



ScriptWorX64

Triggering Scripts on Internal Events



APPLICATION NOTE

September 2013

Description: Guide to triggering scripts based on ScriptWorX64 internal events

OS Requirement: Vista x64/ Windows 7 x64/ Windows 8 x64/ Windows Server 2008 x64/ Windows Server 2008 R2 x64/ Windows Server 2012

General Requirement: Knowledge of VBA scripting

Introduction

ScriptWorX64 contains built in event scripts. These scripts become useful when you want to perform tasks when either ScriptWorX64 enters or exits runtime mode, or if a particular scripts starts executing. We intend to describe and explain how to use these native ScriptWorX64 events in this application note. The following events are available within the application:

- GlobalInstance_Initialize
- GlobalInstance_OnConnection
- GlobalInstance_OnDisconnection
- GlobalInstance_Terminate
- OnTimer
- OnVarChange

Writing Event Scripts

You can create event scripts from within your project. Bring up the VBA editor from any of your scripts. You may find the shortcut Alt+F11 useful in getting to the editor.

To navigate to the specific events, select either "(General)" or "GlobalInstances" from the top left dropdown, then pick the appropriate event from the top right dropdown.

GlobalInstance Events

The four GlobalInstance events all work similarly. They are executed when threads or VBA itself are started or stopped. These events are useful for initializing objects and for doing cleanup.

GlobalInstance_Initialize:

This event happens when VBA initializes. You can use this event to execute tasks on ScriptWorX64 going into runtime.

GlobalInstance_OnConnection:

This event happens when a new designer/thread starts; for example, when the thread connects to the designer.

GlobalInstance_OnDisconnection:

This event happens when the thread finished and disconnects from the designer.

GlobalInstance_Terminate

This event gets triggered when VBA terminates. You can use this event to execute tasks when ScriptWorX64 comes out of runtime.

OnTimer

This event happens periodically based on the interval configured. Each designer/thread has its own timer that must be enabled by checking "Has Timer" box.

To enable the timer and configure the interval:

1. Open the Designer/Thread configuration pane as in Figure 1.

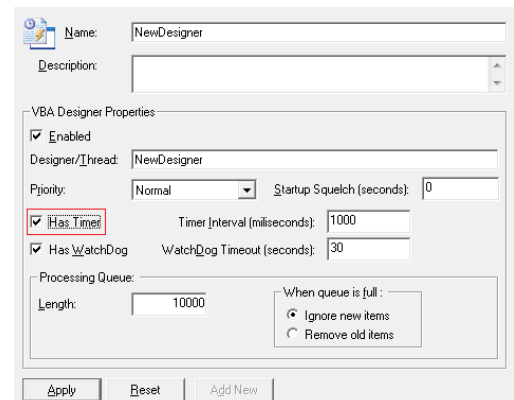


Figure 1 - Enabling OnTimer event

2. Check the checkbox for "Has Timer:
3. Specify the timer interval in milliseconds in the field next to the "Has Timer" checkbox.

OnVarChange

Since internal ScriptWorX64 variables are visible outside of ScriptWorX64 as OPC variables, they can be modified by a script in ScriptWorX64 or by an OPC client. Any change in the internal variables, either by an internal script or an OPC client, would trigger this event.

This event provides four parameters: the name of the variable being changed, its value before the change, its value after the change and the identifier of the thread or OPC client that triggered the change. These parameters can be used to perform different actions based on which variable was changed, what client or script triggered the change or what change was made.