

M-eux Test

Re-use of UFT web scripts on Android/iOS
using UFT

Getting Started Guide

Abstract

This Getting Started Guide describes how to re-use existing UFT web scripts for testing Android web and iOS web applications using UFT. This document is intended for Quality Assurance (QA) engineers and testers who wish to get acquainted with the functionalities of M-eux Test.

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Chapter 1: Re-use of UFT web scripts.

Welcome to the "Re-use of UFT web scripts on Android /iOS using UFT" Getting Started guide. This document will assist you with re-use of existing UFT web scripts on Android or iOS based devices for responsive web apps, the web site which has same design and layout in both PC browser and in mobile web. To make sure you can get started reusing your test cases as soon as possible, we invite you to closely follow the instructions contained in this guide.

When we refer in this guide to the tool UFT or to UFT web scripts, it covers both the UFT tool and UFT tool plus the UFT and UFT created web scripts.

We have made every attempt possible in making the instructions in this guide as clear as possible. However, we recognize that we are unable to cover everything in a single guide. Should you require further assistance, please do not hesitate to contact our support team at support@jamosolutions.com.

After reading his document, you should be familiar with the following topics:

- Re-use UFT web scripts on Android/iOS browsers.
- List of Attributes and Methods M-eux tool support on web.
- M-eux limitations during execution of UFT web scripts against Android/iOS based browsers.

Chapter 2: Getting Started with UFT Web for Mobile

2.1. Installing the UFT Web for Mobile Add-In

To install the UFT Web for Mobile Add-In, please follow these steps:

- Download and install M-eux Test on your PC. For more information on how to download and install M-eux Test, please see the Getting Started Guide.
- On your PC, navigate to C:\Program Files (x86)\Jamo Solutions\M-eux Test\setup\QTPWeb Setup and launch the QTPWebSetup installer.
- In the **Welcome to the QTPWebSetup Setup Wizard** screen, please click **Next**
- In the **Confirm Installation** screen, confirm you want to install the QTP Web by clicking **Next**
- If prompted if you want the installer to make changes to your system, click **Yes**
- In the **Installation Complete** screen, click **Close**.

2.2. Prerequisites

After installing M-eux Test on your PC, the UFT installation of that PC will have two new add-ins: **M-eux Test for UFT** and **M-eux Test for UFT Web**.

- The add-in named **M-eux Test for UFT** enables the support for test scripts against native, hybrid and web-based mobile apps using the M-eux Test test objects.
- The **M-eux Test for UFT Web** add-in enables UFT ability to re-run existing web scripts on mobile web and supports also the M-eux Test objects for testing native, hybrid and web based apps. With **M-eux Test for UFT Web** add in you can run UFT web scripts on Android browsers and iOS browsers on condition that the web pages are identical to the web pages as shown in the supported browsers on the PC.

Note:

- The **M-eux Test for UFT Web** cannot be active together with the **UFT Web** and **M-eux Test for UFT** module.
- The **M-eux Test for UFT** module can be active together with the **UFT Web** module.

To execute UFT web scripts on mobile web, you:

1. Create a working UFT web scripts on a supported PC browser using the **UFT Web** add-in.
2. Restart UFT and select the **M-eux Test for UFT Web** add-in in the **UFT Add-in manager**
3. You can now such a script against a supported browser on the mobile device.

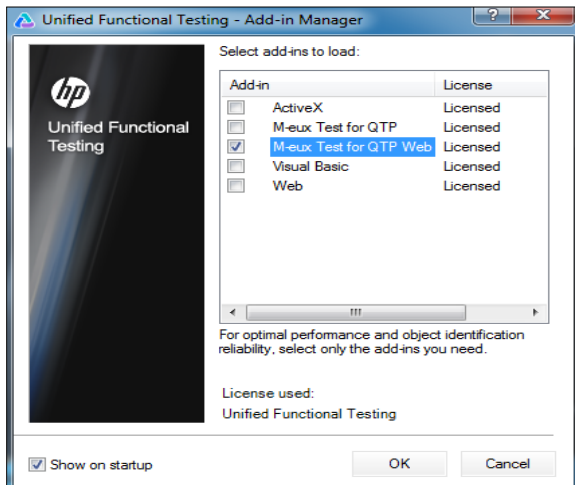
2.3. Replaying a UFT Web Script on a Mobile Device

Before you start execution of UFT web scripts on Mobile web, make sure the device is connected to the Device Manager.

Then, please follow these steps to execute script on mobile web.

Re-use of UFT web scripts on Android/iOS using UFT

1. Launch UFT/UFT
2. Select **M-eux Test for UFT Web** in **UFT Add-in manager** window.



3. Make sure that the UFT **Web** add-in is de-selected.
4. Click **OK** in the **UFT Add-in manager** window.
5. Open already created UFT web script.
6. In order to use the script against a browser on the mobile device, you have to add following object definitions and commands to your UFT script so that the Browser object can be identified on the mobile device.
 - a. Open a testable made browser on the device and add the mobile WebView object of the browser to the UFT repository. This webView object will represent the Browser object.
 - b. Include in the beginning of your script, before any usage of the Browser object the statement "`<your webview object>.setAsQTPBrowser()`" method. The execution of this statement will define the webView as the Browser object for this script.
 - c. Note that by replaying the script against the device, the targeted mobile browser is not opened automatically by the script. You might have to include also statements to launch your targeted mobile browsers.

iOS WebView code example:

```
MobileDevice("Ios6_1").iosWindow("MeuxTestBrowser6_1").iosView("UIView").iosWebView("UIWebView").setAsQTPBrowser()
```

Android WebView code example:

```
MobileDevice("Android4.2").avwWindow("BrowserActivity").avwWebView("avwWebView").setAsQTPBrowser()
```

7. Run / Execute the script.

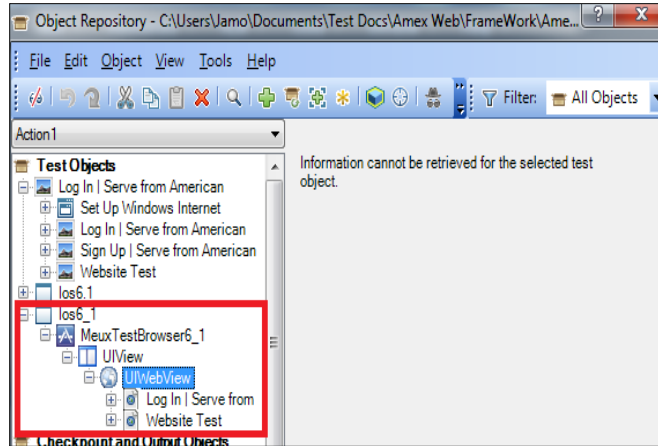


Figure3: iOSWebView

More information about supported mobile browsers and how to launch an application on the device can be found in the Getting Started guides and the Function Reference guide of M-eux Test.

2.4. Code Examples

2.4.1. iOS Code Example

```
MobileDevice("ios6_1").iosWindow("MeuxTestBrowser6_1").iosView("UIView").iosWebView("UIWebView").setAsQTPBrowser()
```

```
Browser("Browser name").Page("page name").WebEdit("UserName").Set "test@test.com"  
Browser("Browser name").Page("page name").WebEdit("Password").Set "Password123"  
Browser("Browser name").Page("page name").WebButton("SignIn").Click
```

2.4.2. Android Code Example

```
MobileDevice("Android4.2").avwWindow("BrowserActivity").avwWebView("avwWebView").setAsQTPBrowser()
```

```
Browser("Browser name").Page("page name").WebEdit("UserName").Set "test@test.com"  
Browser("Browser name").Page("page name").WebEdit("Password").Set "Password123"  
Browser("Browser name").Page("page name").WebButton("SignIn").Click
```

If you want to run same script on both multiple Andorid devices or iOS devices.

```
iDeviceCnt = DeviceManager("DeviceManager").GetDevicesCount("true")  
  
'Loop to repeat test case execution for multiple devices  
For iLoopCnt = 0 To iDeviceCnt-1  
' Get device name  
deviceName = DeviceManager("DeviceManager").GetDevice(iLoopCnt,"true")  
' Set different mobilewebView object to different devices
```

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```
If Instr(deviceName,"Android")>0 Then  
    MobileDevice("Android4.2").avwWindow("BrowserActivity").avwWebView("avwWebView").setAsQTPBrowser()  
Else  
    MobileDevice("Ios6_1").iosWindow("MeuxTestBrowser6_1").iosView("UIView").iosWebView("UIWebView").set  
AsQTPBrowser()  
End If  
Browser("Browser name").Page("page name").WebEdit("UserName").Set "test@test.com"  
Browser("Browser name").Page("page name").WebEdit("Password").Set "Password123"  
Browser("Browser name").Page("page name").WebButton("SignIn").Click  
Next
```


Chapter 3: M-eux Test Compatibility Boundaries

The M-eux Test add-in named **M-eux Test for UFT Web** supports only execution of existing UFT web script on mobile web. Maintenance of the UFT Web scripts need to be done using the UFT web add-in against supported PC based browsers. If the **M-eux Test for UFT Web** is enabled, then:

- The normal UFT Web add-in must disabled. While recording you will not record the UFT web objects or while spying/performing a learn GUI, you will not see the UFT web objects, instead you will see and learn the M-eux Test web objects. Therefore you can only maintain your UFT web scripts using recording, spy and learn-GUI if and only if the “M-eux Test for UFT Web” is disabled and the “UFT Web” add-in is enabled.
- When you replay the script inside UFT create a report with screen shots and active screen functionality enabled, then the M-eux Test objects will be shown in the active screens and not the UFT Web objects.
- Read carefully following section which lists the supported UFT Web test objects, their attributes and their methods.

3.1. Different Add-ins and Supported UFT Features:

Following table gives you an overview of the different add-ins and their supported environments.

UFT Features							
Add-Ins	Browser Type	Record	Replay	Replay of PC Web on Mobile	Spy	Add Object	Learn GUI (Add all object)
Web	PC	✓	✓	✗	✓	✓	✓
	Mobile	✗	✗	✗	✗	✗	✗
M-eux Test For UFT	PC	✗	✗	✗	✗	✗	✗
	Mobile	✓	✓	✗	✓	✓	✓
M-eux Test for UFT Web	PC	✗	✗	✗	✗	✗	✗
	Mobile	✓	✓	✓	✓	✓	✓

Table1: UFT Add-ins and their Features

3.2. Attributes and Methods Mapping

Before execution of UFT Web scripts on mobile web, make sure you use attributes and methods which M-eux support. Please refer below table which shows UFT test objects (attributes and methods) mapped to M-eux test objects. The add-in “M-eux Test for UFT Web” will automatically map the UFT Web attributes and methods to the M-eux Test attributes and Methods.

Re-use of UFT web scripts on Android/iOS using UFT

Mapping is divided into two sections. The first section is common attributes/methods, which shows the attributes and methods that are common in UFT and M-eux. The second section is UFT web attributes and methods mapped to M-eux Test attributes and methods.

If you are not familiar with M-eux test, then the column “M-eux Test Attributes/Methods” can be disregarded.

3.3. Common Attributes /methods in UFT and M-eux

UFT Attributes/Methods	M-eux Support	M-eux Attributes/Methods	Remark
abs_x	<input checked="" type="checkbox"/>	absx	
abs_y	<input checked="" type="checkbox"/>	absy	
class	<input checked="" type="checkbox"/>	className	
css	<input checked="" type="checkbox"/>	NA	
height	<input checked="" type="checkbox"/>	height	
html id	<input checked="" type="checkbox"/>	id	
html tag	<input checked="" type="checkbox"/>	tagName	
index	<input checked="" type="checkbox"/>	index	Most likely value is different from the index value of UFT web add-in
location	<input checked="" type="checkbox"/>	NA	
visible	<input checked="" type="checkbox"/>	NA	
visual relations	<input checked="" type="checkbox"/>	NA	
width	<input checked="" type="checkbox"/>	width	
x	<input checked="" type="checkbox"/>	x	
y	<input checked="" type="checkbox"/>	y	
Object	<input checked="" type="checkbox"/>	NA	No access to the DOM
CaptureBitmap()	<input checked="" type="checkbox"/>	NA	
Check()	<input checked="" type="checkbox"/>	Check()	Not supported for Page object
CheckProperty()	<input checked="" type="checkbox"/>	CheckProperty()	
ChildObjects()	<input checked="" type="checkbox"/>	ChildObjects()	
GetDialogText()	<input checked="" type="checkbox"/>	NA	
GetROProperty()	<input checked="" type="checkbox"/>	GetROProperty()	
GetTOProperty()	<input checked="" type="checkbox"/>	GetTOProperty()	
GetTOProperties()	<input checked="" type="checkbox"/>	GetTOProperties()	
Output()	<input checked="" type="checkbox"/>	Output()	Not supported for Page object
RefreshObject()	<input checked="" type="checkbox"/>	NA	
RunScript()	<input checked="" type="checkbox"/>	NA	

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RunScriptFromFile()	<input checked="" type="checkbox"/>	NA	
SetTOPProperty()	<input checked="" type="checkbox"/>	SetTOPProperty()	
Sync()	<input checked="" type="checkbox"/>	NA	Is synced by default on web add-in of M-eux Test
ToString()	<input checked="" type="checkbox"/>	NA	
WaitProperty()	<input checked="" type="checkbox"/>	WaitProperty()	

3.4. UFT Attributes/methods mapped to M-eux

3.4.1. Browser to WebView Mapping

UFT Attributes/Methods	M-eux Test Support	M-eux Test Attributes/Methods	Remark
application version	<input checked="" type="checkbox"/>	NA	
creationtime	<input checked="" type="checkbox"/>	NA	
HasMenuBar	<input checked="" type="checkbox"/>	NA	
HasStatusBar	<input checked="" type="checkbox"/>	NA	
HasToolbar	<input checked="" type="checkbox"/>	NA	
HWND	<input checked="" type="checkbox"/>	NA	
name	<input checked="" type="checkbox"/>	NA	
number of tabs	<input checked="" type="checkbox"/>	NA	
OpenTitle	<input checked="" type="checkbox"/>	NA	
OpenURL	<input checked="" type="checkbox"/>	NA	
OpenedByTestingTool	<input checked="" type="checkbox"/>	NA	
title	<input checked="" type="checkbox"/>	title	
version	<input checked="" type="checkbox"/>	NA	
WindowContext	<input checked="" type="checkbox"/>	NA	
back()	<input checked="" type="checkbox"/>	GoBack()	
ClearCache()	<input checked="" type="checkbox"/>	clearCache()	
Close()	<input checked="" type="checkbox"/>	kill()	you are not allowed to close an application on iOS
CloseAllTabs()	<input checked="" type="checkbox"/>	Kill()	
DeleteCookies()	<input checked="" type="checkbox"/>	clearSessionStorage	
EmbedScript()	<input checked="" type="checkbox"/>	NA	
EmbedScriptFromFile()	<input checked="" type="checkbox"/>	NA	
Forward()	<input checked="" type="checkbox"/>	GoForward()	
FullScreen()	<input checked="" type="checkbox"/>	NA	An app is always full screen
HandleDialog()	<input checked="" type="checkbox"/>	NA	

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Home()	<input checked="" type="checkbox"/>	NA	
IsSiblingTab()	<input checked="" type="checkbox"/>	NA	
Navigate()	<input checked="" type="checkbox"/>	NavigateTo()	
OpenNewTab()	<input checked="" type="checkbox"/>	NA	

3.4.2. Frame to MoWebFrame Mapping

UFT Attributes/Methods	M-eux Test Support	M-eux Test Attributes/Methods	Remark
OpenNewTab()	<input checked="" type="checkbox"/>	NA	
name	<input checked="" type="checkbox"/>	NA	
text	<input checked="" type="checkbox"/>	text	
title	<input checked="" type="checkbox"/>	title	
url	<input checked="" type="checkbox"/>	NA	

3.4.3. Image to MoWebImage Mapping

UFT Attributes/Methods	M-eux Test Support	M-eux Test Attributes/Methods	Remark
alt	<input checked="" type="checkbox"/>	alt	
file name	<input checked="" type="checkbox"/>	src	
href	<input checked="" type="checkbox"/>	href of associated link	
image type	<input checked="" type="checkbox"/>	NA	
innerHTML	<input checked="" type="checkbox"/>	htmlText	
innertext	<input checked="" type="checkbox"/>	text	
name	<input checked="" type="checkbox"/>	NA	
outerhtml	<input checked="" type="checkbox"/>	NA	
outertext	<input checked="" type="checkbox"/>	NA	
RepositoryName	<input checked="" type="checkbox"/>	NA	
SiebelObjType	<input checked="" type="checkbox"/>	NA	
src	<input checked="" type="checkbox"/>	src	
target	<input checked="" type="checkbox"/>	NA	
UIName	<input checked="" type="checkbox"/>	NA	
url	<input checked="" type="checkbox"/>	???	
Click()	<input checked="" type="checkbox"/>	Click()	
Drag()	<input checked="" type="checkbox"/>	NA	

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Drop()	<input type="checkbox"/>	NA	
FireEvent()	<input type="checkbox"/>	NA	
MiddleClick()	<input type="checkbox"/>	NA	
RightClick()	<input type="checkbox"/>	NA	
Submit()	<input checked="" type="checkbox"/>	Submit on the form()	

3.4.4. Link to MoWebLink Mapping

UFT Attributes/Methods	M-eux Test Support	M-eux Test Attributes/Methods	Remark
background color	<input type="checkbox"/>	???	
color	<input type="checkbox"/>	NA	
font	<input type="checkbox"/>	NA	
href	<input checked="" type="checkbox"/>	href	
innerHTML	<input checked="" type="checkbox"/>	htmlText	
innertext	<input checked="" type="checkbox"/>	text	
name	<input type="checkbox"/>	NA	
outerhtml	<input type="checkbox"/>	NA	
outertext	<input type="checkbox"/>	NA	
repositoryName	<input type="checkbox"/>	NA	
SiebelObjType	<input type="checkbox"/>	NA	
target	<input checked="" type="checkbox"/>	target	
text	<input checked="" type="checkbox"/>	text	
UIName	<input type="checkbox"/>	NA	
url	<input checked="" type="checkbox"/>	pathname	
Click()	<input checked="" type="checkbox"/>	Click()	
Submit()	<input checked="" type="checkbox"/>	Submit()	

3.4.5. Page to MoWebPage Mappings

UFT Attributes/Methods	M-eux Test Support	M-eux Test Attributes/Methods	Remark
name	<input type="checkbox"/>	NA	
text	<input checked="" type="checkbox"/>	text	
title	<input checked="" type="checkbox"/>	title	
url	<input checked="" type="checkbox"/>	url	

3.4.6. WebButton to MoWebButton Mappings

UFT Attributes/Methods	M-eux Test Support	M-eux Test Attributes/Methods	Remark
disabled	☑	enabled	
innerHTML	☑	htmlText	
innertext	☑	text	
name	☑	name	
outerhtml	☒	NA	
outertext	☒	NA	
RepositoryName	☒	NA	
SiebelObjType	☒	NA	
type	☑	type	
UIName	☒	NA	
value	☑	value	
Click()	☑	Click()	
Drag()	☒	NA	
Drop()	☒	NA	
FireEvent()	☒	NA	
MiddleClick()	☒	NA	
Submit()	☑	Submit on form()	

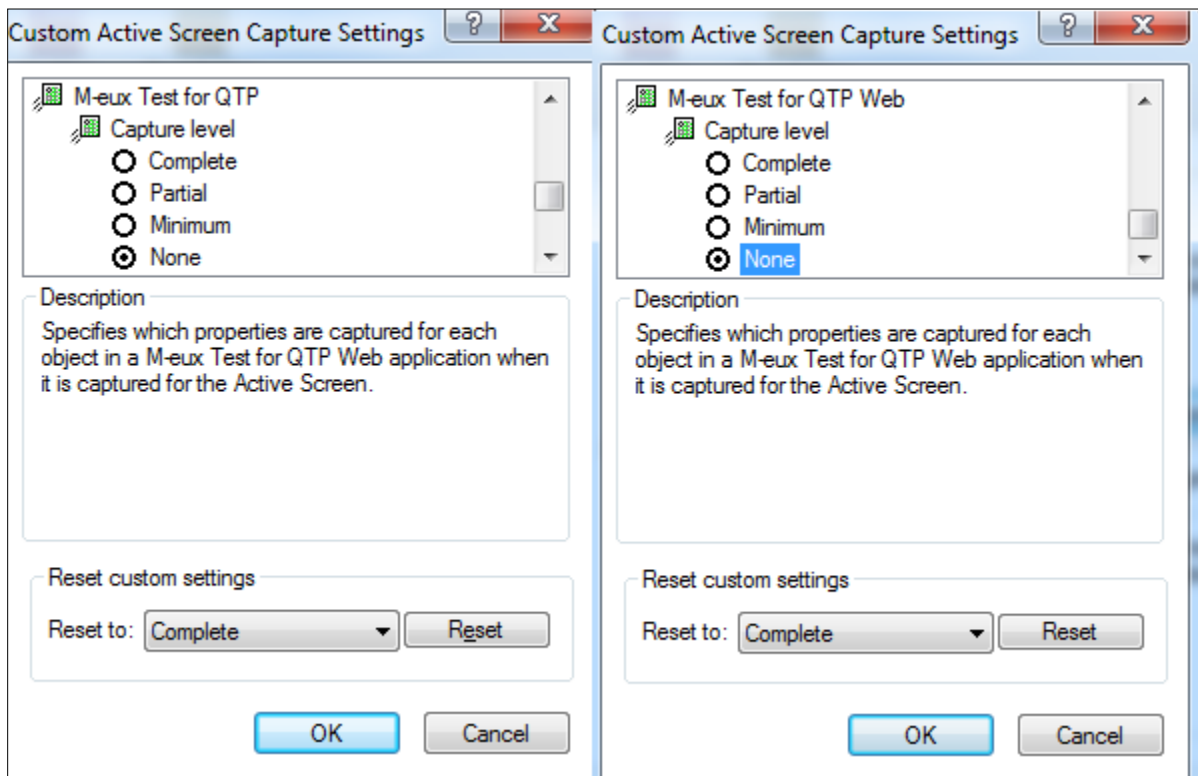
Chapter 4: UFT Replay Settings

To speed up UFT execution please do following changes to your UFT test.

4.1. Disable Active Screen

Please disable active screen for M-eux Test for UFT and M-eux Test for UFT Web, Please follow below steps.

1. In UFT, click **Tools, Options, GUI Testing, Active Screen, Custom Level**
2. Select **M-eux Test for UFT** and choose **None**
3. Select **M-eux Test for UFT Web** and choose **None**
4. Click **OK** as in below figure.

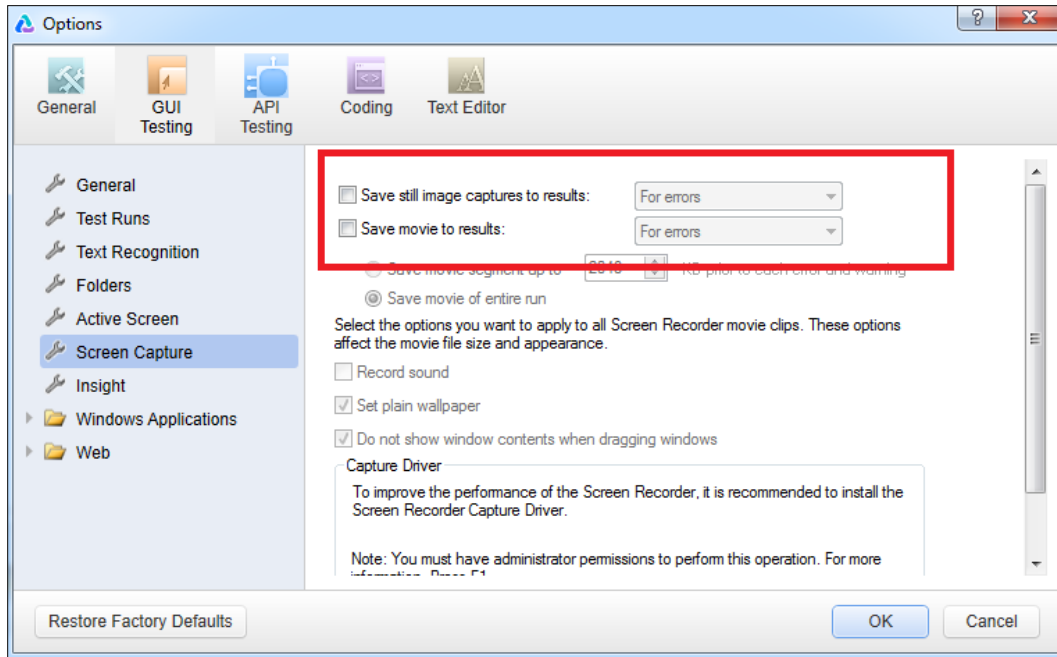


Active screen settings

4.2. Screen Capture

Do not save any screenshots or movies to results, please follow below steps:

1. In UFT, click **Tools, Options, GUI Testing, Screen capture**
2. Uncheck **Save still image capture to results** and **Save movie to results** as in below figure.

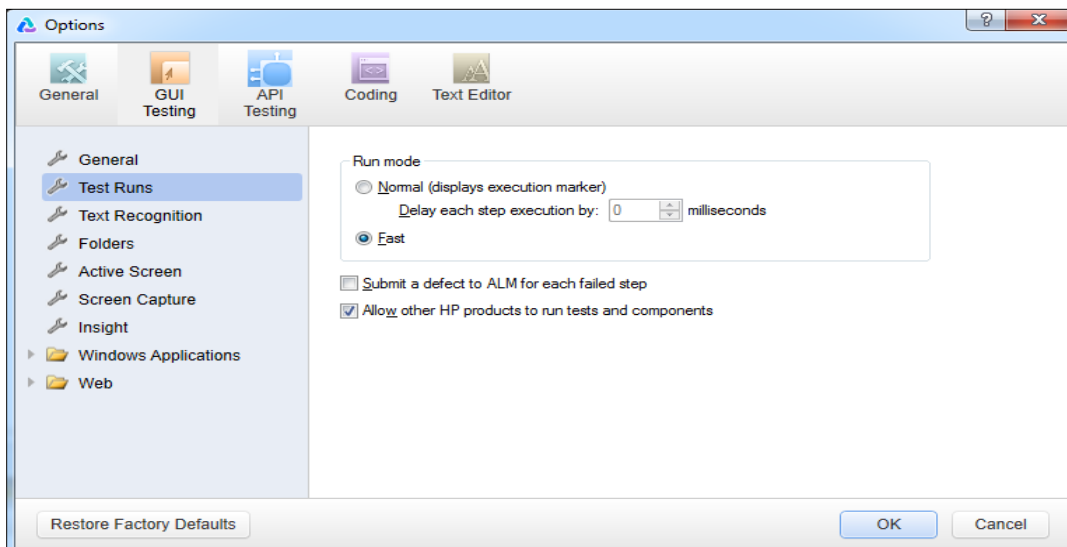


Screen capture settings

4.3. Run mode

Please run scripts in fast mode. Follow below steps to change the run mode:

1. In UFT, click **Tools, Options, GUI Testing, Test Runs**
2. Select **Fast** as in below figure



Run mode settings