keynote

Test. Measure. Monitor.
Assure the connected experience.

MITE Enterprise for UFT

Installation and User Guide

MITE Enterprise 4.0

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Contents

1 Introduction

This document describes the installation and use of Keynote's MITE (Mobile Internet Testing Environment) Enterprise for UFT (HP Unified Functional Testing, which includes HP QTP—HP QuickTest Pro).

MITE Enterprise for UFT provides access to over 2100 emulated devices and 12000 device profiles within HP QTP. Users can test and verify mobile web content availing of Keynote's design and performance metrics. Users can also record test scripts on real WebKit browsers for on-demand playback.

Mobile web site interaction, test script recording and playback all take place within HP QTP. Test scripts and results are stored within HP QTP.

1.1 Document Outline

This document assumes that you are familiar with interacting web sites using MITE emulators and interpreting performance evaluation data displayed in MITE results.

In this document:

Introduction covers requirements for installing and running MITE Enterprise for UFT.

Installation covers the procedure of running the MITE UFT Configurator to install the MITE Add-in.

Running MITE Enterprise for UFT covers starting and stopping a session and adjusting the Keynote MITE window.

Browsing covers how to navigate web content and interpret MITE performance data.

Creating a MITE for UFT Test Script covers recording a script, the objects captured, and inserting a checkpoint.

Execution and Results covers how to run a script on one or multiple devices and view HP QTP as well as MITE results.

1.2 Requirements

To deploy MITE Enterprise for UFT, you need to install:

- HP QTP or HP UFT software 11.00—refer to the *HP QuickTest Professional Installation Guide* for system requirements.
- Keynote MITE 4.0

  When you install and launch MITE, it automatically detects if HP QTP is installed on your machine and prompts you to start the UFT Configurator.

This guide assumes that you familiar with HP QTP as well as browsing websites, recording and playing scripts, and reviewing results in MITE.

1.2.1 Minimum System Requirements

In order to install MITE and the MITE Add-in, and run HP QTP with the MITE Add-in, you require:

Hardware/Software	For	Requirement
Operating system	Installing MITE and MITE Add-in	▪ Windows XP SP2 ▪ Windows 7 ▪ Windows 8
Processor	Running HP QTP with MITE Add-in	▪ Pentium IV (1 Ghz) or higher

Hardware/Software	For	Requirement
Memory	Running HP QTP	▪ 1 GB when no more than 3 add-ins are loaded simultaneously ▪ Additional memory is required to load more add-ins or to capture movies during run sessions.
Disk space	Installing HP QTP	▪ 1 GB for application files and folders ▪ Additional 120 MB of free disk space on the system disk
	Installing MITE and MITE Add-in	▪ 200 MB
Video	Running HP QTP with MITE Add-in	▪ Graphics card with 64 MB video memory ▪ High Color (16 bit) color setting
Network	Running HP QTP with MITE Add-in	▪ Internet connection required for logging in and navigating web sites.

1.3 Documentation and Support

Help for using MITE can be found at http://www.keynote.com/support/mite3_help/.

Keynote Technical Support can be reached at http://www.keynote.com/support/.

2 Installation

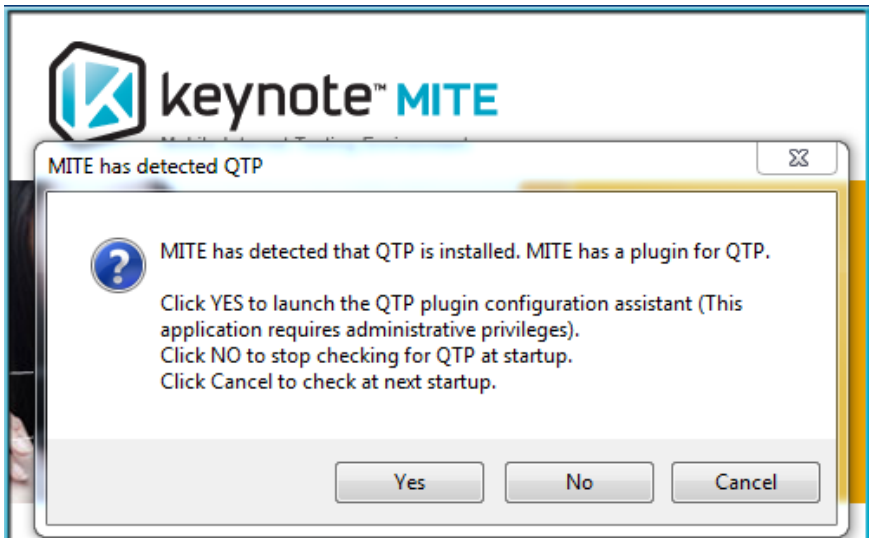
The high-level process of installing the MITE Enterprise for UFT testing environment involves:

1. Installing HP QTP
2. Installing MITE
3. Launching MITE at least once (covered below)
4. Stepping through the UFT Configurator to install the MITE Add-in (covered below)
5. Launching HP QTP and selecting the MITE Add-in

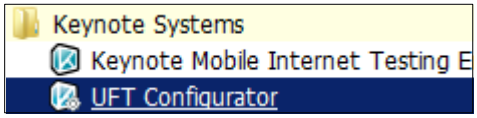
2.1 UFT Configurator

This section describes the simple procedure stepping through the UFT Configurator wizard to install the MITE Add-in for HP QTP.

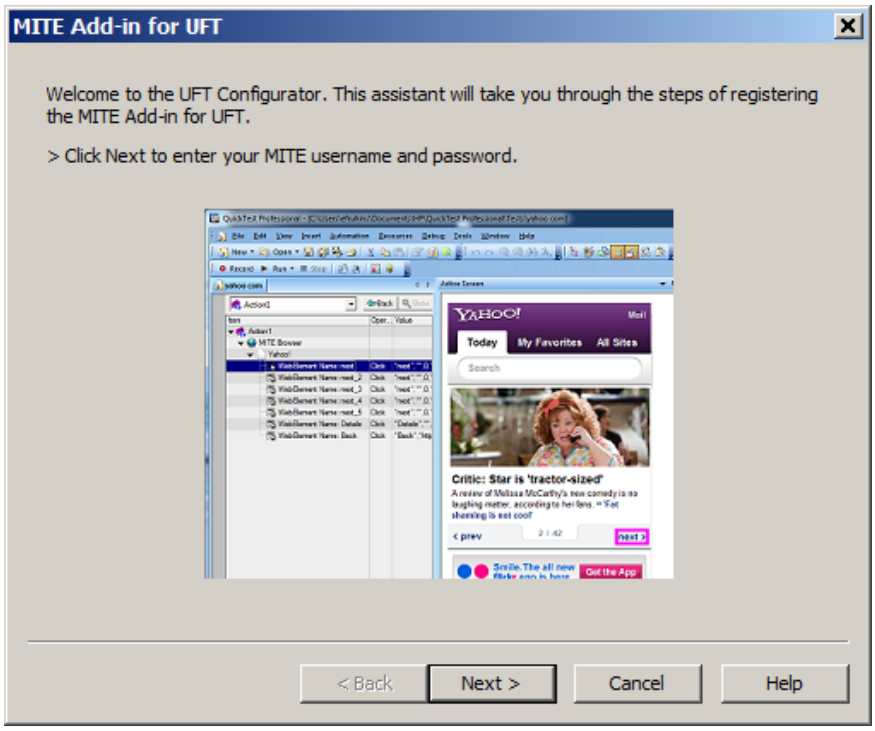
1. After you have installed MITE, launch the program at least once (you do not need to log in) to complete installation of required files in your Windows user profile directory.
2. If MITE detects HP QTP on your machine, it automatically prompts you to start the UFT Configurator—click **Yes** to continue.



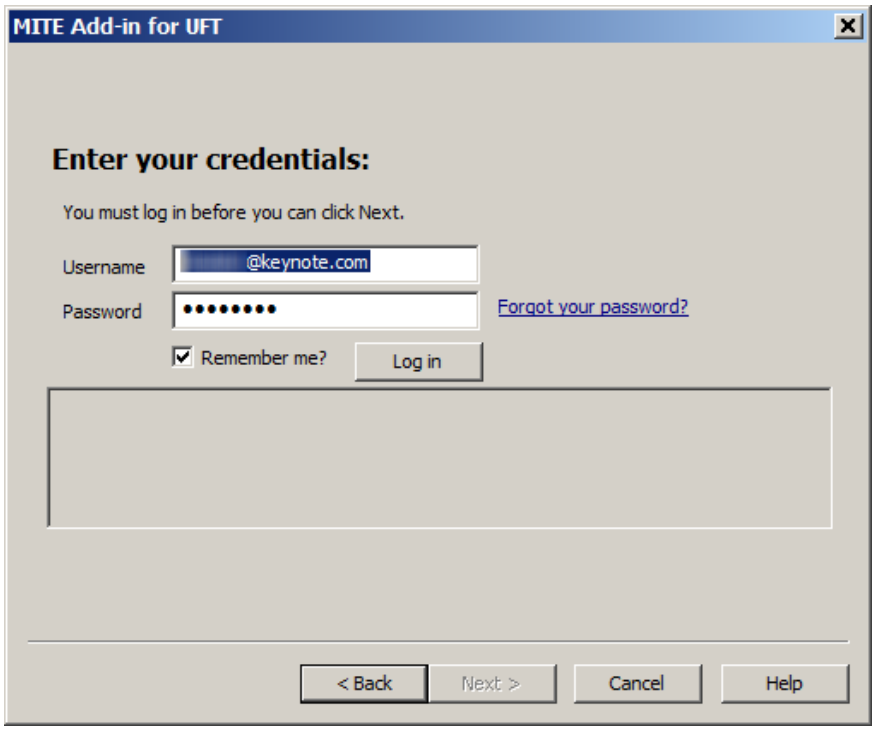
Or you can launch it from **Start** > **All Programs** > **Keynote Systems** > **UFT Configurator**.



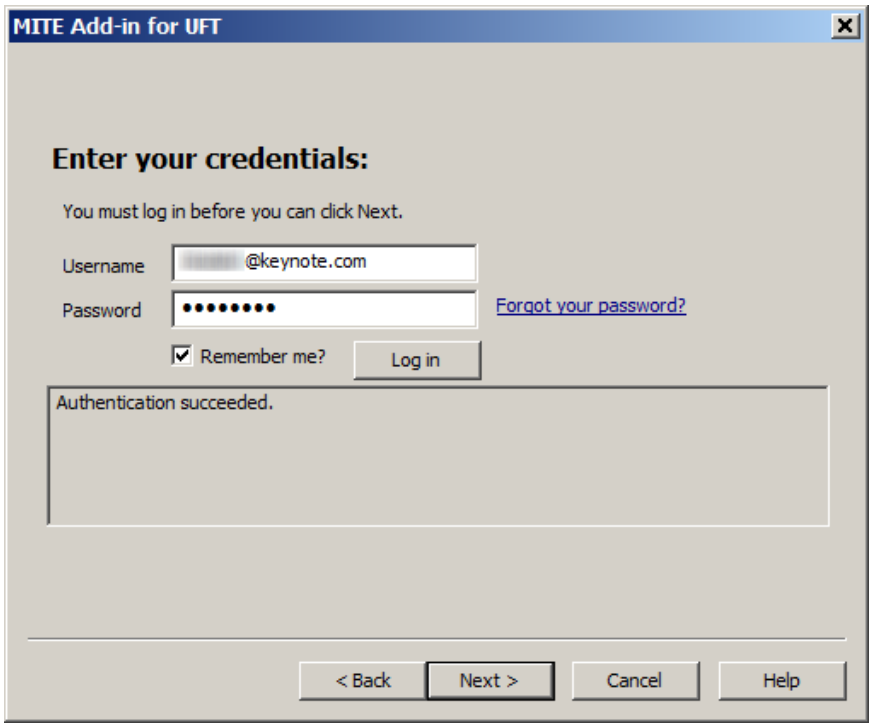
3. Click **Next** to advance through the wizard.



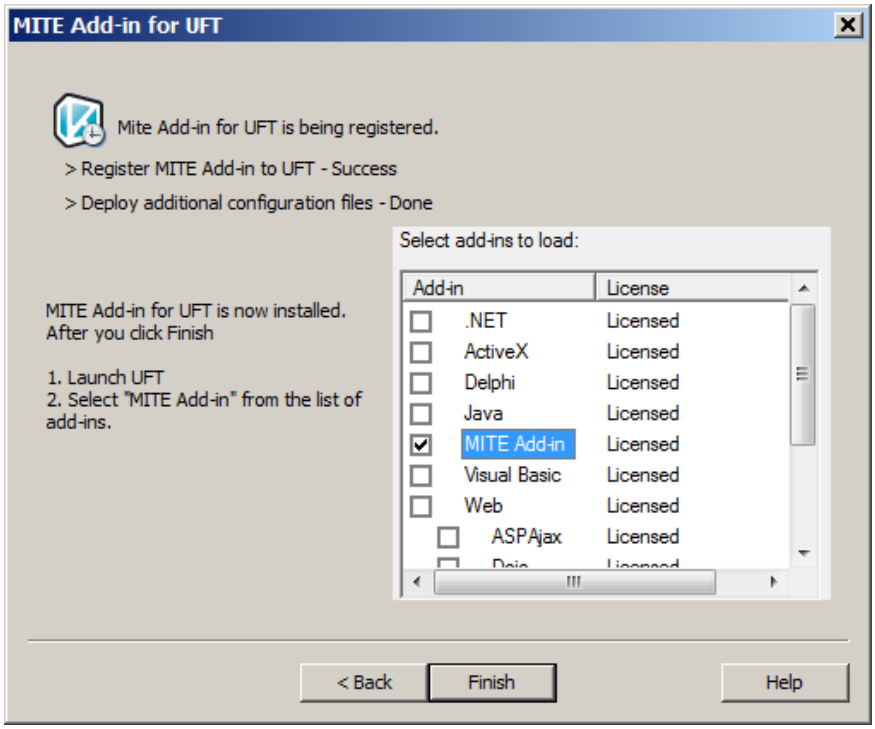
4. Enter your credentials and click **Log in**.



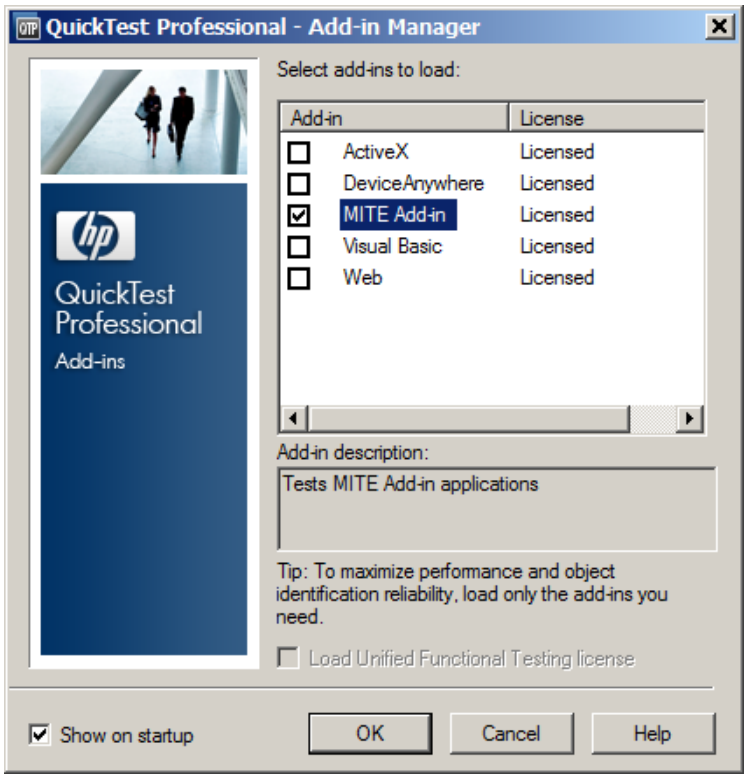
5. You can click **Next** when your credentials have been authenticated.



6. The next screen shows you instructions for what to do after you click **Finish** to exit the wizard.



7. Launch HP QTP and verify that you can see the MITE Add-in listed.



2.2 File Locations

User-specific information and files, including log information, are saved to user profile directories in Windows:

- Windows XP: `C:\Documents and Settings\<Windows_user_name>\Local Settings\Application Data\Keynote Systems\Mite`
- Windows 7 and 8: `C:\Users\<Windows_user_name>\AppData\Roaming\Keynote Systems\Mite`

3 Running MITE Enterprise for UFT

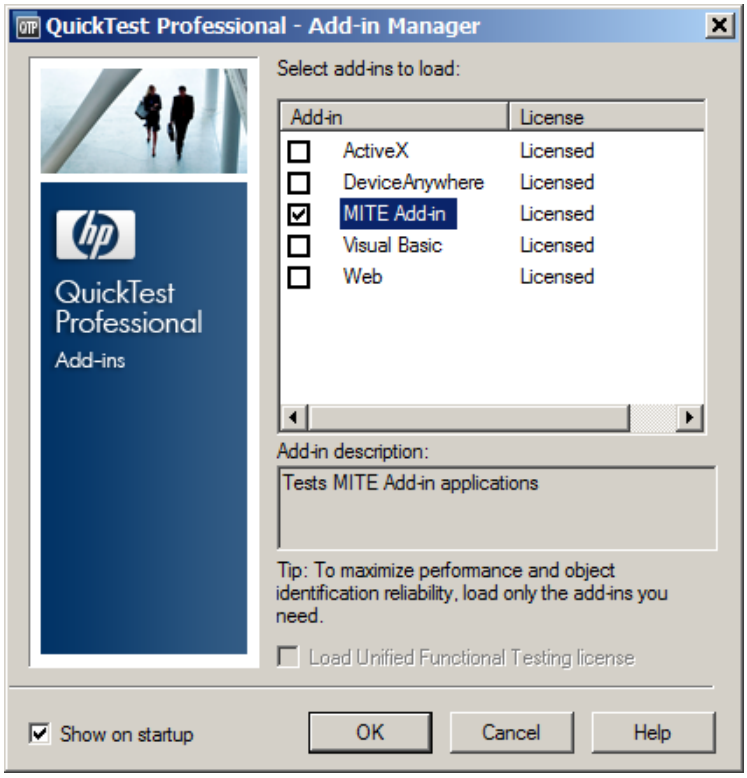
MITE Enterprise for UFT provides a full-featured interface within HP QTP for browsing and testing mobile web content with a real WebKit browser.

This chapter explains how to start and stop a MITE for UFT session and describes the Keynote MITE window for emulated mobile web browsing and testing.

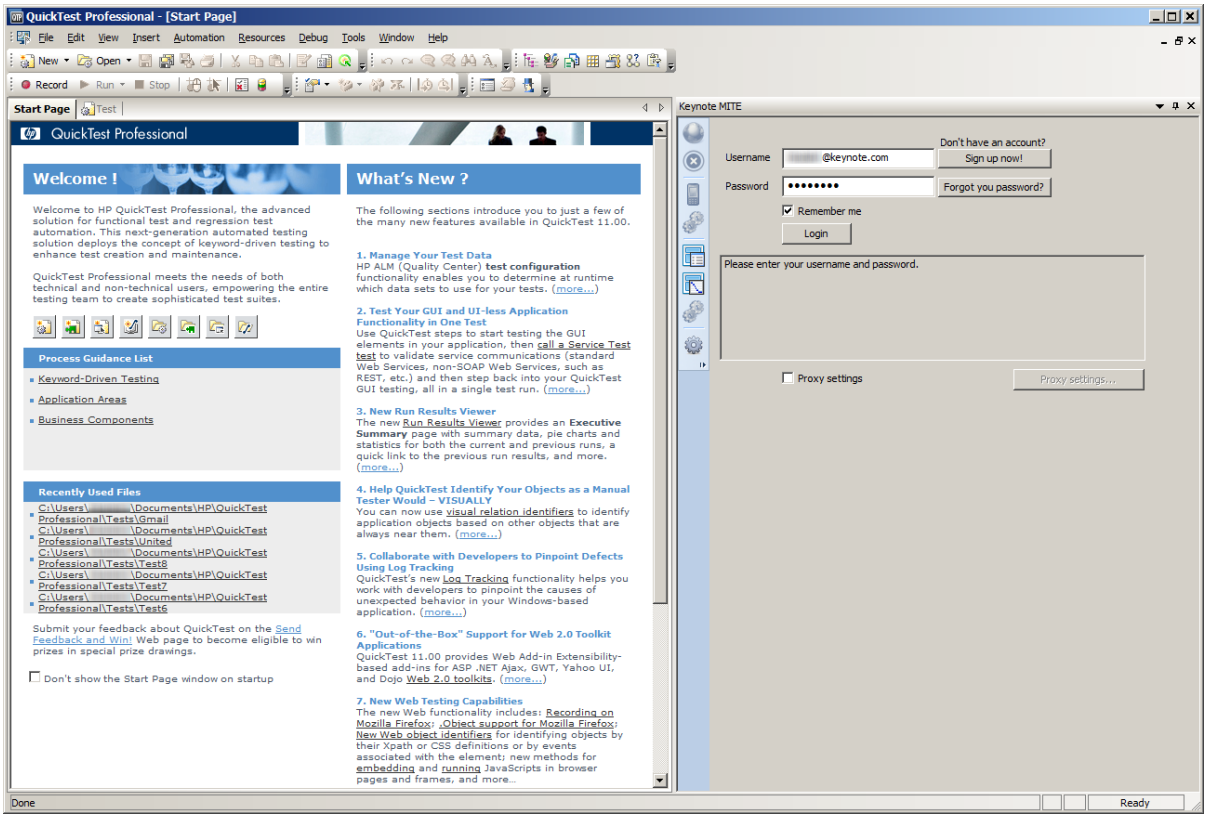
3.1 Starting and Stopping a Session

Test & verify mobile Web content with a real WebKit browser

1. Launch HP QTP and select the **MITE Add-in**. Click **OK**.



2. Enter your MITE credentials in the Keynote MITE window and click **Login**.



NOTE You can be simultaneously be logged in to a standalone instance of MITE as well as MITE Enterprise for UFT using the same credentials.

To exit a MITE for UFT session simply exit HP QTP (**File** > **Exit**).

If HP QTP quits unexpectedly, the MITE Add-in is not terminated. You need to terminate the following processes manually from the Windows Task Manager:

- `MITEPlug.exe`
- `MWPRunnerForm.exe`
- `BrowserRunnerForm.exe`

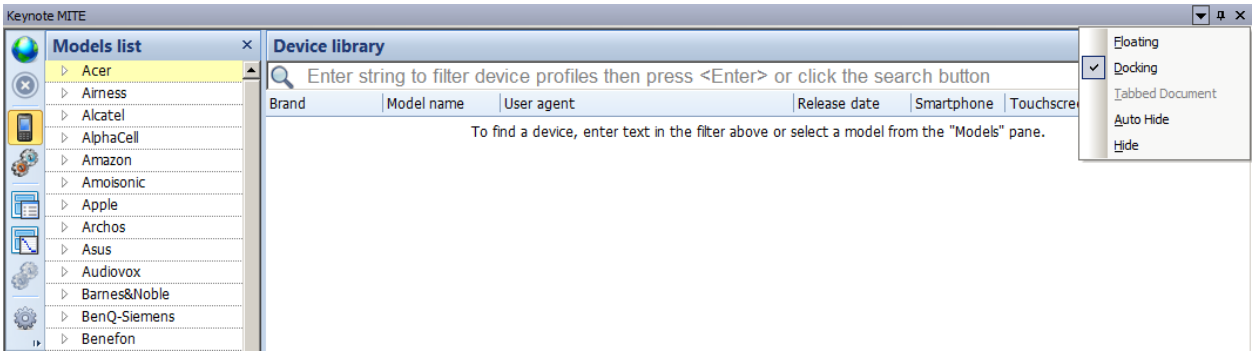
3.2 Keynote MITE Window

When you log in to MITE for UFT, you are directed to the device library, from where you can choose from a vast database of emulated devices and device profiles.

At any point after logging in, you can close/display the window by navigating to **View** > **Keynote MITE**.

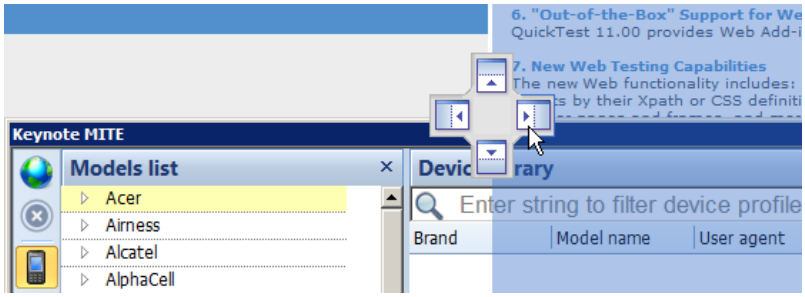
To float the window, click the title bar and drag it. You can also click the arrow in the top-right corner of the window and select **Floating**.

Figure 3-1 Controls to Float or Dock the Keynote MITE Window

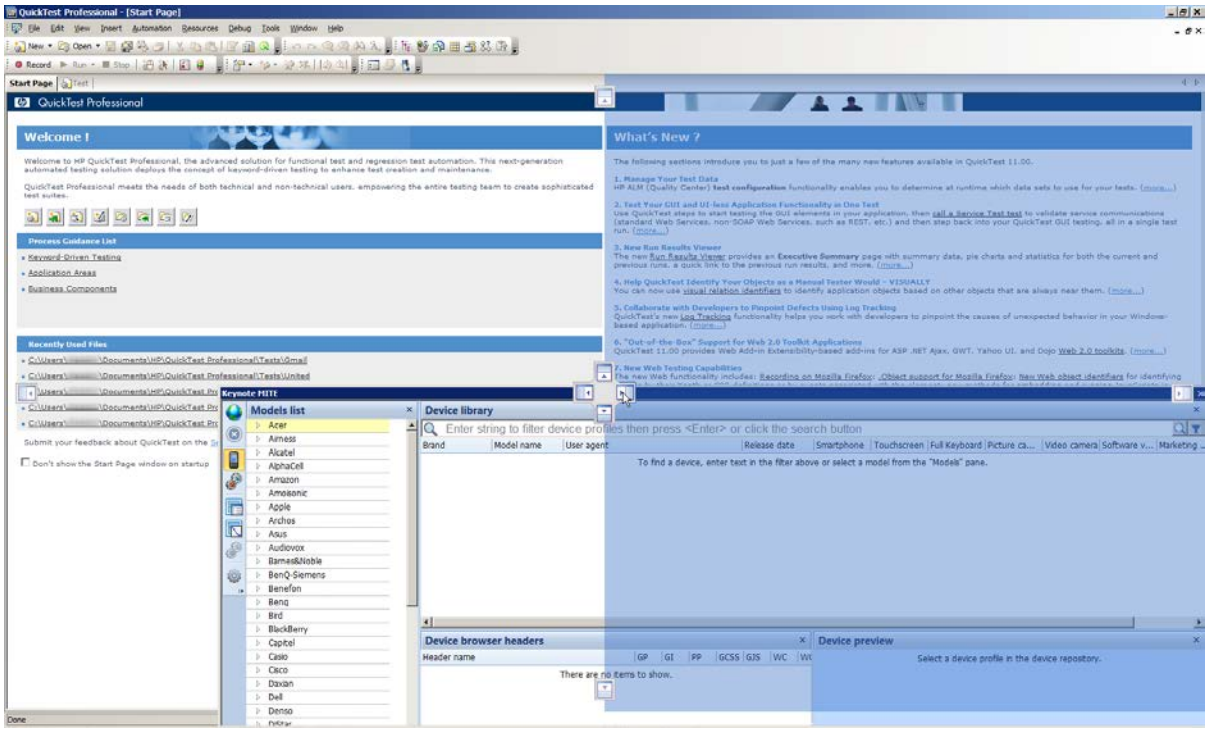


You can dock the window in any quadrant of the HP QTP window:

1. Click the title bar of the window and drag it.



2. Dragging the window, mouse over any of the docking arrows that appear. The corresponding quadrant is highlighted.



3. Release your mouse button. The Keynote MITE window is docked in the chosen quadrant.

4 Browsing

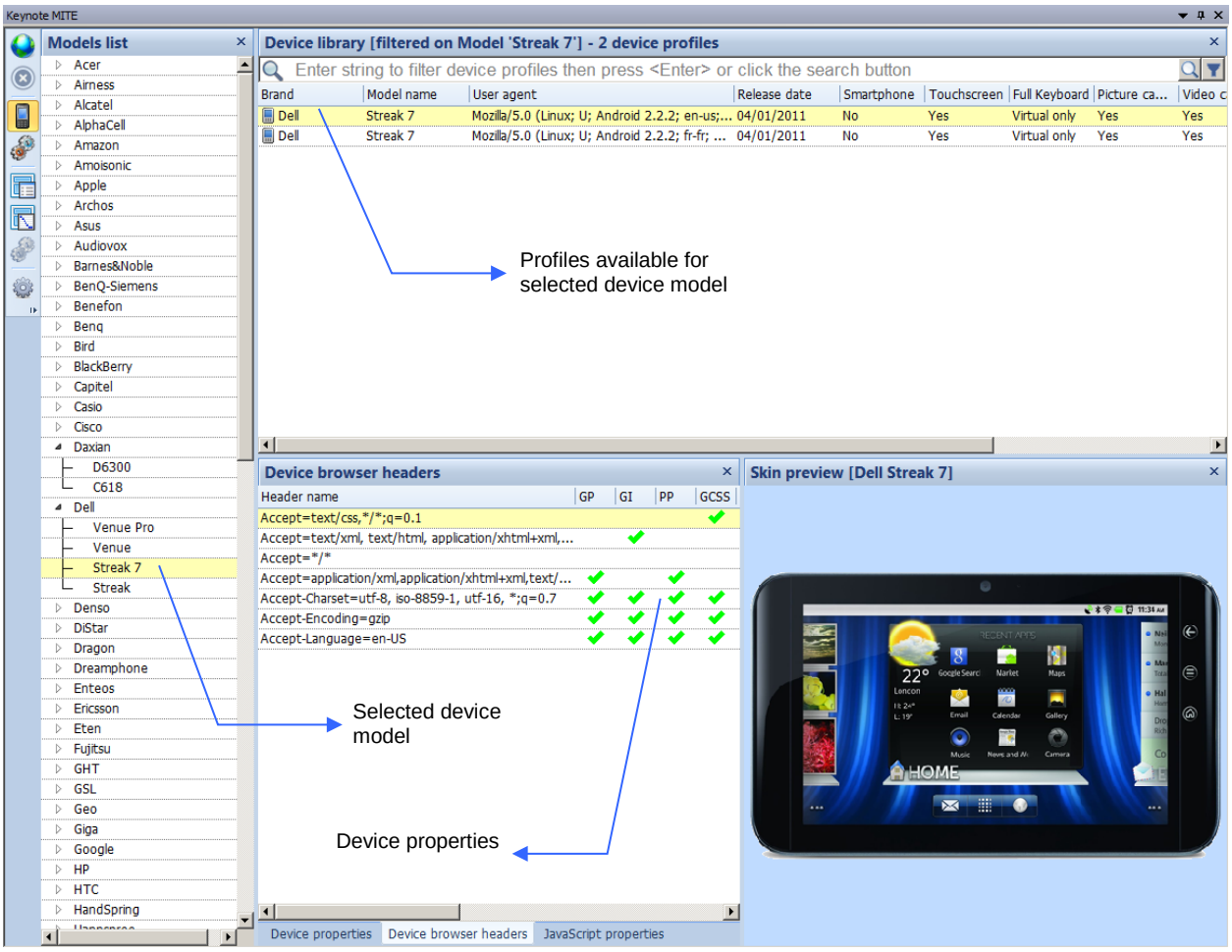
This chapter covers how to browse and interpreting MITE data in the performance waterfall, captured DOM tree, and the MITE score.

As in MITE, you can choose from a large database emulated devices and device profiles to browse live mobile web content in MITE Enterprise for UFT.

A device profile is a unique combination of device model, OS version, and browser. For a given device, profiles can vary with respect to Internet properties such as the HTTP header set or the number of simultaneous TCP connections.

The image below shows the device models available for a manufacturer as well as the profiles available for a selected device model.

Figure 4-1 Device Models and Profiles



4.1 How to Browse

To browse a website:

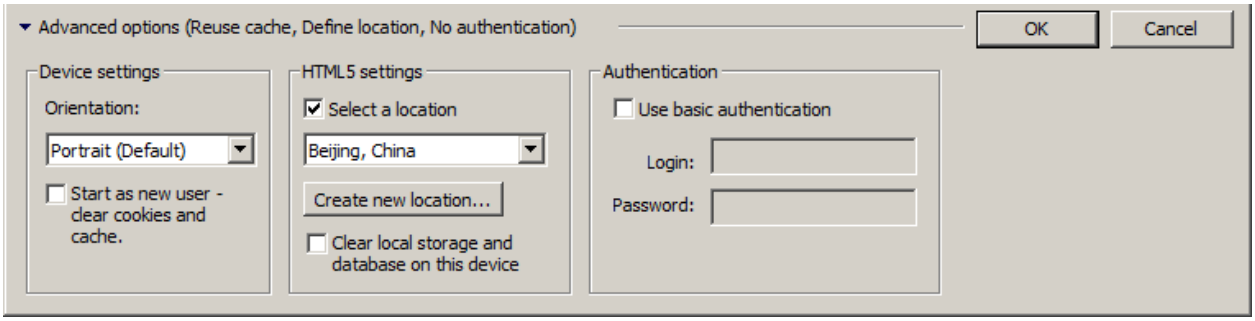
- Select a device or device profile from the device library, then click the Browse button to specify a website, or

- Click the Browse button and select a device as well as URL to navigate to.

Figure 4-2 Browse Dialog Box

Advanced settings allow you to emulate a specific location, specify caching information, change device orientation, and enter credentials to access a website.

Figure 4-3 Advanced Browse Settings

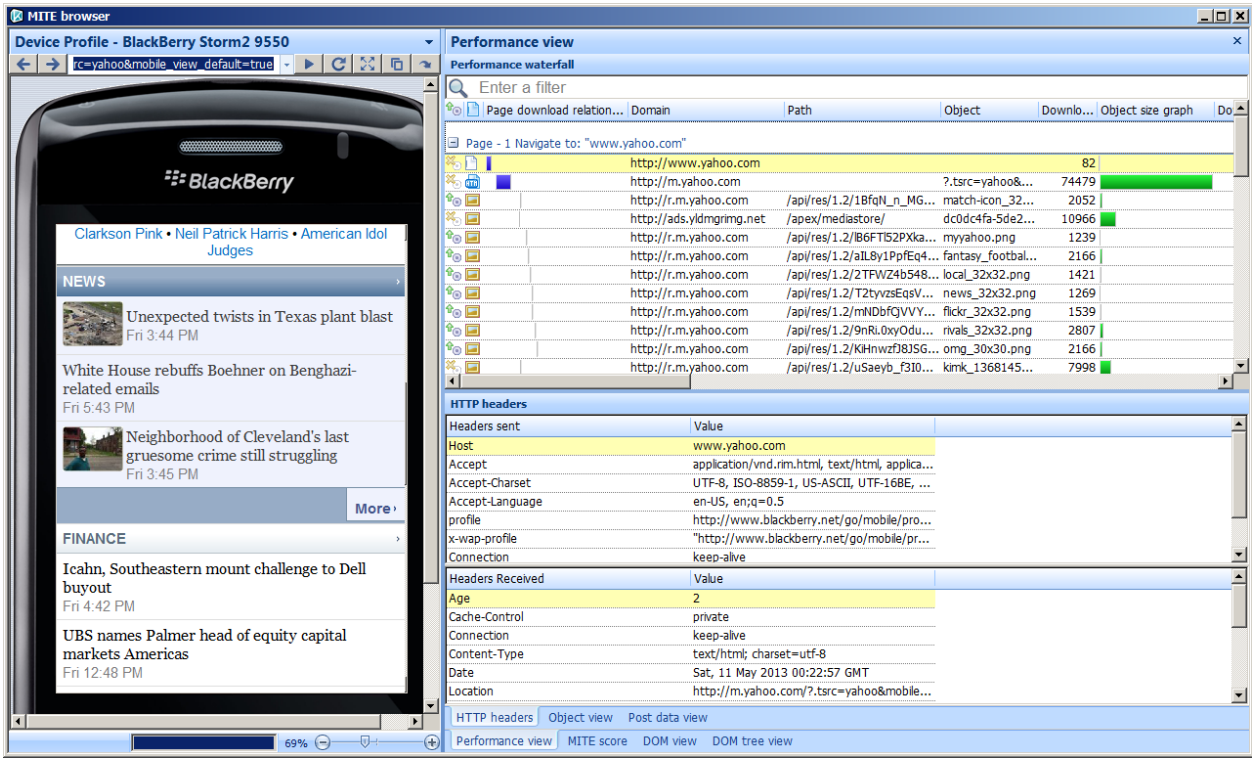


You can click, scroll, and enter data just as you would on a real device in the MITE Browser window that opens up. Simply close the MITE Browser window to stop browsing.

4.2 Performance Waterfall and Object View

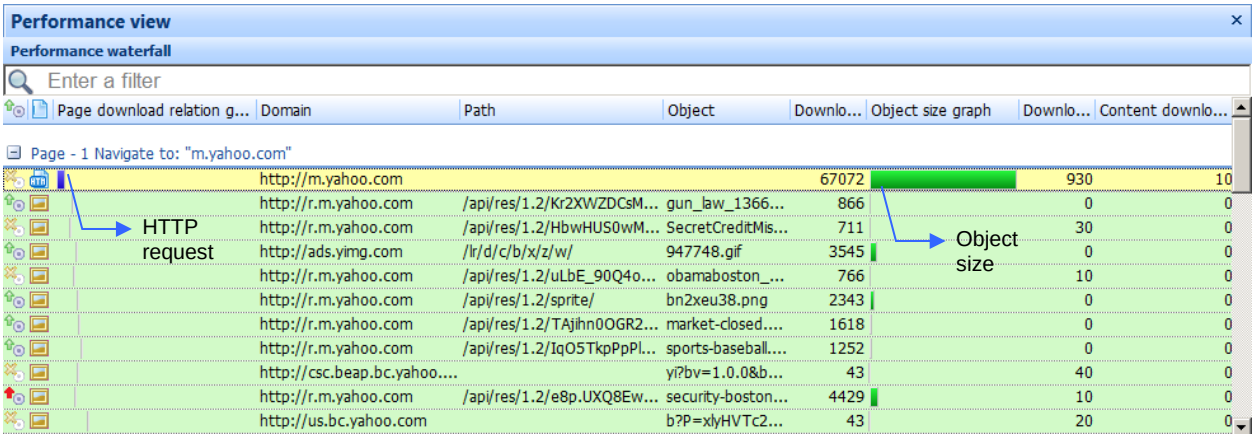
The **Performance waterfall** in the default **Performance view** shows the download sequence and relative download speed and size of downloaded elements for each interaction (click or field entry).

Figure 4-4 MITE Browser Window—Default View



Elements are listed in the order in which they are downloaded. The blue bar for an element in the waterfall represents an HTTP request. The width of the bar represents the time taken to process the request; the green bar represents object size.

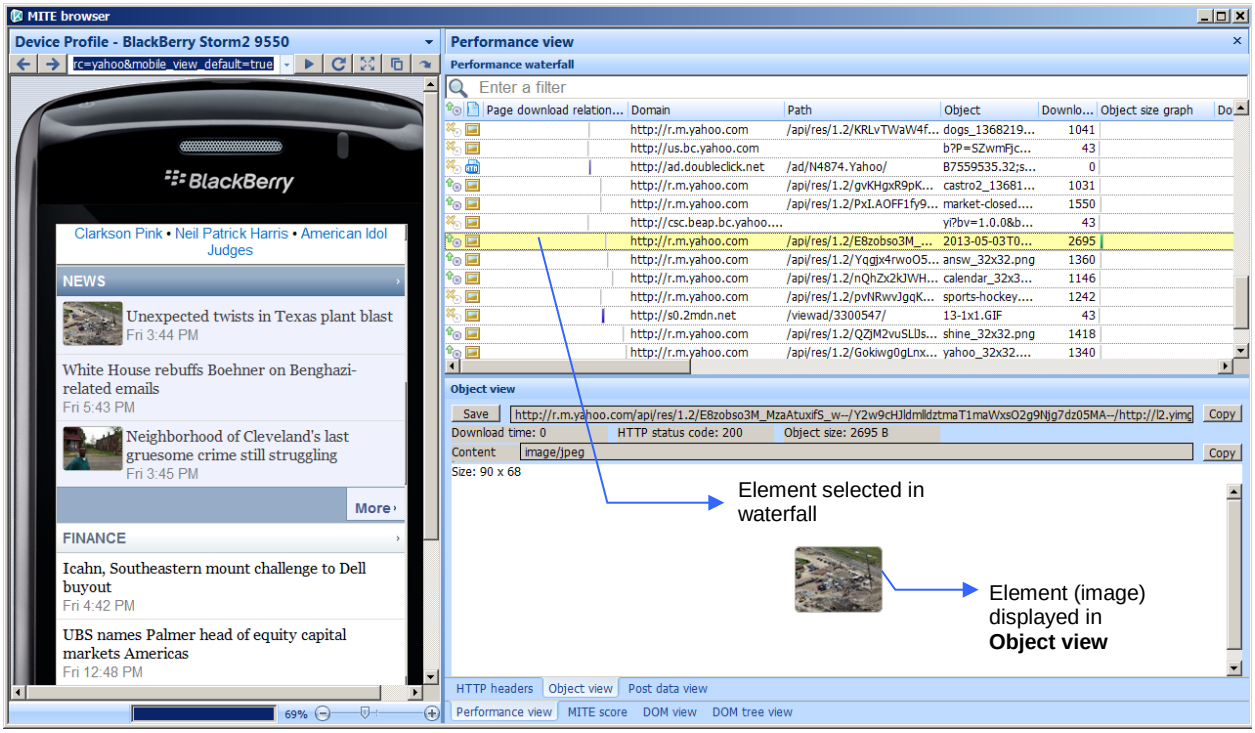
Figure 4-5 Interpreting the Waterfall



Note Waterfall charts with a green background (as in Figure 4-5 above) depict the most recent HTTP requests.

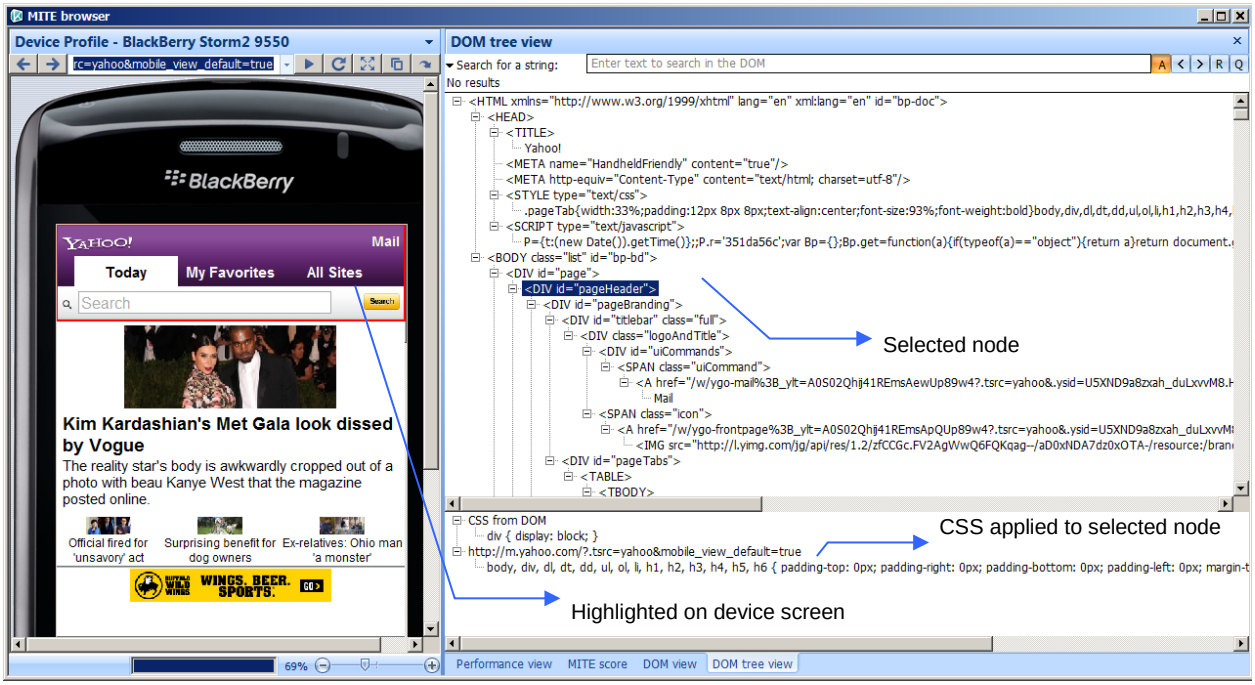
Select an element in the waterfall and switch to the **Object view** to see its details.

Figure 4-6 Object View



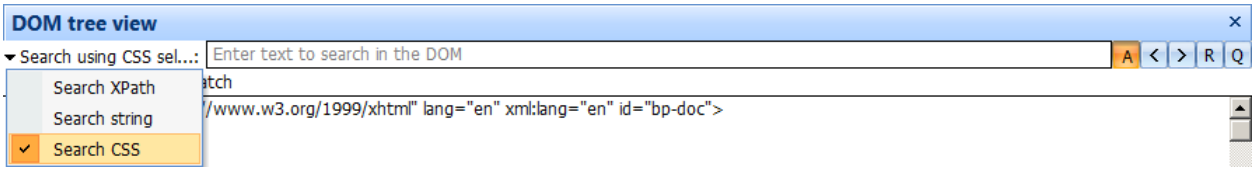
4.3 DOM Tree View

In the DOM tree view, any node you select in the tree is highlighted on the device screen. The CSS applied to the node, whether from the DOM or an external source, is shown in the bottom pane.



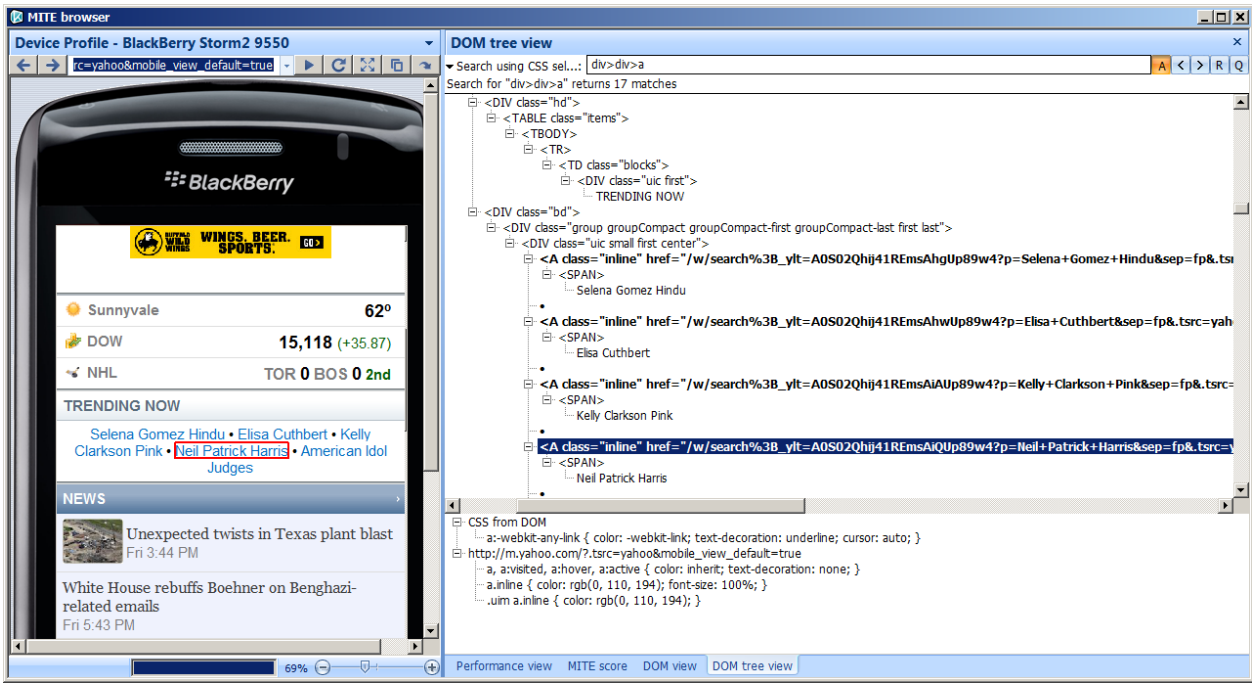
In addition to searching the DOM tree by XPath and a text string, you can also enter a CSS query. Select Search CSS and click the DOM search button  .

Figure 4-7 Searching the DOM by CSS



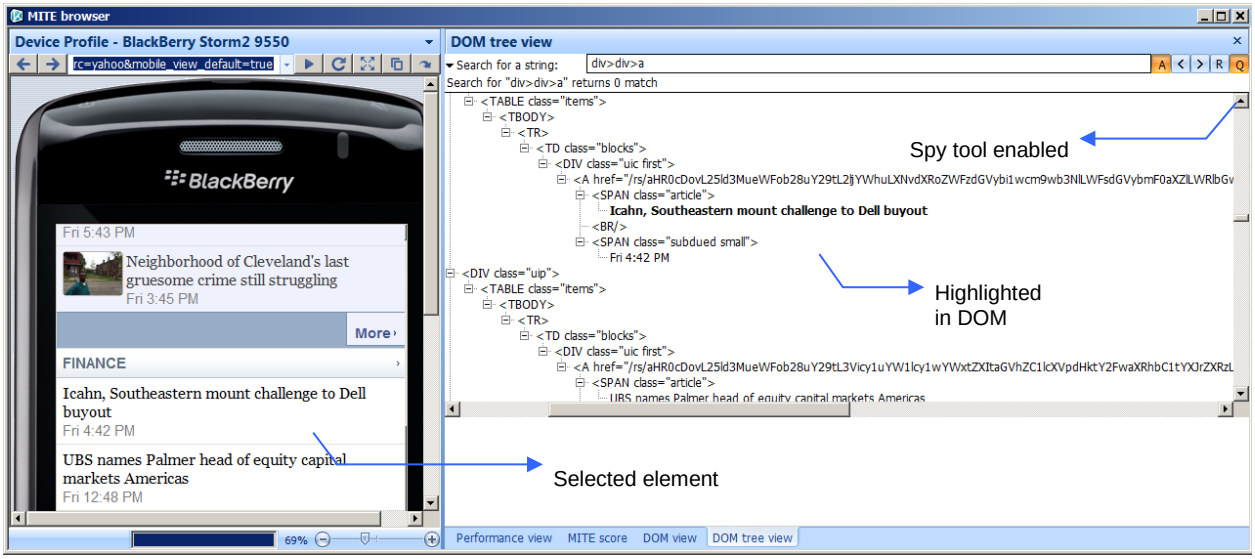
All nodes that match the query are displayed in bold. Use the next/previous buttons  to select each search result in turn. The corresponding area of the device screen is highlighted.

Figure 4-8 CSS Search Results



The spy button  at the top-right of the DOM tree view is another search tool. When you select the spy button  , navigation is effectively frozen and any element you click on the device screen is highlighted in the DOM.

Figure 4-9 MITE Spy Tool

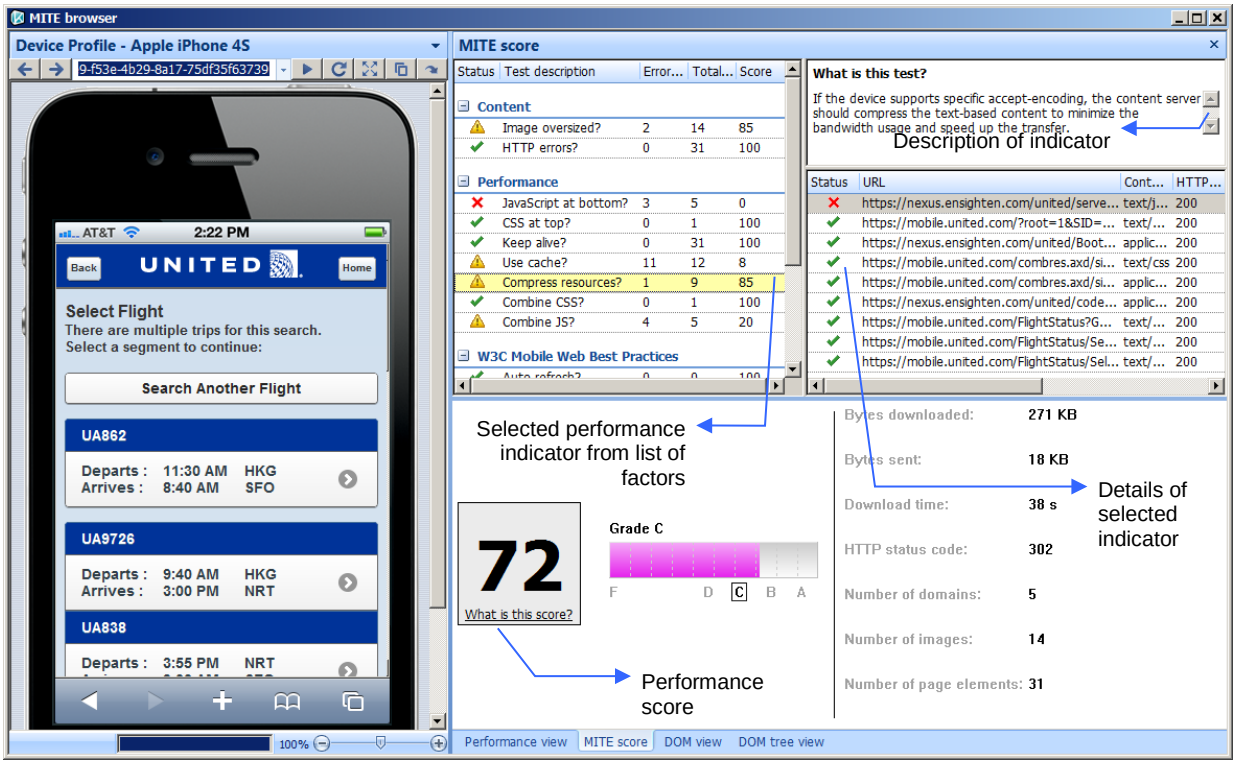


Deselect the MITE spy button to resume navigation.

4.4 MITE Score

Each page navigated to is given a MITE score by evaluating its performance based on Keynote's algorithm for performance best practices.

Figure 4-10 MITE Score



The MITE score tab has panes for the assigned score, a list of performance indicators from which you can select an indicator, a description of the indicator, and its details.

5 Creating a MITE for UFT Test Script

You can record a script using the HP QTP **Record** button and then interacting directly with web content. At a high-level, recording consists of these two steps, performed in any order:

- Click Browse to specify a device and a website to navigate to.
- Click the HP QTP Record button.

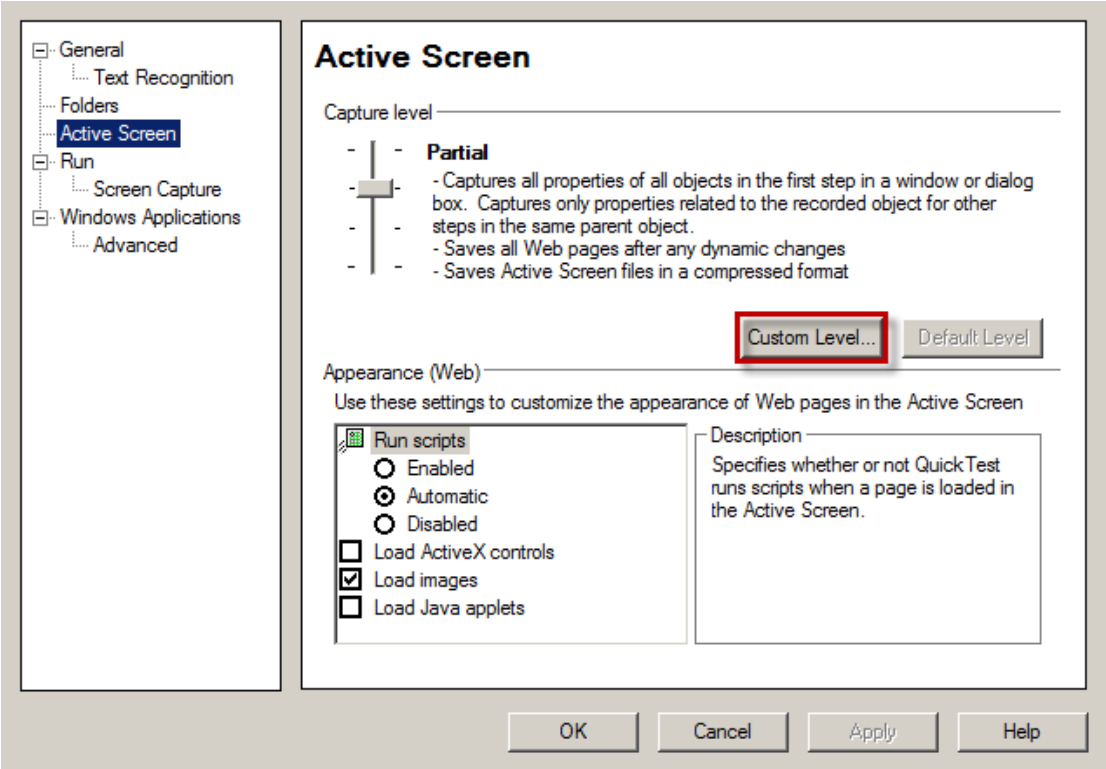
NOTE All MITE for UFT scripts are stored within HP QTP; these scripts are not compatible with standalone installations of MITE and cannot be imported to MITE.

This chapter covers recording a script, the objects captured, and inserting a checkpoint.

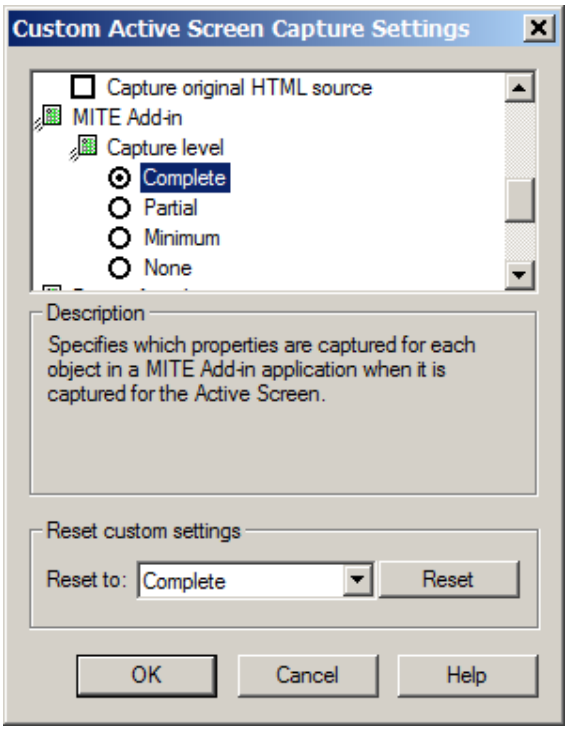
5.1 Recording a Test Script

This section walks you through the creation of a test script.

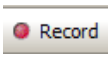
1. Set up Active Screen capture as part of your recorded test script:
   a. Navigate to **Tools** > **Options** > **Active Screen**.
   b. Select **Custom Level**.



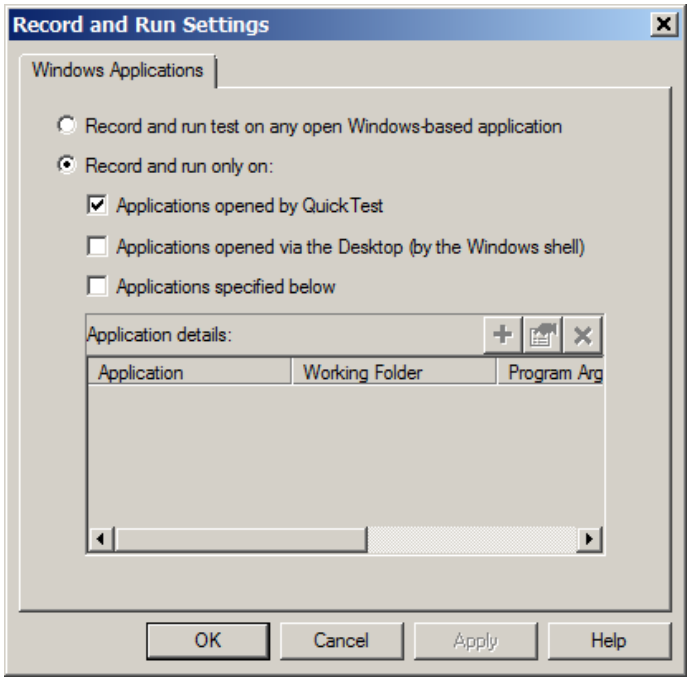
c. Scroll down to MITE Add-in and select **Complete**.



d. Click **OK** twice to exit Active Screen settings.

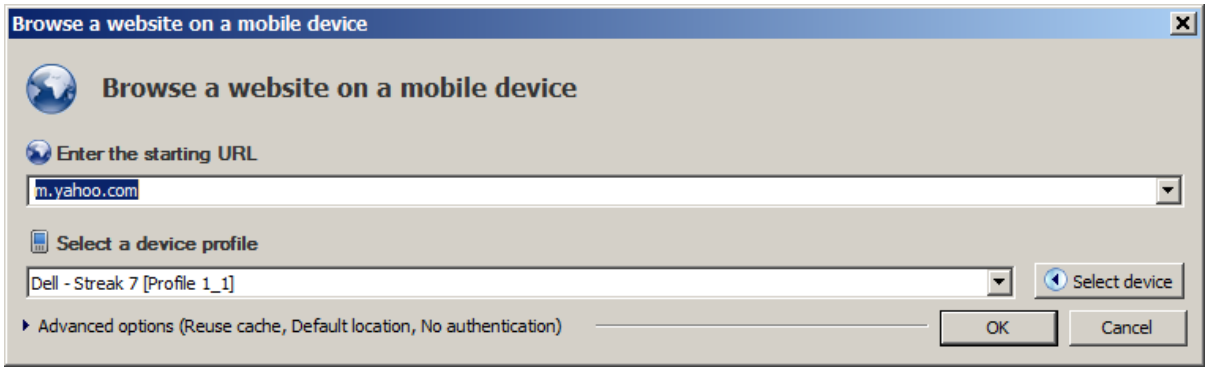
2. Click the Record button  in HP QTP to switch to recording mode.

3. Click **OK** in the Record and Run Settings dialog box.



4. Click the Browse button  .

5. Select a device and a URL to navigate to in the dialog box that appears and click **OK**. The options selected in this dialog box are recorded as properties of the MITE Browser object created.



6. In the MITE Browser window, click, make selections, and enter data to interact with web content.

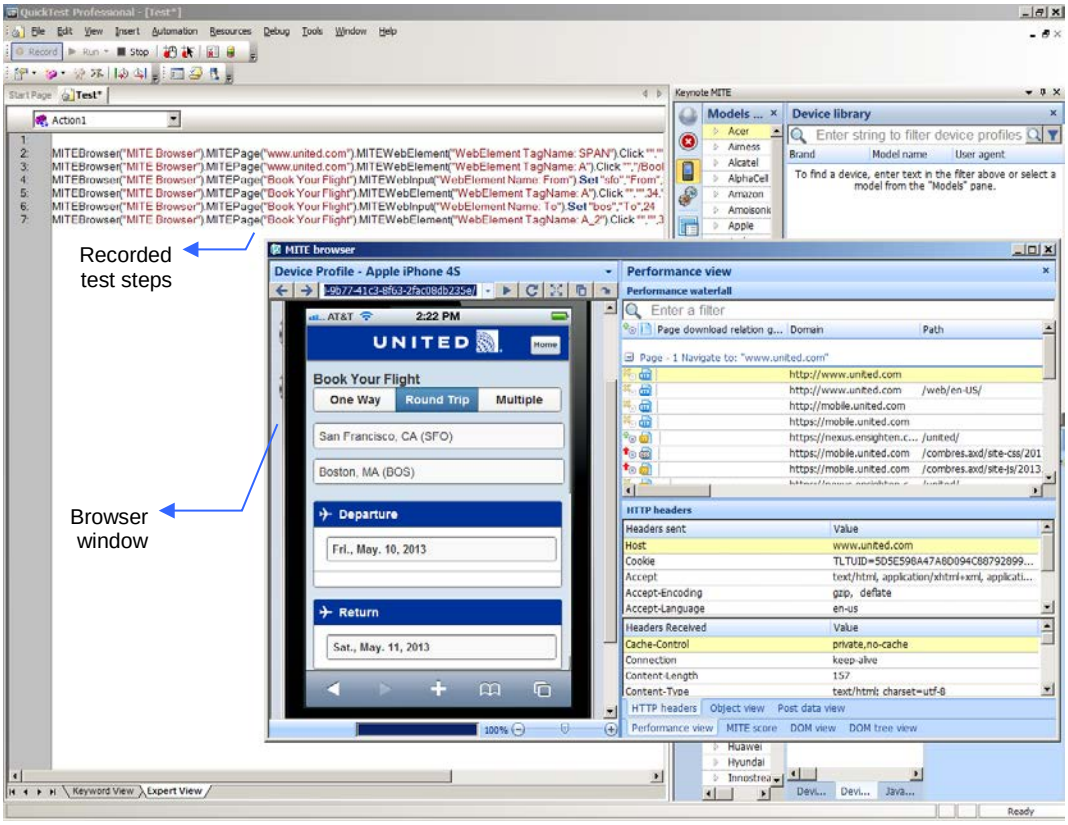
   As you perform the following actions, corresponding HP QTP test steps are inserted (see Figure 5-1 below):

   - Clicking on links
   - Selecting a value using a drop-down list, radio button, or check box
   - Entering a value into a field

   Generally, one test step is inserted per click or field entry.

7. Click **Stop** to finish recording. Closing the browser window will not stop recording.

Figure 5-1 Script Recording in Progress



5.2 MITE Objects in HP QTP

Recording a MITE script creates a hierarchy of HP QTP objects, which are referred to in test steps.

5.2.1 MITE Browser Object

At the top of the hierarchy is the MITE Browser object, whose properties include the opening URL and details of the device profile selected. There are also several properties defining completion events for the starting URL.

Figure 5-2 MITE Browser Object in Repository

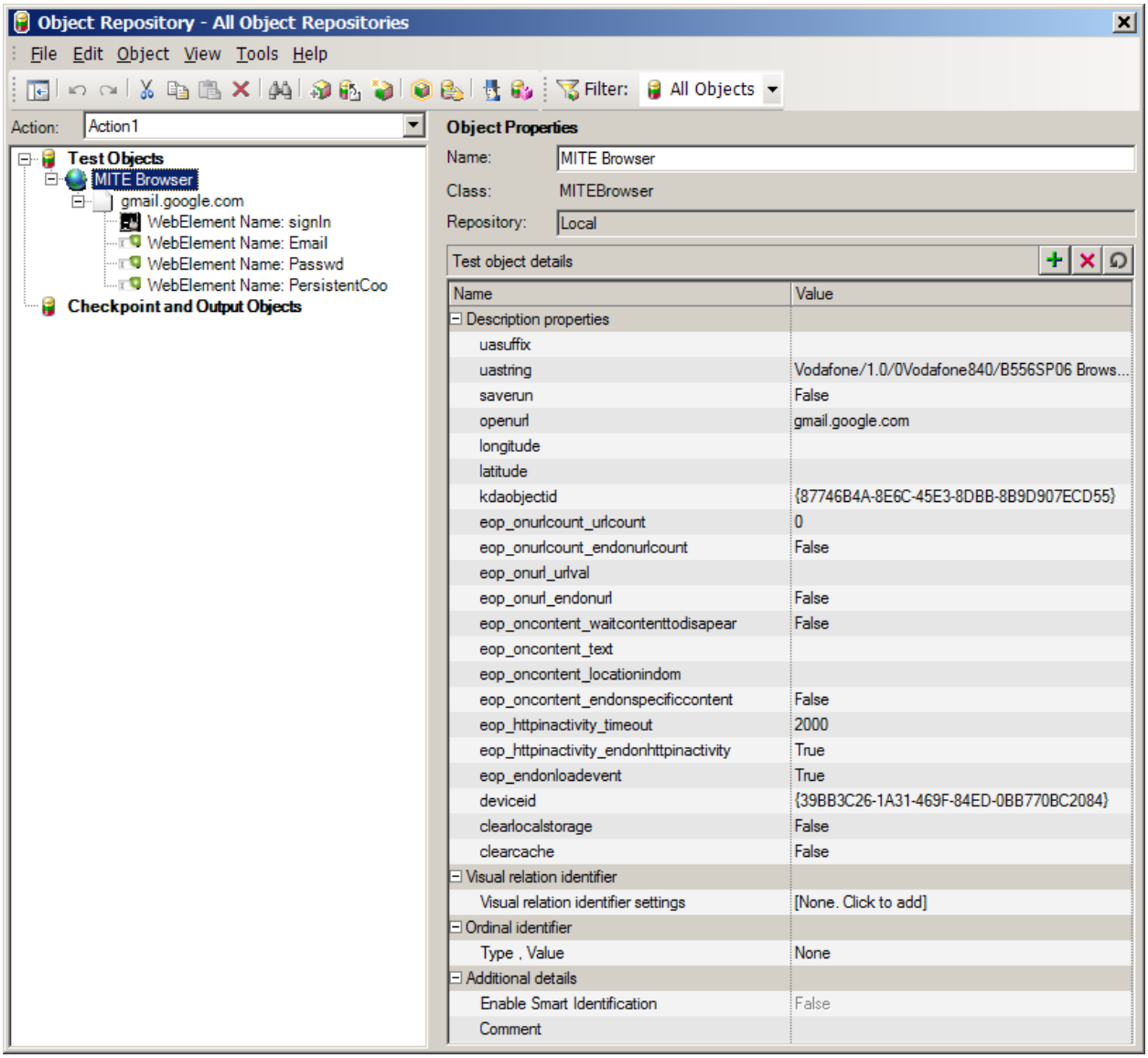


Table 5-1 MITE Browser Object Properties

Field	Description
`uasuffix`	User agent suffix for each HTTP request—this can help filter MITE traffic from your web server logs. The string is appended to the user agent string.

Field	Description
`uastring`	User agent string that identifies browser, device OS and version, browser platform; one of the headers sent to the server
`saverun`	If set to `True`, stores MITE run results in HP QTP. If set to `False`, MITE results do not persist after the session ends.
`openurl`	Based on a setting in the browse dialog box—URL to navigate to
`longitude`	Used to identify the emulated location from which the web server request is sent
`latitude`	
`kdaobjectid`	Unique object identifier used by HP QTP
`eop_onurlcount_urlcount`	URL count to download before a page is considered complete
`eop_onurlcount_endonurl count`	If set to `True`, a certain number of URLs downloaded signify the end of the page (this number is specified in `eop_onurlcount_urlcount`).
`eop_onurl_urlval`	URL to be detected; signifies the end of page.
`eop_onurl_endonurl`	If set to `True`, the end of a specific HTTP request to a URL signifies the end of a page. The URL is specified in `eop_onurl_urlval`.
`eop_oncontent_waitcontent todisappear`	If `True`, waits for text defined in `eop_oncontent_text` to appear; if `False`, waits for the text to disappear for page completion.
`eop_oncontent_text`	If the text string specified appears/disappears, MITE considers the page complete.
`eop_oncontent_locationindom`	Searches for `eop_oncontent_text` in the specified element in the DOM.
`eop_oncontent_endonspecific content`	If `True`, waits for specified content to appear/disappear in order to consider a page complete.
`eop_httpinactivity_timeout`	Time in milliseconds after which, if there is no HTTP activity, the page is considered complete—this value is set to `2000` by default.
`eop_httpinactivity_endon httpinactivity`	If set to `True`, calculates page completion based on `eop_httpinactivity_timeout`. This is the default page completion criterion.
`eop_endonloadevent`	Considers the end of the page to be reached when the browser notifies the completion of download (set by default to `True`).
`deviceid`	Internal ID in the MITE device database of the emulated device
`clearlocalstorage`	Based on a setting in the browse dialog box—clears browser local storage (recent searches, etc.) before a test run or browse session begins.
`clearcache`	Based on a setting in the browse dialog box—clears browser cache before test run or browse session begins.

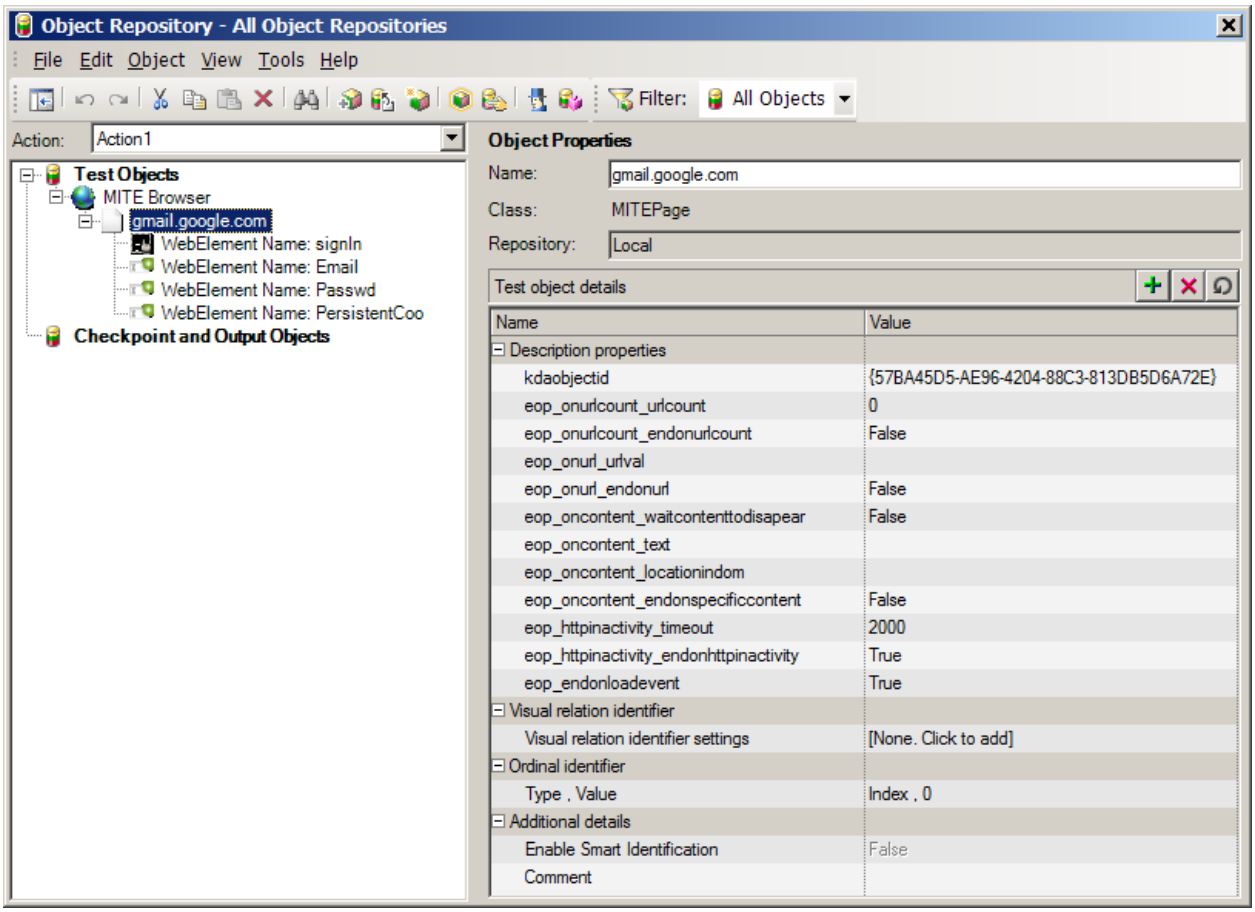
NOTE When using end of page criteria, *all* must be met to signify page completion. For example, by default, both `eop_httpinactivity_endonhttpinactivity` and `eop_endonloadevent` are set to `True`, implying that both conditions must be met for page completion.

5.2.2 Page Object

Each page navigated to creates a corresponding page object. Page objects are children of the MITE Browser object. All actions such as clicks performed on the page create child objects of the page object.

In addition to `kdaobjectid`, the page object, `gmail.google.com` in Figure 5-3 below, has page completion properties, in case the `Back()` or `Forward()` methods are invoked when editing a script in Keyword or Expert mode. These properties are defined in Table 5-1 above.

Figure 5-3 Page Object in Repository



5.2.3 Click Action Object

When you click any point on a web page, a corresponding object is created as a child of the page object. A test step with the `MITEWebElement()` method referring to the object is inserted in the test script. In the sample script line below, the object is `WebElement Name: signIn`.

```
MITEBrowser("MITE Browser").MITEPage("gmail.google.com").
MITEWebElement("WebElement Name: signIn").Click "signIn","",1,""
```

Figure 5-4 Click Action Object in Repository

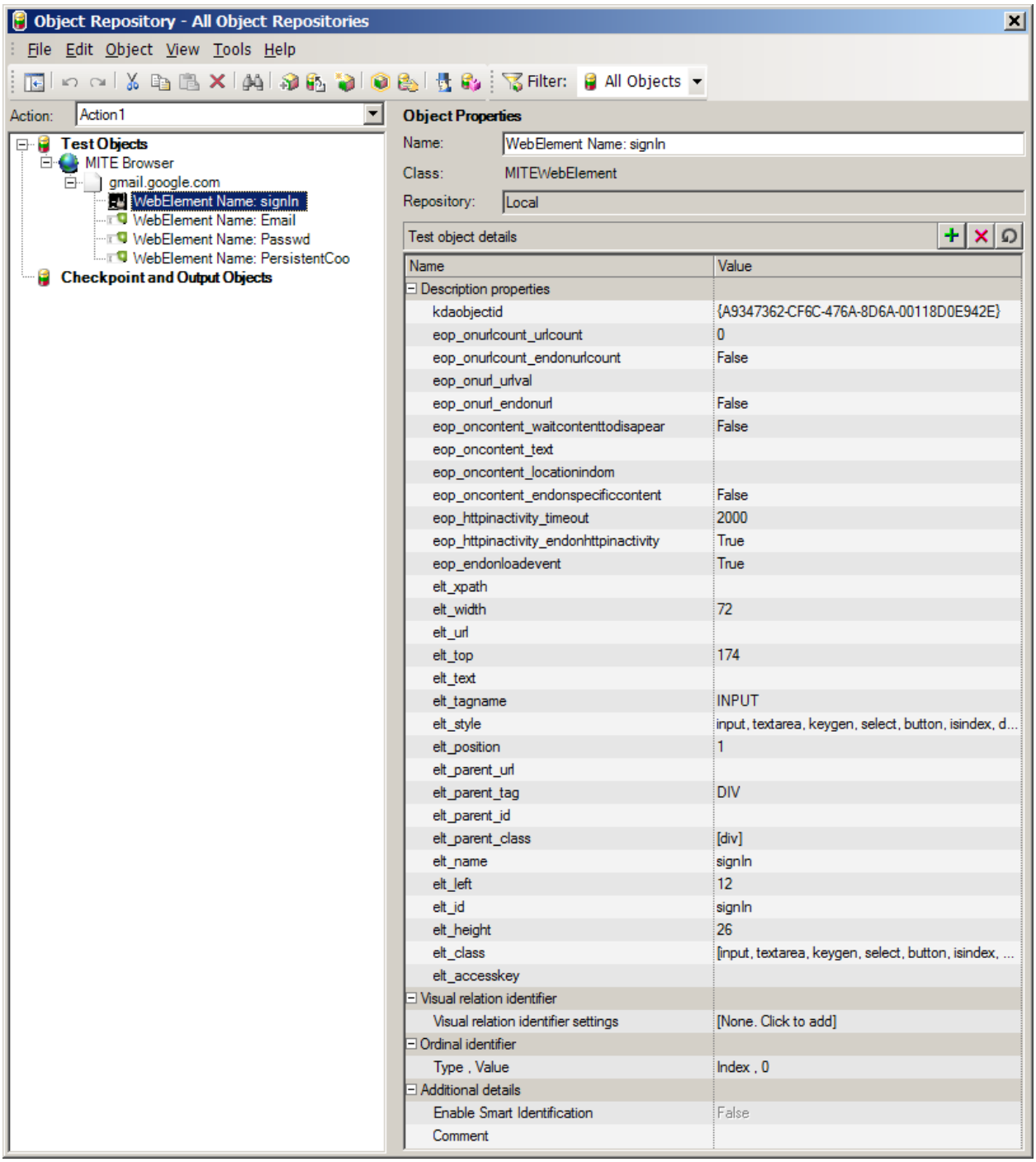


Table 5-2 below describes object properties that identify the element selected. MITE for UFT navigates to an element using the name, URL, access key, or position (`elt_position`), in that order. The name can also use the extended syntax to point to an element using `map.select:{XPath of the element}`. Other properties for the end of page are described in Table 5-1 above.

Table 5-2 Click Action Object Properties

Field	Description
`elt_xpath`	Path expression identifying the selected element in the DOM
`elt_width`	Width of the element in pixels
`elt_url`	URL, if any, of the link clicked
`elt_top`	Ordinate coordinate in pixels of the element clicked
`elt_text`	Text of the selected element
`elt_tagname`	Tag name of the element selected
`elt_style`	
`elt_position`	Number indicating position of the link with regard to other clickable links—clickable links are counted from the top left of the device screen.
`elt_parent_url`	URL of the parent element
`elt_parent_tag`	Tag name of the parent element
`elt_parent_id`	`id` attribute of the parent element
`elt_parent_class`	`class` selector of the parent element
`elt_name`	Name of the link/element clicked
`elt_left`	Abscissa coordinate in pixels of the element clicked
`elt_id`	`id` attribute of the selected element
`elt_height`	Height of the element in pixels
`elt_class`	`class` selector of the element selected
`elt_accesskey`	`accesskey` attribute of the link clicked

5.2.4 Select Action Object

When you select a value using a check box, radio button, or drop-down list, a corresponding object is created as a child of the page object. A test step with the `MITEWebSelect()` method referring to the object is inserted in the test script. In the sample script line below, the object is `WebElement Name: NumberOfAdult` and refers to a pick list for the number of passengers on an airline booking page.

```
MITEBrowser("MITE Browser").MITEPage("Book Your Flight").
MITEWebSelect("WebElement Name: NumberOfAdult").
Select "Adults: 2 Travelers","NumberOfAdults","2",3
```

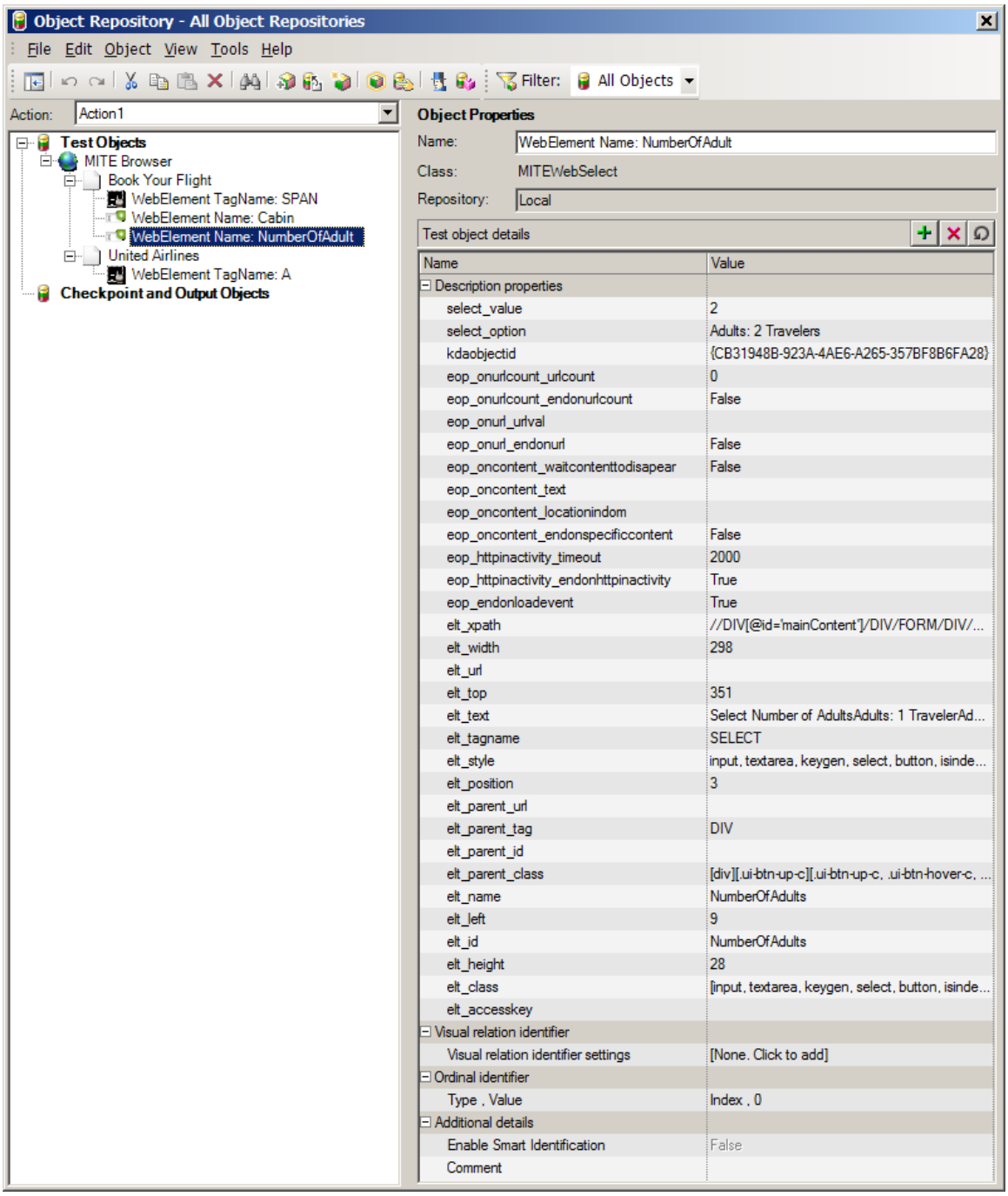
The object properties that identify the selected value are:

Table 5-3 Select Action Object Properties

Field	Description
`select_value`	Value chosen—if a radio button or check box, `1` = select, `0` = unselect 2 in the example above
`select_option`	Option that the value corresponds to (`Adults: 2 Travelers` in the example above)

This object has the same end of page and element identifying properties described in Table 5-1 and Table 5-2, respectively.

Figure 5-5 Select Action Object in Repository

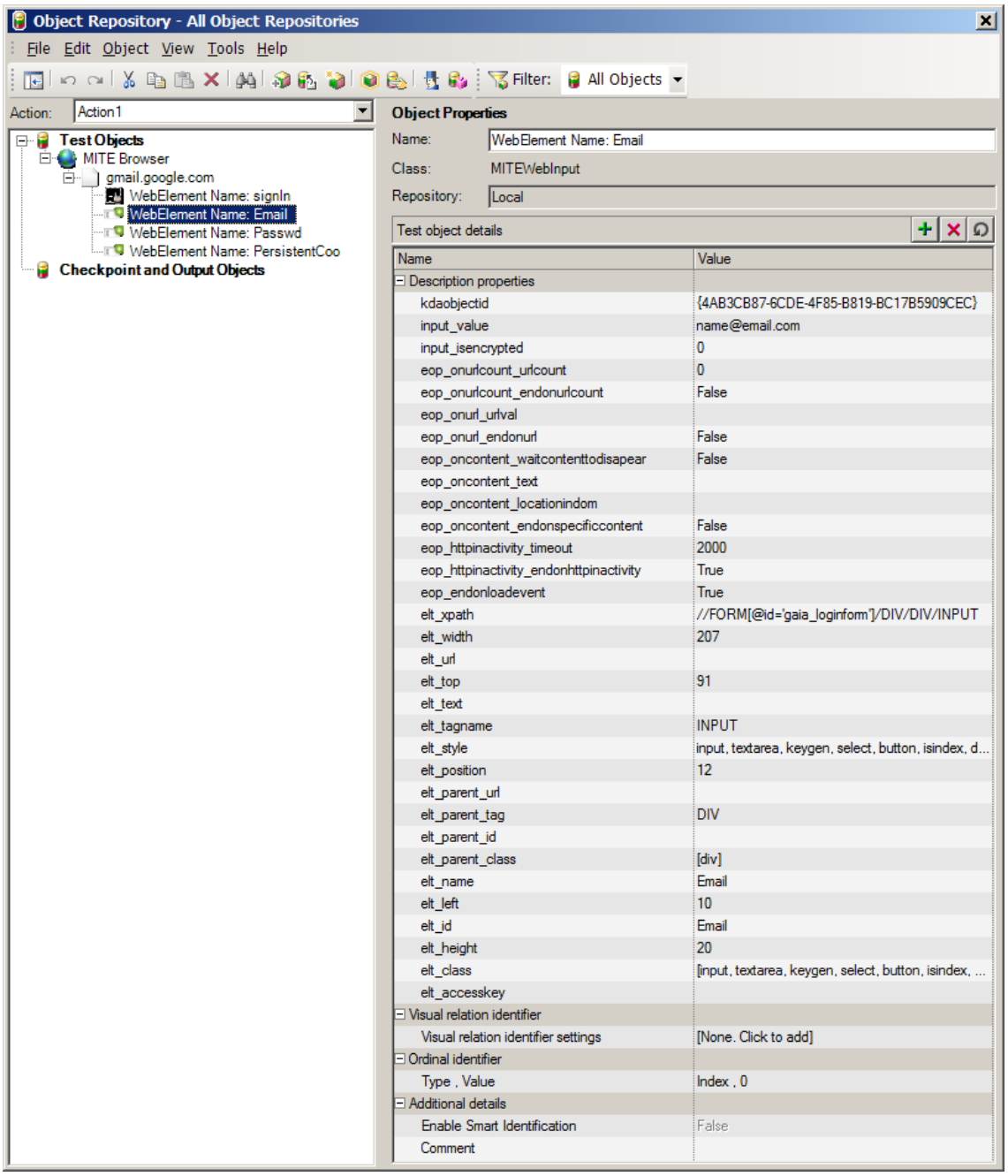


5.2.5 Input Action Object

When you enter a value in a field, a corresponding object is created as a child of the page object. A test step with the `MITEWebInput()` method referring to the object is inserted in the test script. In the sample script line below, the object is `WebElement Name: Email` and refers to email ID entry field on the Gmail sign-in page.

```
MITEBrowser("MITE Browser").MITEPage("gmail.google.com").
MITEWebInput("WebElement Name: Email").Set "name@email.com","Email",12
```

Figure 5-6 Input Action Object in Repository



The object properties that identify the entered value are:

Table 5-4 Select Action Object Properties

Field	Description
`input_value`	Value entered—if encrypted, the value is not displayed as entered to ensure that it is not readable.
`input_isencrypted`	Indicates whether the value is encrypted; 0 = not encrypted, -1 = encrypted

This object has the same end of page and element identifying properties described in Table 5-1 and Table 5-2, respectively.

5.3 Checkpoints

MITE for UFT supports standard HP QTP checkpoints for script verification.

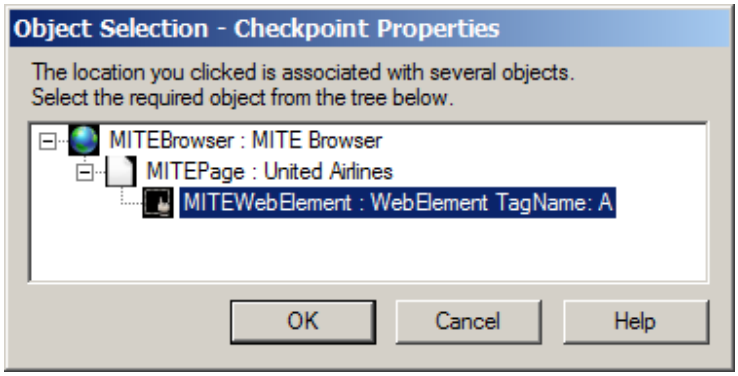
To insert a checkpoint, while still in record mode:

1. Select **Insert** > **Checkpoint** > **Standard Checkpoint**.

   The main HP QTP window is minimized while the MITE Browser window becomes the active window.

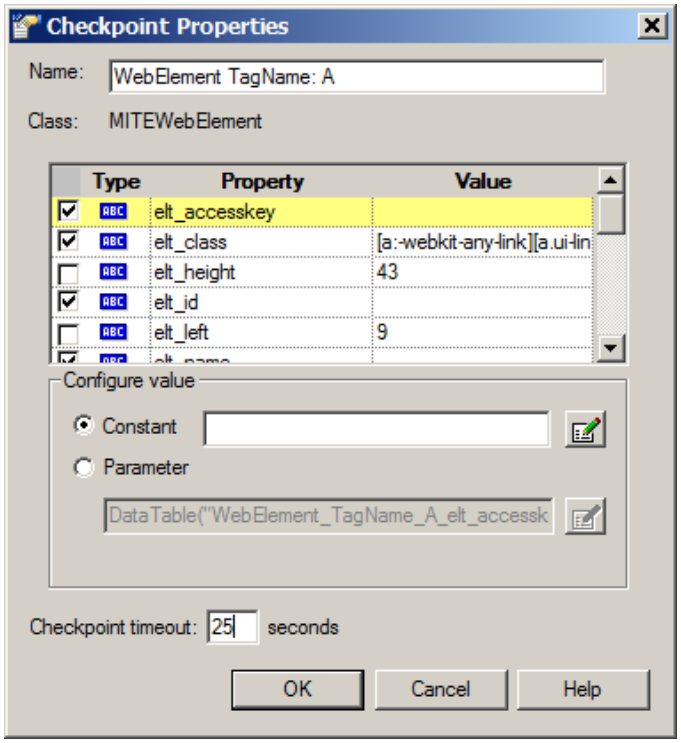
2. Click anywhere on the device screen to select the corresponding element as a checkpoint for the page.

3. If there is a valid element where you have clicked, HP QTP translates it into a child object(s) of the browser and page objects. Select the correct object from the dialog box that appears and click **OK**.



4. In the Checkpoint Properties dialog box, check the properties you want to use to identify the element at run time.

5. Be sure to specify a **timeout** (in seconds) within which the checkpoint must be found. Click **OK**.

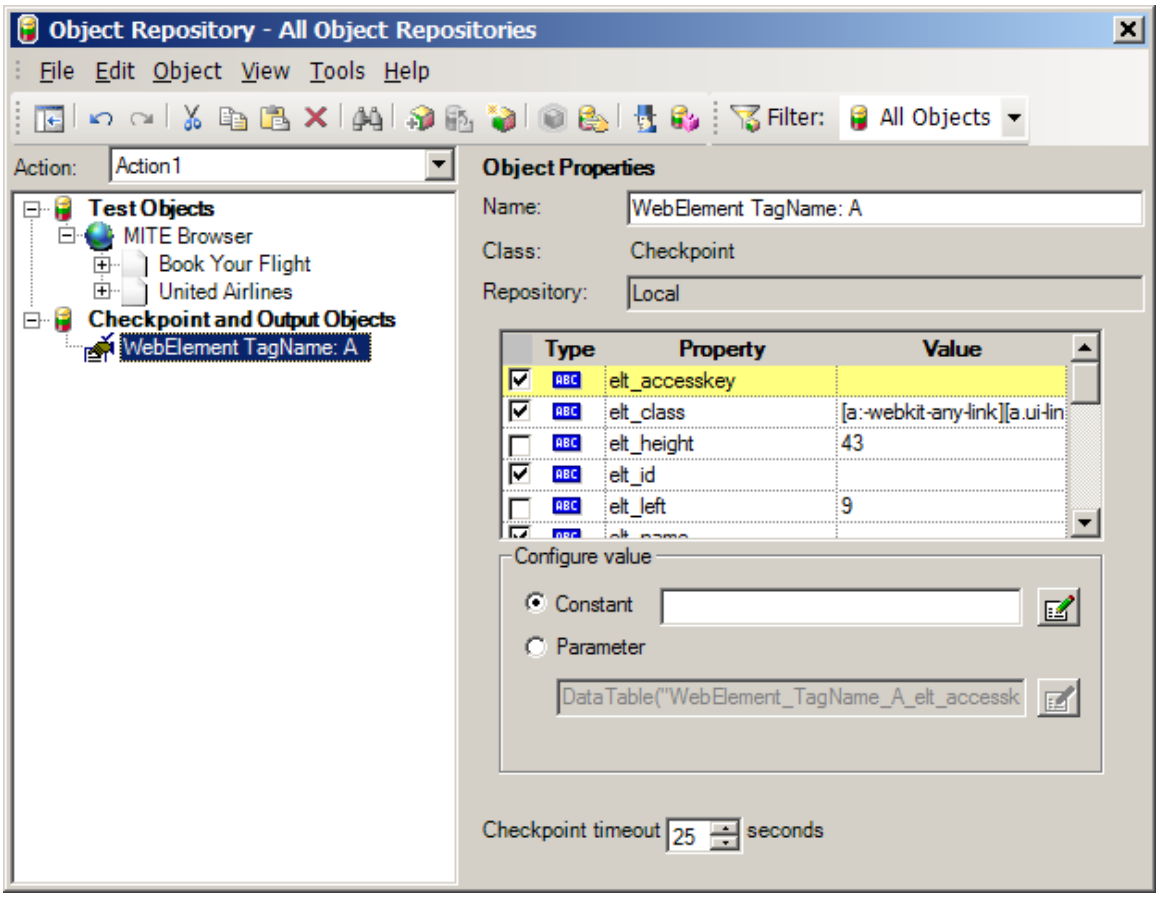


A test step referencing the object created (`WebElement TagName: A` in the example below) is inserted into your script.

```
MITEBrowser("MITE Browser").MITEPage("United Airlines_2").
MITEWebElement("WebElement TagName: A").
Check CheckPoint("WebElement TagName: A")
```

The object is listed in the **Checkpoint and Output Objects** section of the object repository. Properties identifying the selected element are described in Table 5-2.

Figure 5-7 Checkpoint Object in Repository



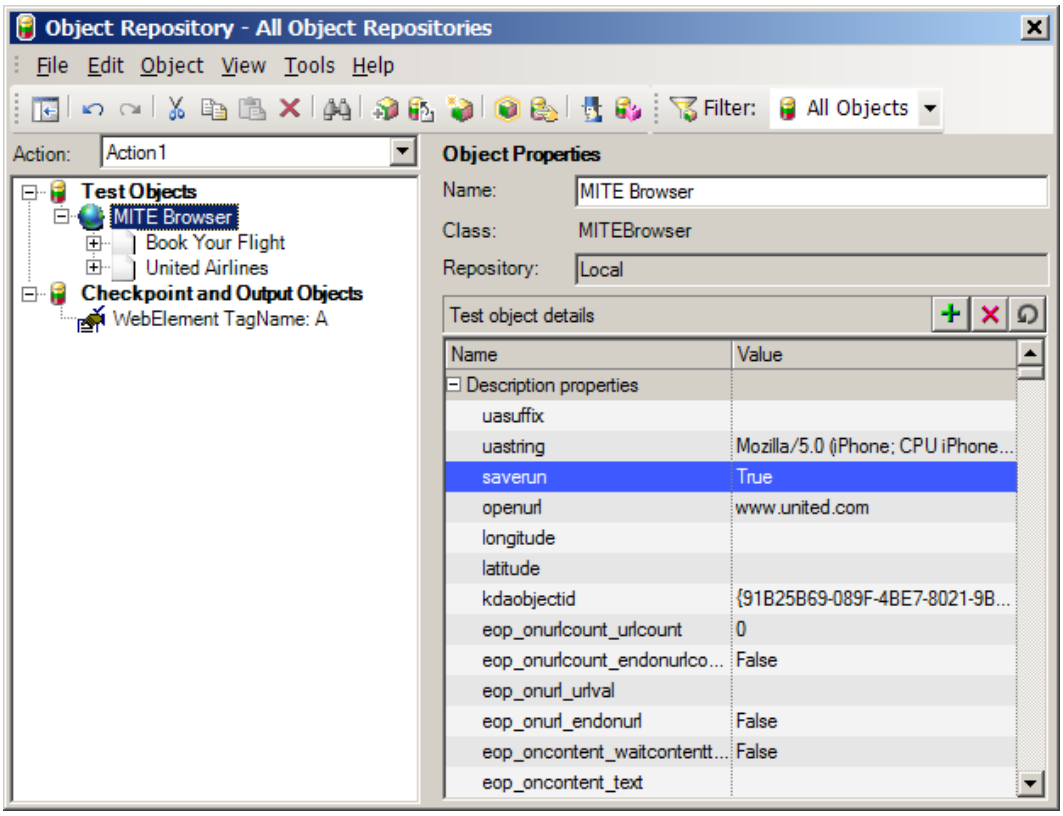
6 Execution and Results

This chapter describes how to run a MITE for UFT test script and view HP QTP results as well as MITE results with waterfall graph and MITE score. It also covers running a script on multiple device profiles.

6.1 Running a Test Script

With your MITE for UFT script open:

1. Open the MITE for UFT script you wish to execute.
2. To save MITE run results that include the MITE score and waterfall graph:
   a. Open the object repository: **Resources** > **Object Repository**.
   b. Select the **MITE Browser** object.
   c. Set the `saverun` property to `True`. Close the object repository.

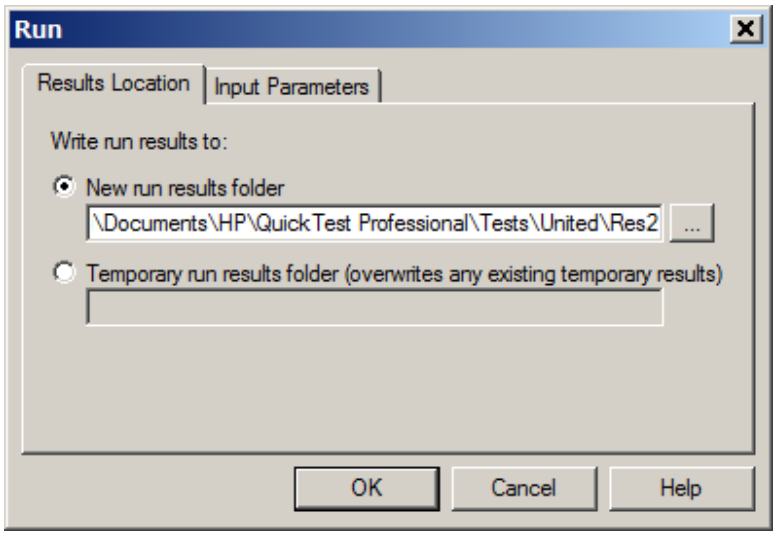


MITE results are then accessible at any time after the run by accessing the test list and run results layouts.

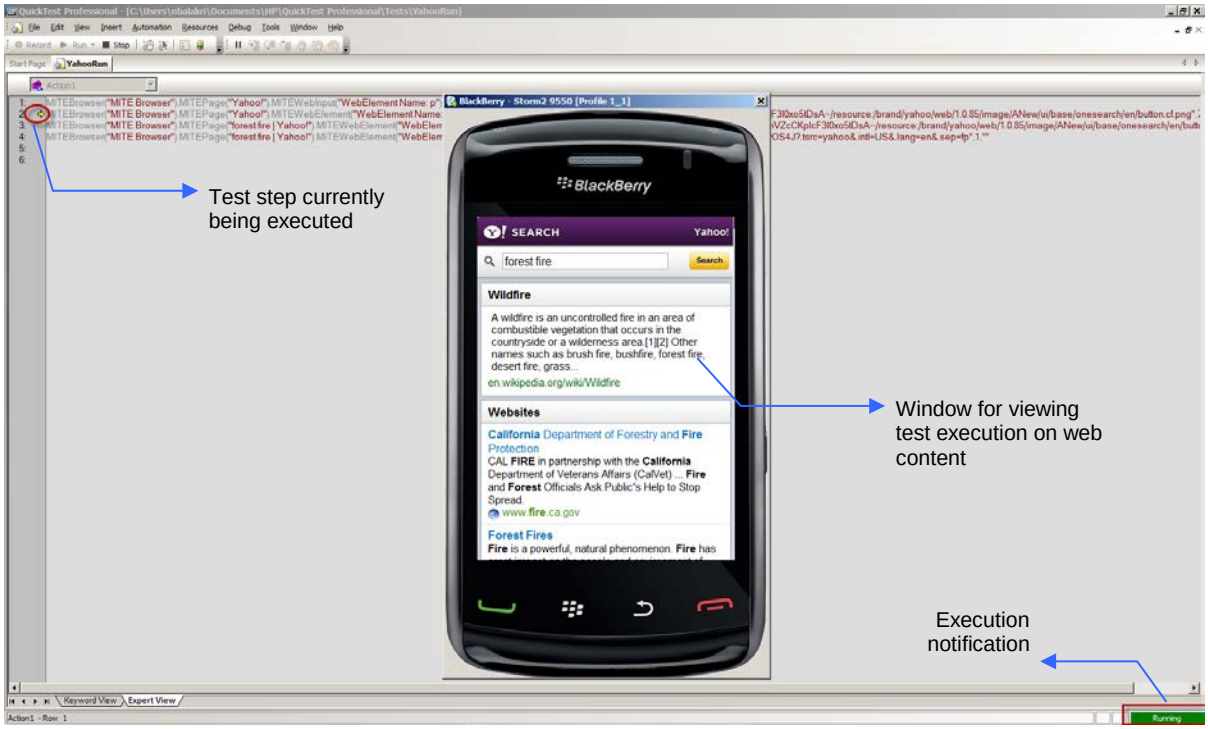
3. Run the script by selecting **Automation** > **Run** or clicking the **Run** icon Run. This executes the script on the device it was recorded on.

NOTE If you need to, insert a wait time of a few seconds, e.g., `Wait 15`, before the first execution of your script so you can position the HP QTP window. You can delete the line for subsequent runs as the window position is automatically remembered.

4. When prompted, specify a location for your HP QTP test results.



While the test is running, the yellow arrow indicates the test step currently being executed. A notification at the base of the HP QTP window indicates that the script is running.



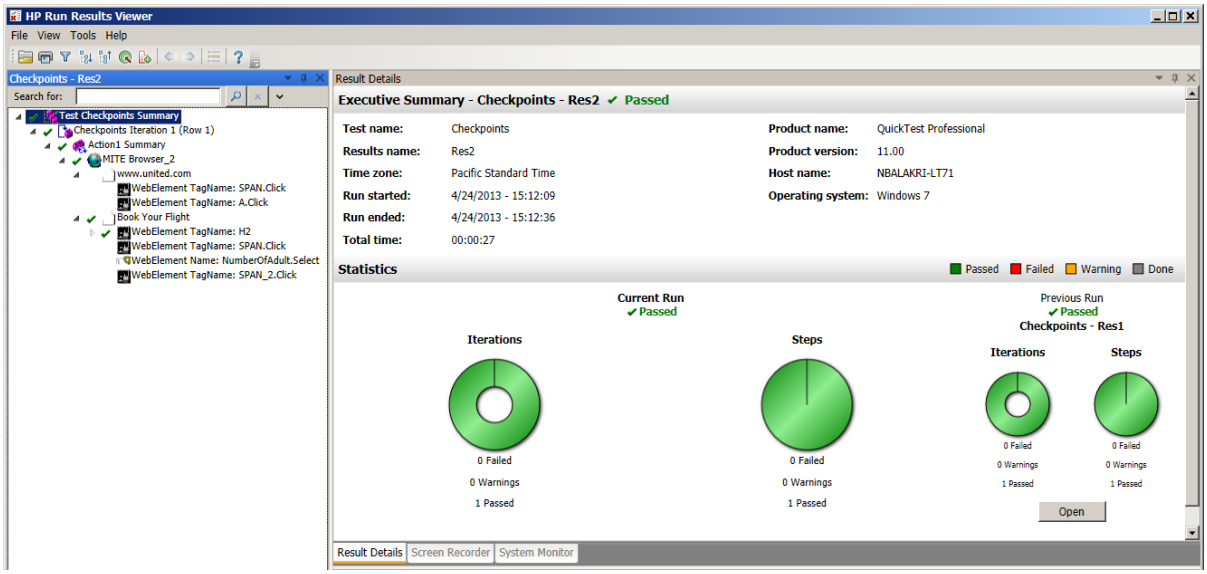
6.2 Viewing Results

When you have executed a script, you can view standard HP QTP results in the HP Run Results Viewer. These are automatically stored to the location specified. You can also view MITE results with detailed performance metrics. If you set the `saverun` property of the script's MITE Browser object to `True`, MITE results persist after your HP QTP session; if not MITE run results are not available after you close the current session.

6.2.1 HP QTP Results

The HP Run Results Viewer is automatically displayed after script execution. Expand the tree on the right to see all script nodes (objects). The top node displays overall results for the current and preceding runs.

Figure 6-1 Overall HP QTP Results



Results for all MITE for UFT objects contain snapshots if you have set up Active Screen capture when recording the script. The node for a successful checkpoint displays a check mark.

Figure 6-2 Checkpoint Results

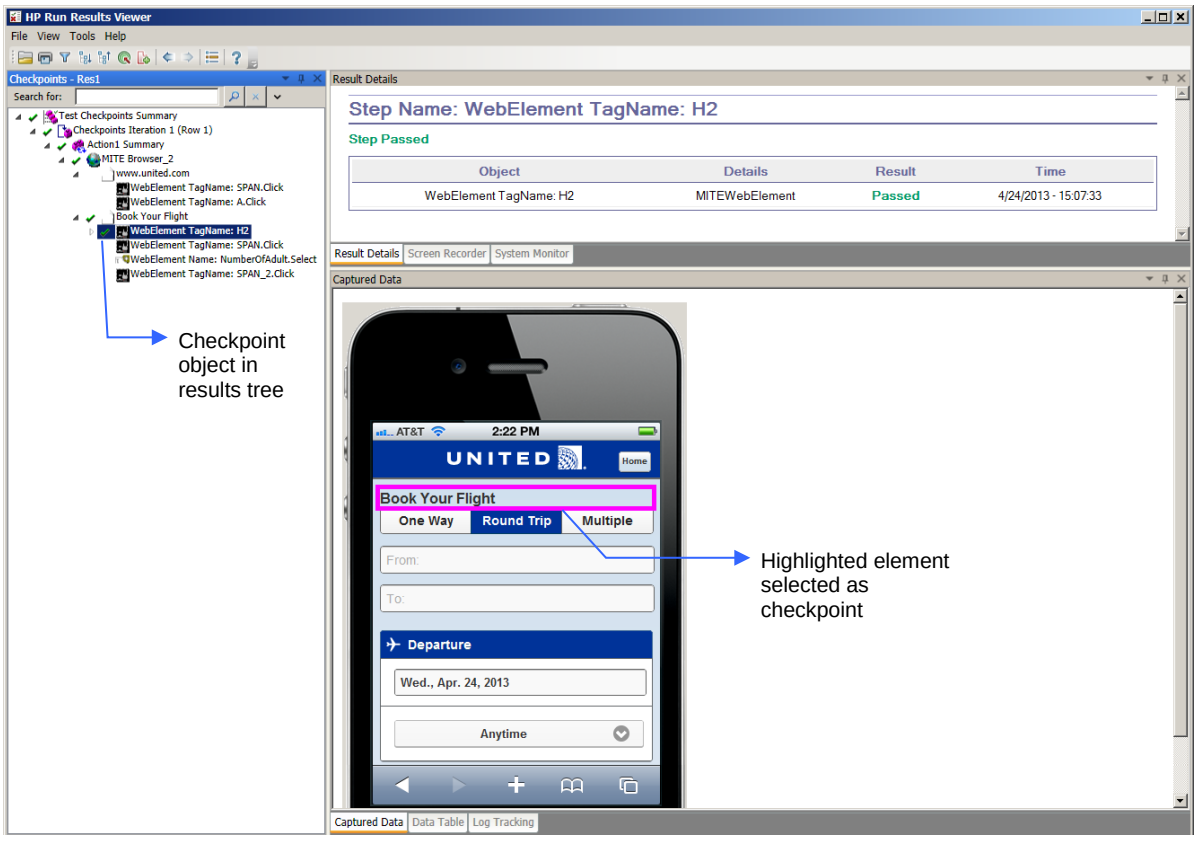


Figure 6-3 Results for Browser Object

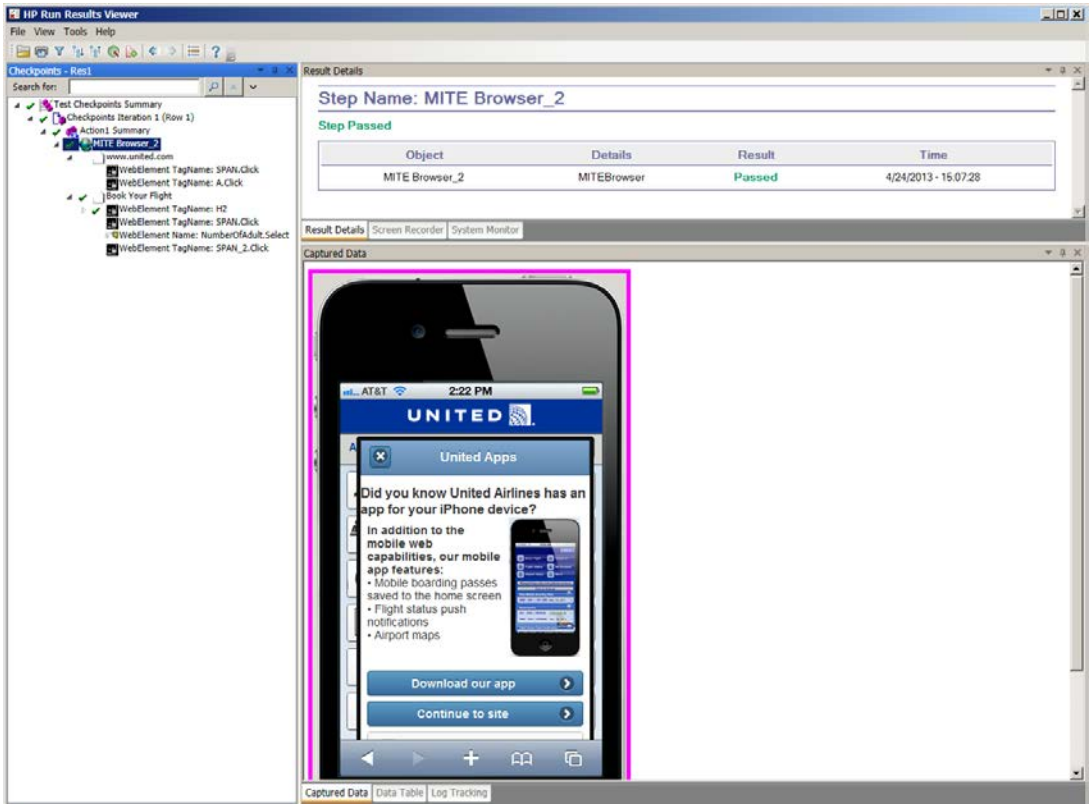


Figure 6-4 Results for Page Object

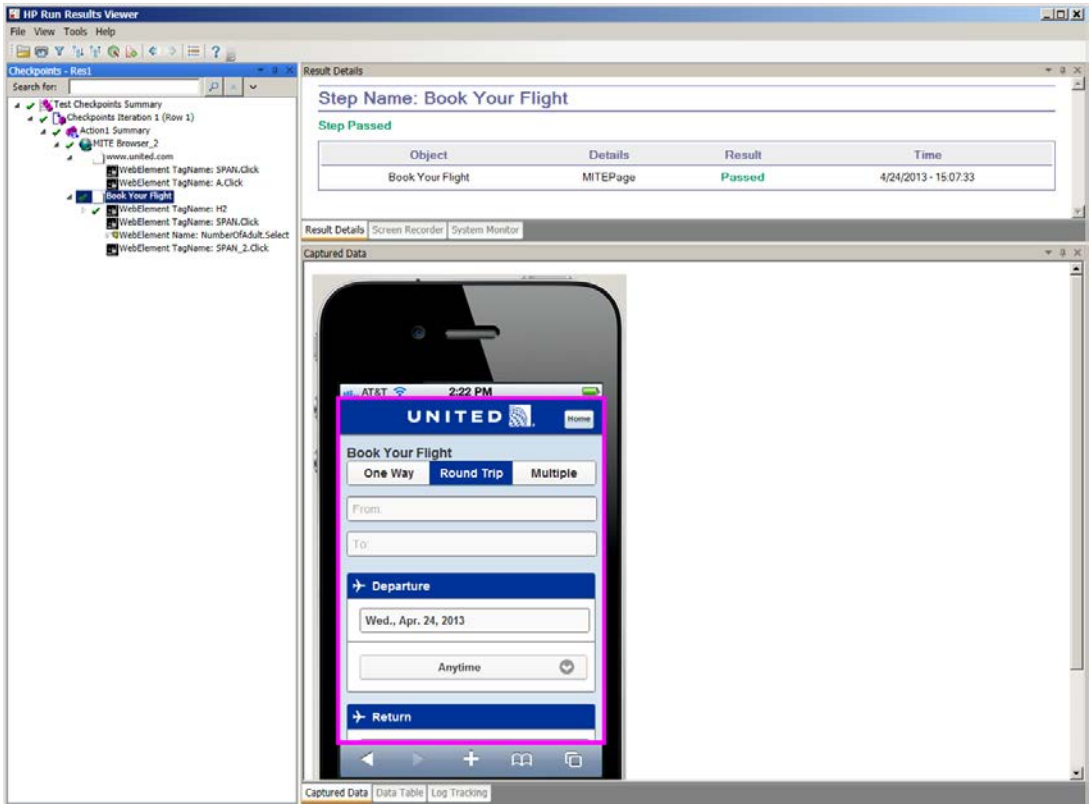


Figure 6-5 Results for Click Action

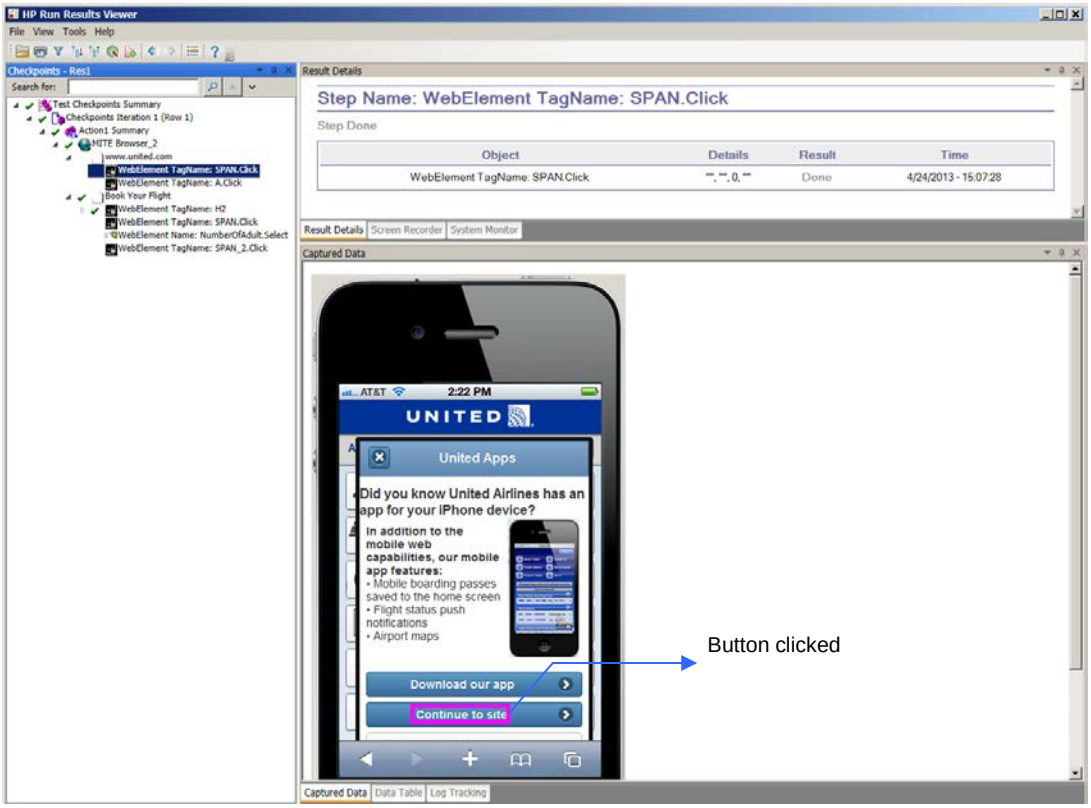


Figure 6-6 Results for Select Action (Drop-Down List)

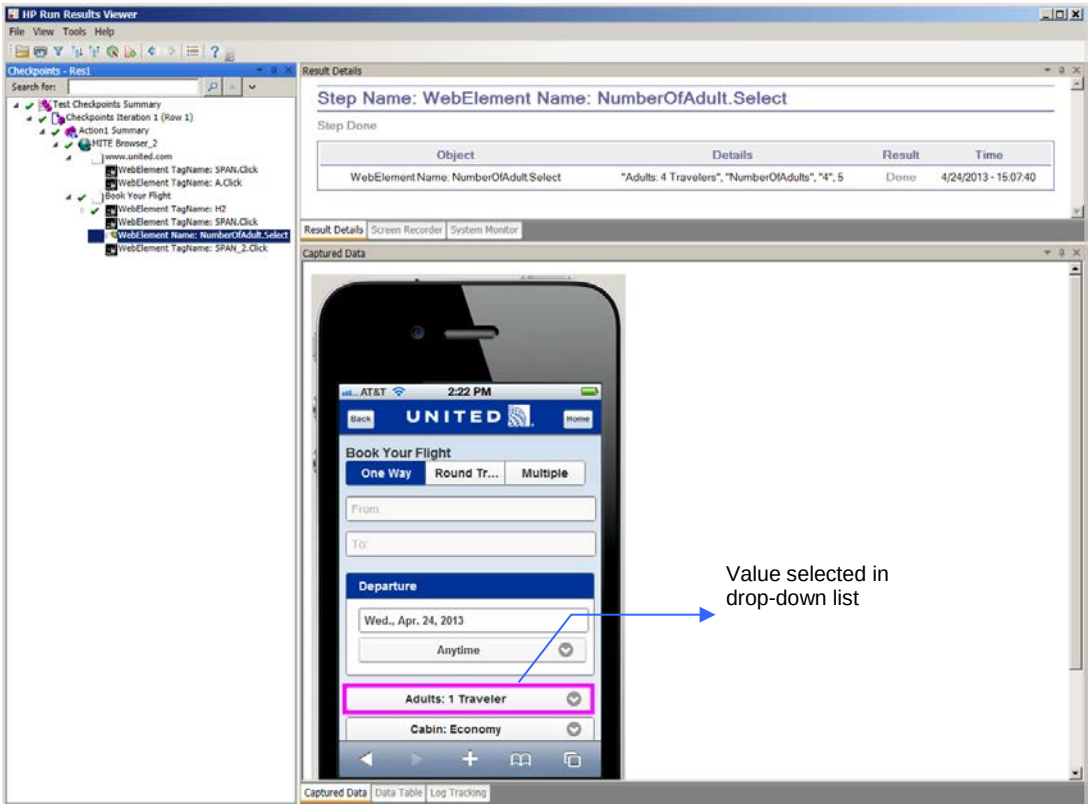
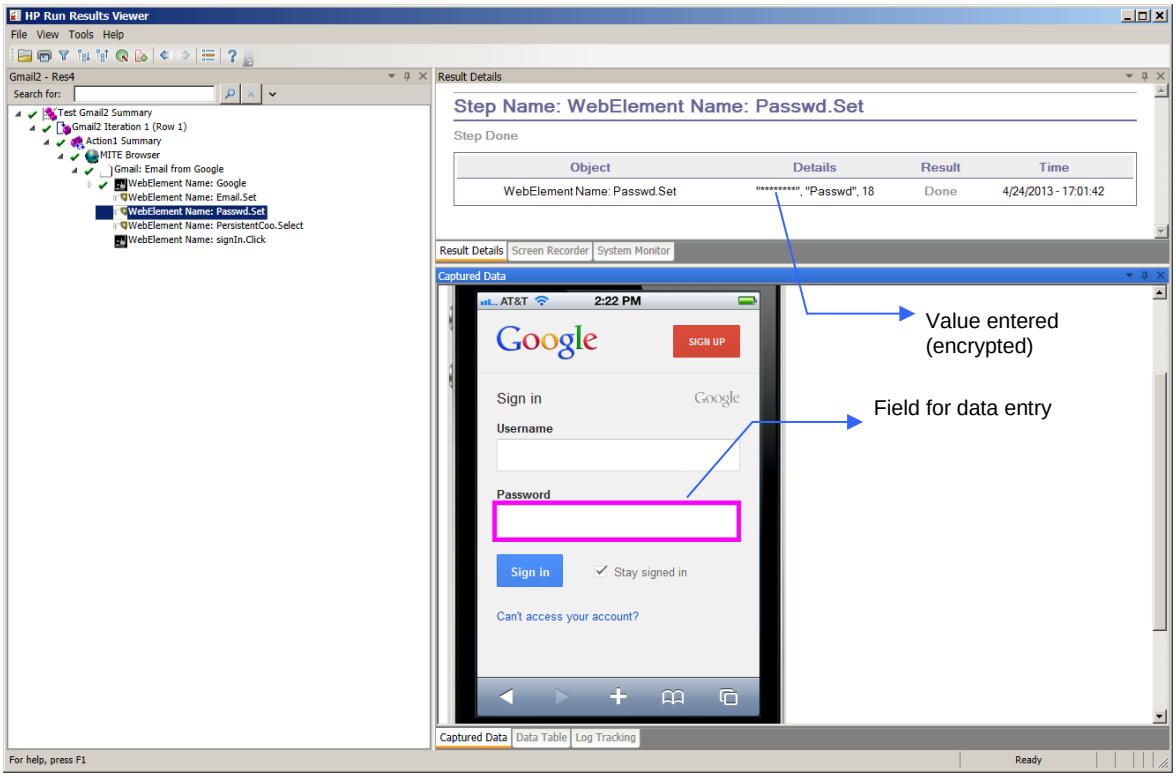


Figure 6-7 Results for Data Entry

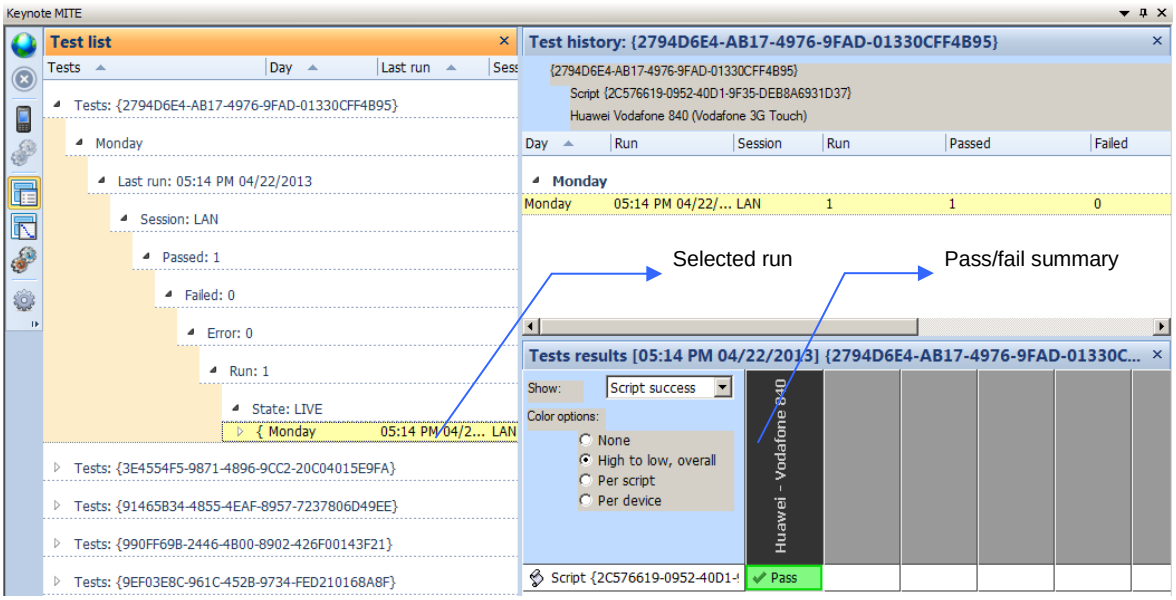


6.2.2 MITE Results

A list of MITE runs is available in the MITE test list layout  in HP QTP. For the runs listed here to persist after the current HP QTP session, set the `saverun` property of a script's MITE Browser object to `True`.

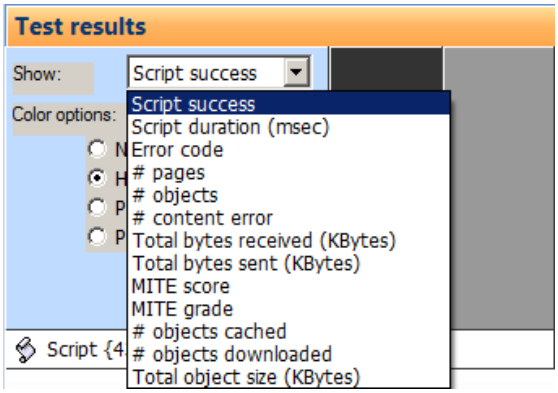
Expand the tree for a run and select the bottom node: summary run results are displayed to the right.

Figure 6-8 Test List with Summary Results for Selected Run



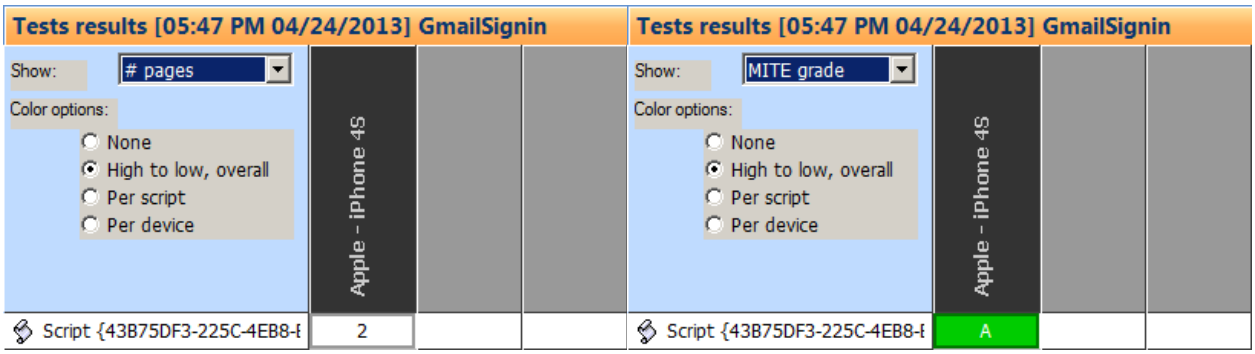
You can select one of several result indicators from the drop-down list in the **Test results** pane:

Figure 6-9 Choosing a Result Indicator



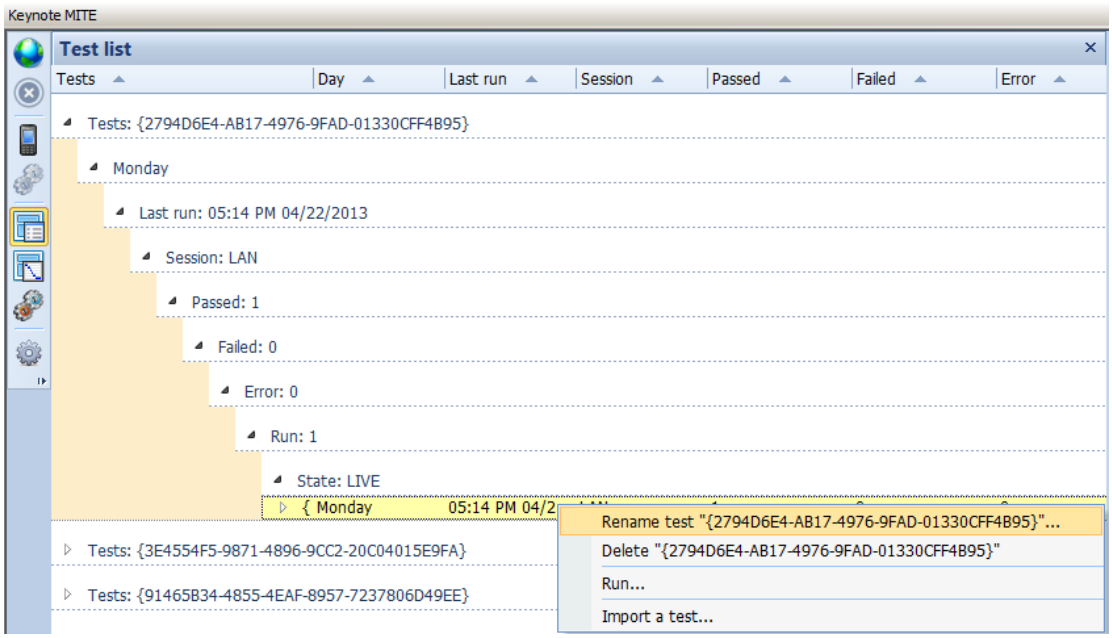
The images below show the number of pages visited (2) and the MITE grade (A):

Figure 6-10 Viewing Different Result Indicators

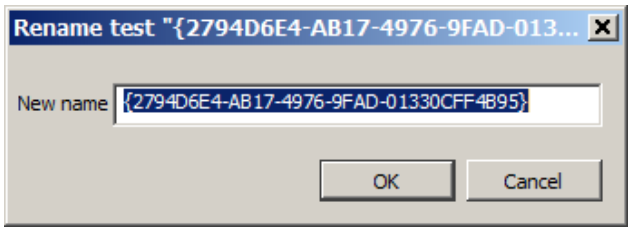


Runs listed here can be renamed:

1. Right-click a run and select **Rename test**.

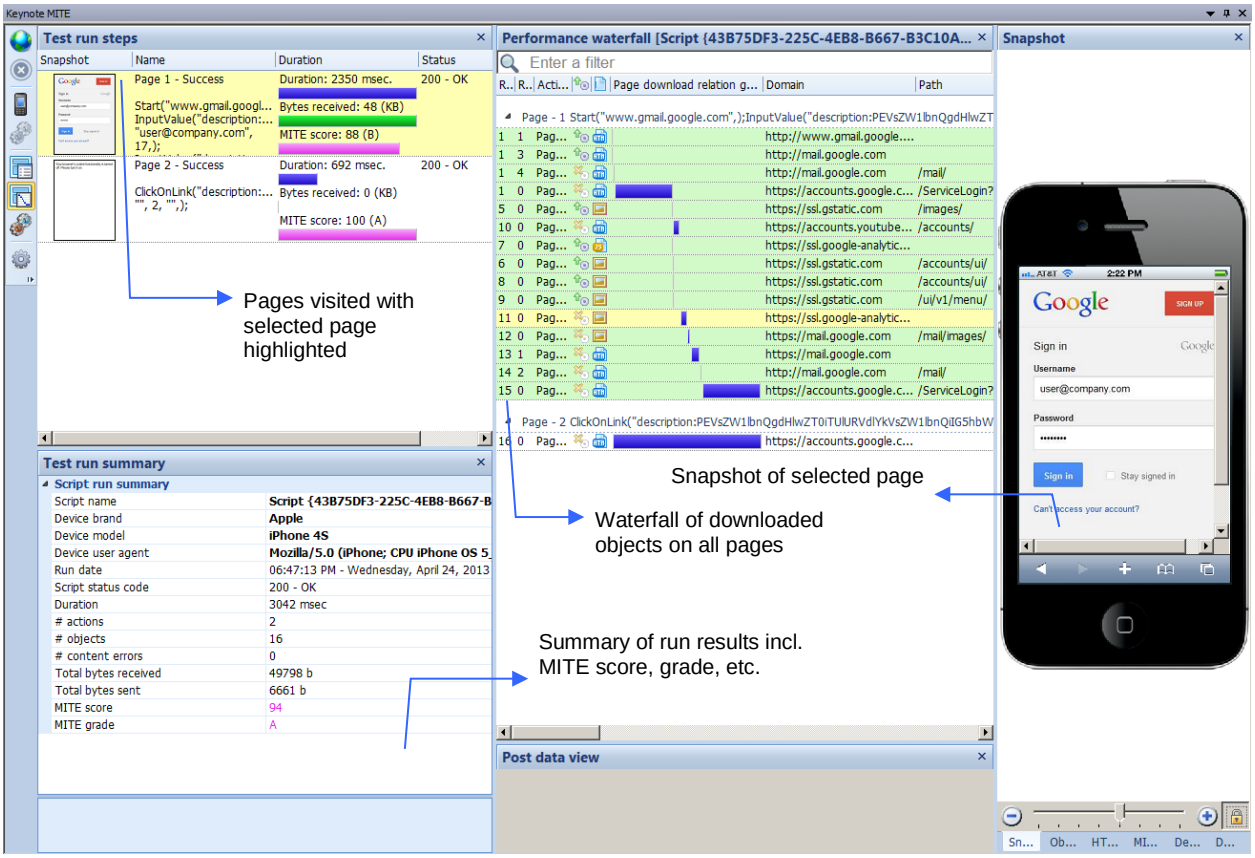


2. Enter a new run name in the dialog box that appears and click **OK**.



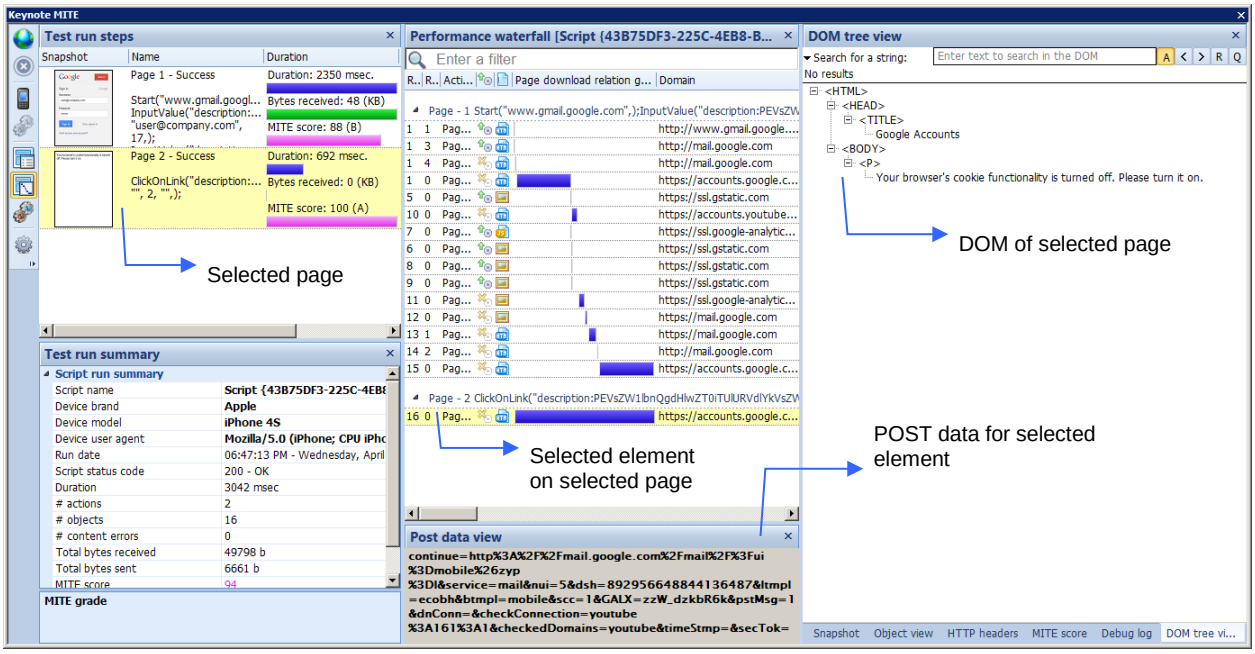
To view detailed results, with a run selected from the test list, switch to the run results layout .

Figure 6-11 Detailed Run Results with Page Snapshot



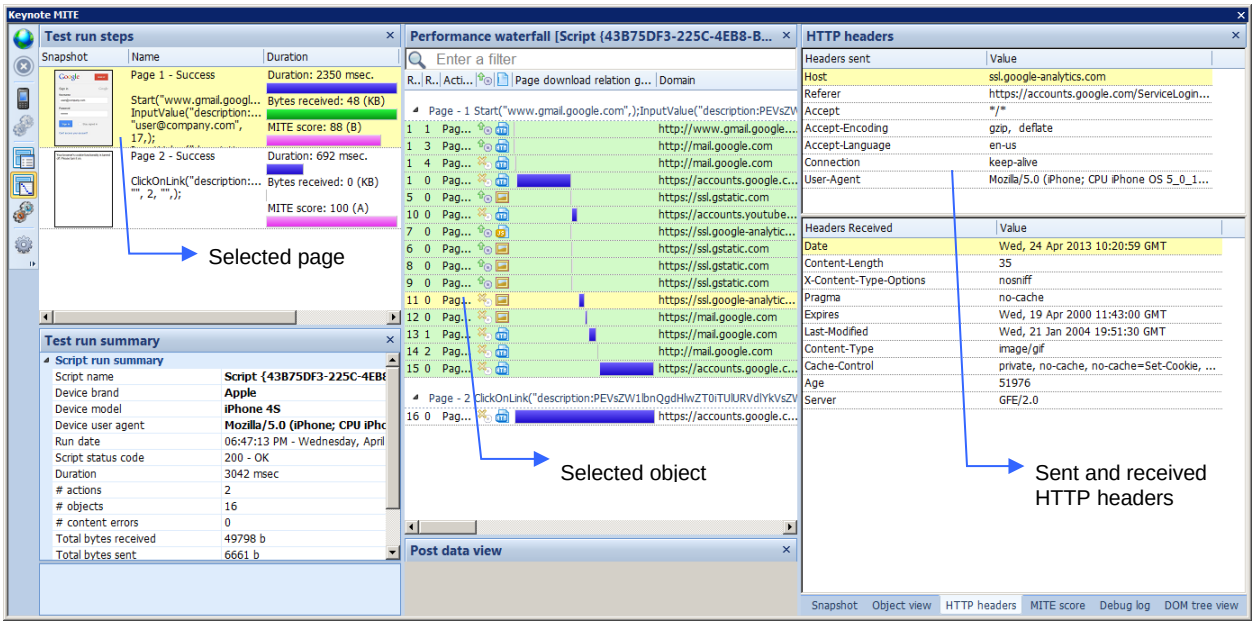
For a selected page, you can also view the DOM tree (shown below). You can search for any string in the DOM.

Figure 6-12 Results--Page DOM and Element Post Data



For any object selected in the waterfall, you can see the sent and received headers in the **HTTP headers** tab to the right.

Figure 6-13 HTTP Headers Sent and Received



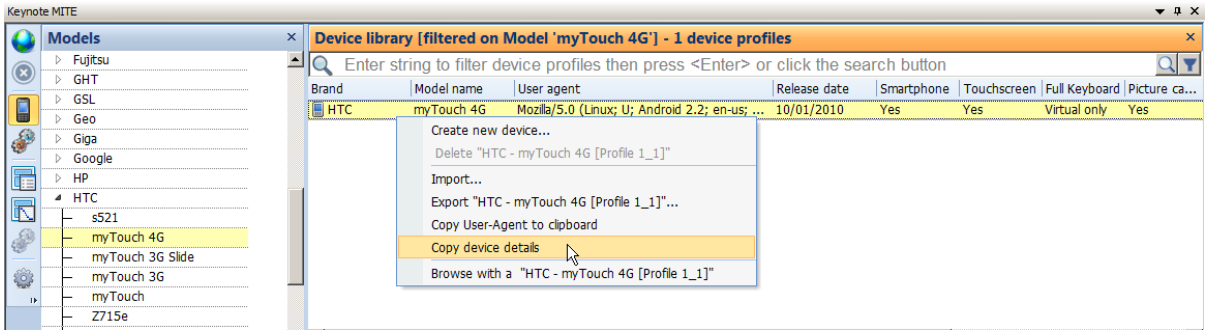
6.3 Execution on a Different or Multiple Devices

As MITE scripts are based directly on the web elements underlying web content, a script recorded on one device can be executed on another.

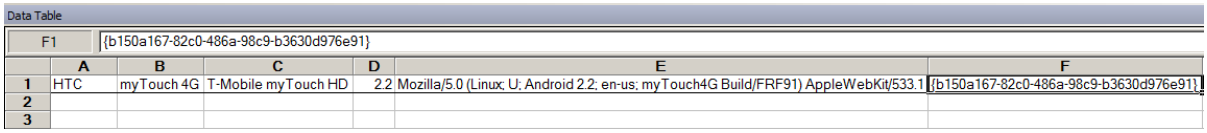
To execute a script on a different device from the one it was recorded on:

1. Open the script you want to execute.

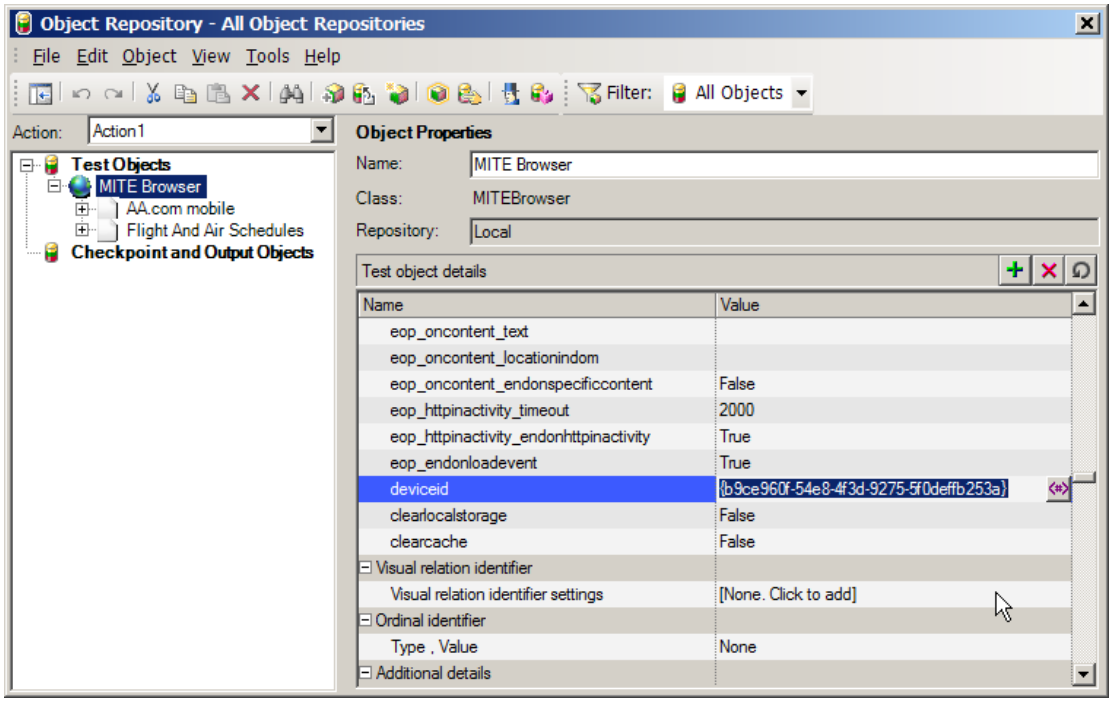
2. Open the script data table: **View** > **Data Table**.
3. Select the device profile you want to execute on in the device library.
4. Right-click and select **Copy device details**.



5. Paste (Ctrl+V) the device details in a data table row.



6. Copy the contents of column **F**.
7. Open the object repository.
8. Select the **deviceid** property of the **MITE Browser** object.



9. Paste the copied device ID and close the object repository.
10. Run your script; it will now be executed on the selected device.

A script can also be executed one device at a time, on a group of several devices. As before, the device list is specified in a script data table. The script's MITE Browser object is set to read device IDs from column F of the data table:

1. Open the script you want to execute. Ensure that the data table is visible: **View** > **Data Table**.
2. From the device library, select the first device profile you want to execute on.
3. Right-click and select **Copy device details**.
4. Paste (Ctrl+V) the device details in a data table row.
5. Repeat these steps for as many devices as you want to add to the device list.

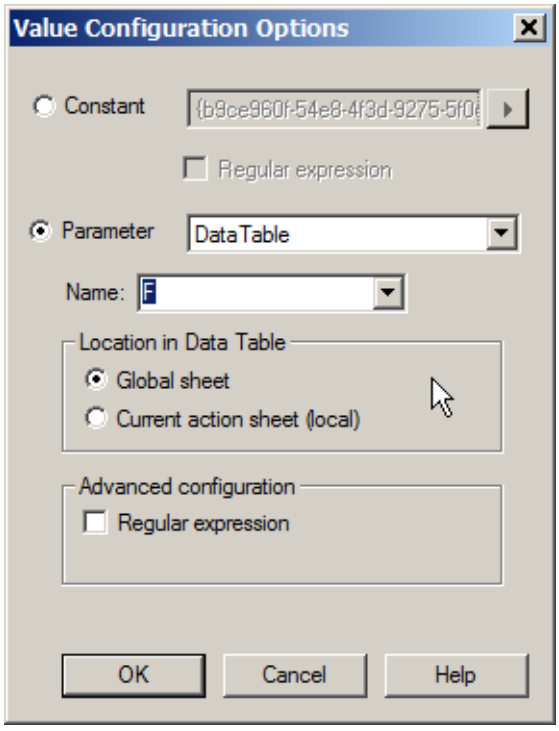
Data Table

F5

	A	B	C	D	E	F
1	HTC	myTouch 4G	T-Mobile myTouch HD	2.2	Mozilla/5.0 (Linux; U; Android 2.2; en-us; myTouch4G Build/FRF91) AppleWebk	{b150a167-82c0-486a-98c9-b3630d976e91}
2	Dell	Streak	Mini 5	1.6	Mozilla/5.0 (Linux; U; Android 1.6; en-us; Dell Streak Build/Donut) AppleWebKit/	{d2fcc32c-226d-4007-990f-ff31cbf81ab5}
3	BlackBerry	Storm2 9550		5.0.0.3	BlackBerry9550/5.0.0.320 Profile/MIDP-2.1 Configuration/CLDC-1.1 VendorID/1	{80d7d106-ad1d-40b0-8139-98c6c1709b78}
4						

NOTE You can also filter the device library by any string, e.g., `Android`, and then Ctrl-click to select multiple devices. You can copy and paste all device details together.

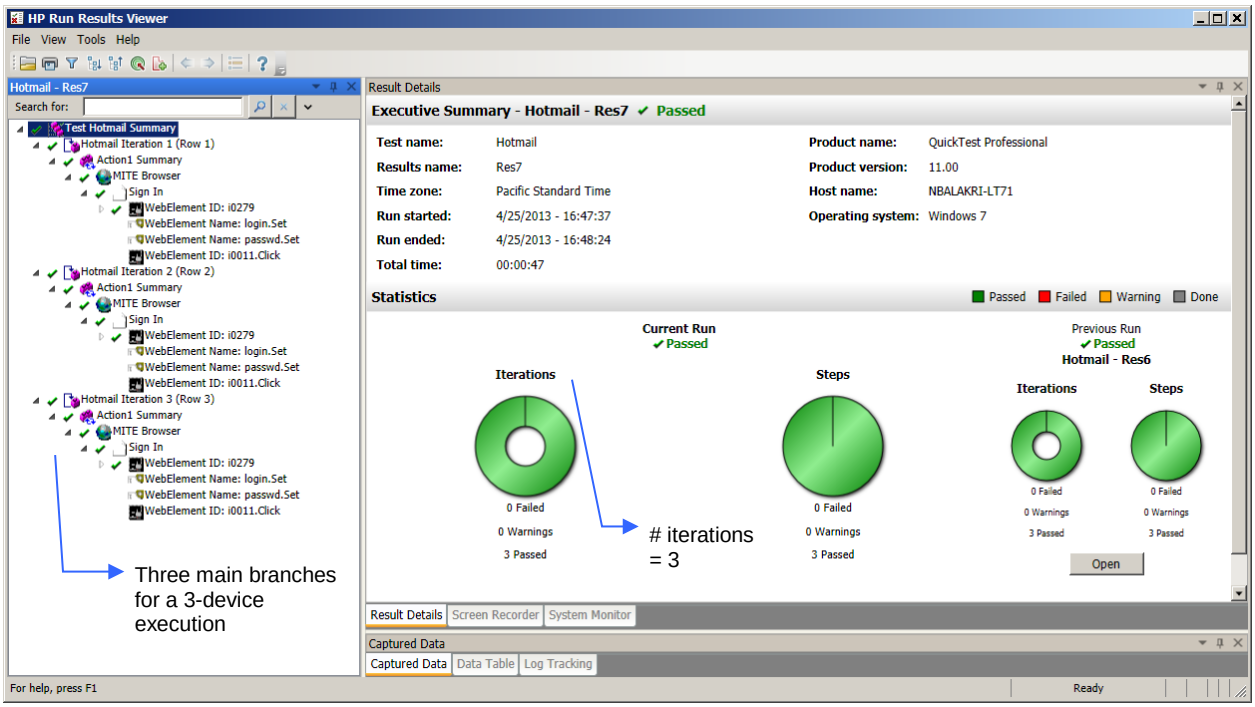
6. In the object repository, select the **deviceid** property of the **MITE Browser** object.
7. Click in the **Value** column and then click the  button to configure the value.
8. Make the following selections in the dialog box that appears and click **OK**:
   a. Select the **Parameter** radio button (ensure that Data Table is selected as the value).
   b. Choose **F** from the **Name** drop-down list. This sets the value of `deviceid` to column F of the data table.
   c. Select **Global sheet**.



9. Run your script; it will now be executed sequentially on each selected device.

HP QTP results for a multi-device script show execution on each device as an iteration.

Figure 6-14 HP QTP Results for Multi-Device Execution



MITE summary results in the test list show the outcome on each device.

Figure 6-15 MITE Summary Results for Multi-Device Execution