



Internet Explorer Plug-In

Version 3.1.x

9/13/2013

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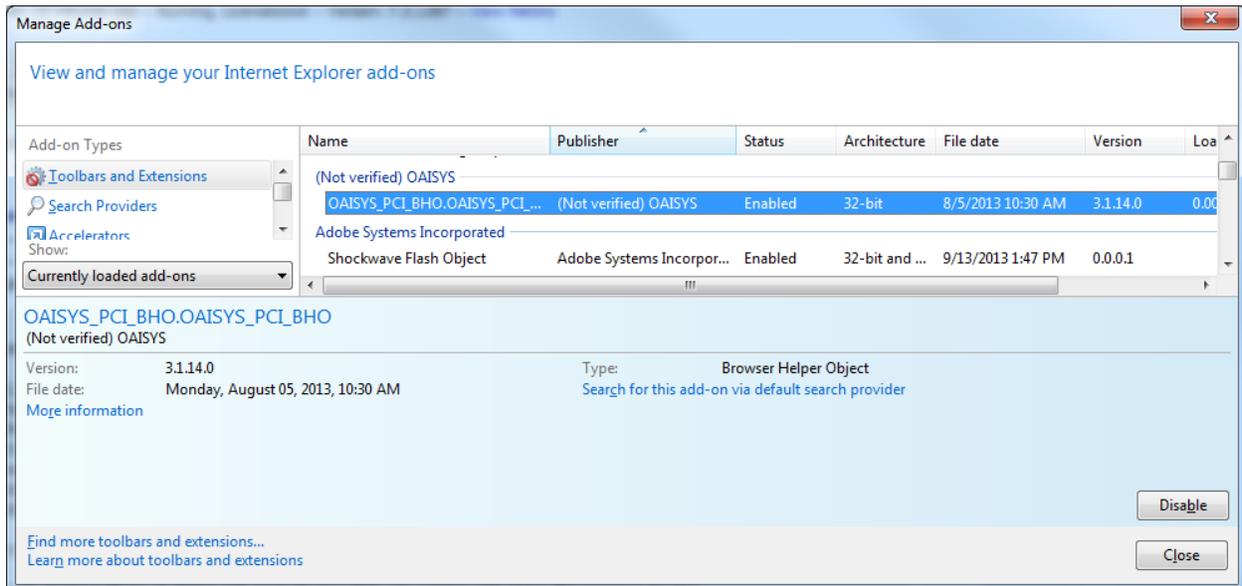
OVERVIEW

OAISYS offers an Internet Explorer plug-in designed to automate business process integration between web apps and an OAISYS recording solution.

- It controls real-time recording by triggering pauses, stops and restarts in call recording when designated secure text fields and drop-down menus within a web page are engaged by a computer user.
- It can attach data from a web app to a recording file for the purpose of access control, searching and after-call actions.
- Web page text can be tagged for automatic attachment.
- Text fields and drop-down menus can be tagged for attachment of user entries.

The plug-in is based on the Microsoft .NET 3.5 framework, which must be installed on each computer that will also host the plug-in. It uses Internet Explorer's Browser Helper Object (BHO) technology, which was first supported by Microsoft with v4 of its Internet Explorer software.

Deployment of the plug-in requires write access to the Windows registry due to the nature of BHO technology.





The plug-in supports two modes:

1. Admin
2. User

ADMIN MODE

Admin mode presents the administrator with a list of all web text elements that may be automatically attached to a recording file. Then gives access to designate the pages, secure text fields, and drop-down menus that should pause, stop and start recording or have user entries attached to the recording file.

USER MODE

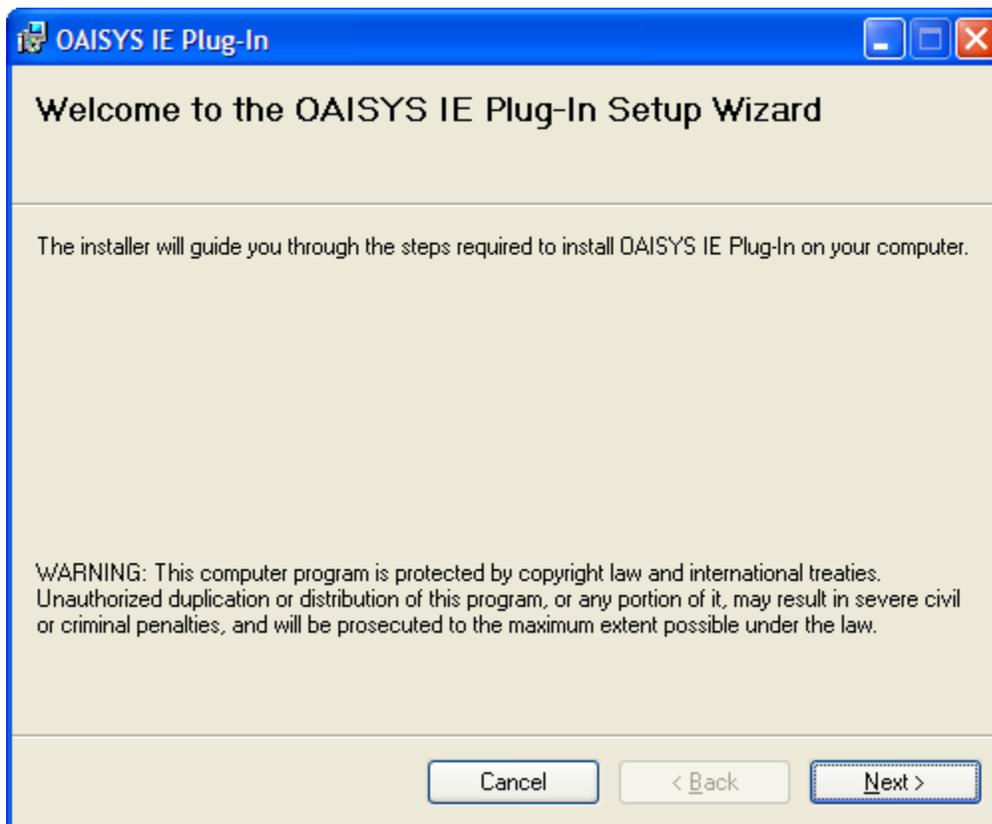
User mode transparently monitors browser activity and activates the Application Programming Interface (API) of the OAISYS Desktop Client, Legacy Recording Client or Net Phone to pause, stop and start call recording based on the use of secure text and drop-down (formally called SELECT) controls as well as attach information from designated web text or input fields.

INSTALLATION

The Microsoft .NET 3.5 framework supports use of optional components to extend its functionality. The OAISYS IE Plug-In requires the deployment of these optional components. They can be installed by running vs90_piaredist.exe, which is made freely available by Microsoft and is provided directly by OAISYS in the zip file. See Troubleshooting section for more information.

Once the prerequisites for the plug-in are installed on the target computer, run Setup.exe, which is contained within OAISYS_IE_Plugin_v3.zip.

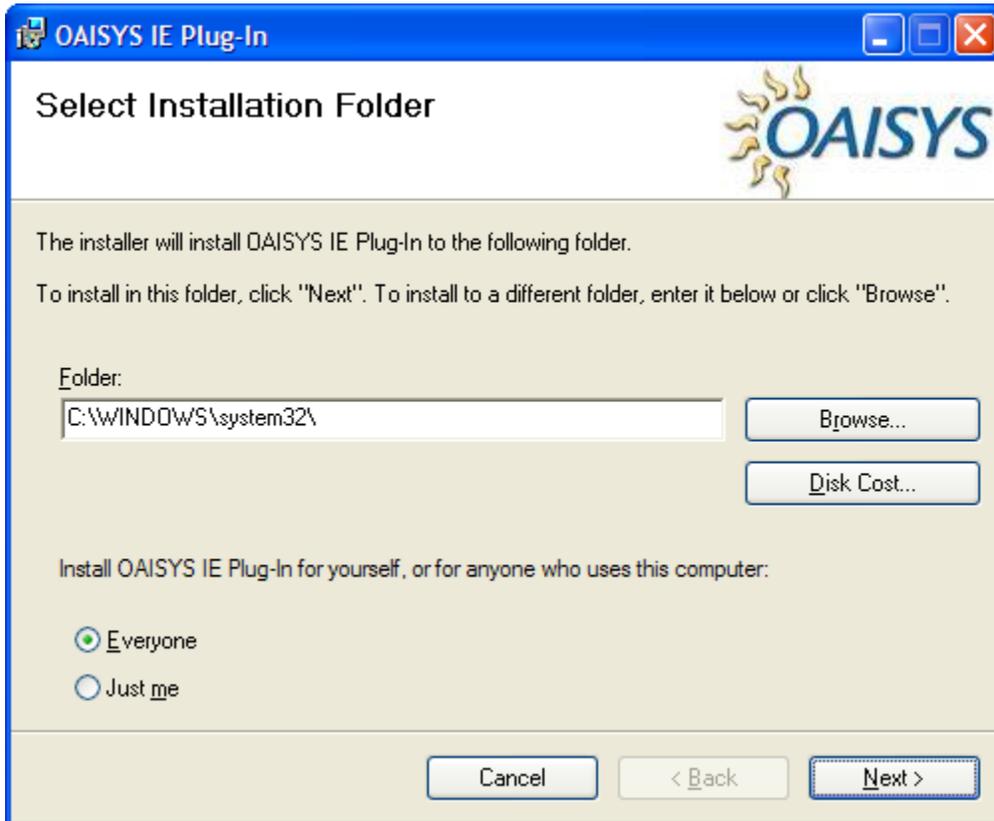
Click *Next*





Choose the installation path for the software files.
By default, the software is installed in the System32 folder along with other interoperability assemblies.

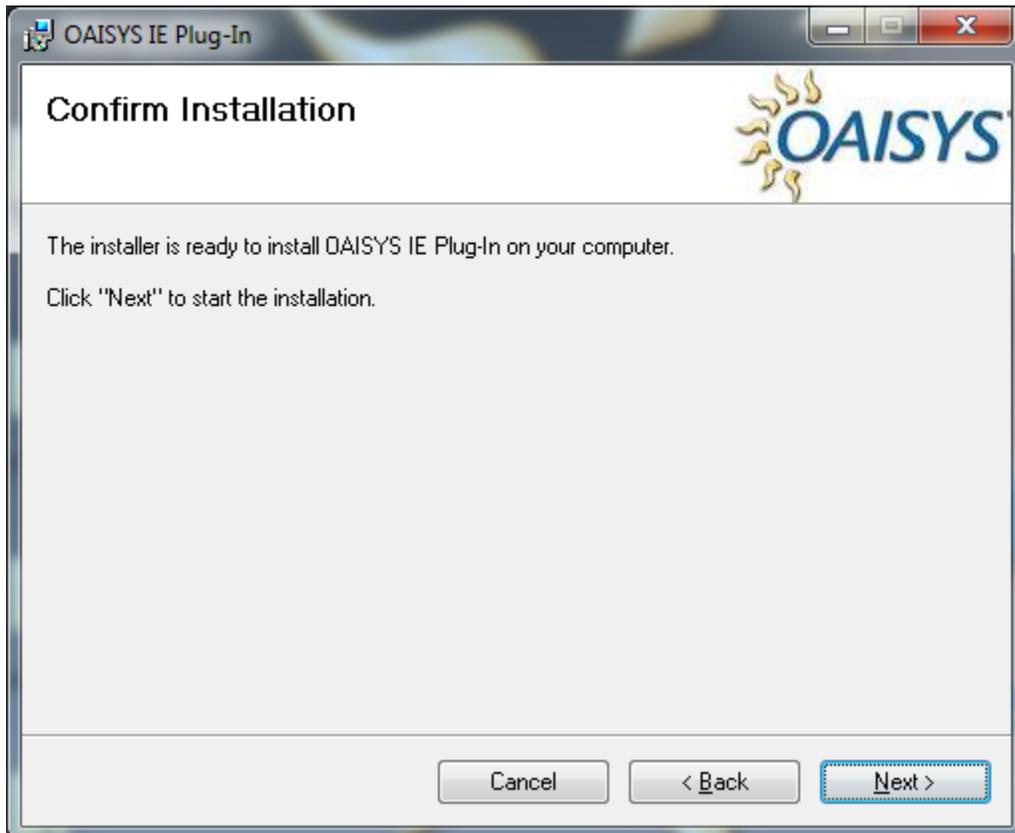
Click [Next](#)





Click [Next](#) to finalize the installation.

The installation will deploy the software and register the software in the Windows registry. Registry entries are made within the HKEY_LOCAL_MACHINE node of the registry.



UNINSTALL

The product can be uninstalled by using the Add/Remove Programs tool in the Control Panel. It is titled OAISYS IE Plugin. This is the recommended way to remove it as all files and registry settings will gracefully be removed from the computer.

ADMIN MODE

Enabling admin mode can be performed by toggling admin mode using the OAISYS IE Plugin Admin, which is accessed through Internet Explorer's Tools menu (see [OAISYS IE Plugin Admin Tool](#) section of this document).

When admin mode is enabled, each time a new Internet Explorer window or tab opens the user will receive this dialog box:



By selecting [Yes](#), the user will experience alterations to the delivery of each web page until that browsing session is closed, which automatically turns Admin mode off.

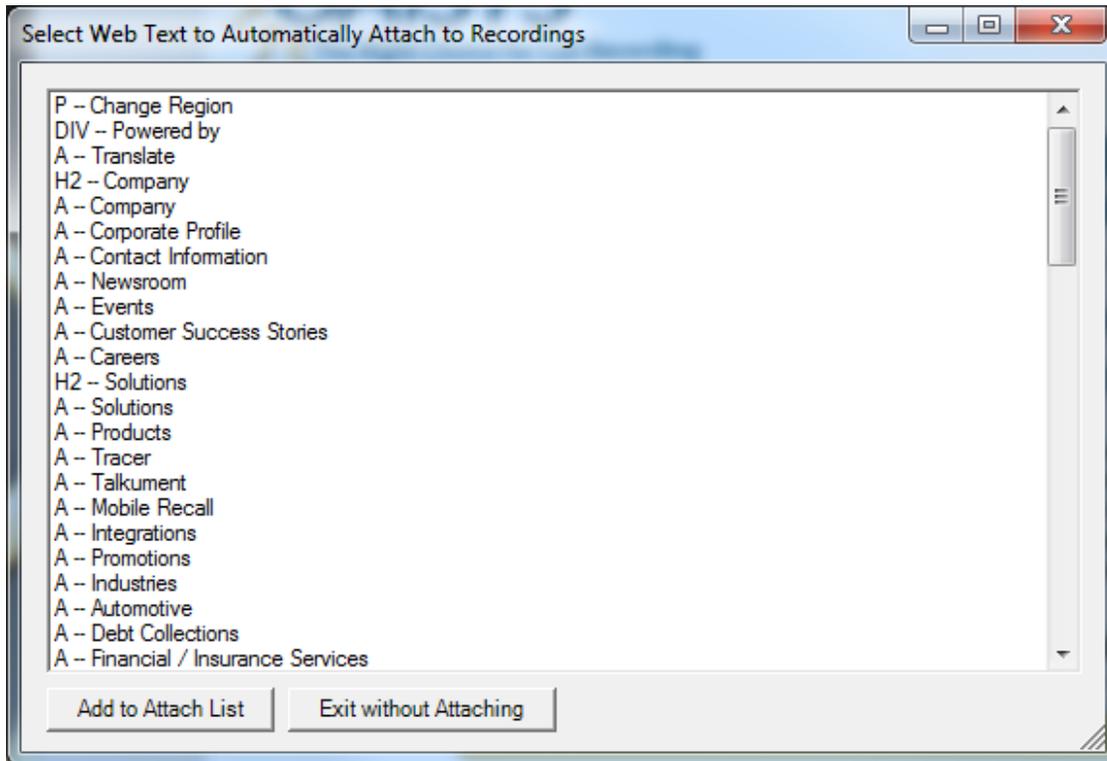
On each page load, if there are any web text elements (defined by HTML as tags such as <p>, <a>, , etc.), a popup window will display a listing of each web text element tag along with the current text.



Select the web text element that is desired to automatically attach to any active recording when that web page loads while in agent mode.

Once all desired items are selected, click [Add to Attach List](#).

Hint: Click and hold Ctrl while clicking multiple entries to tag multiple web text elements for attachment.



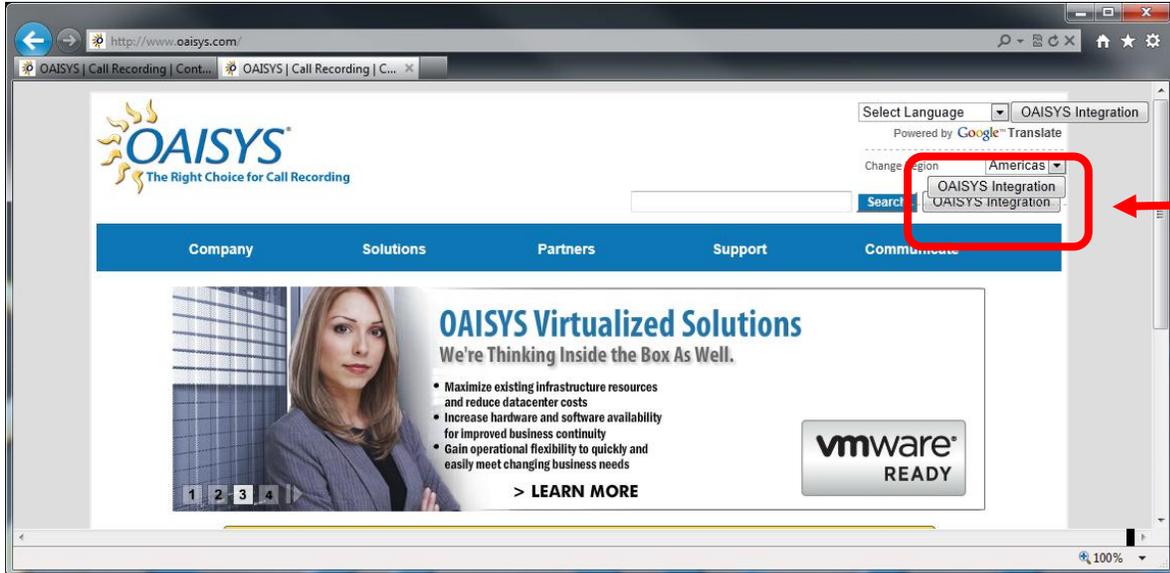
For each item selected, a window will open requesting the name for the data field. Assign the desired call recording file field name in which the data should be placed.



*Hint: Associate **Company** with the **Customer Name** field in the call recording file.*



Once automatic attachment fields are selected, the page will be rendered in a modified form. Next to each text box or independently named drop-down menu control will be placed a control button labeled *OAISYS Integration* or *REGISTERED*.



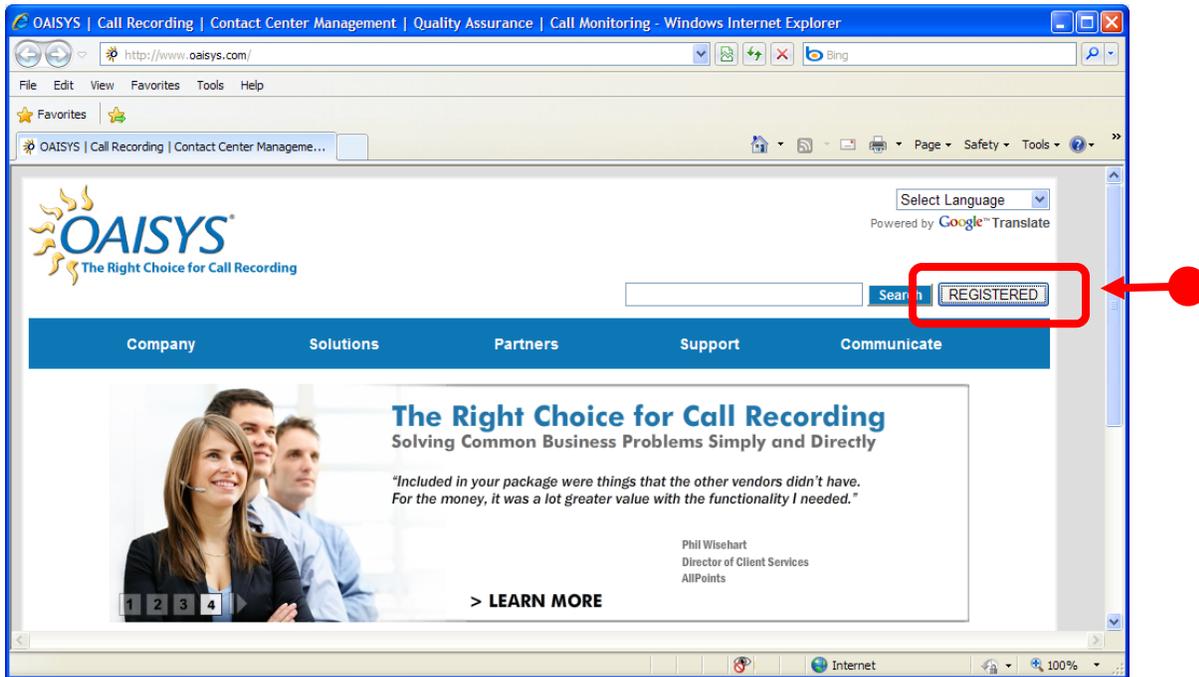
Clicking an *OAISYS Integration* button will present the option to:

- Pause
- Stop until restarted
- Restart recording upon leaving
- Attach user data entry upon engagement of the associated text field or drop-down menu





In response to selecting an option, the button will change the text to say *REGISTERED*.



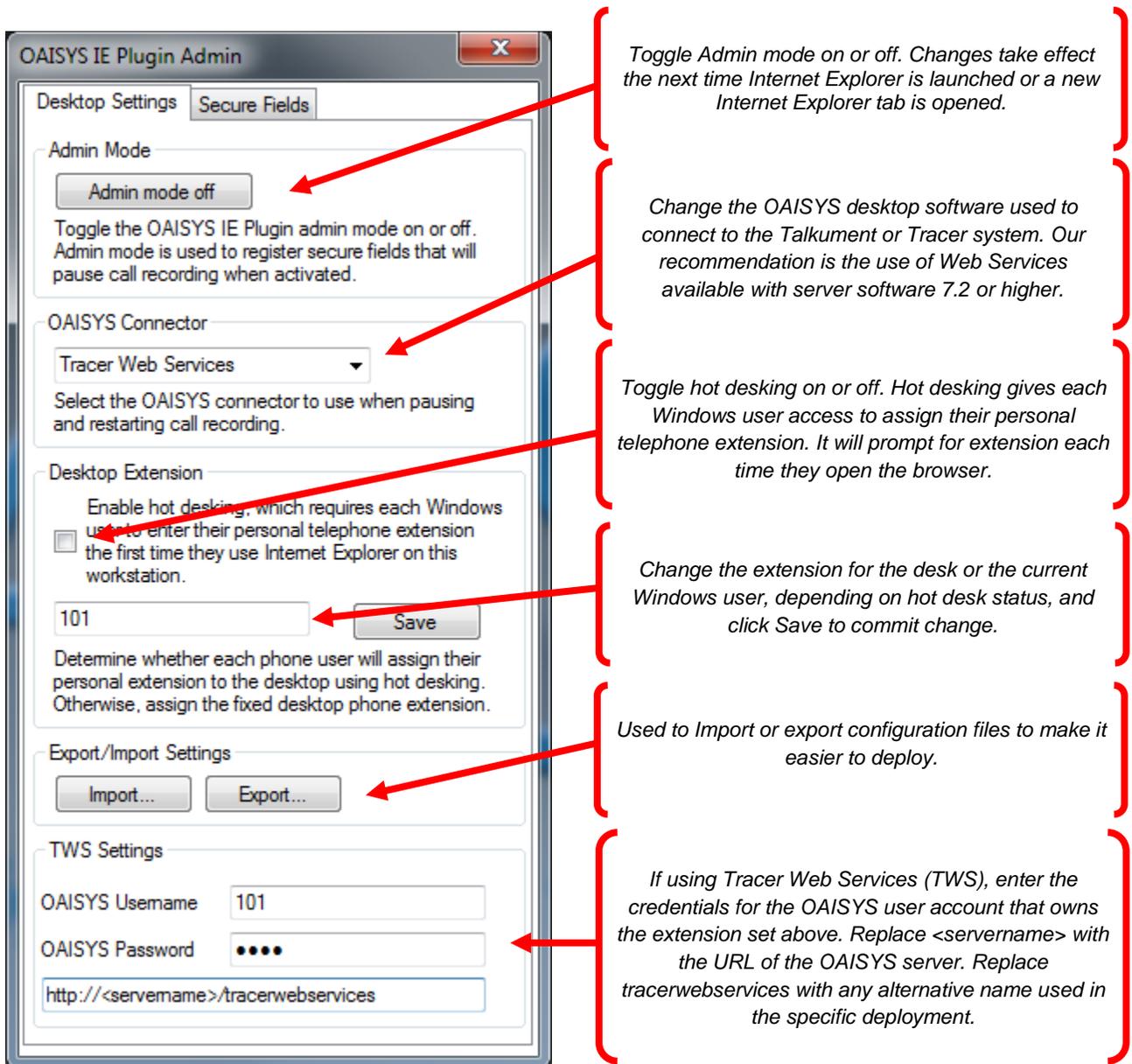
Once all secure text controls and drop-down menus across all affected pages have been registered, the admin user should close the browser.

Admin mode is automatically disabled upon closing the browser. It can be restored through the OAISYS IE Plug-In Admin.

OAISYS IE PLUGIN ADMIN TOOL

This tool can be used to change the OAISYS desktop software used to connect to the Talkument or Tracer system; enable or disable hot desk support; change the fixed telephone extension or current user's telephone extension setting; view and unregister secure data fields; import settings; and export settings.

Access the OAISYS IE Plugin tool through the Internet Explorer's Tools menu.



OAISYS IE Plugin Admin

Desktop Settings | Secure Fields

Admin Mode

 Toggle the OAISYS IE Plugin admin mode on or off. Admin mode is used to register secure fields that will pause call recording when activated.

OAISYS Connector
 Tracer Web Services
 Select the OAISYS connector to use when pausing and restarting call recording.

Desktop Extension
 Enable hot desking, which requires each Windows user to enter their personal telephone extension the first time they use Internet Explorer on this workstation.
 101
 Determine whether each phone user will assign their personal extension to the desktop using hot desking. Otherwise, assign the fixed desktop phone extension.

Export/Import Settings

TWS Settings
 OAISYS Username: 101
 OAISYS Password: ●●●●
 http://<servername>/tracerwebservices

Toggle Admin mode on or off. Changes take effect the next time Internet Explorer is launched or a new Internet Explorer tab is opened.

Change the OAISYS desktop software used to connect to the Talkument or Tracer system. Our recommendation is the use of Web Services available with server software 7.2 or higher.

Toggle hot desking on or off. Hot desking gives each Windows user access to assign their personal telephone extension. It will prompt for extension each time they open the browser.

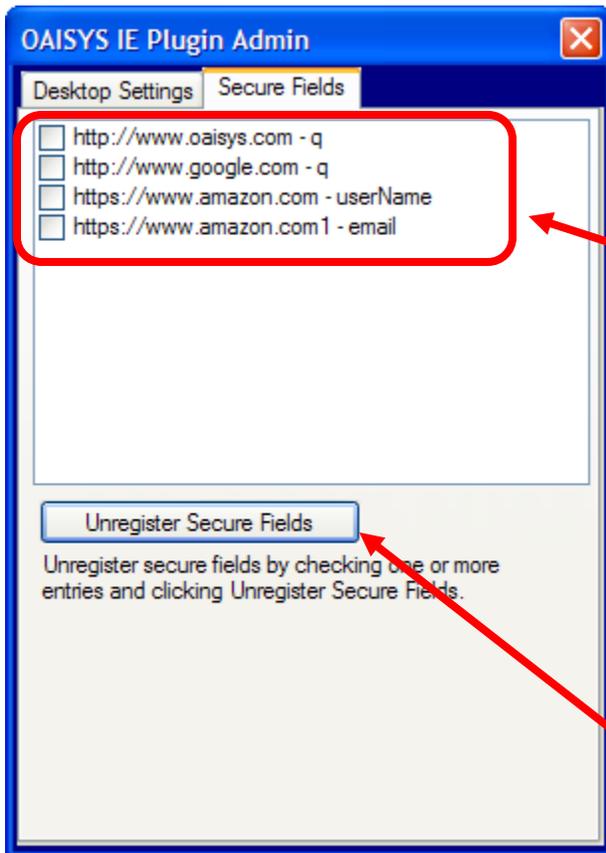
Change the extension for the desk or the current Windows user, depending on hot desk status, and click Save to commit change.

Used to Import or export configuration files to make it easier to deploy.

If using Tracer Web Services (TWS), enter the credentials for the OAISYS user account that owns the extension set above. Replace <servername> with the URL of the OAISYS server. Replace tracerwebservices with any alternative name used in the specific deployment.

The Secure Fields tab lists the currently registered secure fields.

Close the tool by clicking the *Exit* icon in the upper-right corner of the form. All changes are saved upon exit.



This is the list of currently registered secure fields. The domain of the web server is shown for the first secure field within a given domain. Each subsequent field shows the domain plus a counter to track multiple fields. The field's programmatic ID as supplied by the web server is displayed after a dash separator.

URL's preceded by "stop—" will stop recording until a start recording field is engaged. Those preceded by "start—" will restart recording. Those preceded by "attach—" or "attachbyindex—" will attach text to the recording file. "All others pause recording while a field is engaged and immediately restart when leaving the field.

Unregister one or more secure fields by selecting them in the list above and clicking this button. A confirmation alert will appear. Cancel and no changes are made. Confirm and the entries are deleted.



USER MODE

First, to be useful, settings created by an administrator should be loaded after installing the plug-in. This is done by opening the IE Admin tool and importing an OAISYS_PCI_BHO.exe.config file published by an administrator.

Once the settings are installed, user mode is almost transparent in that no dialog boxes or additional web page controls are visible. When launching a new Internet Explorer window or tab the plug-in will attempt to connect with a currently running instance of the designated OAISYS desktop software. If there is no currently running instance it will attempt to launch the appropriate software.

NOTE: The OAISYS Desktop Client cannot be automatically launched by the plugin and must be running to be functional.

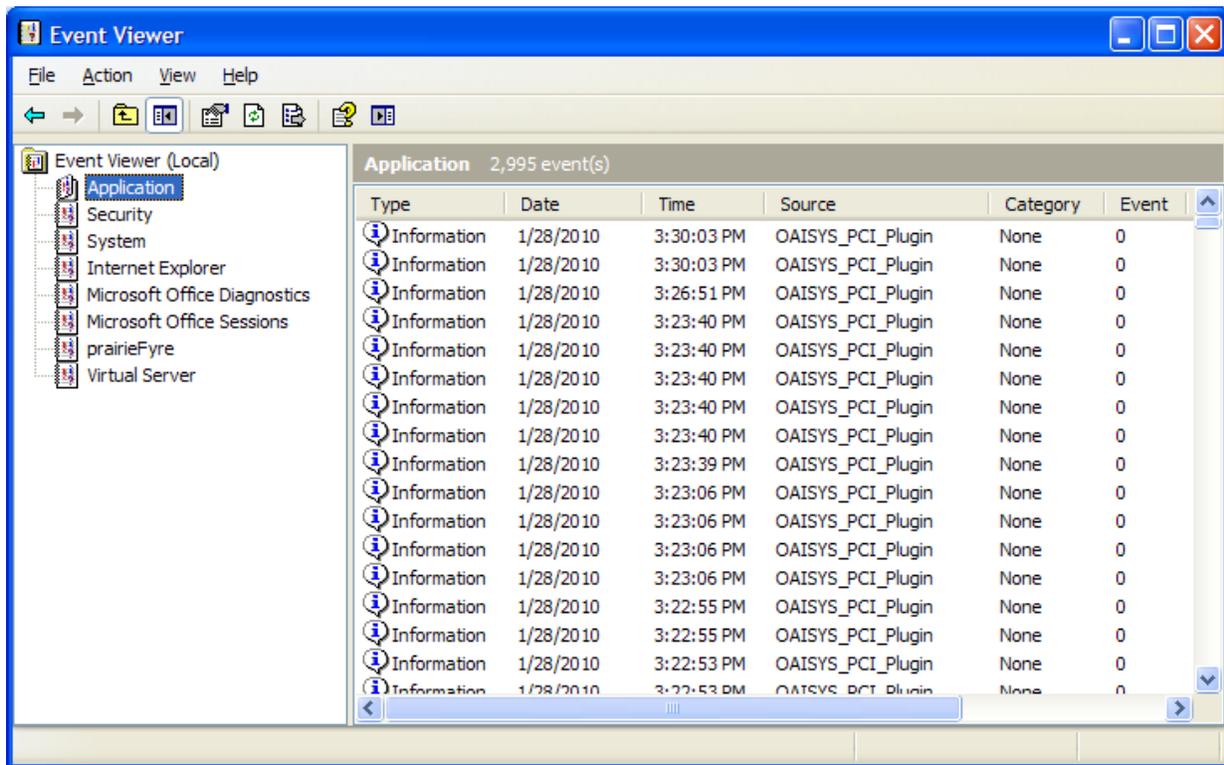
When a secure text field or drop-down menu on a registered web page receives focus (i.e. placing the cursor in the text box or clicking the drop-down menu) it will automatically and transparently issue a stop recording command to the OAISYS desktop software and attach a note to the recording for auditing purposes. If tagged to pause, once that control loses focus (i.e. the user clicks a button on the page or tabs to another control) the plug-in will issue a start recording command to restart the recording. Otherwise, recording will remain ceased until a start recording field is engaged.

When a text field or drop-down menu tagged to start is engaged, recording will resume within a half a second.

TROUBLESHOOTING

The plug-in logs certain events to the Event Viewer, which can be found in the Control Panel. It uses the Application log and registers events under the Source name OAISYS_PCI_Plugin:

If the Windows User account does not have permission to write to the logs there will not be anything. Our recommendation is to setup and test the first couple on a user that can write to the event logs so troubleshooting is available.



Here is what the Events show when things are working as expected:

Checking hotdesk status

Checking connector type

TWS logging in using Xuser account

Attempting to connect to OAISYS client

Connection status: True

No elements found for http://localhost

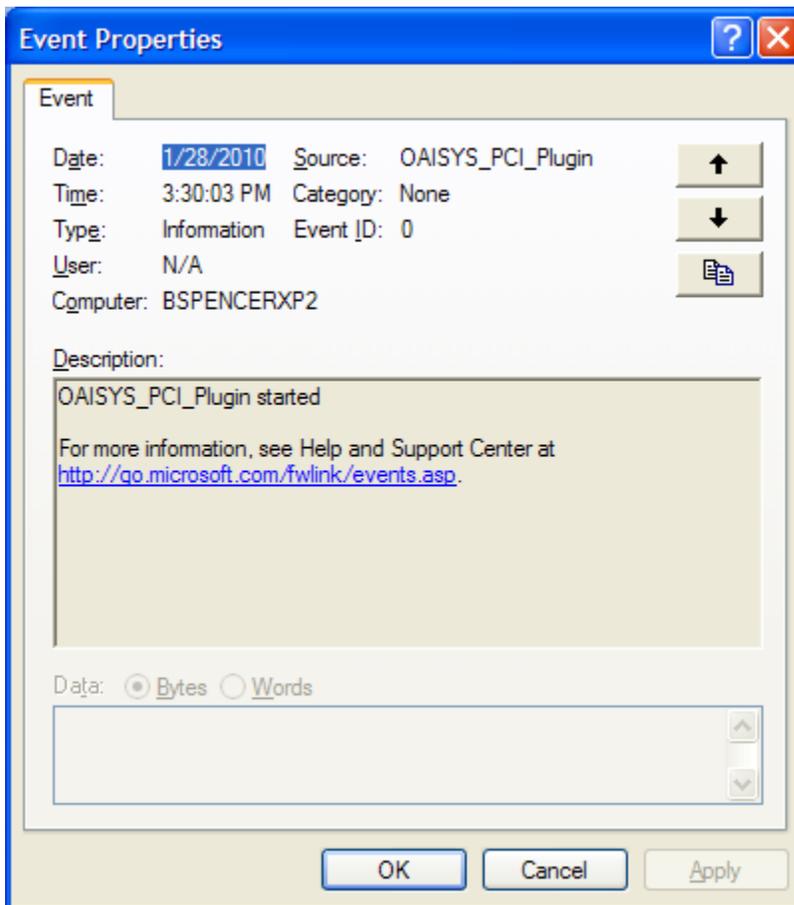
DownloadComplete fired; ready state = READYSTATE_INTERACTIVE

DocumentComplete fired



1 elements found for http://docserver
Attached event handlers to 1 HTML elements.
TextOnFocus fired
stopped = True

This can be used to verify whether the application is loading, registering Internet Explorer event handlers, seeing Internet Explorer events and triggering the text control focus and off focus events. Here is an example of an event in the log:



In some instances of clicking back and forth to other applications the focus events may not fire within Internet Explorer as expected. It is possible to cause the plug-in to restart recording early by putting focus on a registered control and then removing focus by bringing forth another application window. Recording will not likely be paused just by returning to the Internet Explorer window but will require clicking somewhere else on the web page and then replacing focus in the registered text control.



Common errors and solutions:

Connection error:

System.Web.Services.Protocols.SoapException: Server was unable to process request.
---> System.Exception: Invalid username or password.
 at TracerWebService.Session.Login(String loginClass, String username, String password) --- End of inner exception stack trace ---...http://tracer-house-7/tracerwebservice/session.asmx

Solution:

The username or password used for the WebServices is incorrect. Use Oaisys Management Studio to validate user/password.

Could not stop recording:

System.Web.Services.Protocols.SoapException: Server was unable to process request.
---> System.Exception: Invalid sessionID:
 at TracerWebService.Globals.ParseSessionID(String sessionID)
 at TracerWebService.TwsSessions.TwsSessionManager.LookupTwsSession(String sessionIDStr) at TracerWebService.Globals.LookupTwsSession(String sessionID)
 at TracerWebService.LiveCalls.TryLookupCall(String sessionID, CallSearch callSearch, String& callID) --- End of inner exception stack trace ---

Solution:

Validate the extension being used is the primary extension and not a secondary.

Could not stop recording:

System.Web.Services.Protocols.SoapException: Server was unable to process request.
---> OAISYS.OaisysException: EClient error: [U-Unknown Service]
 at TracerWebService.TryLookupCall.Execute(CallSearch callSearch)
 at TracerWebService.LiveCalls.TryLookupCall(String sessionID, CallSearch callSearch, String& callID)
 --- End of inner exception stack trace ---

Solution:

Validate the Tracer Web Services is functional (see the API documentation for more information)

http://www.oaisys.com/downloads/OAISYS_API_Overview_&_Developer's_Guide.pdf