes look.
- Protect a file's shapes or master shapes so people can add to the drawing, but not change the existing shapes or masters.

NOTE Protecting a drawing file's attributes applies protection to all shapes in the file. To protect individual shapes, use the [Protection](#) command.

To protect a file:

1. Choose Tools > Protect Document.

2. Check the items that you want to protect.

If you want specific people to be able to bypass the protection settings, type a password. The password is not visible after you close the dialog box, so be sure to memorize it or write it down.

3. Click OK.

■ Overview

To remove protection from a file:

- If you've used a password to protect the file, choose Tools > Unprotect Document, type the password, then click OK. All options you protected will be unprotected.
- If you haven't used a password to protect the file, choose Tools > Protect Document. Uncheck the items from which you want to remove protection, then click OK.

■ Overview

About working with color

[Related Topics](#)

When you apply color to a line, fill, shadow, or text, it helps to understand how the results are affected by the way color works in Visio.

Colors are opaque

All colors in Visio, including white, are opaque both in print and onscreen. For example, if you apply a solid white to a rectangle, you cannot see what's underneath the rectangle. To make a line or fill transparent, you must apply a pattern of None to it. (Because you cannot apply a pattern to text, you cannot make text transparent.)

Screen resolution affects display of color

The number of colors your display driver supports affects how colors display when you apply them to different kinds of elements in a Visio drawing.

When you apply a color to lines, text, or bitmap-pattern fills and shadows, Visio uses the color that is the closest match available to the specified color. For example, with a 16-color display, orange is mapped to yellow. If your display driver supports 256 colors or more, the match is likely to be exact, meaning orange is mapped to orange.

When you apply a color to a solid- or gradient-pattern fill or to a shadow, Visio dithers any color that is not one of the eight standard colors to approximate the specified color. For example, on a 16-color display, orange is dithered. If your display driver supports 256 colors or more, colors may not need to be dithered.

Visio shows both the closest-matching solid color and the dithered approximation in each color swatch in its palette or list. The dithered color is the left half of the swatch and the solid color is the right half. On high resolution monitors, there may not be any difference between the two.

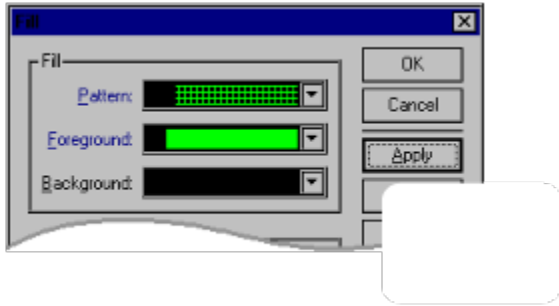
Working with foreground and background colors

For fills and shadows, you can specify a foreground color and a background color.

- For the solid pattern, Visio uses the foreground color and ignores the background color.
- For bitmap patterns, Visio applies the foreground color to the dots and lines that make up the pattern and the background color to the background.
- For gradient patterns, Visio graduates from one color to the other.



Because a solid pattern fill is applied to this rectangle, the foreground color is used for the fill.



When you change the fill to a bitmap pattern, the foreground color is used for the pattern, and the background color is used for the background.


About custom colors

Related Topics

The difference between a custom color and a color on the color palette is that a custom color is tied to the shapes to which it is applied. If you remove all of those shapes from the drawing and then save the drawing, the custom color is removed from the color lists in the dialog boxes. That's because custom color values are defined absolutely in each shape's ShapeSheet spreadsheet. For example, if you create a custom orange for a rectangle, the ShapeSheet spreadsheet for that shape lists the color as RGB(255,128,0). Until that formula is changed, the shape will be orange no matter where you take it. When you delete the shape, its ShapeSheet spreadsheet is also deleted.

In contrast, a color on the color palette is tied to the color palette. Even if you have no shapes in the drawing, the 24 palette colors remain. For example, if you change the blue in the default color palette to orange, but don't apply it to any shape, the orange still exists when you save the drawing. If you apply the color to a shape, it is defined in the ShapeSheet spreadsheet by its position on the color palette. For example, in the default color palette, blue is number 4, which is what would be listed in the ShapeSheet spreadsheet for color. If you change the color in the color palette to orange, it's still number 4, so every shape that was blue becomes orange. And if you paste the shape into a drawing in which color number 4 is red, the shape becomes red.

Using custom colors and color palettes

 [How To](#)

 [Related Topics](#)

When you assign colors to fills, lines, or text in Visio using toolbar palettes or commands on the Format menu, you have a limited number of color choices. However, you can assign custom colors to shapes or modify an existing color in the active drawing file's color palette. You can also use a different color palette by choosing one Visio provides (such as the Excel Chart Color Palette), or by copying one from another Visio drawing file.

Each drawing file contains its own color palette—in other words, palettes are not standalone files. If you have a palette file that you use regularly in other programs, recreate it in a blank Visio drawing file and then save it. You can then copy that color palette into any drawing you create.

To create a custom fill, line, or text color, you can add a new color or edit an existing color in the color palette. If shapes in the file are formatted with a color that you edit, the shapes' formatting changes to the new color. Colors you define or edit appear in the color lists in the Fill, Text, and Line dialog boxes.

To create and assign a custom color in a color list:

1. Select a shape, then choose Text, Line, Fill, or Shadow from the Format menu.
2. In the Text or Line dialog box, choose Custom from the Color list. In the Fill or Shadow dialog box, choose Custom from the Foreground or Background color list.
3. In the Color dialog box, specify the color you want, then click Add To Custom Colors.
4. Click OK.

The color appears in the color list. It will also appear in the color lists in the other formatting dialog boxes, but will not appear in the Color Palette dialog box.

NOTE If you delete all shapes to which a custom list color is applied and then save the drawing, Visio removes the custom color from the color lists.

■ Overview

To modify colors in the color palette:

1. Choose Tools > Color Palette.

2. From the list of colors, click the color you want to change.

It's best not to edit colors 0 (black) and 1 (white). Changing these colors will affect many areas of the drawing, including those you may not want to change.

3. Click Edit.

The Color dialog box appears.

4. In the Color dialog box, choose one of the basic colors or define a custom color.

5. Click OK.

The new color appears in the Visio color palette.

6. In the Color Palette dialog box, click OK.

In addition to appearing in the color palette, the modified color appears on the color list in the Text, Line, Fill, or Shadow dialog boxes.

Any shapes colored with the original color take on the modified color.

For details about editing colors, see your Windows documentation.

■ Overview

To choose a different color palette for a drawing file:

1. Choose Tools > Color Palette.
2. In the Copy Colors From list, choose one of the palettes provided with Visio.

The new colors show in the color palette.

3. Click OK.

■ Overview

To copy the color palette from another drawing file:


1. Open the file with the color palette you want to use.
2. Choose Tools > Color Palette
3. From the Copy Colors From list, choose one of the listed color palettes or a file name.


Choosing a file name copies the color palette for that file to the current drawing. Only the names of open files appear in the list.

4. Click OK.

■ Overview

Setting color behavior in custom line and fill patterns

 [How To](#)

 [Related Topics](#)

When you create a custom line or fill pattern, you can choose whether the pattern takes on the colors of the shape it's applied to, as the Visio patterns do, or whether the pattern's colors override the shape's colors.

To set a pattern to take on a shape's colors:

- For fills, make sure the foreground color for the shape on which the pattern is based is set to white and the background color to black. If you want only the foreground or background color to take on the shape's color, you only need to set that one. For example, if you want the foreground to always be red, but the background to take on the shape's color, set the foreground to red and the background to black.
- For lines, make sure the line color for the shape on which the pattern is based is set to black.

■ [_Overview](#)

To set a pattern to override a shape's colors:

- For fills, make sure the foreground color for the shape on which the pattern is based is set to a color other than white and that the background color is set to a color other than black. If you only want the foreground or background color to override the shape's color, you only need to set that one. For example, if you want the foreground to always be red, but the background to take on the shape's color, set the foreground to red and the background to black.
- For lines, make sure the line color for the shape on which the pattern is based is set to a color other than black.

■ [_Overview](#)

Converting a text file to a Visio drawing

[How To](#)

[Related Topics](#)

You can import text files in Comma Separated Variable (.csv) or Text (.txt) format into Visio. The Visio text file converter translates specific codes contained in the text file into a Visio drawing.

Text import record types

Each line in a text file you import is a record, and each record must conform to a record type by listing specific fields in a specific order.

The general syntax for records and fields is:

```
<record type, > <field,field,field,... >
```

For example:

```
Master, Logo, Pentagon, BASIC.VSS
```

In this example, "Master" is the record type, and "Logo," "Pentagon," and "BASIC.VSS" are fields.

NOTE The comma is the default field separator for .csv files. If you're creating a file in the .txt format, the default field separator is a tab.

If a field is optional, you can leave it blank. To leave a field empty, you type only the field separator (that is, comma or tab).

For example:

```
Master, , Pentagon, BASIC.VSS
```

The first field is left blank.

Available record types

[AvenueSize](#)

[BlockSize](#)

[Gridding](#)

[LineToLineClearance](#)

[Link](#)

[Master](#)

[NodeToLineClearance](#)

[PlacementStyle](#)

[Property](#)

[RoutingStyle](#)

[Shape](#)

[Template](#)

To import a text file:

1. Choose File > Open.
2. Under Files Of Type, choose Text Files (*.csv, *.txt).
3. In the Look In box, find the folder that contains the text file, select the file, and click Open.
4. In the Visio File Converter dialog box, choose the options you want.

Field Separator Select the character your text file uses to separate fields within records. The text import filter recognizes the comma, tab, or semi-colon as valid field separators.

Text Delimiter Select whether your text file uses single or double quotation marks to enclose text strings.

Comment Character Select the character that marks a comment line that the filter can ignore during the conversion process. Valid comment characters are: semi-colon (default), number sign (#), exclamation point (!), forward slash (/), or backward slash (\).

Merge Into Current Drawing Check this option if you want to incorporate the text file into an existing drawing. If you want Visio to start a new drawing file, leave this box unchecked.

5. When you're finished selecting options, click OK.

Visio converts the text file to a drawing.

NOTE If the text file's Shape records do not include position information, Visio uses the Lay Out Shapes command to place shapes automatically. However, if the drawing is not a connected diagram (such as a flowchart or network diagram), you may need to reposition shapes after the conversion process is complete.

 Overview

AvenueSize record type (text import)

 [_Related Topics](#)

Description Optional. Used to specify the width or height of avenues in the [Lay Out Shapes grid](#).

Usage Used by text import operations.

Fields:

Width	Width in inches.
Height	Height in inches.

BlockSize record type (text import)

 [_Related Topics](#)

Description Optional. Used to specify the block size of the [Lay Out Shapes grid](#).

Usage Used by text import operations.

Fields:

Width	Width in inches.
Height	Height in inches.

Gridding record type (text import)

 [_Related Topics](#)

Description Optional. Used to specify whether or not to turn on the [Lay Out Shapes grid](#).

Usage Used by text import operations.

Fields:

UseGrid	A Boolean (integer) value. Non-zero enables the grid; 0 disables it.
---------	--

LineToLineClearance record type (text import)

 [_Related Topics](#)

Description Optional. Used by the [Lay Out Shapes](#) command to specify the minimum distance between connectors.

Usage Used by text import operations.

Fields:

Horizontal	Horizontal space in inches.
Vertical	Vertical space in inches.

Link record type (text import)

■ [Related Topics](#)

Description Required. Works similarly to the Shape record type, but it is used for 1-D shapes (connectors) that connect two other shapes. It identifies the master used to draw the connector, and it contains shape text, connections, and custom property values.

TIP Use the Dynamic Connector shape because it connects shapes with dynamic glue, which allows Visio to reposition connectors as shapes move. Then those connectors connect the closest points between two shapes and do not cross through other shapes.

Usage Used by all text import operations.

Fields:

ShapeID	A shape identifier (a string). ShapeID must be unique within the drawing.
MasterName	Refers to the MasterName field defined in a <u>Master record</u> , which identifies the link master to use. If this field is empty, or if the master cannot be found, the link is created with the Layout Connector shape.
Text	The text you want to display in the connector's text block.
From	The ShapeID of the shape from which the link begins.
To	The ShapeID of the shape where the link ends.
Property <i>n</i>	0 or more custom property values.

Master record type (text import)

■ [Related Topics](#)

Description Required. Defines masters that can be referenced from Shape record types.

Usage Used to find masters that are referred to in Shape records.

NOTE The text import filter uses existing master shapes to determine how to draw a shape. If the text import filter cannot locate master information for a shape in the text import file, it draws a rectangle.

Fields:

MasterName	Optional. The name you assign to reference the master from the Shape and <u>Link records</u> . The MasterName must be unique within a drawing. You can choose any name—the MasterName field is not associated with the master's name on the stencil.
MasterID	The name of the master in the

Visio stencil. This is the name the text import filter uses to find the master. **NOTE** If this information is not included, the text import filter draws a rectangle for the shape.

StencilName The name of the Visio stencil (.vss) file that contains the master. The file path is optional. **NOTE** This field may be left blank if you include the Template record type and the master is on one of the template's stencils.

NodeToLineClearance record type (text import)

 [Related Topics](#)

Description Optional. Used by the [Lay Out Shapes](#) command to specify minimum distance between "nodes" (shapes) and connectors.

Usage Used by text import operations.

Fields:

Horizontal	Horizontal space in inches.
Vertical	Vertical space in inches.

PlacementStyle record type (text import)

 [Related Topics](#)

Description Optional. Used to define the layout style for the [Lay Out Shapes](#) command. If you do not include x- and y-coordinate information with [Shape records](#), the text import filter runs the Lay Out Shapes command automatically.

Usage Used by text import operations.

Fields:

Style	An integer corresponding to one of the styles listed in the Lay Out Shapes dialog box.
-------	--

- 0 Radial
- 1 Top to Bottom
- 2 Left to Right

Property record type (text import)

 [Related Topics](#)

Description Optional. Used to define or redefine custom properties for a [master](#) (or all masters). Note that this deletes and replaces any of the shape's existing custom properties.

Usage Used by text import operations.

Fields:

Master	The name of the master for which you want to define or redefine custom properties. If this field is blank, the custom property is assigned to all masters in the drawing. NOTE The Master name in this field is the same as the MasterName field you assign in Shape and Link records .
RowName	The name of the custom property row in the ShapeSheet spreadsheet. If left blank, Visio generates a generic name, such as "Row_1".
Label	The label that appears in the Custom Properties dialog box. This field may be left blank.
Prompt	The text that appears in the Prompt section of the Custom Properties dialog box when this property is selected.
Type	An integer that must be a valid custom property type. For a list of valid custom property types, see Type (Custom Properties section) .
Format	A string that is a valid custom property format string. For details about valid format strings, see FORMAT function .
Value	A default value for the custom property. The value can be a string or a number, but it must agree with the Type field. This field may be left blank.
Hidden	A Boolean (integer) value. Non-zero prevents the custom property from being displayed in the Custom Properties dialog box. Blank or zero allows the custom property to be displayed normally.
Ask	A Boolean (integer) value. Non-zero displays the Custom Properties dialog box when the shape is dropped on the page, to prompt the user to enter a value for the property. A blank field or

zero value does not display the
dialog box.

NOTE For details about Property fields, see [Custom Properties section](#).

RoutingStyle record type (text import)

 [_Related Topics](#)

Description Optional. Used to define the connector routing style for the [Lay Out Shapes](#) command.

Usage Used by text import operations.

Fields:

Style	An integer corresponding to one of the routing styles listed in the Lay Out Routing dialog box.
5	Flowchart
1	Right Angle

Shape record type (text import)

 [_Related Topics](#)

Description Required. Used for shapes that are not connectors. It identifies the master used to draw the shape, and it contains shape text, size and position data, and custom property values. (For connectors, see the [Link record type](#).)

Usage Used by all text import operations.

Fields:

ShapeID	A shape identifier (a string). ShapeID must be unique within the drawing.
MasterName	Refers to the MasterName field defined in a Master record that creates the shape. If this field is blank, or if the master cannot be found, the shape is drawn as a rectangle.
ShapeText	The text you want to display in the shape's text block.
ShapeX	The shape's x coordinate.
ShapeY	The shape's y coordinate. TIP If you don't want to calculate each shape's x and y position, leave the ShapeX and ShapeY fields blank. When these fields are empty, the text import filter runs the Lay Out Shapes command, which positions the shapes automatically.
Width	Width of shape. If this field is empty, Visio uses the default width for the master.
Height	Height of shape. If this field is

	empty, Visio uses the default height for the master.
Property <i>n</i>	0 or more custom property values.

Template record type

[_Related Topics](#)

Description Optional. Specifies a Visio [template](#) upon which the drawing is based. Each text file can contain only one template record.

Usage Used to establish defaults for drawing parameters such as page size, date formats, grid and ruler settings, and so on, when a new drawing is created.

Fields:

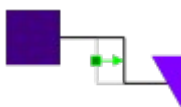
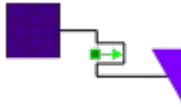


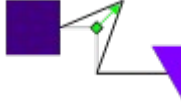
FileName	Name of a Visio template file (path optional).
----------	--

Manually editing routable connector paths

[_Related Topics](#)


You can move a [routable connector's](#) vertices and midpoints to change its path between the two shapes it connects. For example, if a connector runs through the space between two shapes, but you want to keep the shapes visibly associated with each other, you can create a "bridge" in the connector to route it around the other side of one of the shapes. You can also create connectors with diagonal segments—for example, for network diagrams.

Techniques for manually editing routable connector paths

To	Do This	Example
Move a connector line segment while maintaining the angles between it and the segments on each side of it	Drag a midpoint	
Create a new vertex in a connector	Shift+drag a midpoint	
Create a "bridge" in a line segment	Ctrl+drag a midpoint	
Move a vertex while maintaining angles of the line segments	Drag a vertex	
Reposition a vertex without maintaining angles of the line segments	Ctrl+drag a vertex	

NOTE Before you edit a routable connector, make sure it's connected to each shape the way you want. If you move one of its endpoints after editing it, it automatically reroutes with a new path.

Printing color drawings on monochrome printers

 [How To](#)

 [Related Topics](#)

When you print drawings on a monochrome printer, Visio translates the colors on the screen into gray tones on the printed page. White prints as no color and black prints as black.

Some printer drivers provide grayscale options. You can experiment with grayscale options to find which one works best.

To specify a grayscale option:

1. Choose File > Page Setup, then click Print Setup.
2. Click Printer, then click Properties.
3. In the Properties dialog box, set printing options that control the grayscale.

This dialog box is printer specific.

4. Click OK, then click OK again.
5. Click OK in both the Print Setup and Page Setup dialog boxes.

TIP For the best gray tones in a printed drawing, use the grays in the Visio default color palette. If you use patterned fills, try using a solid color for the fill background and a shade of gray for the foreground. These patterns print better than some other patterns.

■ Overview

Avoiding unexpected printing results

Related Topics

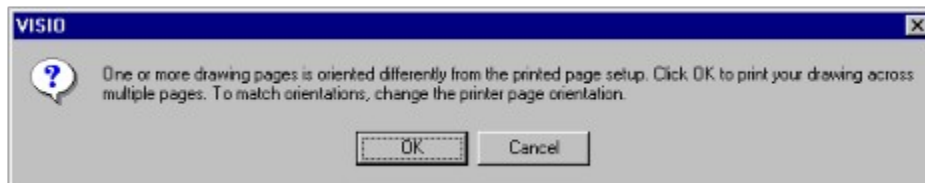
The best way to prevent unexpected printing results is to choose File > Print Preview to view the printed drawing before you print it. If the print preview doesn't look the way you expect, you can reposition shapes or adjust drawing settings to make sure it prints correctly.

Another way to avoid common unexpected printing results is by understanding the relationships between the drawing page, printed drawing, and printed page size.

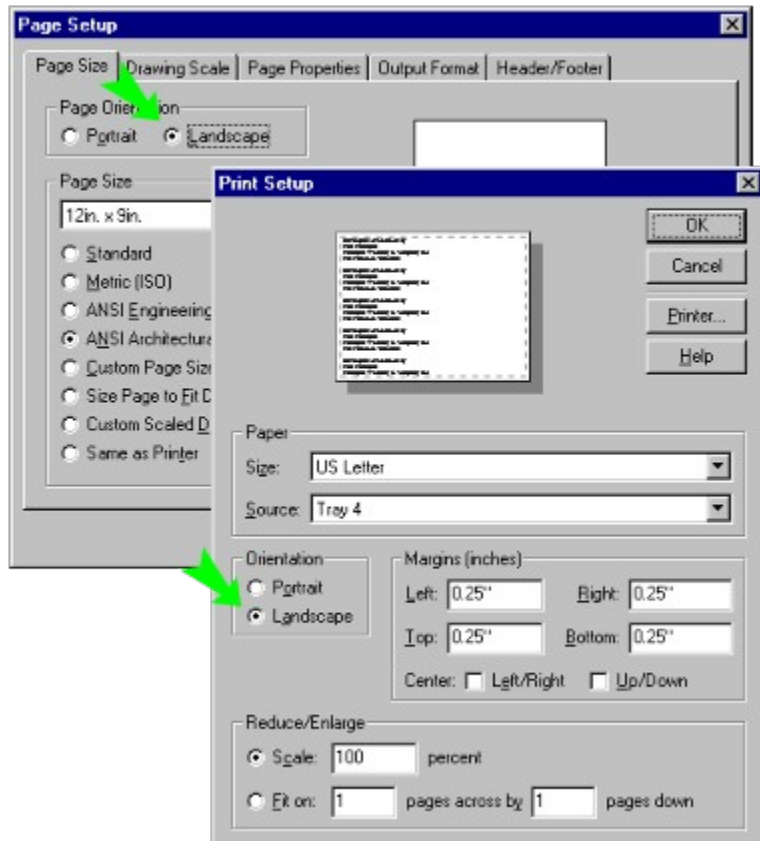
Below are some common problems that may occur when one of the three components isn't set to match the other two.

You can avoid some common, unexpected printing results by making sure drawing- and printed-page orientation settings are the same.

When the drawing page orientation is different from the printed page orientation. Sometimes, changing the orientation of the drawing page fits your drawing more appropriately. However, because Visio considers drawing- and printed-page orientation to be separate elements, if you change the drawing-page orientation but not the printed-page orientation, Visio displays an alert that tells you the drawing page is oriented differently than the printed page.



When you see this alert, you can click OK to continue printing. The drawing will require additional printed pages. Usually, though, a better alternative is to click Cancel, then open the File > Page Setup dialog box and change the printed page orientation to match the drawing page. That way the drawing prints the way it looks onscreen.



When changing margins or centering a drawing has no effect. The Print Setup dialog box includes settings for changing the margins or centering the drawing on the printed page. If the drawing-page size is not set properly, the printed drawing may not reflect changes in these settings.

To use the margin and centering settings in the Print Setup dialog box successfully, before you print the drawing, set the drawing-page size to Size Page To Fit Drawing in the Page Setup dialog box.

When enlarging a drawing causes unnecessary blank printed pages. In the Print Setup dialog box, you can choose to reduce or enlarge your drawing on the printed page. If your drawing is small, enlarging it can make it easier to see on the printed page. However, when you enlarge a drawing, Visio may print a number of blank pages in addition to the drawing.

To avoid this problem, before you print the drawing, set the drawing-page size to Size Page To Fit Drawing in the Page Setup dialog box.

When some shapes don't appear in printed drawings. If a shape doesn't appear in a printed drawing, the printer driver may have translated the color of the shape's line and fill as white.

To print the shapes:

- Change the color of the shape's line or fill to a darker color. The printer driver translates the color as a darker gray, so the shape appears in the printed drawing.
- Choose File > Print and, in the Print dialog box, check Color As Black. Visio converts the lines and fills of all shapes to black before sending them to the printer, so shapes are visible in the printed drawing. This is helpful if you can't determine which shapes are missing from the printed drawing.

Another reason why a shape doesn't print is that it's set as a non-printing shape. To find out if a shape is non-printing and set it to print, select the shape, then choose Format > Behavior. If the Non-Printing Shape box is checked, uncheck it, then click OK.

Controlling the border around embedded or linked Visio objects

■ [How To](#)

■ [Related Topics](#)

Sometimes when you embed or link an entire drawing, extra white space appears around the Visio object in the container program. These are the areas of the original Visio drawing page that don't have shapes, but are included when you use the [Copy Drawing](#) command.

However, sometimes when you embed or link selected shapes, there may not be enough white space around the Visio object in the container program. In either of these situations, you can easily define the amount of white space that appears around the Visio object.

To eliminate space around an embedded or linked drawing:

1. In the program from which you are linking the drawing, use the command to open the embedded or linked drawing in the full Visio window.

In Microsoft Office programs, this command is Edit > Visio Object > Open.

2. In Visio, choose File > Page Setup.

3. On the Page Size tab, select Size Page To Fit Drawing, then click OK.

The drawing page resizes to fit only the shapes. It may appear as though you zoomed in on the drawing.

4. Choose File > Exit And Return To <File name>.

■ Overview

To define a specific amount of white space around linked or embedded shapes:

1. In Visio, draw a rectangle that encloses the area you want to link or embed. Size and position the area to reflect the amount of space you want on each side of the drawing when it's linked or embedded.
2. Make the rectangle transparent by applying the fill style None to the rectangle, or move it behind the shapes by choosing Shape > Send To Back.
3. If you don't want the drawing to have a border, make the border transparent by applying the line style None to the rectangle.
4. Choose Edit > Select All, then choose Edit > Copy.
5. Embed or link the drawing into the other program's document.

■ Overview

Formats in which you can export Visio shapes and drawings

Visio can export shapes and drawings in these formats:

- Adobe Illustrator File Format (.ai)
- AutoCAD Drawing Web Format (.dwf) (Visio Technical only)
- CompuServe Interchange Format (.gif)
- Computer Graphics Metafile (.cgm)
- Encapsulated PostScript (.eps)
- Initial Graphics Exchange Specification (.igs)
- Joint Photographic Experts Group (.jpg)
- Macintosh Picture File Format (.pct)
- Portable Network Graphics (.png)
- Tag Image File Format (.tif)
- Windows Bitmap (.bmp, .dib)
- ZSoft PC PaintBrush Bitmap (.pcx)

When you export a shape or drawing, a Filter Setup dialog box may appear in which you choose settings for the exported file. Because each file type has its own settings, the dialog box you see depends upon the format in which you export the drawing. Some of the most common settings include:

Profiles Lists the preset setting profiles for the file format you're exporting. To create a new profile with settings you select, click the New option, and enter a profile name. To remove a profile from the list, select the profile, then click the Delete option. To return to the default settings, click the Defaults option.


Color Translation Controls how colors translate. The Normal option translates colors exactly as specified in the original file. The Inverse option inverts all colors to their opposite values. For example, white becomes black and blue becomes yellow. The Inverse Grays Only option inverts only white, black, and grays. The Gray Scale option converts all colors to shades of gray. The Inverse Gray Scale option converts all colors to shades of gray, and then inverts them.

Line Cap Mode Controls the appearance of line ends. The Device option bases line ends on those the file format supports directly. The Stroked option bases line ends on those the program offers or the file format can emulate. The Device option supports fewer line ends but results in faster screen redraw.

Resolution The Screen option bases the exported file's resolution on current screen resolution. The Printer option bases the resolution on current printer resolution and gives optimum printout results. The Source option allows the source program to determine the resolution. The Custom option allows you to choose the resolution (your width x height dimensions should be somewhere between 32 and 400 pixels per inch).

Size The Screen option bases the exported file's size on the screen size and places the largest possible image within the dimensions of the screen while maintaining the original drawing's or shape's aspect ratio. The Printer option bases the size on the currently selected printer paper size, and places the largest possible image within the dimensions of the paper size while maintaining the original drawing's or shape's aspect ratio. The Source option bases the size on the size of the source. The Custom option bases the size on the custom size (width x height) you enter and places the largest possible image within the custom dimensions while maintaining the original drawing's or shape's aspect ratio.

Changing default styles for drawing and text tools

 [How To](#)

 [Related Topics](#)

You can change default line, fill, and text formatting for the drawing tools—the [pencil](#), [freeform](#), [line](#), [arc](#), [rectangle](#), and [ellipse](#) tools—and for the [text tool](#). When you change the default styles, shapes you draw with those tools automatically display the new formatting.


To change the default style for the drawing and text tools:

1. Click a blank area of the drawing page to cancel any shape selections.
2. On the Shape and Text toolbars, choose the formatting settings you want. For example, if you want all text-only shapes you draw with the Text tool to use the Times New Roman font, select that font from the font list. (Text you type into shapes you draw with the drawing tools also use the font you select.)

Now when you draw a shape with one of the drawing tools, it displays the formatting you defined. (Text-only shapes that you draw with the Text tool do not display the line and fill settings.)

■ Overview

Changing the default text, line, or fill styles in shapes

 [How To](#)

 [Related Topics](#)

You can define default styles for your drawing file so that shapes display the styles you want when you drop them onto the drawing page.

The formatting for shapes on stencils is defined by styles that you can edit. Frequently, the same styles are applied to all related shapes on a stencil. That way, you can change the formatting for all the shapes in the current drawing at once by editing the style.

First, find out what styles are assigned to a set of shapes, then edit the attributes in the style listed as the default. After you edit the style, all shapes to which the style is assigned inherit the new formatting.

To determine the default styles:

1. Drag a shape from the stencil to the drawing page.
2. While the shape is selected, choose Format > Styles.

The styles that appear in the Text, Line, and Fill sections are the default styles assigned to that shape. The same style may be assigned to more than one or all of the attributes.

■ Overview

Working with Document Management Systems

[Related Topics](#)

Visio supports the Open Document Management Architecture (ODMA) standard so that, if you work with a Document Management System (DMS), you can include Visio drawings within it.

When Visio detects the presence of ODMA 1.5 on your system, it passes the Open and Save file-management operations to the DMS program so that

- When you choose the Open command from the Visio File menu, the DMS Open dialog box appears so that you can open files stored within your document management system.
- When you choose the Save or Save As command from the Visio File menu, the DMS Save dialog boxes appear so that you can save Visio drawings and store them within your document management system.

To take advantage of Visio's ODMA compatibility, you must open and save files using the File > Open and File > Save commands (rather than using keyboard alternatives or the list of recently opened files on the File menu).

You may need to register Visio 5.0 with your DMS program before you can open and save Visio drawing files. For details, see your DMS program documentation.

