



# API Treaded Demo Readme

## **About:**

API Thread Demo Version 1.0.0

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API Treaded Demo is a practical executable (exe) application demonstrating the API Tread Application Program Interface for passing user input properties between two different executables via a user input argument executable. The user input parameters can also be passed directly to the API Tread by the programmer in their own script. The following, are instructions on how to pass user input properties from one executable to another via the AppStartUp.exe, and the API Tread Demo, and a short cut with administrator rights.

## **About Application Summary:**

API Tread Demo Application is an extension demo Add-On of the Application Extension that can take user passed input arguments from another executable and use them to set its own run-time look and feel properties; and start a user defined application. This application to application communication is called threading. The application programming interface (AP read creates a communications link between two different applications (FileName.exe[s]). This achieved by using Windows 3.11 technology of ini file transfer communication, information solely through the use of information text files (AppConfig.dat); solely during run-time and can be discarded after the communication has been completed for any systems security considerations. In order to up hold windows OS releases, & future windows operating platform security which is a requirement by the API Thread Function & the API Thread Demo application. The API Thread Demo falls under Application Extension copy rights license agreement."

## **Controls:**

### **Help:**

There are three toolbar pull downs; Website, Local & License.

### **About:**

Gives an application summary about description.

### **Website:**

Selecting Website will load <https://softglue.net> into the browser to contact softglue for help, view this help document and FAQ's on line. There are no FAQ's for Constitution & Ethics application. It's self-explanatory and all FAQ's are answered in this help document.

### **Local:**

Selecting Local will load this help file into the PC's default pdf reader for reading.

### **License:**

Selecting License will load the softglue user license into wordpad for reading.



### **Exe to EXE API Thread:**

This thread is an alternative to developing otherwise not necessary small Dynamic Link Library or DLL executable taking in programmed input vs the executable command line input for file system application development work. DLL's fundamentally always have posed an OS security problem, particularly with DLL's that are registered as global access in the OS registry. While for many applications the programmer can call the exe command line input from the command line or from a short cut, it's a file system OS security if the programmer nest, exe command line input; ie) call the exe command line from one to another to another such as exe1->exe2->exe3->etc & is not supported by the exe to exe API Thread. DLL, registry information & servicing links are required for this type of communication nesting. However, with the exe to exe API Thread it is possible and file system security will not be compromised, but the tradeoff is more hard drive memory and a reduction in application performance if the developer used the exe to exe extensively vs standard DLL threading communication between file system sub applications. The purpose of the traditional ini & dat text files predominately of windows 3.11, 16-bit technology, then was threading communication by all application extensions including the executable. The purpose of it now, is exe to exe file system threading is to add a balance to communication threading and extra file system threading to the security socket layer of the allocated RAM memory space for that application, than with DLL solutions alone.

### **Setup Window:**

By setting Prop 2 to [False] will keep the Close API Thread Demo application open after the user application opens, and all the user passed threaded property arguments will be displayed in the API Thread Demo window without the user defined background picture. This allows the user to see how their short cut passed properties, were passed to the API Thread Demo application for debugging. Also, the Information pull down will be displayed showing the application "About" and this "Help" readme file. See Table 1 for complete details.

Where:

Prop0 = Window Format: 0 = Basic Window, 1 = Border Window, 2 = Framed Window

Prop1 = Close API Thread Demo: Boolean: True / False

Prop2= Close Treaded App on Exit: Boolean: True / False

Prop3 = Window Background: String: "[FilePath]\PictureName.bmp, jpg, etc

Prop4 = Threaded Application: String: "[FilePath]\[ExternalApp.exe]"

Prop5 = Application Argument: String: <Argument>



### **API Treaded Demo Instructions:**

Create an AppStartUp-Thread-Rev[N].exe shortcut with “Run as administrator” right click and set the shortcut path as follows:

[FilePath]\AppStartUp-Thread-Rev[N].exe Prop1 Prop2 Prop3 Prop4 Prop5 Prop6 Prop7

eg) "C:\Program Files\App Extension\AppStartUp-Thread-Rev1.exe" 0 true false "My App"  
"[FilePath]\PictureName.jpg" "[FilePath]\[ExternalApp.exe]"  
"C:\Program Files\App Extension\AppExtns.exe"

If the user does not have script programming administrator rights, the user can use the short cut supplied with the API Thread Demo Application tool kit which has “Run as administrator” rights and just edit the short cut string to suite the user’s needs as described above.

The user only has to use one property to run the API Thread Demo application. By setting the first property to "[App Path]\AppExtns.exe" will start the API Thread Demo, with the basic window, no picture, and will run notepad.exe when the “Open” button is pressed.

The API Thread Demo short cut in the “App Extension” root folder of the API Thread Demo will demonstrate the API thread usages. By double clicking the short cut will run an executable (AppThreadStartUp.exe) which will pass seven user input properties to the AppExtns.exe executable through the API Tread. Thereby, demonstrating passing user input parameters from one executable to another. The visual basic script used for this is below, and the programmer is free to use this script as they see fit in their own application to access the AppExtns.exe executable only. The AppThreadStartUp.exe is not licensed as shareware to be used by the programmer for treading to any other application except the AppExtns.exe executable. See “Programmer Option” below for details of the AppThreadStartUp.exe script.

### **Programmer Option:**

The programmer who wants to set up a short cut with security, or cannot use the AppThreadStartUp.exe short cut because the total character input string is too long, can pass the API Thread Demo property arguments with the help of visual basic script ('APIThreadStartup-Rev{N}.vbs) user defined executable (“User Defined Name API Startup”.exe). See sample script below. Copy and paste sample script below to a script editor and save it as APIThreadStartup-Rev{N}.vbs, compile, create a short cut and set its “Run as administration” Advanced Properties; and run. Where {N} = 1 is current revision supported.

It is assumed that the programmer is running Windows 7 professional , Windows 10 Pro or greater with administration access for running visual basic scripts (WScript.Shell interpolator) and it has administration access for creating and running visual basic scripts (FileName.vbs) executable (FileName.exe), for FileName.vbs scripts in the registry. However, any client will be able to run the API Thread Demo with compiled binaries, and the short cut with “Run as administrator” Advanced Properties set by a professional operating system with administrator access for software development.



### **Sample Script:**

The sample script below is a demonstration of executable to executable through file transfer, via a vbs script communication. A form of this was widely used in the beginnings of the 16-bit operating systems as the information file or FileName.ini file transfer. This form of threading has high security access and balancing RAM vs hard drive disk memory uses; vs Dynamic Link Library (FileName.dll) threading.

The sample script below is free to use, is modifiable for the API Thread Demo application uses and is only licensed to be used with the API Treaded Demo application. **APIThreadHelpStartup.vbs** was written specifically for the **API\_Thread\_Readme** help file learning and demonstration purposes only. It is not licensed to be used as general purpose script else ware. The purpose of it is that while the shortcut command line is quite long, it is limited with long file name paths, preventing the user form selecting all API Thread Demo Options to evaluate. The dedicated script command line method below solves that problem. It is a sample starter visual basic script that can be used to run the “API Thread Demo”, tailored to your own needs.

#### **Note:**

The **APIThreadHelpStartup.vbs** in the licensed shareware sample script is a user input VBA program to build an AppConfig.dat file & to load the App Thread Demo application on the command line. *It was originally written in both vb script and VBA.* The developer needs make their own AppConfig.dat build script or copy an AppConfig.dat file during run time to a working directory so the API Thread Demo can read it and display the user input properties. The API Thread Demo deletes the AppConfig.dat file after it reads it. While the delete API Thread file is an API variable, it is set in the API Thread Demo application to delete files after reading, and not set in the Application Extension the patent application to API Thread Demo. The API executable to executable thread is the core of both applications.

### **Scripting Notes:**

The API Thread Demo calls the AppConfig.dat threaded file in the user Temp folder as follows:

#### **Visual Basic .Net**

##### **Note:**

The vbs script sample below has to be translated into VB.net to work as VB.net script. However it works just fine as a vbs file from the command line or as a short-cut.

### **Sample Script APIThreadHelpStartup.vbs:**

#### **Note:**

The script below is an argument input script and is intended to run as non administration access script from the command line or as a short-cut. The script below will format the output file as per this document's requirements.



'Copyright (c) by Mark L. Alberi 2019–2024

'Current revision = 1

'AppStartup.vbs creates thread link to other executables through the use of in memory disposable ini files

'AppStartup.vbs is an extension application to GetPropsThread API.

'This script creates a AppConfig.dat file then loads the API Thread Demo executable, APIAppExtn.exe on the command line

'based on the user input values either form another input program or a user defined shortcut user input values

'to this compiled script AppStartUpAPI.exe.

'This script supports up to one text string input argument into API Thread Demo & runs with seven

'total user defined input parameter arguments as defined in API\_Thread\_Read me help document,

'AppStartUpAPI.exe that runs / creates as standalone a Config.dat file and then runs

'API Demo Thread executable, APIAppExtn.exe.

'APIThreadHelpStartup-Rev{N} is based on APIThreadStartup-Rev{N}.vbs and was written with VbsEdit development tool, and its tool kits.

### Option Explicit

```
Dim objShell
Dim fso, MyFile
Dim AppPath
Dim RetVal
Dim strArgs
Dim args(4)
Dim Msg
Dim Return
Dim AppThread
Dim CurrentUser
Const ForWriting = 2
```

### On Error Resume Next

```
Set objShell=CreateObject("WScript.Shell")
Set strArgs = Wscript.Arguments
CurrentUser = objShell.ExpandEnvironmentStrings("%USERNAME%")
```

```
'Input args transfer.
args(0) = strArgs(0)
args(1) = strArgs(1)
args(2) = strArgs(2)
args(3) = strArgs(3)
args(4) = strArgs(4)
```

```
AppPath ="C:\Program Files\SoftGlue\APIThread\APIAppExtn.exe"
AppThread = "C:\Users\" & CurrentUser & "\AppData\Local\Temp\AppDataConfig.tmp"
```

```
Set fso = CreateObject("Scripting.FileSystemObject")
Set MyFile = fso.OpenTextFile(AppThread, ForWriting, True)
```



```
If(err.number > 0) Then
    err.Clear
    'Delete old treaded file AppConfig.tmp if still exist.
    Set MyFile = fso.GetFile(AppThread)
    MyFile.Delete

    Set MyFile = fso.OpenTextFile(AppThread, ForWriting, True)
End If

Call StartUp

Public Sub StartUp()
    'Save user input properties.
    If((UBound(args) < 4) And (IsEmpty(args(0)) = True)) Then
        'No user input exit script with run-time message.
        Msg = "Incorrect user properties were set." + Chr(10) + "Program will now
exit."
        MsgBox Msg,vbCritical, "StartUp Error"

        Exit Sub
    End If

    'Save transfered threaded file.
    MyFile.WriteLine(args(0))
    MyFile.WriteLine(args(1))
    MyFile.WriteLine(args(2))
    MyFile.WriteLine(args(3))
    MyFile.WriteLine(args(4))

    MyFile.Close
    Call App_Thread
End Sub

Sub App_Thread
    'Start application through the AppConfig.tmp threaded link.
    'Delay starting app thread for specified N seconds.

    'Hide transfer file.
    Set MyFile = fso.GetFile(AppThread)
    MyFile.Attributes = 2
    Set MyFile = Nothing

    Dim EndTime
    EndTime = DateAdd("s", 1, Now)

    Do until now >= EndTime
    Loop

    'Start threaded application.
    Set ObjShell = CreateObject("WScript.Shell")
    ObjShell.Run((Chr(34) & AppPath & Chr(34))) 'Run API Thread Demo.
End Sub
```



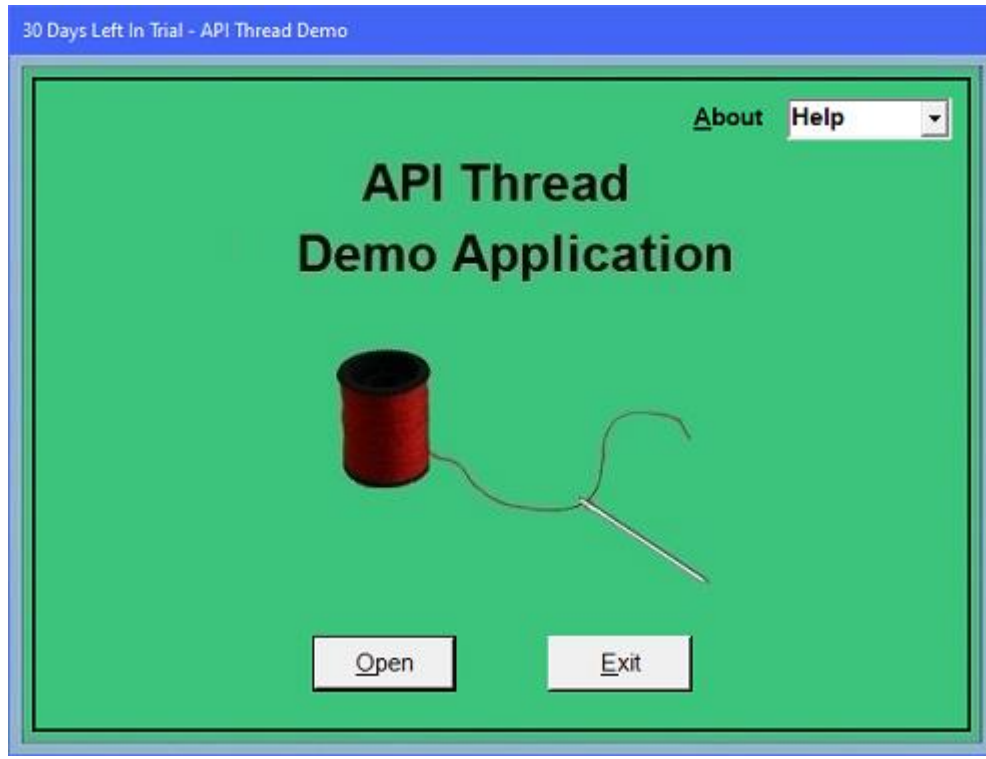
**AppConfig.dat - Definition Table 1:**

Number	Property	Example Value All values are in Twips
0	Window Format	0 = Basic Window 1 = Window with border 2 = Window With Frame
1	CloseSwitch	True = Close API Thread Demo on auto startup of threaded application.  False = Leave API Thread Demo open on startup.
2	CloseAppSwitch	True = Close threaded application after closing API Threaded Demo.  False = Leave extended application open after closing API Demo.
3	Window Background	Picture file background graphic picture (*.bmp, jpg, png, tiff, gif, etc)  C:\<My File Path>\MyImage.jpg
4	Threaded Application & (Optional) One Argument	C:\<My File Path>\MyApp .exe <Argument>  <Argument> = Open file, single command
<b>Note:</b>	Can't set both the CloseSwitch and the CloseAppSwitch to true at the same time. API Demo and the extended application will both close at startup, generating a user message error.	

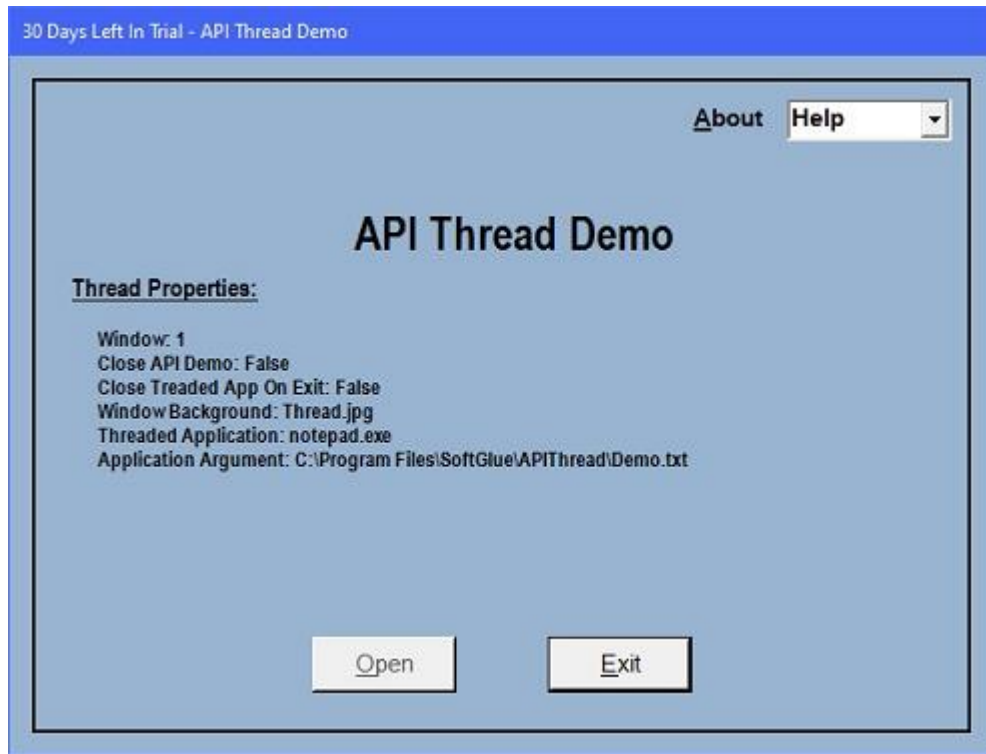
**Custom Form AppConfig.dat Table Example:**

0 false false C:\Program Files\SoftGlue\APIThread\Images\Thread.jpg %System32%\notepad.exe C:\Program Files\SoftGlue\APIThread\Demo.txt
---

**Custom AppConfig.dat Form Output Example:**



**API Thread Properties Transfer:**







## Notepad & File Argument Transfer:

A screenshot of a Notepad window titled "Demo.txt - Notepad". The window has a blue title bar and a menu bar with "File", "Edit", "Format", "View", and "Help". The text content is as follows:

Welcome to API Thread Demo.

You are running vb script executables to load API Thread Demo.

Note:  
Any text file such as Demo.txt and Demo.rtf can only be run by API Thread Demo from a file passed directly to the command line for all 7 passed properties such as the ReadmeExample in API\_Thread\_Readme help document. Passed parameters due to the total string length passed by the short cut command line my be too long and will truncate, causing unpredictable run time errors and failing to start the API Thread Demo.

regards,

SoftGlue

The status bar at the bottom shows "Ln 1, Col 1", "100%", "Windows (CRLF)", and "UTF-8".