

Testing Appeon Web Applications with QTP

Appeon® for PowerBuilder® 2013
FOR WINDOWS & UNIX & LINUX

DOCUMENT ID: DC40000-01-0651-01

LAST REVISED: May 15, 2013

Copyright © 2000-2013 by Appeon Corporation. All rights reserved.

This publication pertains to Appeon software and to any subsequent release until otherwise indicated in new editions or technical notes. Information in this document is subject to change without notice. The software described herein is furnished under a license agreement, and it may be used or copied only in accordance with the terms of that agreement.

No part of this publication may be reproduced, transmitted, or translated in any form or by any means, electronic, mechanical, manual, optical, or otherwise, without the prior written permission of Appeon Corporation.

Appeon, the Appeon logo, Appeon Developer, Appeon Enterprise Manager, AEM, Appeon Server and Appeon Server Web Component are registered trademarks of Appeon Corporation.

Sybase, Adaptive Server Anywhere, Adaptive Server Enterprise, iAnywhere, PowerBuilder, Sybase Central, and Sybase jConnect for JDBC are trademarks or registered trademarks of Sybase, Inc.

Java and JDBC are trademarks or registered trademarks of Sun Microsystems, Inc.

All other company and product names used herein may be trademarks or registered trademarks of their respective companies.

Use, duplication, or disclosure by the government is subject to the restrictions set forth in subparagraph (c)(1)(ii) of DFARS 52.227-7013 for the DOD and as set forth in FAR 52.227-19(a)-(d) for civilian agencies.

Appeon Corporation, 1/F, Shell Industrial Building, 12 Lee Chung Street, Chai Wan District, Hong Kong.

Contents

1 Overview	1
2 Configuring AEM	2
3 Configuring QTP	3
3.1 Selecting Web add-in	3
3.2 Configuring options	3
3.3 Configuring object identification	6
4 Considerations for Recording Web Applications	8
4.1 Mouse scroll ball	8
4.2 Keeping data consistent	8
4.3 Recording TreeView DataWindow	8
4.4 Recording DatePicker	8
4.5 Recording Menu	8
5 Known Issues	10
5.1 Failing to record operations on SDI windows in Internet Explorer 8.0	10
5.2 Generating scripts in an incorrect order	10
5.3 Failing to run tests	10
6 Appendix	11

1 Overview

You can automate the testing of Apeon Web application by using QTP (QuickTest Professional), one of the most popular automatic testing tools. This guide will walk you through how to configure QTP. It also introduces several considerations and known issues for recording Web applications with QTP. To make sure that you can follow this guide easily, you would need to know how to use QTP beforehand. Please read the QTP user manual first if you do not know the basis of QTP.

You will find step-by-step instructions for the following tasks in this user guide:

- [Configuring AEM](#)
- [Configuring QTP](#)
- [Considerations for Recording Web Applications](#)
- [Known Issues](#)
- [Appendix](#)

2 Configuring AEM

To test a Web application converted by Appeon for PowerBuilder, go to AEM and switch the **Run Mode** to **Test Mode** (by default, **Normal Mode** is selected).

For more information, please refer to the *Run Mode* section in the *Appeon Server Configuration Guide*.

Figure 2.1: Configuring AEM

Run Mode Settings
Select the run mode for Web applications. If test mode has been turned on, Appeon Server will start in the performance test mode, allowing stress testing tools (such as LoadRunner) to read and write parameters in the plain text.
Run Mode: <input type="radio"/> Normal Mode <input checked="" type="radio"/> Test Mode

3 Configuring QTP

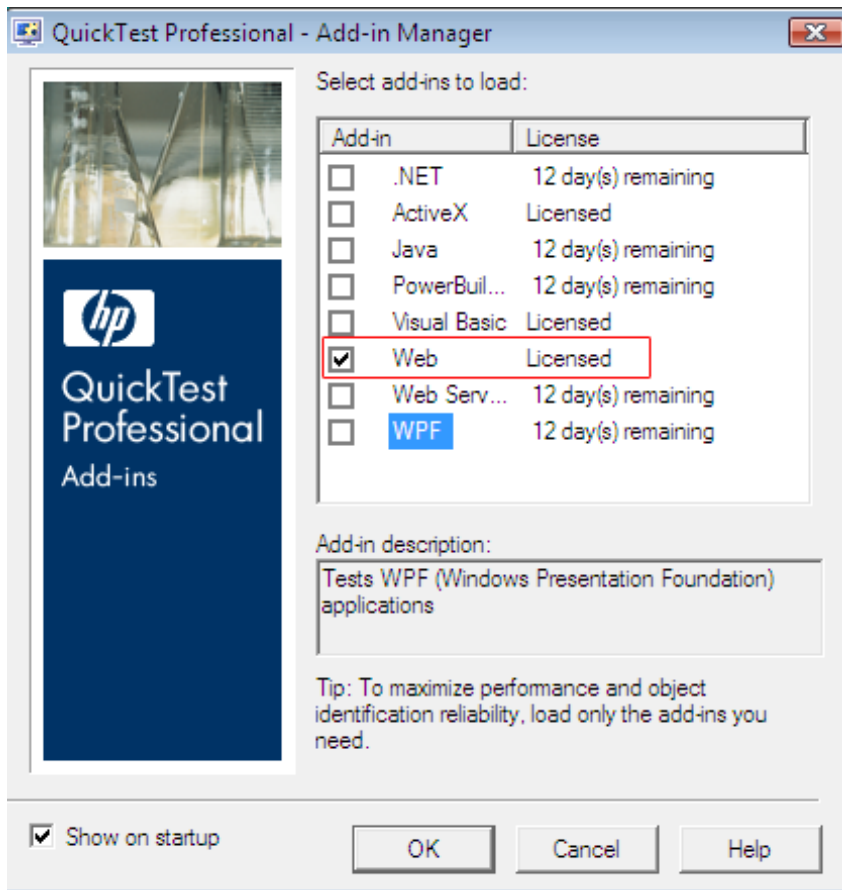
Before you can use QTP to record the operations on the controls or functionalities of a Web application, you will need to configure QTP properly.

3.1 Selecting Web add-in

When you start QuickTest, the **Add-in Manager** dialog box opens. In the Add-in Manager, select the **Web** add-in, and then click **OK** to save the settings and close Add-in Manager.

Note: If the Add-in Manager does not open when starting QuickTest, choose **Tools > Options**, click **General** and select **Display Add-in Manager on startup**. When you exit and restart QuickTest, the **Add-in Manager** opens.

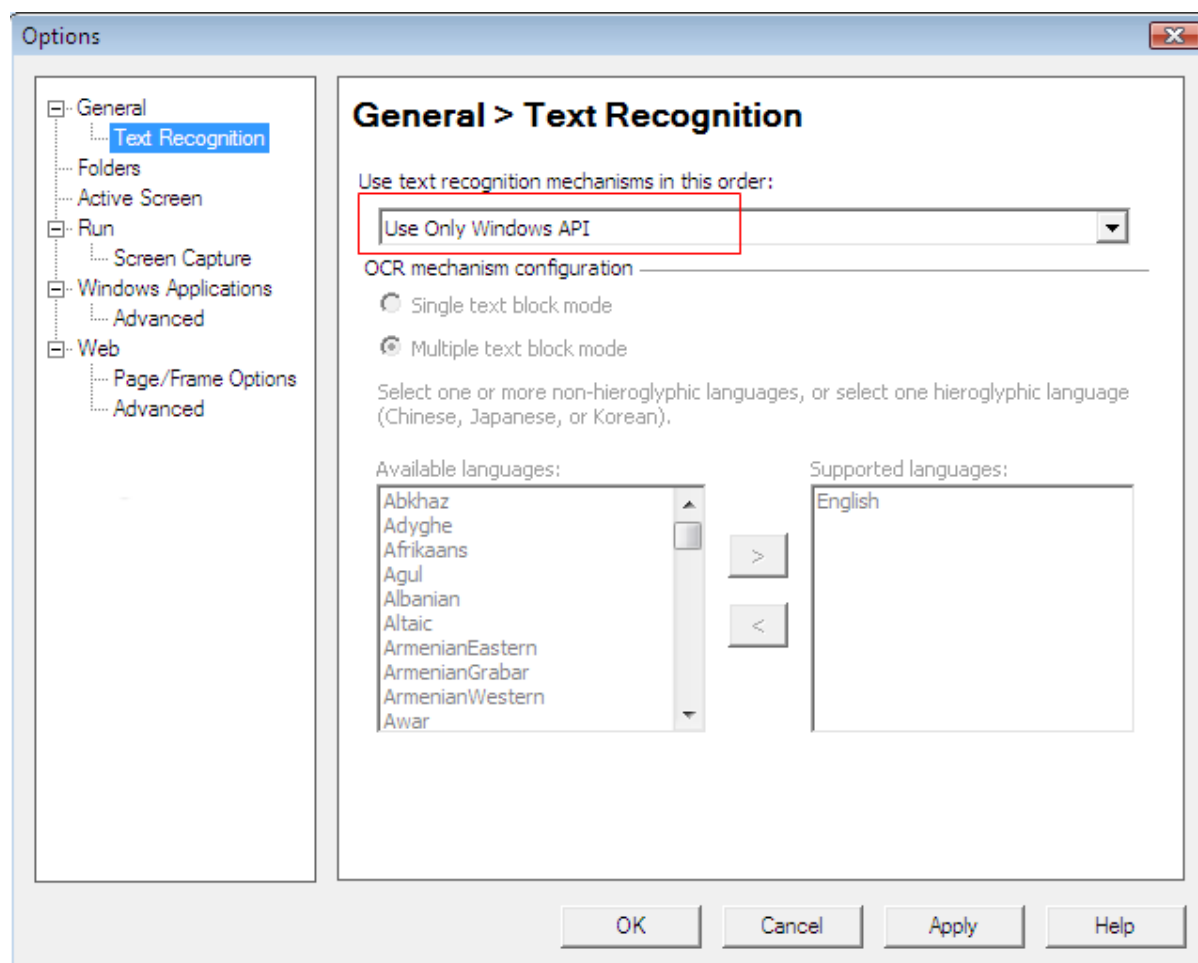
Figure 3.1: Selecting add-ins



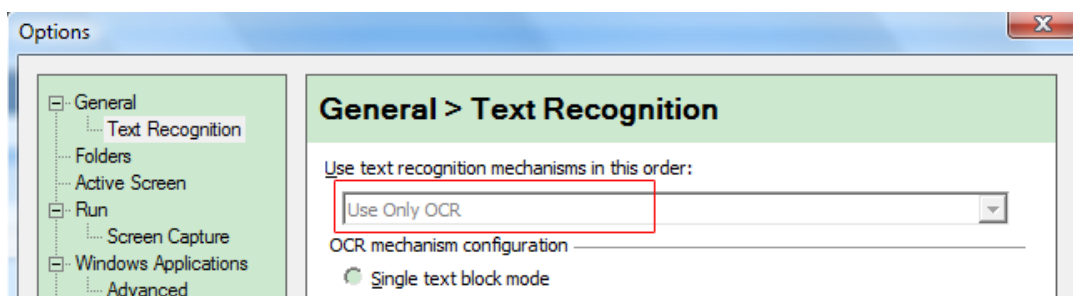
3.2 Configuring options

Step 1 -- Choose **Tools > Options**. The **Options** dialog box opens.

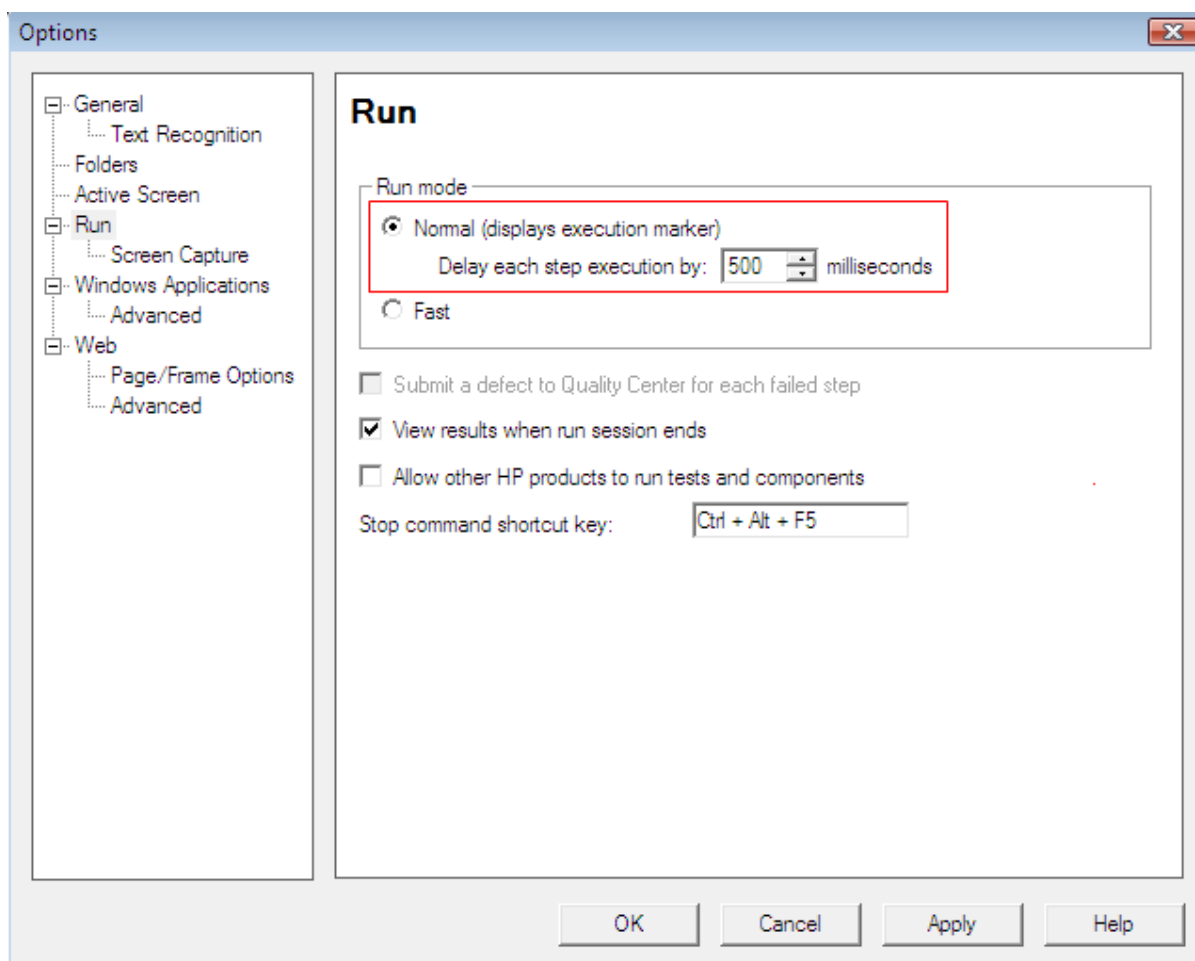
Step 2 -- In the left pane, click **General**, and in the right pane, select **Use Only Windows API** from the **Use text recognition mechanisms in this order** list.

Figure 3.2: Text Recognition**Notes:**

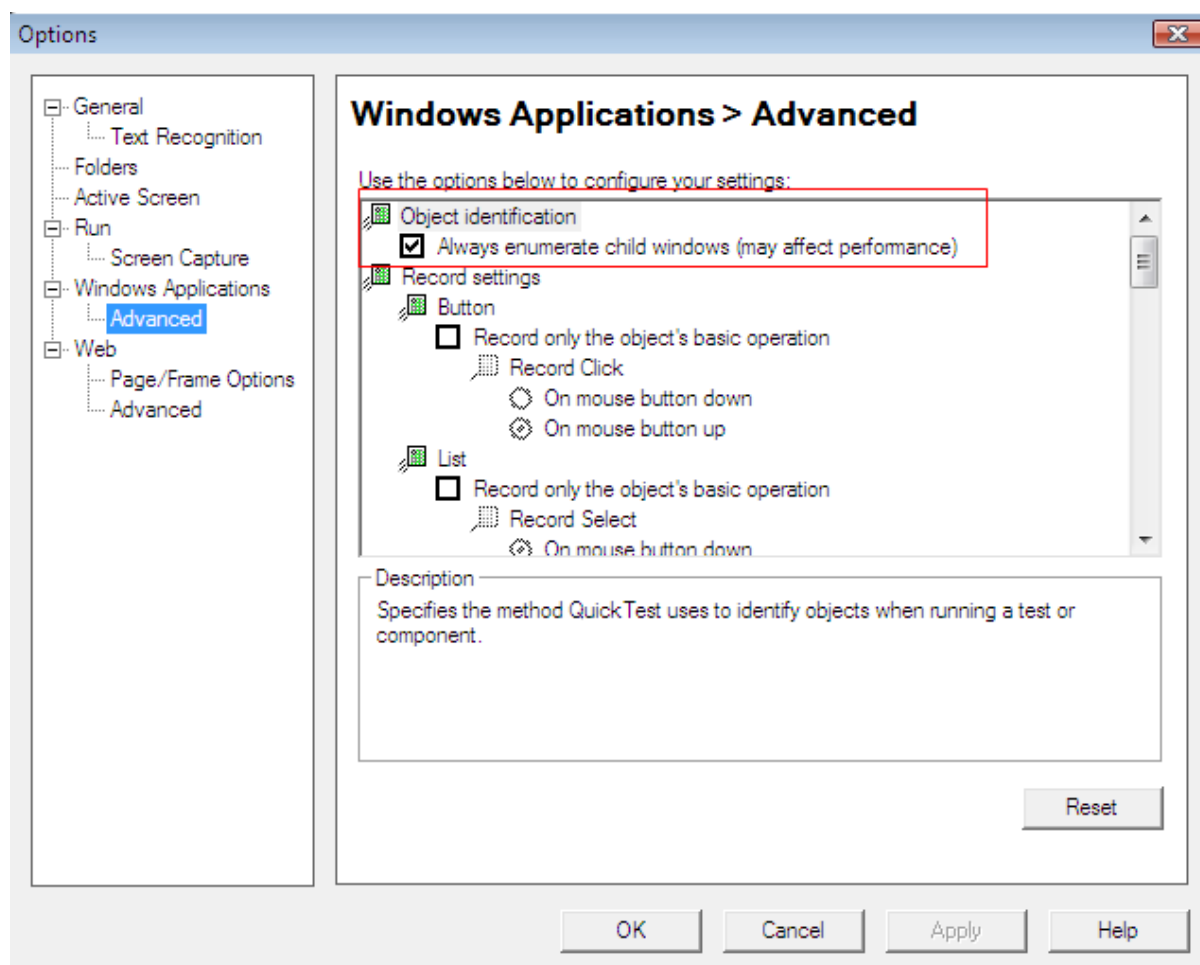
1. If there is unrecognized script obtained and the checkpoint is not an image when you insert a Text checkpoint, check the configuration here. Make sure the **Use Only Window API** is selected in the **Use text recognition mechanism in this order** dropdown list box.
2. Windows 7 and Windows Server 2008 R2 do not support the Windows API test recognition mechanism. Therefore, when you install relevant QTP 10.00 patches, the **Use text recognition mechanisms in this order** option in the **Options** dialog box (**Options > General > Text Recognition**) is set to **Use only OCR**, and cannot be changed (the option is disabled), as shown in the figure below. However, you can still test a Web application on Windows 7 or Windows Server 2008 R2, the only problem you might have is the text that QTP obtain may contain some unrecognizable characters. When this happens, you can manually modify these unrecognizable characters. For more information, refer to the QTP 10.0 user guide.

Figure 3.3: View Text Recognition window

Step 3 -- Click **Run** in the left pane. In the right pane, select **Normal (displays execution marker)**, and then type 500 or select 500 using the spin control in the **Delay each step execution by [] milliseconds** spin control, as shown in the figure below.

Figure 3.4: Choose the Run mode

Step 4 -- In the left pane, expand **Windows Applications** and click **Advanced**. In the right pane, select **Always enumerate child windows (may affect performance)** option under **Object identification**.

Figure 3.5: Set the object identification

Step 5 -- Click **OK** or **Apply** to save the settings.

3.3 Configuring object identification

Copy the following scripts to the **Expert View** in QTP and click **Run**.

This is to map the Apeon Web application objects with standard QTP objects. And it is an "import once, use forever" operation. You just need to copy the following scripts to your QTP **Expert View** for the very first time when you begin to record Apeon Web applications.

```
Dim App 'As Application
Dim intPosition
Set App = CreateObject("QuickTest.Application")
App.Launch
App.Visible = True

'Configuration of Standard Windows objects
'Object identification configuration for user-defined object "WinEdit"\
intPosition = App.Options.ObjectIdentification("WinEdit").
MandatoryProperties.Find("attached text")
If intPosition <> -1 Then
App.Options.ObjectIdentification("WinEdit").MandatoryProperties.Remove intPosition
End If

'Object identification configuration for user-defined object "WinEditor"
intPosition = App.Options.ObjectIdentification("WinEditor").
MandatoryProperties.Find("attached text")
If intPosition <> -1 Then
App.Options.ObjectIdentification("WinEditor").MandatoryProperties.Remove intPosition
End If

'Object identification configuration for test object object "browser"
App.Options.ObjectIdentification("browser").MandatoryProperties.RemoveAll()
App.Options.ObjectIdentification("browser").AssistiveProperties.RemoveAll()

'Configuration of user-defined objects

'Object identification configuration for user-defined object "eoncheckbox"
App.Options.ObjectIdentification("WinCheckBox").CreateUserDefinedObject("eoncheckbox")
App.Options.ObjectIdentification("eoncheckbox").OrdinalIdentifier = "location"
App.Options.ObjectIdentification("eoncheckbox").MandatoryProperties.RemoveAll()
App.Options.ObjectIdentification("eoncheckbox").AssistiveProperties.RemoveAll()
App.Options.ObjectIdentification("eoncheckbox").MandatoryProperties.Add("nativeclass")
App.Options.ObjectIdentification("eoncheckbox").AssistiveProperties.Add("window id")
'App.Options.ObjectIdentification("eoncheckbox").AssistiveProperties.Add("x")
'App.Options.ObjectIdentification("eoncheckbox").AssistiveProperties.Add("y")
App.Options.ObjectIdentification("eoncheckbox").EnableSmartIdentification = False
App.Options.ObjectIdentification("eoncheckbox").BaseFilterProperties.RemoveAll()
App.Options.ObjectIdentification("eoncheckbox").OptionalFilterProperties.RemoveAll()

'Object identification configuration for user-defined object "eoncmbbutton"
App.Options.ObjectIdentification("WinButton").CreateUserDefinedObject("eoncmbbutton")
App.Options.ObjectIdentification("eoncmbbutton").OrdinalIdentifier = "location"
App.Options.ObjectIdentification("eoncmbbutton").MandatoryProperties.RemoveAll()
App.Options.ObjectIdentification("eoncmbbutton").AssistiveProperties.RemoveAll()
App.Options.ObjectIdentification("eoncmbbutton").MandatoryProperties.Add("nativeclass")
App.Options.ObjectIdentification("eoncmbbutton").AssistiveProperties.Add("window id")
'App.Options.ObjectIdentification("eoncmbbutton").AssistiveProperties.Add("x")
'App.Options.ObjectIdentification("eoncmbbutton").AssistiveProperties.Add("y")
App.Options.ObjectIdentification("eoncmbbutton").EnableSmartIdentification = False
App.Options.ObjectIdentification("eoncmbbutton").BaseFilterProperties.RemoveAll()
App.Options.ObjectIdentification("eoncmbbutton").OptionalFilterProperties.RemoveAll()

'Object identification configuration for user-defined object "eoncombobox"
App.Options.ObjectIdentification("WinComboBox").CreateUserDefinedObject("eoncombobox")
App.Options.ObjectIdentification("eoncombobox").OrdinalIdentifier = "location"
App.Options.ObjectIdentification("eoncombobox").MandatoryProperties.RemoveAll()
App.Options.ObjectIdentification("eoncombobox").AssistiveProperties.RemoveAll()
App.Options.ObjectIdentification("eoncombobox").MandatoryProperties.Add("nativeclass")
App.Options.ObjectIdentification("eoncombobox").AssistiveProperties.Add("window id")
'App.Options.ObjectIdentification("eoncombobox").AssistiveProperties.Add("x")
'App.Options.ObjectIdentification("eoncombobox").AssistiveProperties.Add("y")
App.Options.ObjectIdentification("eoncombobox").EnableSmartIdentification = False
App.Options.ObjectIdentification("eoncombobox").BaseFilterProperties.RemoveAll()
App.Options.ObjectIdentification("eoncombobox").OptionalFilterProperties.RemoveAll()

'Object identification configuration for user-defined object "eondatawindow"
App.Options.ObjectIdentification("WinObject").CreateUserDefinedObject("eondatawindow")
App.Options.ObjectIdentification("eondatawindow").OrdinalIdentifier = "location"
App.Options.ObjectIdentification("eondatawindow").MandatoryProperties.RemoveAll()
```

4 Considerations for Recording Web Applications

This section only highlights a few areas that you should pay special attention to when you test Apeon Web applications with QTP. For step-by-step instructions on how to use QTP, please refer to the QTP user guide.

4.1 Mouse scroll ball

QTP cannot record operations performed by using the mouse scroll ball, therefore avoid using mouse scroll ball to scroll a window when recording the application with QTP.

4.2 Keeping data consistent

Make sure that the data of running a test need to be the same data when the test is recorded, otherwise it may cause run failures.

4.3 Recording TreeView DataWindow

The TreeView DataWindow is not a standard Windows TreeView in QTP, therefore when clicking a TreeView node, its coordinates will be recorded by QTP.

4.4 Recording DatePicker

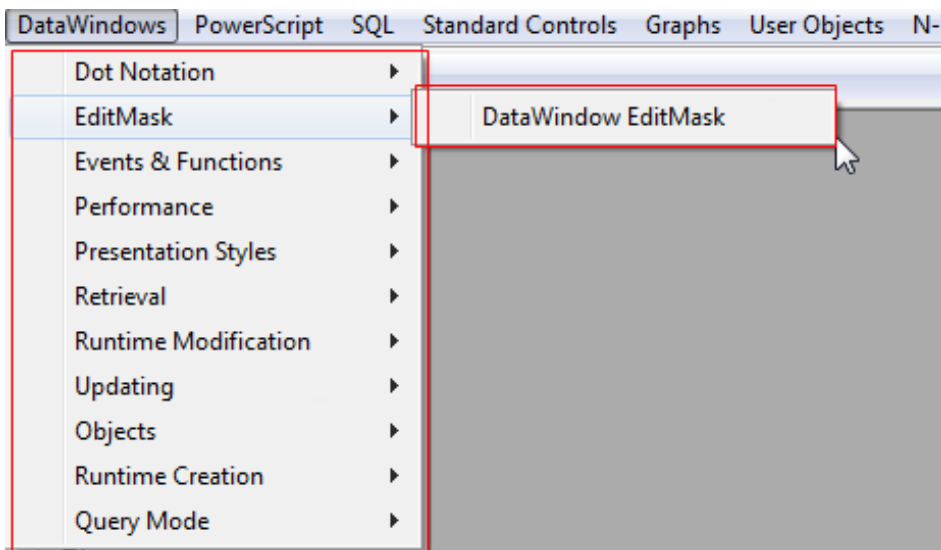
For the DatePicker control or controls of this type (time controls that use x and y coordinates to recognize data), the date (year and month) to run a test need to be the same as the year and month when the test is recorded.

4.5 Recording Menu

QTP may occasionally record a Menu as a ControlMenu which will cause run failures. When this happens, you can record the operation again, and make sure that you do not click any menu other than the one you intend to record.

Typically, to record a sub-menu, instead of clicking the menu, move the mouse over the menu, for example *DataWindows* and then *EditMask* as shown in the figure below, until the sub-menu you want to record appears, and then click the sub-menu.

Figure 4.1: Recording Menu



5 Known Issues

This section lists the issues one may come across when testing Apeon Web applications with QTP.

5.1 Failing to record operations on SDI windows in Internet Explorer 8.0

Description: No test script is generated while QTP 10.00 is recording operations on an SDI window (main-type window opened by the PB Open function) in IE 8.0.

Cause: It is probably caused by the limited support of QTP 10.00 for IE 8.0.

Solution: You can upgrade to QTP 11.00 to avoid this problem.

5.2 Generating scripts in an incorrect order

Description: The test scripts are generated in an incorrect order.

Cause: This is probably a QTP issue and happens occasionally.

Solution: When this happens, you can record the operation again and make sure that the scripts are generated in the correct order; or you can manually change the scripts into the correct order in the Expert View.

5.3 Failing to run tests

Description: Test failed to run in QTP, and errors like "Cannot identify the object ..." occur.

Cause A & Solution A: This is caused by the incorrect order in which the record is generated. See [Generating scripts in an incorrect order](#) for details.

Cause B & Solution B: Data of running a test is not the same data when the test is recorded. See [Keeping data consistent](#).

6 Appendix

This section lists the default ID of several objects. They will be used to represent the object in the **Object Repository** and the script. You can refer to the following table and modify the default ID in the **Object Repository** if you find it difficult to understand or remember them.

Control code	Description
[ATL: Eon000202]	MDI Window
[ATL: Eon000203]	MDI Window with help status bar
[ATL: Eon000204]	Popup window
[ATL: Eon000205]	Response window
[ATL: Eon000206]	Child Window
[ATL: Eon000038]	User Object