HP UFT Connection Agent

Software Version: For UFT 12.53

User Guide

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UFT Connection Agent Overview

This section includes:

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What is the UFT Connection Agent?

The UFT Connection Agent is a service installed on your Apple Mac computer, which enables UFT to communicate with the Safari browser using the WebSockets protocol. This enables UFT to run tests on Web applications running in Safari on the Mac and to spy on objects in these applications.

When you install the UFT Connection Agent, the agent service is installed on your Mac, and the Unified Functional Testing Agent extension is installed on the Apple Safari browser.

The UFT Connection Agent runs automatically after installation and after each restart of the Mac and communicates with UFT on the one hand and the Unified Functional Testing Agent Safari extension on the other.

If you previously used UFT 12.00 to test Web applications on Safari, then after you upgrade UFT you must reinstall the UFT Connection Agent on the Mac from the current UFT version.

The UFT Connection Agent preferences and the Unified Functional Testing Agent Safari extension preferences are reset to their defaults.

If you want to use non-default preferences, for example, if you configured UFT to use a port other than the default 8822 for remote connections, then you must reconfigure these preferences on the Mac computer.

This is required because of significant changes in the UFT Connection Agent's preferences. For example, the UFT Connection Agent now uses different ports to communicate with UFT and the Safari extension. In UFT 12.00, the same port was used for both communications.

What Do I Need to Configure on the Mac so UFT Can Test Web Applications?

By default, you do not need to modify the preferences set for the UFT Connection Agent and the Unified Functional Testing Agent extension.

- UFT and the connection agent communicate using port **8822**
- The connection agent and the UFT Safari extension communicate using port **8823**.

However, in some situations, you might want to specify different ports. For example:

- If another application on the Mac uses these ports.
- If multiple UFT users need to connect to the same Mac computer. Each UFT user can use a connection agent installed under a different Mac user account, with a different port number configured.

> **Caution:** If you modify the port numbers, make sure that:
>
> - The **UFT port** defined in the UFT Connection Agent preferences matches the one defined in UFT.
>
>   For details on setting this in UFT, see the topic on connecting to a remote Mac computer in the Web Add-in Quick Reference section of the *HP Unified Functional Testing Add-ins Guide*.
>
> - The **Safari port** defined in the UFT Connection Agent preferences matches the one defined in the Unified Functional Testing Agent extension in Safari.

In addition to the port numbers, you can configure the level of log messages to collect. By default, log messages are collected from the connection agent, but not the Safari extension.

Can you have multiple connections to the Mac computer?

Yes.

- Multiple users from different UFT instances can connect to the same Mac simultaneously using different ports.

  Each user must install the UFT Connection Agent and UFT Safari extension in their Mac user account, and configure the relevant port number in UFT, in the connection agent on the Mac.

- The Mac connection information is in the Record and Run settings, which are defined per test, therefore you can connect to different Macs or different ports when running different tests.

  However, UFT can connect to only one Mac at any time.

How Do I Secure the Communication Between UFT and the Mac Computer

When UFT communicates with the Mac, UFT acts as a client and the UFT Connection Agent acts as a server.

You can secure this communication on different levels:

1. You can set up client authentication by defining a passphrase for UFT to use when contacting the Mac.
2. You can secure the communication between UFT and the UFT Connection Agent by requiring that they use an SSL connection.

For more details, see the topic on securing the communication with the remote Mac computer in the Web section of the *HP Unified Functional Testing Add-ins Guide*

For task details on configuring the UFT Connection Agent preferences, the Unified Functional Testing Agent Safari extension preferences, and the security settings, see "Configure the UFT Connection Agent preferences" on page 7.

Installation, Configuration, and TroubleShooting

The UFT Connection Agent is a service installed on your Apple Mac computer, which enables UFT to communicate with the Safari browser using the WebSockets protocol. This enables UFT to run tests on Web applications running in Safari on the Mac and to spy on objects in these applications. For details, see "UFT Connection Agent Overview" on page 4.

This task describes installing and configuring the UFT Connection Agent.

Install or Uninstall the UFT Connection Agent

> **Note:**
> - You must have administrator permissions to install the UFT Connection Agent.
> - All Mac users that use the UFT Connection Agent must have the agent installed in their Mac user account.

1. Copy the installer image file (**UFTConnectionAgent.dmg**) from the **<UFT installation folder>/Installations/Safari** folder to the Mac.
2. Open the **UFTConnectionAgent.dmg** image file.
3. Double-click (**HP UFT Connection Agent.pkg**) to start the installation wizard, or **Uninstall** to remove the agent from your Mac.

   This installs or removes both the UFT Connection Agent and the Unified Functional Testing Agent Safari extension.

   > **Note:** If Safari or the System Preferences pane are open when you uninstall the agent, reopen them for the uninstallation to take effect.

Configure the UFT Connection Agent preferences

1. To check or modify the status of the UFT Connection Agent, or to update its preferences, open **System Preferences** and double-click **HP UFT Connection Agent**.

2. You can modify any of the following preferences (separately for each Mac user):

Connection Port Numbers	• **Safari port.** The port on which the UFT Connection Agent communicates with the Unified Functional Testing Agent Safari extension. (**Default:** 8823) This number must match the **Remote Agent Port** number defined in the Unified Functional Testing Agent extension in Safari. • **UFT port.** The port on which UFT communicates with the UFT Connection Agent. (**Default:** 8822) This number must match the number defined in UFT for initiating the remote connection to the Mac.

Security Configuration	• **Passphrase.** The passphrase that UFT must use for authentication when initiating a remote connection to the Mac computer.
	
	This string must match the passphrase defined in UFT's **Remote Connection** pane in the Options dialog box (**Tools > Options > GUI Testing > Remote Connection**).
	
	The passphrase can be empty, but a long and complicated passphrase that is difficult to guess provides better security.
	
	• **Use SSL.** Indicates that UFT must use SSL when initiating the connection to the Mac computer.
	
	If you select this option, then:
	
	  ◦ The **Use SSL** option, available in UFT when initiating a remote connection, must also be selected.
	
	  ◦ You must specify the paths to the **SSL certificate file** to use for the communication and its **SSL private key**.
	
	    These files must be accessible to the UFT Connection Agent when it sets up the connection. (Chain certificate files are also supported)
	
	  ◦ In UFT (**Tools > Options > GUI Testing > Remote Connection**), specify the **CA certificate** that UFT can use to validate the **SSL certificate file** when received from the UFT Connection Agent.

Log Messages Configuration	• **Log folder.** The folder in which to save activity log messages. Make sure you have write permissions for this folder. • **Agent log level.** The level of information to save in the agent log (Fatal, Error, Warning, Debug). The log is saved in the **UFTAgent.log** file in the specified folder. • **UFT Safari extension logs.** Specifies whether to maintain a log of the Unified Functional Testing Agent Safari extension activity in addition to the UFT Connection Agent log. (**Default:** OFF). There is no need to turn these logs on, unless HP Support personnel request it. This log is saved in the **SafariLog.log** file in the same folder. To activate the Unified Functional Testing Agent Safari extension log, you must also select **Enable Remote Logging** in the extension's preferences in Safari.

3. Make sure the Safari browser is closed and then click **Apply & Save** to save your changes and restart the agent with the new preferences.

   - The agent's status is displayed in the HP UFT Connection Agent preference pane.
     Check the status to make sure the agent runs successfully with the new preferences. If it does not, check the `UFTAgent.log` file for problem details.

   - If you set the **UFT Safari extension logs** option to `ON` and the remote logger service that logs the Safari extension activity fails to run, this option is automatically set back to `OFF`. Check the **SafariLog.log** file for problem details.

Configure the Unified Functional Testing Agent Extension in Safari

1. Open the Unified Functional Testing Agent extension in Safari.

   a. Select **Safari > Preferences**

   b. In the Preferences dialog box, select the **Extensions** tab.

   c. In the Extensions list in the left pane of the dialog box, select the Unified

Functional Testing Agent extension.

2. In the right pane, you can modify any of the following preferences:

Remote Agent Port	The port number on which the UFT Connection Agent communicates with the Safari browser. (**Default:** 8823) **Caution:** This number must match the **Safari port** number defined in the UFT Connection Agent preferences.
Show Object Spy popover when Spy starts:	If you turned off the notification displayed on Safari when UFT initiates a Spy session, you can turn it back on using this option.
Options related to maintaining a log of the Unified Functional Testing Agent Safari extension activity	Options related to maintaining a log of the Unified Functional Testing Agent Safari extension activity.There is no need to modify these options, unless HP Support personnel request it. ● **Default Logging Level.** The level of information to save in the Unified Functional Testing Agent Safari extension log file. (All, Trace, Debug, Info, Warn, Error, Fatal, Off) ● **Enable Remote Logging.** Specifies whether to maintain a log of the Unified Functional Testing Agent Safari extension activity in addition to the UFT Connection Agent log. (By default, this option is cleared.) This log is saved in the `SafariLog.log` file in the same folder as the UFT Connection Agent logs. To activate the Unified Functional Testing Agent Safari extension log, you must also select **UFT Safari Extension logs** in the UFT Connection Agent preferences. ● Leave the **Logging Exceptions** box empty. This is intended for use by HP Support only.

Troubleshoot the UFT Connection Agent

● If the agent remains in **not running** status after you update its preferences, check the **UFTAgent.log** file for problem details.

For example, the ports you specified might be busy. They may be used by another application, or they may be in use by a UFT Connection Agent installed on the Mac under another user's account.

Alternatively, you might have entered a port number that is restricted by Apple. Consult the Apple support site regarding restricted or blocked ports.

- If UFT fails to connect to the Mac, make sure that the security settings defined in UFT match those defined in the UFT Connection Agent. For more details, see the topic on securing the communication with the remote Mac computer in the Web section of the *HP Unified Functional Testing Add-ins Guide*.

- If UFT fails to run tests on Safari or to recognize that it is installed on the Mac:

  - Make sure that **Safari port** number defined in the UFT Connection Agent preferences, matches the **Remote Agent Port** number defined in the Unified Functional Testing Agent extension.

    Make sure that the **UFT port** number defined in the UFT Connection Agent preferences, matches the number defined in UFT for initiating the remote connection to the Mac.

  - Make sure that you are not using a port number that is blocked by Safari. Consult the Apple support site regarding restricted or blocked ports.

- If you manually remove the Unified Functional Testing Agent extension from Safari, or the *HP* UFT Connection Agent preferences pane from the System Preferences, you can reinstall them by reinstalling the UFT Connection Agent on the Mac.

  Reinstalling the UFT Connection Agent resets its preferences to their defaults. Make sure to update the preferences, if necessary, so that the correct port numbers are defined in the agent preferences and in the Safari extension.

- If you turn on the UFT Safari extension logs, and when you save the preferences, the log option is set to **OFF**, check the **SafariLog.log** file for problem details.

  For example, the port used for these logs is the **Safari port + 1**. If this port is busy, the remote logger service fails.

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