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Introduction

The **Tree Explorer ActiveX** is included in the GENESIS32 installation, and it can be inserted into any container that has the capability to embed ActiveX objects, including GraphWorX32, Visual Basic forms, Microsoft Word, and Microsoft Excel.

The Tree Explorer ActiveX allows you to browse for and visualize recipes within GraphWorX32. It also has a File Explorer feature that enables you to browse for files and folders during runtime mode.

Inserting the ActiveX Into a GraphWorX32 Display

To insert the Tree Explorer ActiveX, choose **Insert Object** from the **Edit** menu in GraphWorX32, or click the **Tree Explorer ActiveX** button on the **ActiveX** toolbar, as shown in the figure below.



Tree Explorer ActiveX Button on the ActiveX Toolbar

The **Tree Explorer ActiveX** will appear in the display, as shown in the figure below.



Tree Explorer ActiveX

Recipe Management and Visualization

The Tree Explorer ActiveX is just one of several applications in the ICONICS Recipe Management System, which consists of the following components:

The Front End

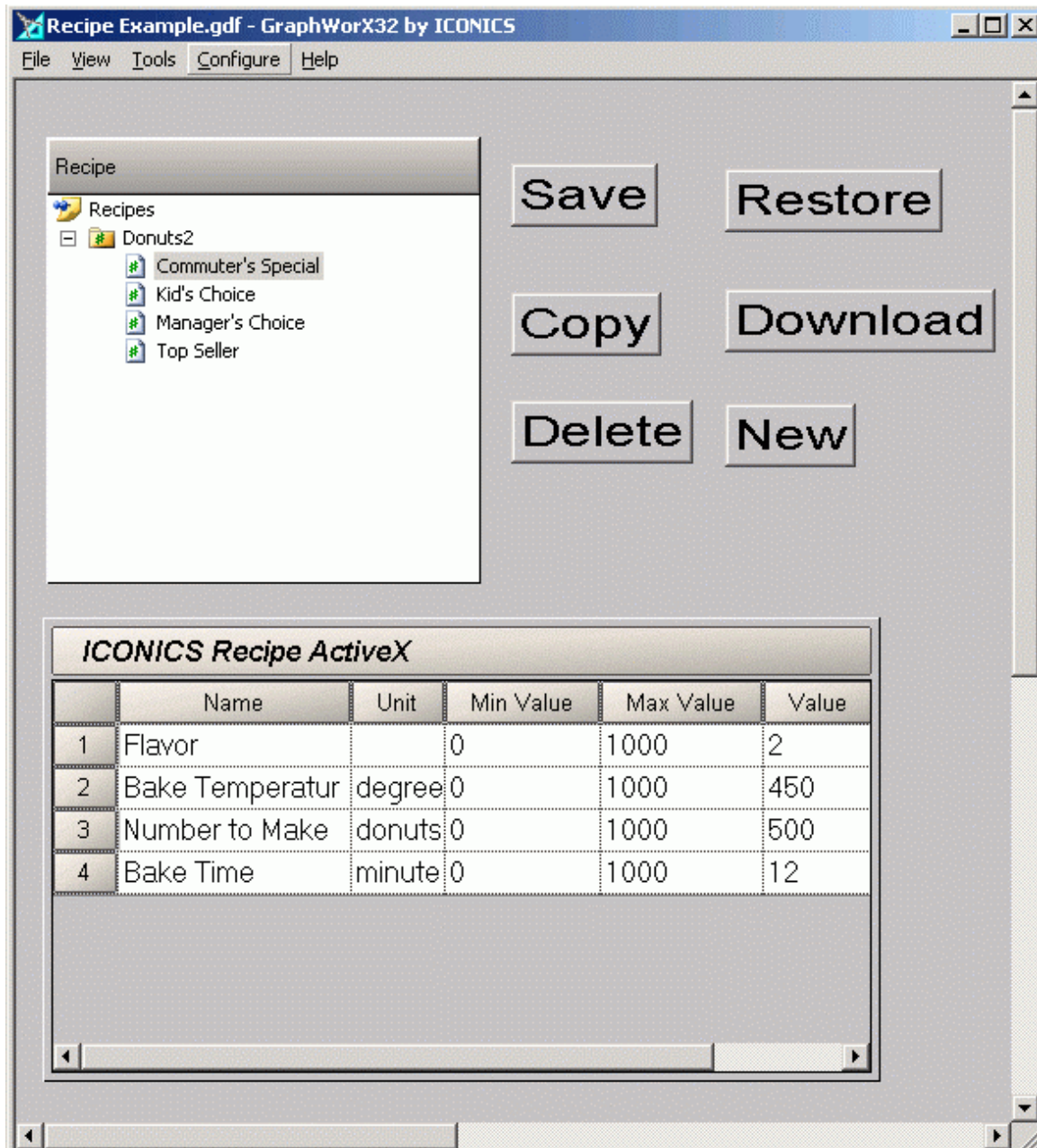
- **Tree Explorer ActiveX:** Consists of a tree control that allows you to browse for and visualize recipes within GraphWorX32.
- **Recipe ActiveX:** Consists of a data table that allows you to visualize and edit recipe item values within GraphWorX32. For more information, please see the Recipe ActiveX help documentation.
- **Recipe Pick Action:** Enables you to create buttons in your GraphWorX32 display that allow you to apply changes made to recipe items via the Tree Explorer ActiveX and the Recipe ActiveX. Changes that you make to the recipe values can be applied to the Recipe Server, the active recipe configuration, and the connected OPC server.

The Back End

- **Unified Data Manager:** Use the Unified Data Manager configurator to create and activate your recipe configuration.
- **OPC Servers:** Recipe parameter values are associated with OPC tags, which enable the connected OPC servers to communicate with the Recipe Server and to relay recipe values to the PLC device in the end-user application.
- **Recipe Server:** Communicates and relays recipe data between the Unified Data Manager configuration database, the Tree Explorer ActiveX, the Recipe ActiveX, and the OPC server to which the recipes are connected.

The Tree Explorer ActiveX, Recipe ActiveX, and associated recipe pick action buttons can be inserted into a GraphWorX32 display, as shown in the figure below, so that recipe data can be viewed directly from the display.

Note: For complete information about recipe configuration and visualization, please see the Recipe Management System section in the GraphWorX32 help documentation.



Tree Explorer ActiveX and Recipe ActiveX in Runtime

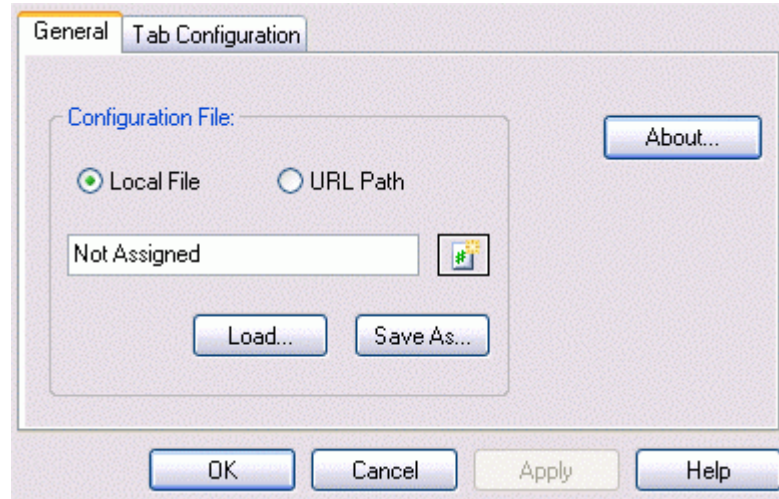
Tree Explorer ActiveX Properties

Double-clicking the Tree Explorer ActiveX opens the **Tree Explorer ActiveX Properties** dialog box, which contains the following property pages:

- **General**
- **Tab Configuration**

General

The **General** tab in the **Tree Explorer ActiveX Properties** dialog box, shown below, allows you to configure the following settings.



Tree Explorer ActiveX Properties: General Tab

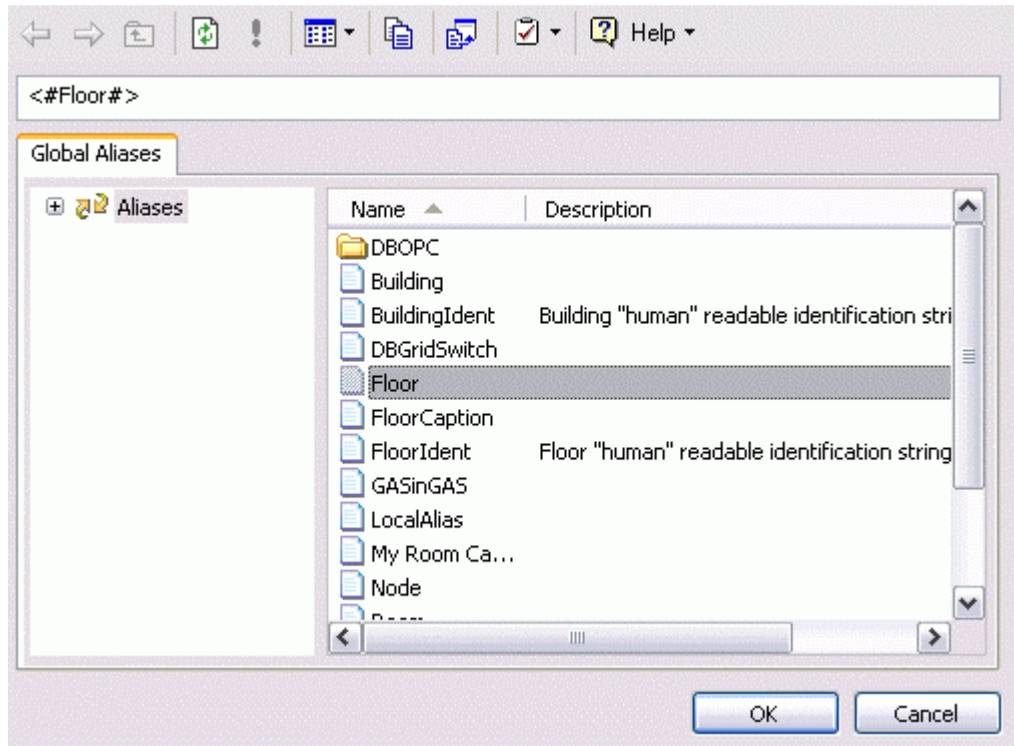
- **About:** Clicking the **About** button displays both technical support information and the About Box, which contains registration and serial number information as well as system resource information, such as memory and disk space available.
- **Configuration File:** By default, information is stored as part of the container application's document file. You can also store information as part of a separate (.tre) file. To save the .tre file, under **Configuration File** click **Save As** to open the **Save Configuration Info** dialog box. Enter a name for the .tre file in the **File Name** field, and then click **Save**.

You can also open an existing configuration file by clicking the **Load** button on the **General** tab and browsing for the file. The ActiveX will attempt to load the configuration file. If **URL Path** is selected, the ActiveX will use the specified network URL path upon loading the file.

Note: The ActiveX cannot be saved to a URL path. To create a URL file, save a configuration to a local file and copy the file to the desired network location. When the **URL Path** option is selected, you can also enable the **Use Local Settings** option, which, if checked, stores runtime changes to a local copy of the remote configuration file. It will use this local file every time the HTML page that hosts the Viewer is loaded inside the Web browser.

You can also select aliases to use for the configuration file. Clicking the **#** button and selecting **Insert Global Alias** from the pop-up menu opens

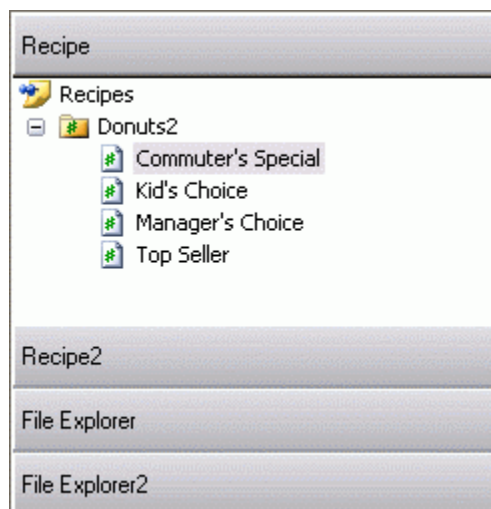
the Global Aliases tab of the Unified Data Browser, as shown in the figure below. Select a global alias from the Unified Browser, which includes all global aliases in the global alias database. This eliminates the need to manually type in the alias name. All global aliases that are configured in the Global Alias Engine Configurator are conveniently available to choose from inside the browser. The tree control of the Global Alias Engine Configurator is mimicked in the tree control of the Global Alias Browser. Select a global alias by double-clicking the alias name (e.g. "Floor" in the figure below). The alias name appears at the top of the browser, which automatically adds the <# and #> delimiters to the alias name. Click the **OK** button.



Selecting an Alias From the Global Alias Browser

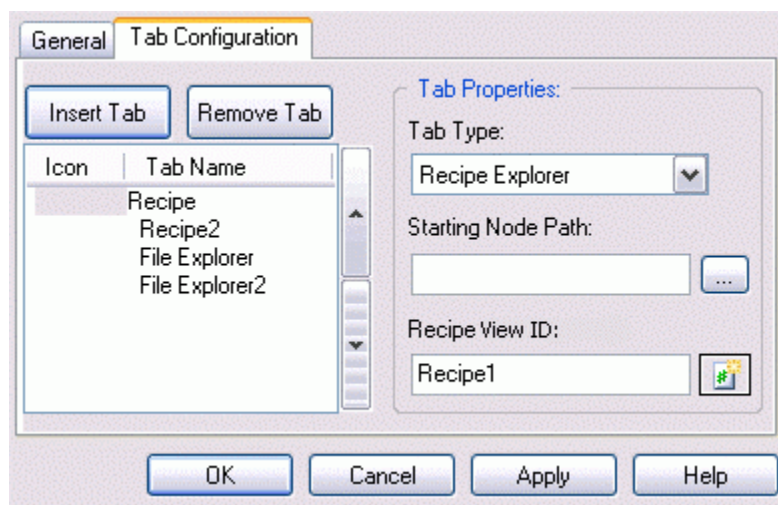
Tab Configuration

The Tree Explorer ActiveX allows you to browse for and visualize recipes within GraphWorX32. It also has a File Explorer feature that enables you to browse for files and folders during runtime mode. The Tree Explorer ActiveX enables you to do both of these functions through the use of tabs. Each tab is a group that allows you to browse for different items. You can have multiple tabs within the Tree Explorer ActiveX. In runtime mode, the currently selected tab is expanded to show its contents. You can change the tab selection view in runtime mode by simply clicking on a different tab. The figure below shows how the Tree Explorer appears in runtime mode with four configured tabs (two for recipes and two for the file browser).



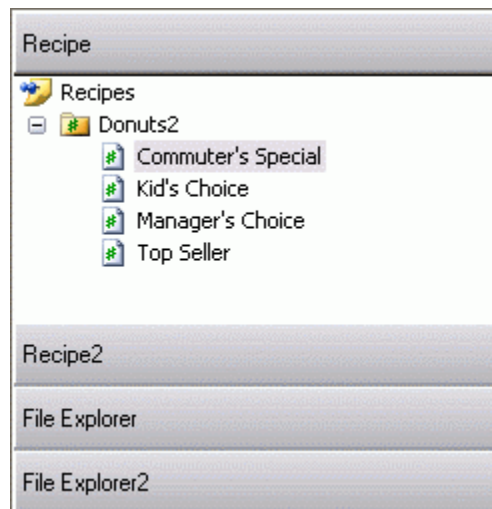
Multiple Tabs in the Tree Explorer ActiveX in Runtime Mode

The **Tab Configuration** tab in the **Tree Explorer ActiveX Properties** dialog box, shown below, allows you to configure your tabs. To create a new tab, click the **Insert Tab** button, and then type a name for the tab. To delete a tab, click the **Remove Tab** button. For each tab, you can also specify a **Starting Node Path** that will be used as a starting point for the explorer tree control in runtime mode.



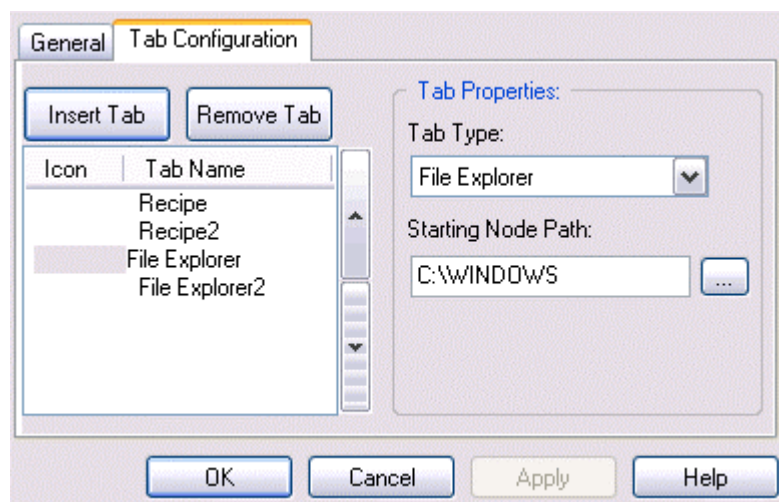
Tree Explorer ActiveX: Tab Configuration Tab

If you are creating a tab that will be used for recipe visualization, you must select **Recipe Explorer** from the drop-down list under **Tab Type**. In the configuration shown above, the selected tab is named "Recipe". Under **Recipe View ID**, enter an ID for the recipe that will be used to connect the Tree Explorer ActiveX to the Recipe ActiveX. In the example shown above, the view ID is "Recipe1". As shown in the figure below, when you select this tab during runtime mode, the tab expands to show the tree control, which allows you to select the recipe and recipe items in the active recipe configuration.



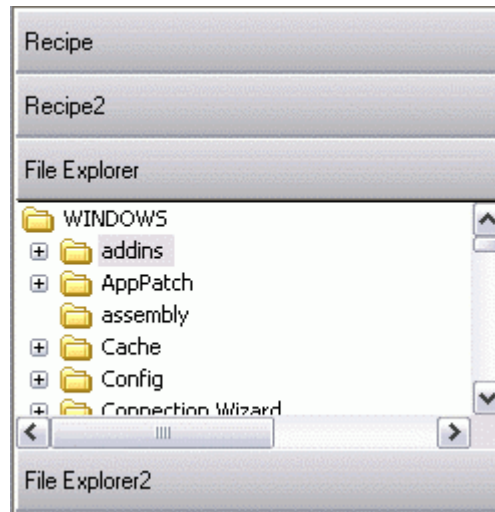
Recipe Tab in Runtime Mode

If you are creating a tab that will be used for file browsing, you must select **File Explorer** from the drop-down list under **Tab Type**, as shown in the figure below.



File Explorer Configuration

In the example configuration shown above, the tab is named "File Explorer", and the **Starting Node Path** is C:\WINDOWS. As shown in the figure below, when you select this tab during runtime mode, the tab expands to show the tree control, which is launched from this directory path. You can browse for files and folders and expand and collapse the tree control.



File Explorer Tab in Runtime Mode

Viewing the Tree Explorer in Runtime

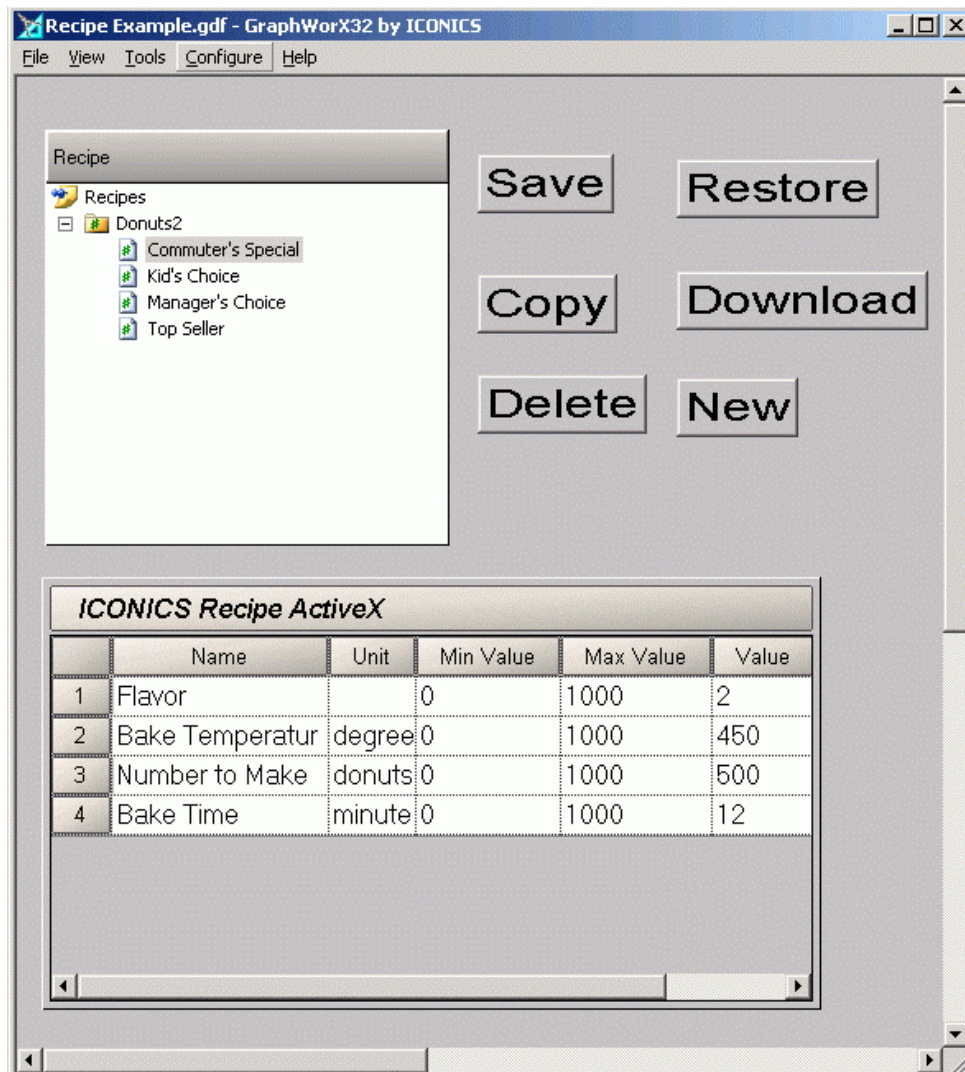
The Tree Explorer ActiveX allows you to browse for and visualize recipes within GraphWorX32. It also has a File Explorer feature that enables you to browse for files and folders during runtime mode.

Recipe Visualization

Once you have completed your Tree Explorer ActiveX configuration in GraphWorX32 (in conjunction with the Recipe ActiveX and recipe pick action buttons), you are ready to browse for recipe items in runtime mode.

Note: For complete information about recipe configuration and visualization, please see the Recipe Management System section in the GraphWorX32 help documentation.

1. Click the **Runtime** menu in GraphWorX32 to start runtime mode. As you can see in the figure below, the Tree Explorer ActiveX displays the recipes and recipe items from the active recipe configuration in the Unified Data Manager. In the example shown in the figure below, the "Donuts2" recipe is selected, and its four recipe items are displayed in the tree control: **Commuter's Special**, **Kid's Choice**, **Manager's Choice**, and **Top Seller**.
2. When you click on a recipe item in the Tree Explorer ActiveX, the parameters (ingredients) are displayed in the Recipe ActiveX, which consists of a data table with rows and columns. Each row lists a parameter, and for each parameter there are multiple data columns for units, minimum value, maximum value, value, associated OPC tag, etc. In this example recipe configuration, the parameters are **Flavor**, **Bake Temperature**, **Number to Make**, and **Bake Time**.

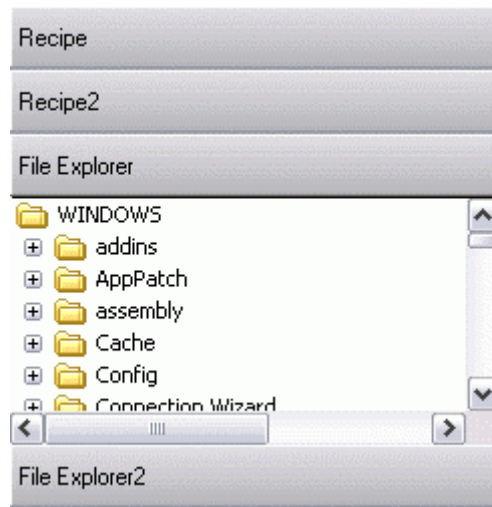


Tree Explorer and Recipe ActiveX in Runtime

File Explorer Visualization

Once you have completed your Tree Explorer ActiveX configuration in GraphWorX32 you are ready to browse for files and folders in runtime mode.

1. Click the **Runtime** menu in GraphWorX32 to start runtime mode. As you can see in the figure below, the file explorer in the Tree Explorer ActiveX displays the starting node path.
2. You can browse for files and folders and expand and collapse the tree control.



File Explorer in Runtime Mode

Tree Explorer ActiveX OLE Automation Reference

This reference describes the OLE Automation features available in the Tree Explorer ActiveX. The Tree Explorer ActiveX provides a COM interface that allows automation interfaces run from within the ActiveX container to manipulate the Tree Explorer ActiveX control as it is running. The interface is available to all programming languages that support COM, including Visual Basic (VB), Visual Basic for Applications (VBA), and Microsoft Visual C++.

To access the Automation interface from VB and VBA, the Tree Explorer ActiveX must be made available by selecting **TreeExplorerLib** in the Object Browser.

Control Properties

FileName As String

Type: BSTR

Description

Sets/gets the name of the Tree Explorer ActiveX configuration file.

Example

ThisDocument.TreeExplorer1.FileName="C:\TreeConfig.tre"

ShowNewRecipeDialog As Boolean

Type: Boolean

Description

Enable/disable the message box that ask the user for the new recipe item name when it is created using GraphWorX pick action.

Example

ThisDocument.TreeExplorer1.ShowNewRecipeDialog = True

URLPathName

Type: BSTR

Description

Sets/gets the URL path for a configuration file over the Web. Must set URLPathUsed to "True" for this to take effect.

Example

ThisDocument.TreeExplorer1.URLPathName=
"http://www.iconics.com/treecfg.tre"

URLPathUsed

Type: Boolean

Description

Enables/disables the use of a URL path.

Example

```
ThisDocument.TreeExplorer1.URLPathUsed=True
```

Control Methods

AboutBox()

Shows **About** dialog box.

Example

```
ThisDocument.TreeExplorer1>AboutBox
```

LoadConfigFile(BSTR newVal) as Boolean

Loads the configuration file specified in newVal.

Example

```
Dim ret As Boolean
```

```
ret = TreeExplorer1.LoadConfigFile("C:\My Configs\cfg.tre")
```

LoadConfigURL(BSTR newVal) as Boolean

Loads the configuration file specified in the URL string newVal.

Example

```
Dim ret As Boolean
```

```
ret = TreeExplorer1.LoadConfigURL("http://localhost/cfg.tre")
```

SaveConfigFile(BSTR newVal) as Boolean

Saves your current Tree Explorer ActiveX configuration to the file specified in newVal.

Example

```
Dim ret As Boolean
```

```
ret = TreeExplorer1.SaveConfigFile("C:\My Configs\cfg.tre")
```

SetRuntimeMode(bEnable As Long)

Forces the Tree Explorer ActiveX to go in runtime/configuration mode.

Example

```
TreeExplorer1.SetRuntimeMode(True)
```

Control Events

OnTreeNodeDbClick(inodeID As Integer, strPath As String, bExecute As Integer)

Description

The Tree Explorer ActiveX will fire up this event when the user double-clicks on any node of the tree.

It will return:

inodeID containing the unique identification of the tree node.

strPath containing the path from the root up to the clicked node.

bExecute is used to validate the execution of the file if the tree is a file explorer tree. If the user changes this value from 1 to 0 the file explorer will not execute the associated file if the node represents a valid file.