



# Workshare Compare & iManage Work 10

*Integration Guide*

February 2020

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## Overview

This guide covers the integration of Workshare comparison in iManage Work 10 environments. It focuses on Workshare's online comparison which brings the DeltaView comparison technology directly into the Work 10 browser environment so that users can initiate a comparison from within Work 10 and view the comparison in the browser too.

**Note:** For the integration of Workshare's desktop comparison and iManage Work 10, please refer to the Workshare Professional Installation Guide.

Workshare's online comparison displays the results of a comparison (the redline) as well as a summary of changes in the browser, providing a fast and lightweight user experience.

The screenshot displays the 'Compare With Selected' window. On the left, a 'Change Summary' panel lists various changes such as 'CONTENT (68)', 'CURRENCY (18)', and 'NUMBERING (25)'. Below this, a table shows 'Page Changed content' with a list of changes, including 'DRAFT ARRANGEMENT LETTER FOR STAND-ALONE BONDS' and 'DirectorsDirectrs'. A blue button at the bottom of the summary panel reads 'Accept selected changes'. The main area shows the document content with redlines and blue highlights. The document title is 'DRAFT ARRANGEMENT LETTER FOR STAND-ALONE BONDS'. The text includes 'The DirectorsDirectrs ACMEQUALITY Bonds Plc Issuer Plc' and 'The Lead Manager and the other Managers (as defined in paragraph 2 below)'. The document is dated '[Date]' and addressed to 'Dear Sirs,'. The subject is 'PROPOSED ACMEQUALITY BONDS PLC ISSUE BY ACMEQUALITY BONDS PLC ISSUER PLC ("the Issuer")'. The 'Introduction' section states: '1. This arrangement noticeletter sets out the scope and limitations of the work to be performed by us in related with the above transaction, namely the proposed issue of [ ] ("the issue") which will involve the preparation by the issuer, and for which the issuer will be solely responsible, of an offering circular [in accordance with the listing rules of the [relevant] stock exchange]. This noticeletter is written in the context of the respective roles of the directors of the issuer, the head manager ("the lead manager"), the other managers (as defined in paragraph 2 below) and ourselves.'

In order to extend the Work 10 interface to include Workshare comparison options, installation and configuration of the following is required:

- Workshare Compare Server (WCS)
- Workshare iManage Integration Server (WIIS)

Setup requirements will vary according to how Work 10 is implemented as follows:

Work 10	WCS	WIIS	Install/Setup steps
On-premise or private cloud	On-premise	On-premise	<ol style="list-style-type: none"> <li>1. Install WCS</li> <li>2. Install WIIS</li> <li>3. Generate web extension zip file for each Work 10 server</li> <li>4. Upload web extension zip file to each Work 10 server</li> </ol> <p>Refer to <a href="#">On-premise Installation</a>.</p>
Private cloud	Cloud, hosted by Workshare	Cloud, hosted by Workshare	<ol style="list-style-type: none"> <li>1. Contact Workshare: <ul style="list-style-type: none"> <li>• To receive web extension zip file for each Work 10 server</li> <li>• To register Work 10 URLs on whitelist to enable access to WCS and WIIS</li> </ul> </li> <li>2. Upload web extension zip file to each Work 10 server</li> </ol> <p>Refer to <a href="#">Uploading configuration file to iManage Work 10</a>.</p>
Public cloud cloudimanager.com	Cloud, hosted by Workshare	Cloud, hosted by Workshare	<ol style="list-style-type: none"> <li>1. Contact Workshare to register customer ID on whitelist to enable access to WCS and WIIS</li> <li>2. Enable web extensions via the Control Center</li> </ol> <p>Refer to <a href="#">Cloudimanager.com Integrations</a>.</p>

**Note:** If you are only using the Workshare Compare desktop option, adding the Work 10 server URL or customer ID to the whitelist is not necessary.

## On-Premise Installation

In this implementation, the Work 10 server is installed on-premise or in a private cloud hosted by iManage and WCS and WIIS are also installed on-premise. The setup requires:

- Install WCS
- Install WCS
- Generate web extension zip file for each Work 10 server
- Upload web extension zip file to each Work 10 server

## System Requirements

### Supported Client Browsers

- Google Chrome, latest version
- Microsoft Internet Explorer 11

### Servers

You will need to install and configure the following services:

- **iManage Work 10.2 and above**  
This must be installed on-premise (either at your offices or on a private cloud)
- **Workshare Compare Server 9.6.0 or above**  
Installed on Microsoft Windows Server 2016 x64 Edition. It is strongly recommended that you install Compare Server on a dedicated server instance.

The recommended hardware for Compare Server is as follows:

- **CPU:** 64-bit architecture-based computer with Intel or AMD processor with 4 cores
- **Memory:** 4GB RAM – more memory may be needed if you intend multiple users to regularly compare long and complex documents
- **Storage:** 1GB free disk space for installation; additional space required for storage of DVJS comparisons and queued comparisons

- **Workshare iManage Integration Server 1.6 or above**

This is an ASP.NET application that is called from the Work 10 web UI. It provides the configuration files needed to extend Work 10, responds to users clicking on the Workshare menu items and retrieves documents from Work 10 to send to Compare Server.

WIIS requires Windows Server 2012 R2 or 2016.

**Note:** Compare Server and WIIS can be installed on the same server.

**Note:** If you work with Workshare Compare Desktop, it must be 9.5.4 or above)

## Installing Workshare Compare Server

Workshare Compare Server is provided as a standard installation file, with an additional company-specific file for licensing purposes:

Workshare.CompareServerInstall-[build #].exe	The executable file used to install Compare Server.
Product.lic	The license file that contains the Compare Server license.

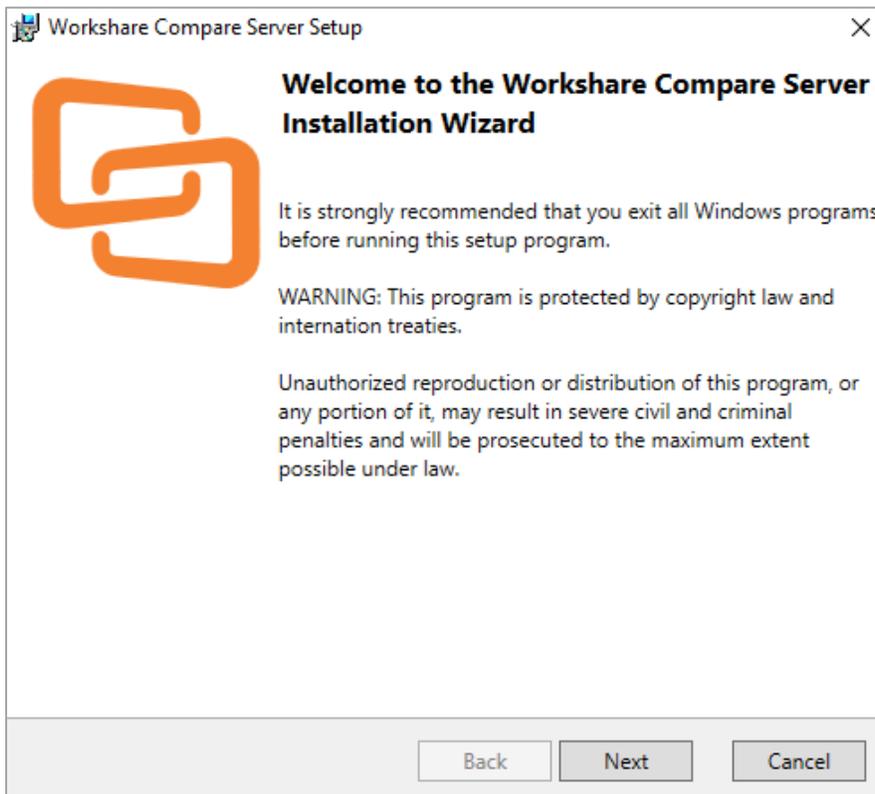
**Note:** Both installation files (the EXE and the LIC file) must be on a local drive of the server machine and not on a mapped network drive or UNC path.

During install or uninstall of Compare Server, information and error entries are written to log files. These plain text files are saved in the current user's temporary folder (for example, C:\Documents and Settings\Admin\Local Settings\Temp).

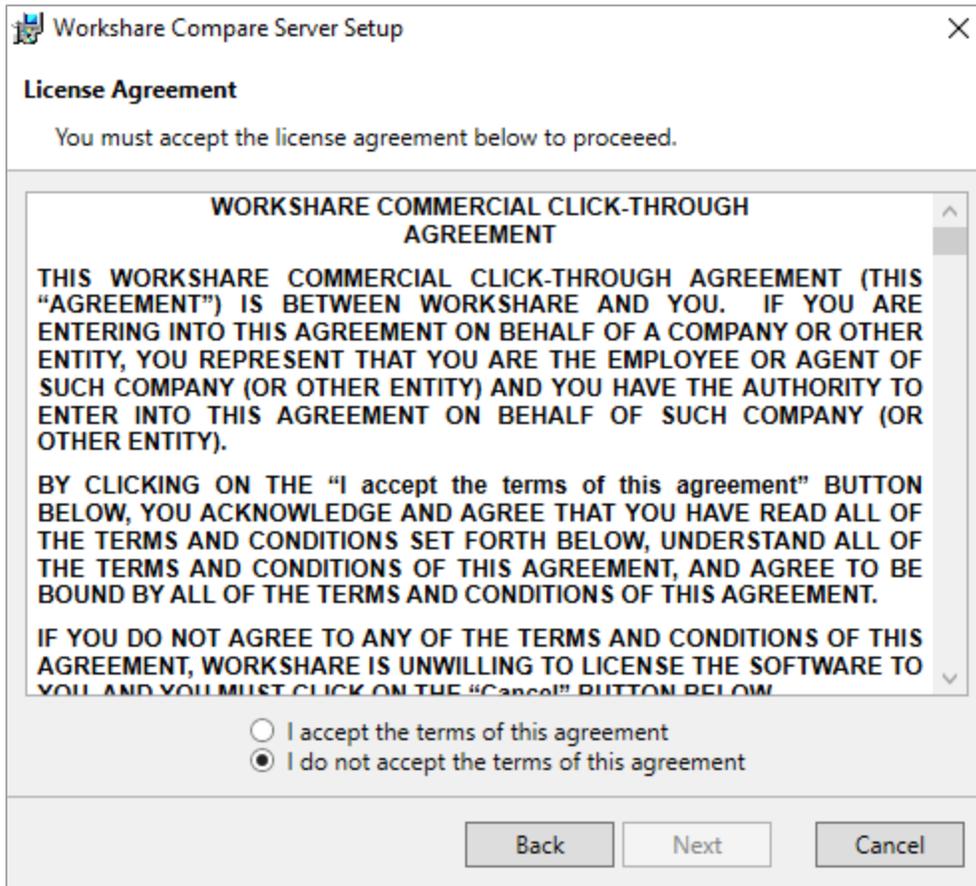
The following procedure explains how to install Compare Server on your server using the executable installer. Before beginning the installation procedure, make sure that all other programs are closed and disable any anti-virus software.

## To install Compare Server:

1. Double-click the **Workshare.CompareServerInstall-9.6.XXXX.exe** file. The Workshare Compare Server Installation Wizard is displayed.

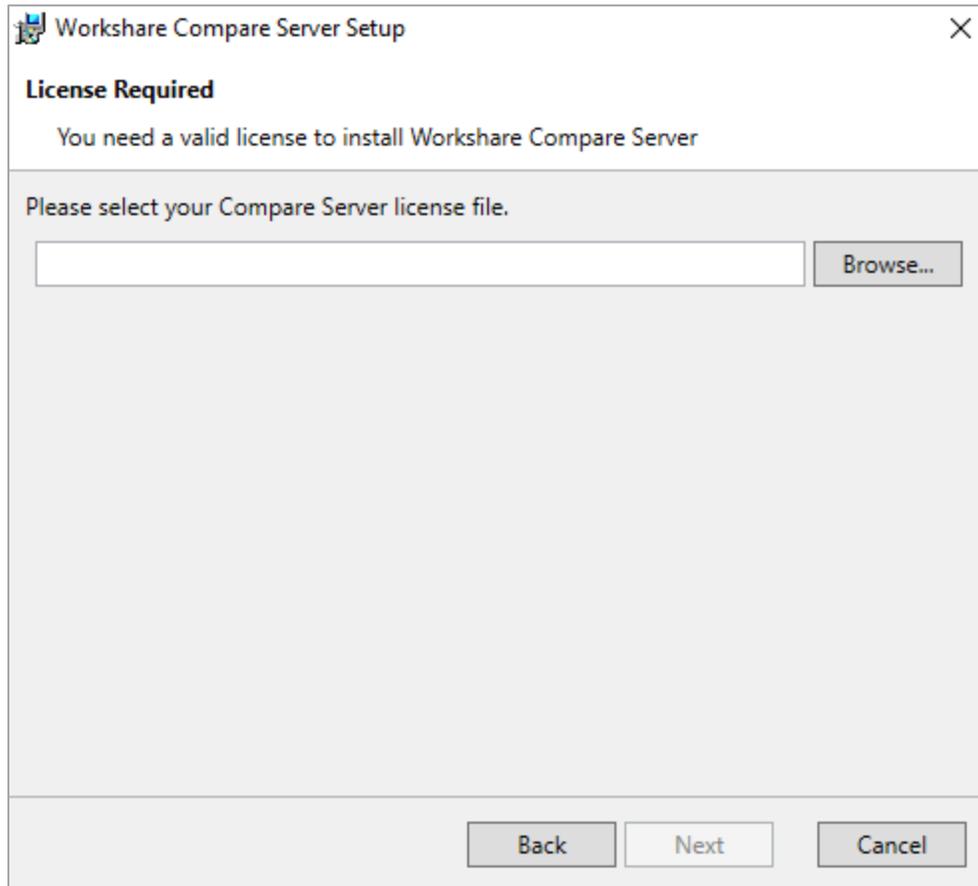


2. Click **Next**. The License Agreement screen is displayed.



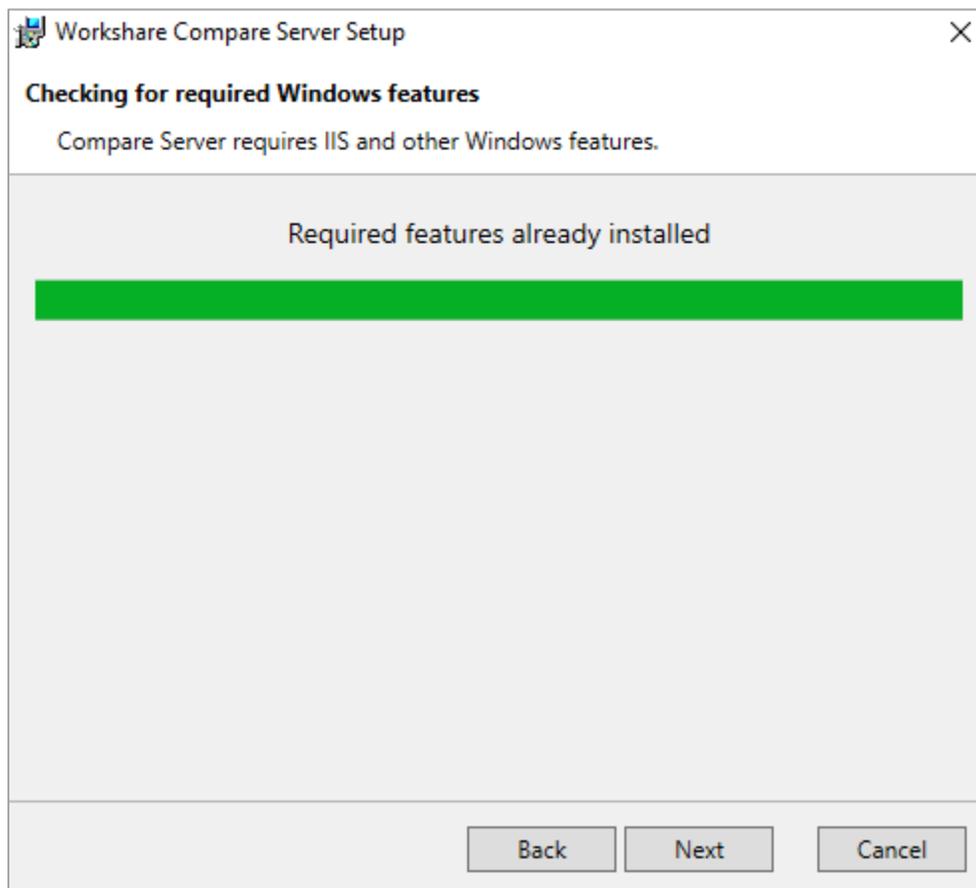
3. Read the agreement and select the **I accept the terms of this agreement** radio button.

4. Click **Next**.

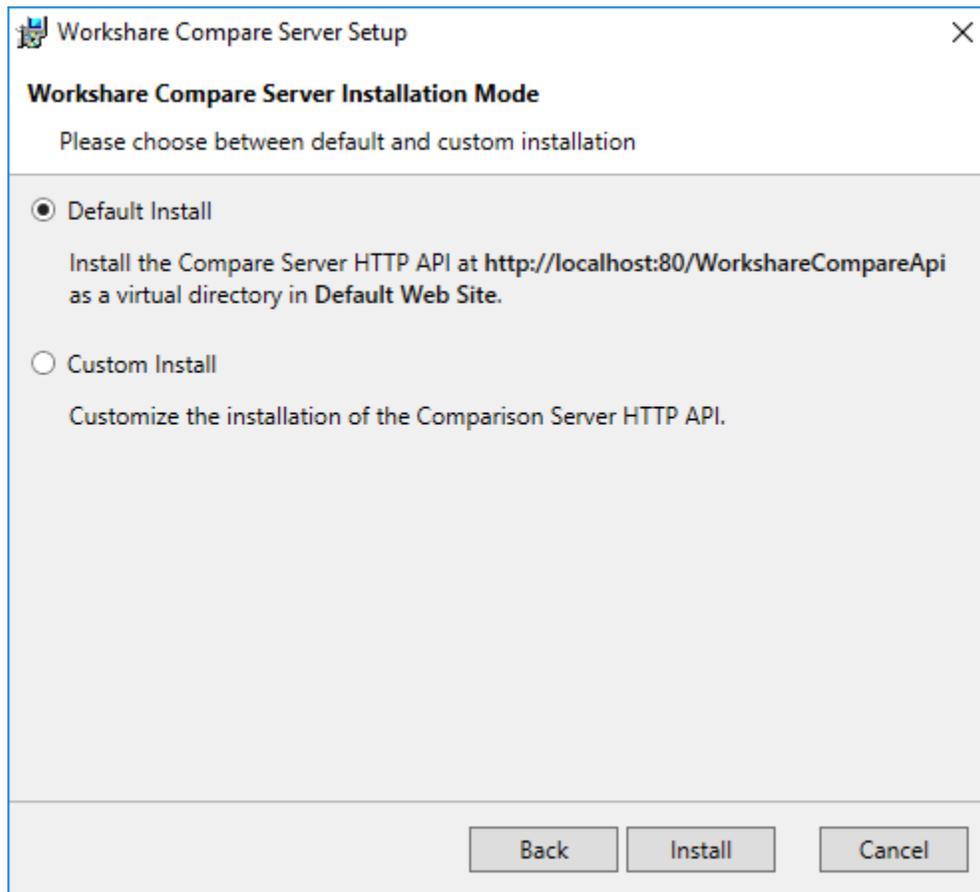


5. Workshare will automatically detect your license file if it is in the same location as the installation file. If necessary, browse to the location of your license (.lic) file. This location **MUST** be on the local machine.

6. Click **Next**. Workshare checks you have the required Windows components and other prerequisites. If any are not found, Workshare will install them.



**Note:** If the installer cannot install the required components, it will display an error showing the command it tried to run. You can troubleshoot by reinserting your Windows Server installation media and rerunning the installer, or by running the command manually.

7. Click **Next**.

## 8. Continue in one of the following ways:

- Leave **Default Install** selected and click **Install**. Workshare Compare Server is installed as a web service with RESTful APIs. Go to step 11.
- If you want to customize the installation of the RESTful APIs, select **Custom Install** and click **Install**.

The following screen is displayed.

Workshare Compare Server Setup

**Workshare Compare Server API**

Please choose how the Compare Server API will be installed

Install in an existing IIS site

Default Web Site

Virtual Directory Name

Create a new IIS site

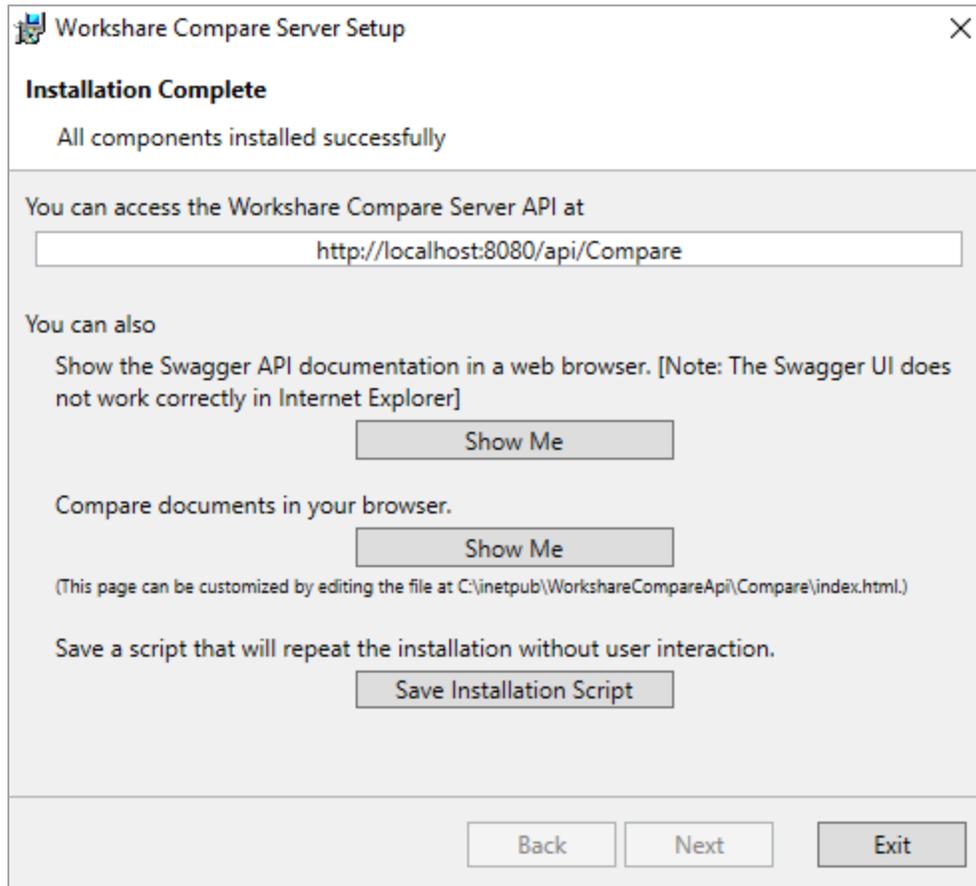
Site Name

HTTP Port

Back Next Cancel

9. Select an existing IIS site or create a new IIS site for the installation of the RESTful APIs.

10. Click **Install**. Compare Server is installed.



11. Once installation is complete, the confirmation dialog provides useful information about your install:

- The URL for the API is provided.
- You can display the Swagger API documentation in your browser. You can also try a test comparison from there.

**Note:** If you are using the Microsoft Internet Explorer browser, the Swagger API documentation may not display correctly.

- You can run a comparison in your browser.
- Click **Save Installation Script** if you want to save your installation settings for further Compare Server installs.

12. Click **Exit**.

## Installing Workshare iManage Integration Server

The WIIS provides the APIs needed to embed Workshare's comparison technology into the Work 10 UI. It also provides the web interface so that comparisons launched from Work 10 can be displayed in a browser.

If you have Workshare Compare desktop, you may want to install WIIS so that users can launch comparisons from a document's context menu in Work 10 and the redline is displayed in Workshare's desktop application. When both Compare Server is available and a user has Compare desktop, the user can choose whether to run and view the comparison in a browser or in the desktop application.

Complete the following steps whether you're installing WIIS after Compare Server or installing WIIS on its own:

- Step 1: Confirm IIS installed
- Step 2: Set up HTTPS binding
- Step 3: Run WIIS install

### Step 1: Confirm IIS Installed

If you don't have Microsoft IIS installed on the server where you will install WIIS, install it before continuing further.

### Step 2: Set Up HTTPS Binding

All interaction between the Work 10 server, WIIS, Compare Server and the users' browsers must be over HTTPS. This is because authentication of the user for the WIIS is handled by OAuth2 on the Work 10 server.

Users' browsers must trust the certificates of the Work 10 server, the WIIS and Compare Server.

The WIIS must trust the certificates of the Work 10 server and Compare Server. There are no direct HTTPS calls from the Work 10 server to the other servers: the interaction between Work 10 and WIIS is initiated from the Work 10 web UI in a browser.

#### To set up HTTPS binding:

Go into IIS and set up the binding for HTTPS via port 443.

## Step 3: Run WIIS Install

The WIIS install is provided as a standard installation file - **WiiS.Setup-[build#].exe**. You must run it from the command line so you can set the parameters required by the install.

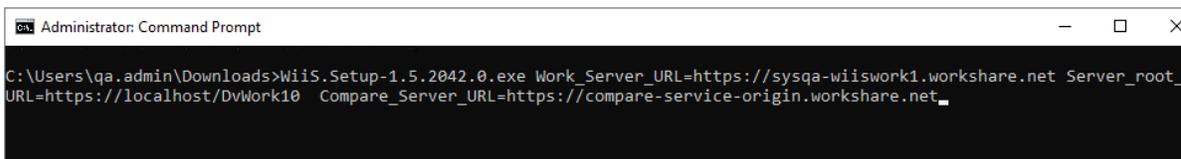
### To install WIIS:

1. Open a command prompt and navigate to the location of the WIIS executable file.
2. Set the following command line parameters:

**Note:** Use lower case for all parameters.

- Work\_Server\_URL=https://<imanager-server-url>
- Server\_root\_URL=https://<wiis-server-url>/dvwork10
- Compare\_Server\_URL=https://<compare-server-url>

**Note:** If you are installing WIIS **without** Compare Server, you must still enter a Compare\_Server\_URL as a placeholder. This should be removed once installation is complete.



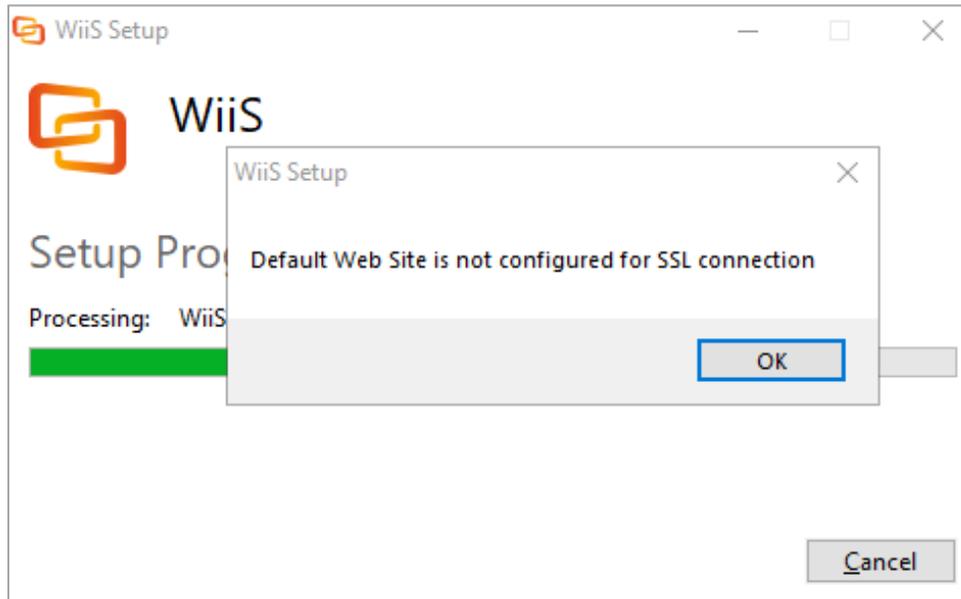
```
Administrator: Command Prompt
C:\Users\qa.admin\Downloads>WiiS.Setup-1.5.2042.0.exe Work_Server_URL=https://sysqa-wiiswork1.workshare.net Server_root_URL=https://localhost/DvWork10 Compare_Server_URL=https://compare-service-origin.workshare.net_
```

3. Press enter to initiate the WIIS installer.

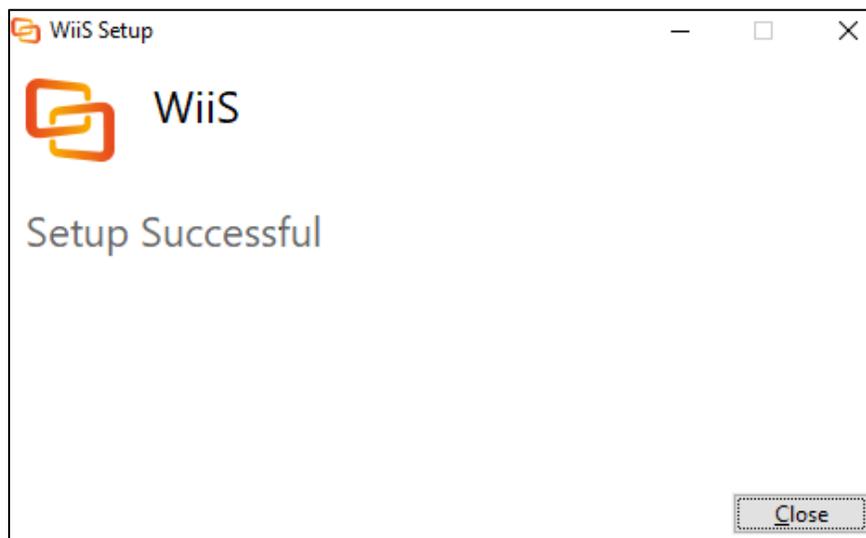


4. Accept the license terms and conditions and click **Install**. The setup process runs.

**Note:** WIIS requires an SSL connection and if the web server is not configured for SSL, the following error will be shown:



Once setup has completed, the following screen is displayed:



5. Click **Close**.
6. If you are installing WIIS without Compare Server, go to web.config in your installed IIS site (by default C:\inetpub\DvWork10) and remove the placeholder Compare Server URL added in step 2:

```
<add key="compareServer" value="[compare server url]" />
```

## Downloading Configuration File from WIIS

Adding Workshare options to Work 10's menus is done by uploading a configuration file to each Work 10 server. First you need to generate a web extension configuration file for each of your Work 10 servers.

### To generate the web extension zip file:

1. Navigate to <https://<<WIIS-URL>/admin>. The page shows the details of your servers from web.config.

**Current Configuration**

Work 10 Server:  
<https://work10.acme.corp>

This Server:  
<https://wiis.acme.corp/compare>

Compare Server:  
<https://compare.acme.corp/WorkshareCompareApi>

**Download the configuration file**

To add the Workshare compare options to Work 10 menus, download the configuration zip file and install it on your Work 10 Server.

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**Additional Work 10 Server**

To add the Workshare compare options to Work 10 menus, download the configuration zip file and install it on your additional Work 10 Server.

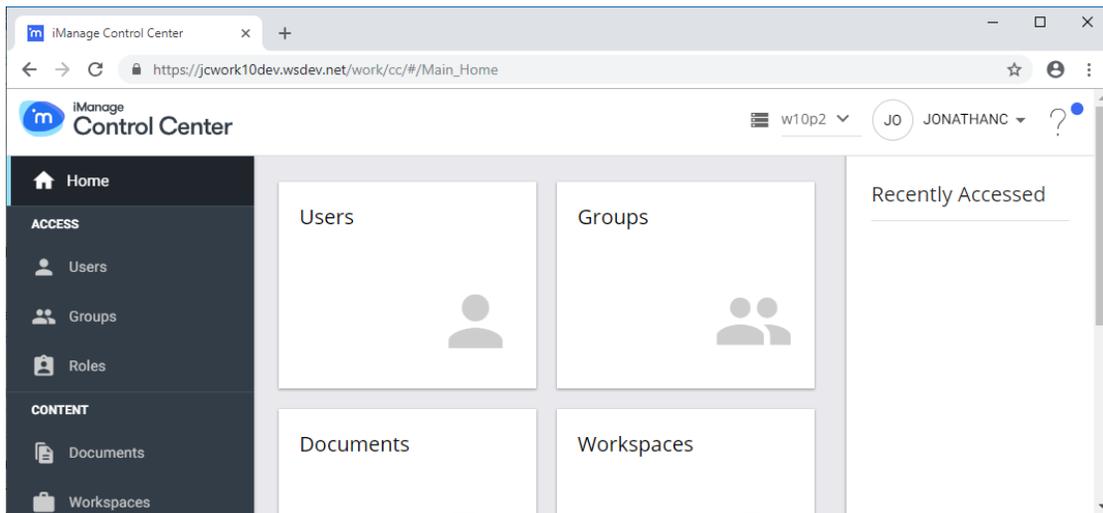
2. Click **Generate Web Extension Configuration File** in the first section to generate a configuration zip file for the Work 10 server specified in the first section. A server-specific configuration file is generated with the name “**wiis.[host name of server].zip**”.
3. For additional Work 10 servers, enter the URL of the server and click **Generate Web Extension Configuration File** in the lower section.
4. Once you have generated configuration zip file for each of your Work 10 server, continue to the next step.

## Uploading Configuration File to iManage Work 10

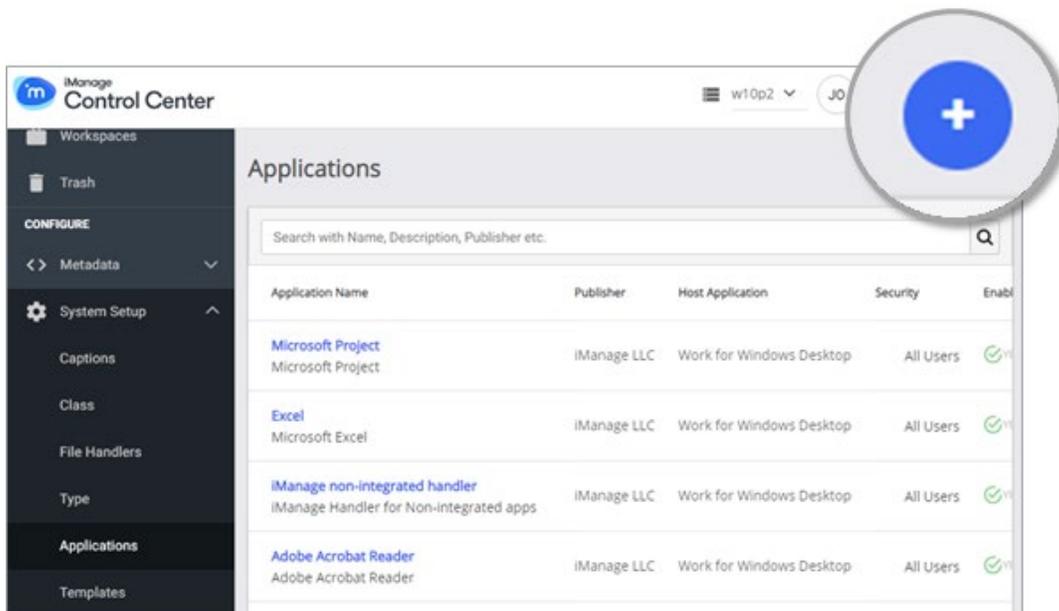
Adding Workshare options to Work 10's menus is done by uploading the web extension configuration file to the Work 10 server. Web extension configuration files (generated in the previous step) are server-specific.

### To upload the web extension zip file:

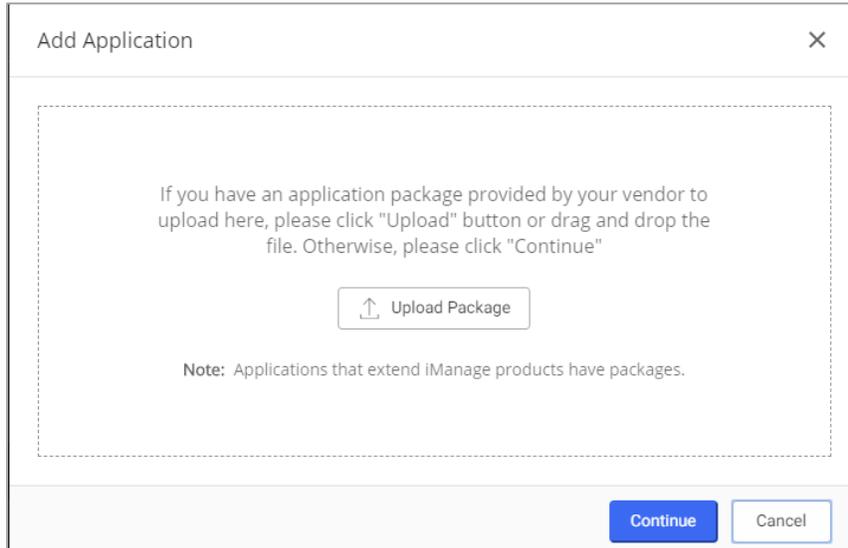
1. Navigate to the iManage Work Control Center at [https://\[work-server-name\]/work/cc/](https://[work-server-name]/work/cc/).



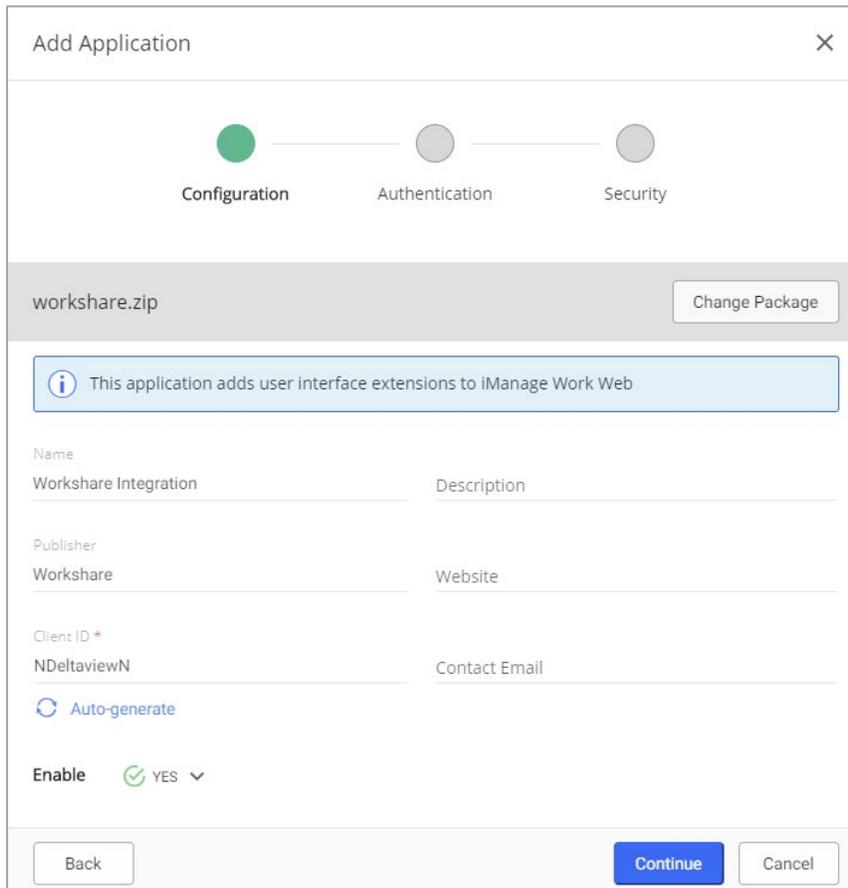
2. In the left menu bar, scroll to **Configure > System Setup > Applications**.



3. Click the add button in the top right of the screen.



4. Upload the zip file downloaded from the WIIS server – either by drag & drop onto the dialog or by browsing for it. Click **Continue**.



5. Once the above screen is displayed, click **Continue**.

Add Application ✕

Configuration  Authentication  Security

**i** This application adds user interface extensions to iManage Work Web

Does this application require authentication with Work?  Yes  No

Client Secret \*  
D45808F3-0430-42E6-925 [Edit](#)

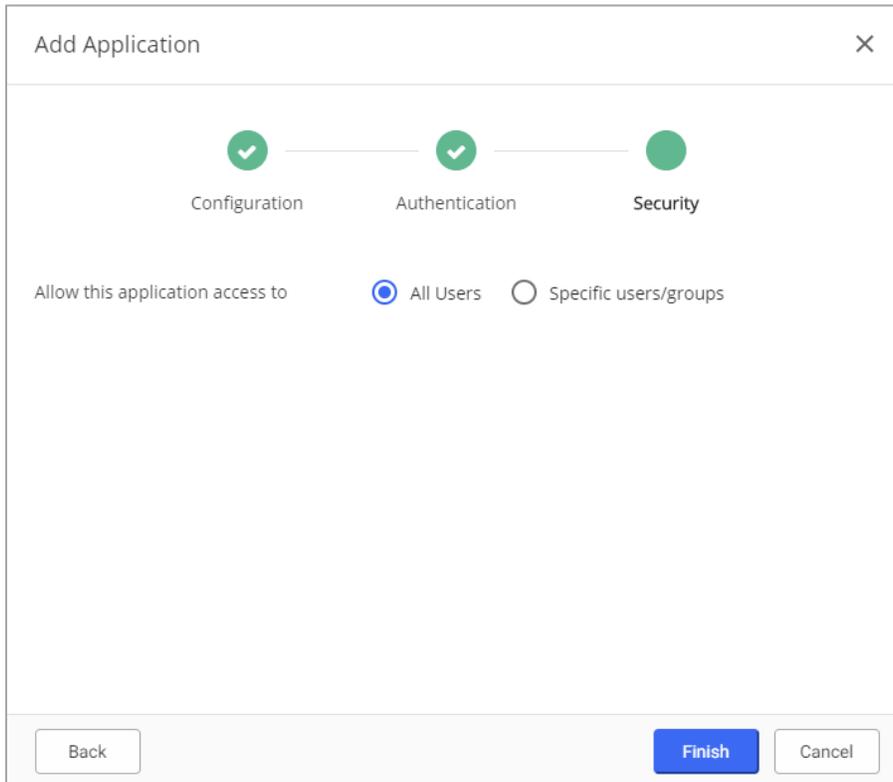
Client Secret Expires On  
 MM/DD/YYYY  Never Expires

Redirect URL \*  
https://localhost:44396/oauth/authorized ⊕

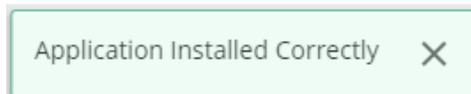
Application Type  Native  Web

Client Type  Public  Confidential

6. Under **Client Type**, select the **Confidential** radio button.
7. Click **Continue**.



8. The above screen enables you to restrict WIS functionality to specified users or groups. This can be changed later – refer to iManage Work 10 administration guides for details.
9. Click **Finish**. The application is installed and a confirmation message is displayed.



## Cloudmanage.com Integrations

In this implementation, the Work 10 server is installed on cloudmanage.com (iManage Work Cloud Service). WCS and WIIS are installed in a cloud hosted by Workshare. All you need to do to set up the integration between Workshare and iManage is:

- Contact Workshare to register customer ID to whitelist to enable access to WCS and WIIS
- Enable web extensions via the Control Center

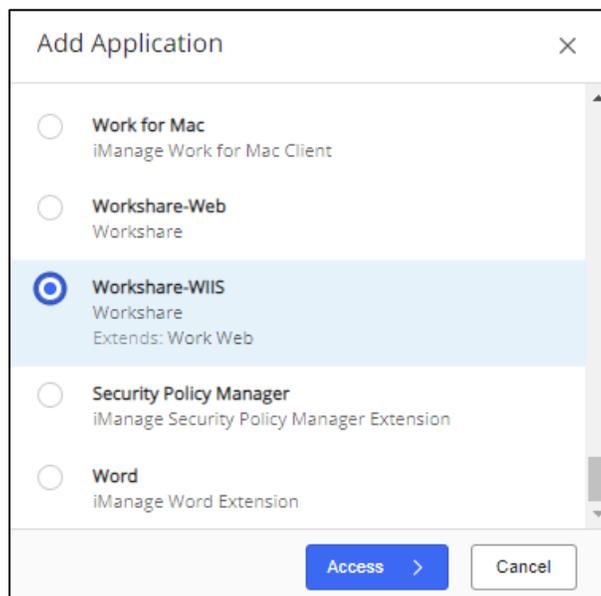
**Note:** If you are only using the Workshare Compare desktop option, registering your customer ID to the whitelist is not necessary.

## Enable Web Extensions

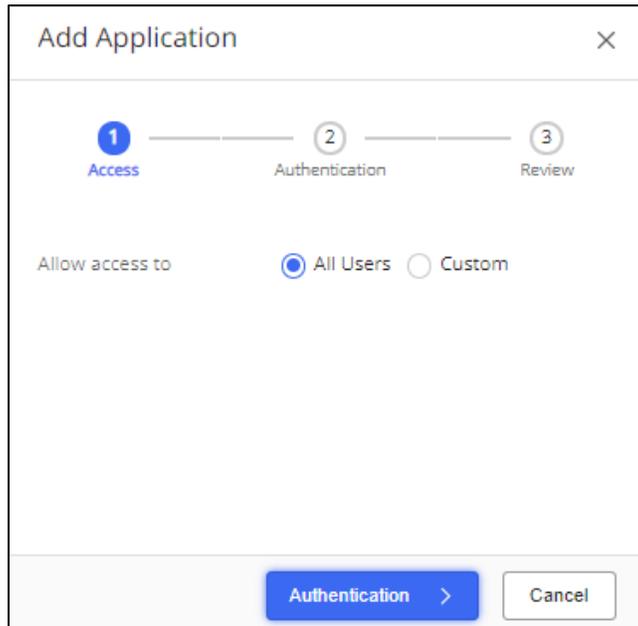
This is done by adding WIIS as an applications via the iManage Control Center

### To enable the web extensions:

1. Navigate to the iManage Work Control Center at <https://cloudmanage.com/work/cc/>.
2. In the left menu bar, scroll to **Settings > Applications**.
3. Click the **Add Application** button in the top right of the screen.
4. Scroll down the list of published applications and select **Workshare-WIIS**.

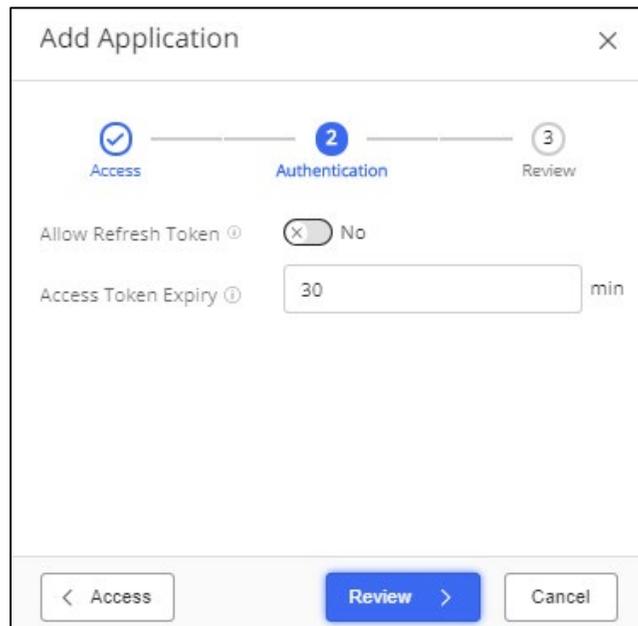


5. Click **Access**.



The above screen enables you to restrict WIS functionality to specified users or groups. This can be changed later – refer to iManage Work 10 administration guides for details.

6. Click **Authentication**.



7. Leave the default settings and click **Review**.
8. Click **Finish**. Workshare-WIIS now appears in your list of applications.

## The User Interface

### Workshare Options Added to Work 10

The Work 10 web UI is extended to allow the user to choose two documents (or versions) to be compared by Workshare. The following options are added:

- When a single-version document is selected:

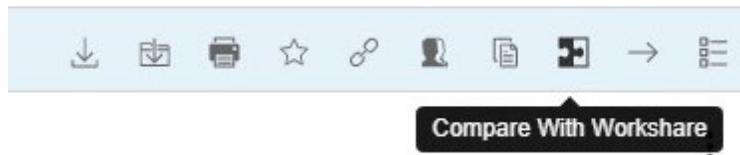


- When a multi-version document is selected:



- When two documents are selected:

The Compare With Workshare button is added to the toolbar.



Option	Description
<b>Select For Compare</b>	<p>This option is always available for files of the supported file types. Clicking this option stores the ID of the selected document.</p> <p>The most recently selected document will be stored until the end of the Work 10 browser session.</p> <p>To deselect a document, click Select For Compare for another document.</p>
<b>Compare With Selected</b>	<p>This option is available if a document has already been selected (using Select For Compare).</p> <p>Clicking this option initiates a comparison between the previously selected document and this one and the result is displayed in Compare Online.</p>
<b>Select for Workshare Compare</b>	<p>This option is always available for the supported file types. Clicking this option prompts for permission to open Compare Desktop, which is then opened with the document pre-selected for comparison.</p>
<b>Compare With Previous</b>	<p>This option is available if the selected document has versions. Clicking this option initiates a comparison with the immediately previous version and the result is displayed in Compare Online.</p>
<b>Compare Previous With Workshare</b>	<p>This option is available if the selected document has versions. Clicking this option initiates a comparison with the immediately previous version and the result is displayed in Compare Desktop.</p>
<b>Compare With Workshare</b>	<p>This option is available when two documents are selected. Clicking this button opens Compare Desktop with the two documents pre-selected for comparison.</p>

## If Workshare Menu Items don't Appear

If the Workshare menu items are not appearing in your Work 10 web UI, add them via the iManage Work Control Center.

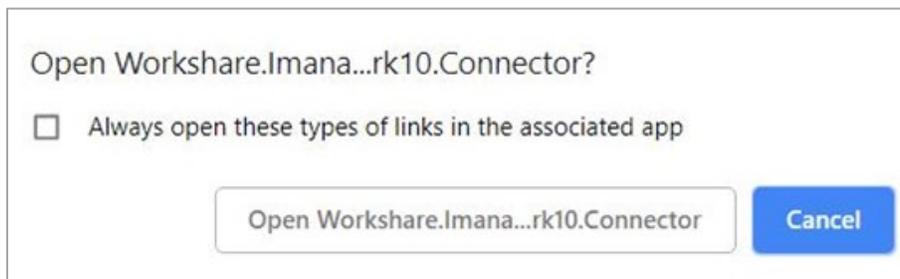
### To add the menu options manually:

1. Navigate to the **Context Menus** section of iManage Control Center. (This may be under **Client Setup > Web** or under **Settings > Web Client**).
2. Select the **Documents** tab. You will see two menus – one for **Documents** and one for **Versions**.
3. Hover over the first menu and click the edit pencil icon at top right of menu.
4. At the bottom of the menu, click the **Add** link. A list of all available options for the menu is displayed.
5. Select a Workshare option.
6. Repeat for all the Workshare options.
7. Repeat these steps to add the options to the second menu.
8. Click **Save**.

**Note:** The options may not be added immediately in your Work 10 web UI. You may need to close and reopen the browser.

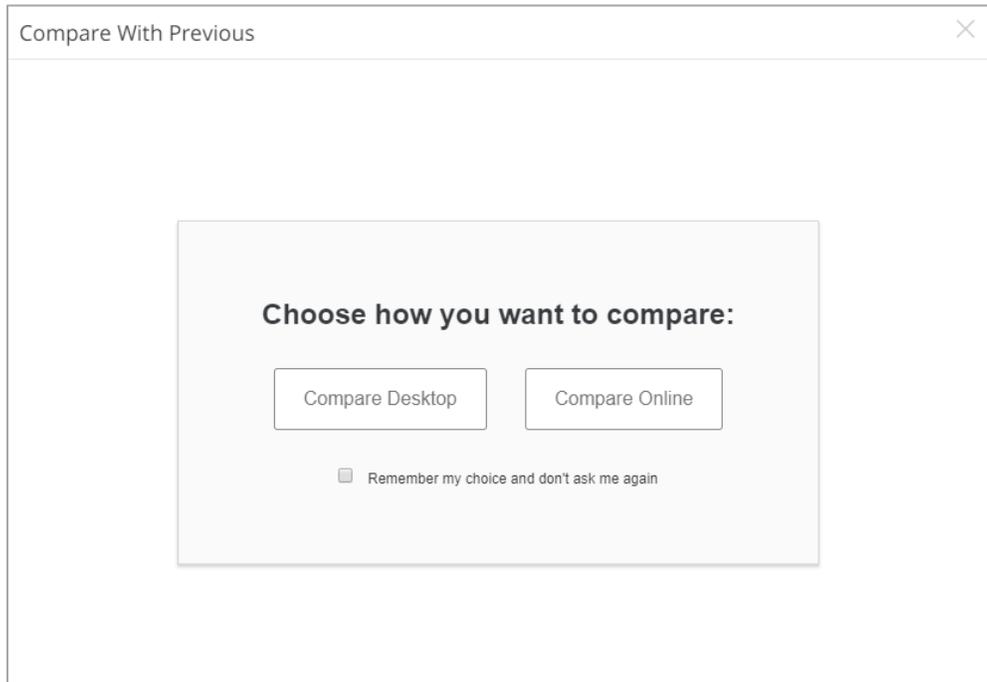
## The Comparison Flow

The comparison flow for the user will vary according to the configuration. If you are only using the Workshare Compare desktop option, the user will see a prompt to launch the Compare desktop. For example:



By clicking the **Open...** button, Workshare Compare desktop is launched and the Document Selection dialog is displayed with the selected iManage documents prepopulated in the Original/Modified fields.

If you are using Workshare's online comparison, the user will see the following screen in a new browser tab.



A user is presented with the choice of running the comparison in Compare Online and viewing the comparison in the browser, or running the comparison in Compare Desktop and viewing the comparison in the Workshare desktop application.

The user's preference can be stored to skip this choice on subsequent comparisons.

## Compare Desktop

Clicking this button launches the Workshare comparison desktop product with the document selection dialog populated with the two documents selected through the web UI.

**Note:** Workshare Compare/Professional 9.5.4 (or later) with iManage integration must be installed on the desktop.

## Compare Online

Clicking this button means Compare Server runs the comparison. The documents are downloaded from Work 10, sent to Compare Server and the resulting comparison (or redline) is displayed in the browser.

The screenshot displays the 'Compare With Selected' window. The top toolbar includes icons for 'Save as PDF', 'Save as DOCX', 'Tracked Changes', 'Previous Change', and 'Next Change'. The main area is split into two panes. The left pane, titled 'Change Summary', lists various categories of changes such as 'CONTENT (68)', 'CURRENCY (18)', and 'NUMBERING (25)'. Below this, a table shows 'Page' and 'Changed content' with a list of specific changes, including 'DRAFT ARRANGEMENT LETTER FOR STAND-ALONE BONDS' and 'Directors/Directs'. A blue button at the bottom of this pane reads 'Accept selected changes'. The right pane shows the document content with redlines and blue highlights. The document text includes 'NAME OF ENTERPRISE', 'DRAFT ARRANGEMENT LETTER FOR STAND-ALONE BONDS', 'The Directors/Directs ACMEQUALITY Bonds Plc Issuer Plc', and 'PROPOSED ACMEQUALITY BONDS PLC ISSUE BY ACMEQUALITY BONDS PLC ISSUER PLC ("the Issuer")'. The document also contains an 'Introduction' section with a numbered list item.

For a description of the Workshare Compare online interface, refer to this knowledge base article - [View your comparison in a browser.](#)