

Workshare Compare Server 9.5

Admin Guide

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Chapter 1: Product Overview

This chapter provides an overview of Workshare Compare Server as well as a list of system requirements. It includes the following sections:

- **What is Workshare Compare Server?**, page 4, introduces Workshare Compare Server and its key functionality.
- **System Requirements**, page 4, describes the system attributes required to run Workshare Compare Server.

What is Workshare Compare Server?

Workshare Compare Server exposes a simple API that allows for integration into a range of client applications and server-based solutions. For example, it can be used by custom solutions that run on your internet site, intranet site, internal network or your email system. Clients can be developed in Java, C#, C++, VB.NET and other languages to integrate Workshare Compare Server into your desktop, DMS or document applications.

System Requirements

Workshare Compare Server is designed to run on both entry level and enterprise scale servers. Recommended specifications are given below:

Hardware

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

Supported Operating Systems

- Microsoft Windows Server 2012 R2 x64 Edition
- Microsoft Windows Server 2016 x64 Edition

Note: Workshare Compare Server can be installed on Microsoft Windows 8 and Windows 10 for demonstration and evaluation purposes only.

Chapter 2: Deploying Workshare Compare Server

This chapter describes the installation procedure for Workshare Compare Server. It includes the following sections:

- **Prerequisites**, page 6, describes the software required before installation of Workshare Compare Server.
- **Installation**, page 6, describes the step-by-step procedure required to install Workshare Compare Server.
- **Uninstalling**, page 12, provides important information about uninstalling Workshare Compare Server.

Prerequisites

The Workshare Compare Server is installed using a single installation file. It will automatically install the following required software (if not found) as part of the installation process.

- Windows Server Components
- Microsoft .NET Framework 4.5
- Microsoft Visual C++ 2015 Redistributable Package (x64 and x86)
- IIS, if you're going to install Workshare Compare Server as a website hosted within IIS

Installation

The 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 Workshare Compare Server.
Product.lic	The license file that contains the Workshare 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 Workshare Compare Server, information and error entries are written to a log file called **WorkshareCompareServiceInstallEventLog.log**. This is a plain text file 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 Workshare 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.

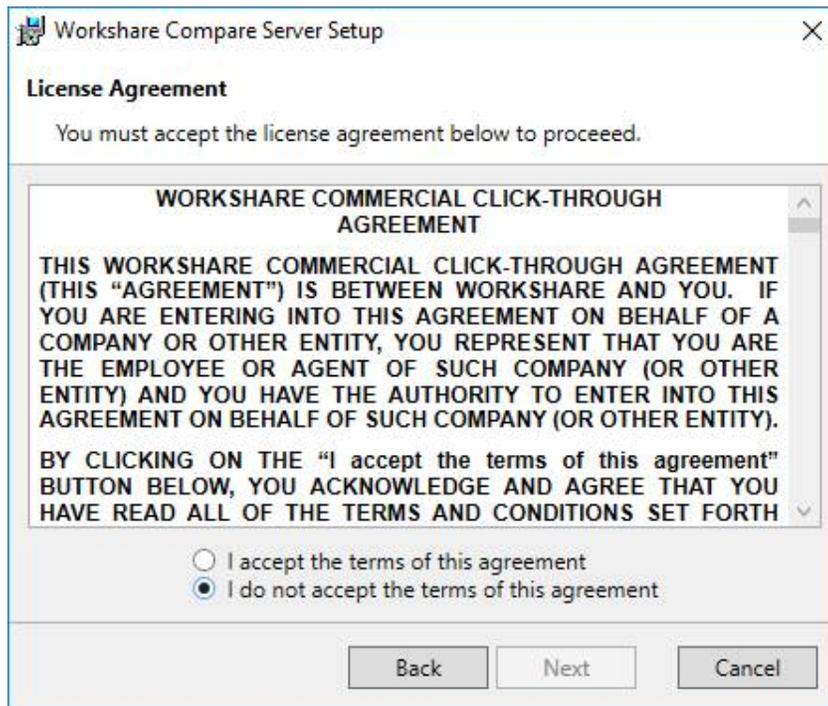
Note: For deployments of Workshare Compare Server where domain accounts are to be used to access the web client, verify the server is correctly joined to the domain before starting the installation.

To install Workshare Compare Server:

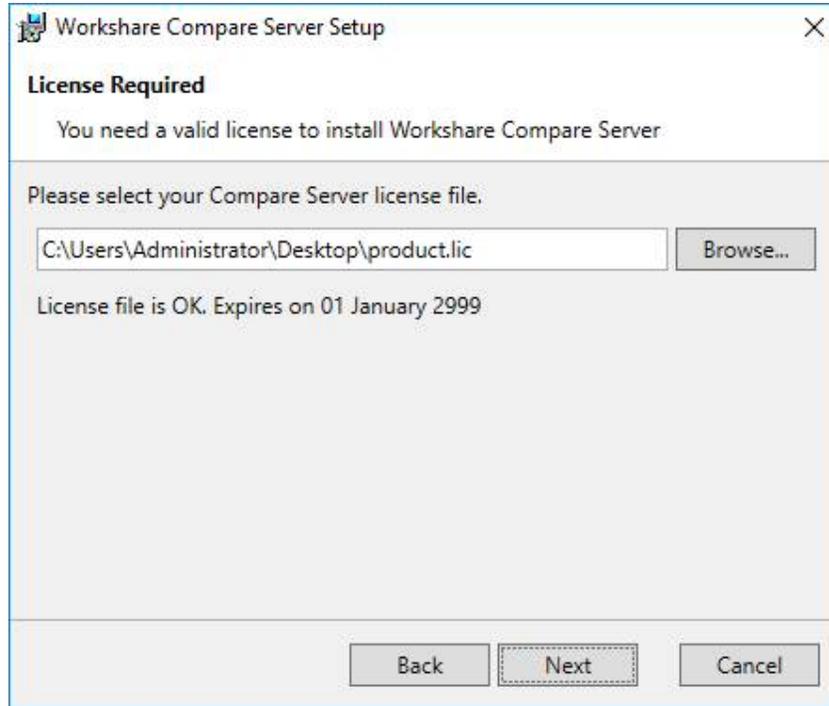
1. Double-click the **Workshare.CompareServerInstall-9.5.XXXX.exe** file. The Workshare Compare Server Installation Wizard is displayed.



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

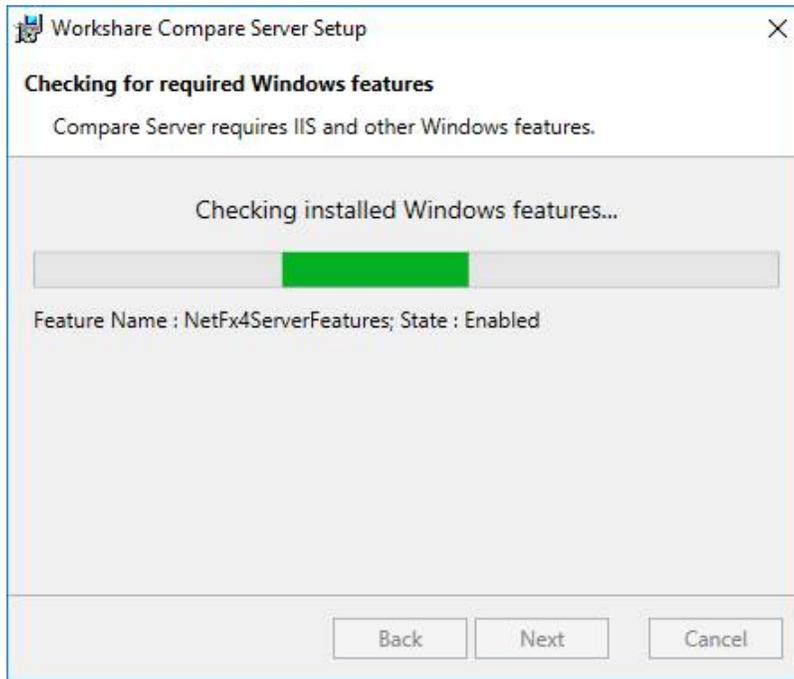


3. Read the agreement and select the **I accept the terms of this agreement** radio button.
4. Click **Next**.

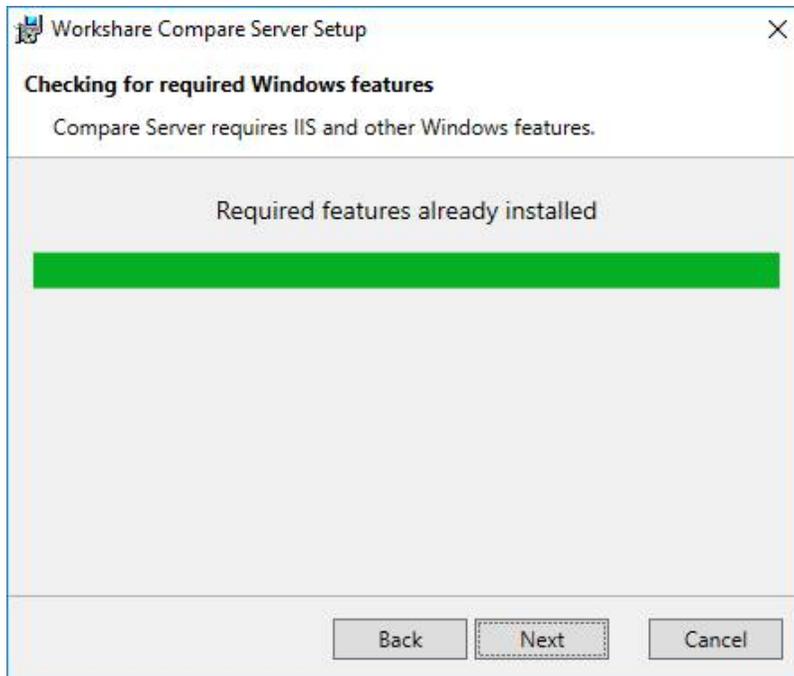


5. Workshare will automatically detect your license file if it is in the same location as the installation file. If necessary, browse to the location of your license (.lic) file. This location **MUST** be on the local machine.

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 Compare Server cannot find the source files it needs to install certain components, you will be asked to reinsert your Windows Server installer media.

7. Click **Next**.

The screenshot shows a dialog box titled "Workshare Compare Server Setup" with a close button (X) in the top right corner. The main heading is "Workshare Compare Server Installation Mode" and the instruction is "Please choose between default and custom installation". There are two radio button options: "Default Install" (selected) and "Custom Install". Under "Default Install", the text reads: "Install the Compare Server Engine as a Windows service on port 8080 and 8090. Install the API at <http://localhost:80/WorkshareCompareApi> as a virtual directory in Default Web Site." Under "Custom Install", the text reads: "Customize the installation of the Comparison Service Engine and the API." At the bottom, there are three buttons: "Back", "Install" (highlighted with a dashed border), and "Cancel".

8. Continue in one of the following ways:

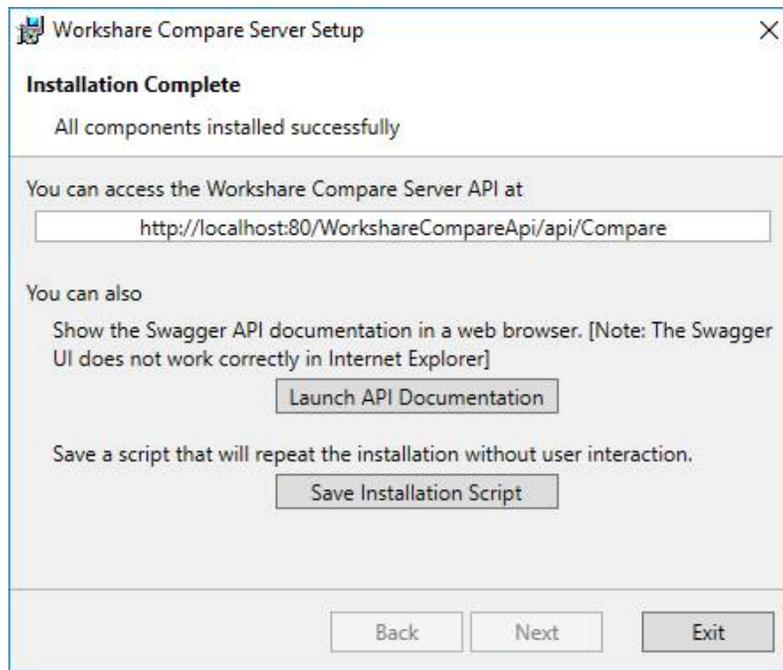
- Leave **Default Install** selected and click **Install**. Workshare Compare Server is installed as specified. Go to step 11.
- If you want to specify different ports and locations, select **Custom Install** and click **Next**.

The screenshot shows a dialog box titled "Workshare Compare Server Setup" with a close button (X) in the top right corner. The main heading is "Workshare Compare Server Engine" and the instruction is "Please choose how the Compare Server Engine will be installed". There are two radio button options: "As a Windows Service (Recommended)" (selected) and "As a Website hosted within IIS". Under "As a Windows Service (Recommended)", there are two text boxes: "HTTP Port" with the value "8080" and "TCP Port" with the value "8090". Under "As a Website hosted within IIS", there are three sub-options: "Use an Existing Site" (selected), "Install in a New Site", and "Use an Existing Site" (unselected). Under "Use an Existing Site", there is a dropdown menu showing "Default Web Site" and a text box for "Virtual Directory Name" with the value "WorkshareCompareEngine". Under "Install in a New Site", there is a text box for "Site Name" with the value "WorkshareCompareEngine" and a text box for "HTTP Port" with the value "8080". At the bottom, there are three buttons: "Back", "Next" (highlighted with a dashed border), and "Cancel".

9. Select how you want to install the Workshare comparison engine:
- **As a Windows Service:** This provides access to the comparison engine via the HTTP, TCP and Named Pipe protocols. Specify the HTTP and TCP ports.
 - **As a Website hosted within IIS:** This provides access to the comparison engine via the HTTP and HTTPS protocols. If you want to configure the website further, use IIS Manager. Specify the website and port, or you can leave the default settings.

Note: Do not use a port that is already in use for a new website, i.e. port 80 if you have an existing website.

10. Click **Next**. Workshare 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.
 - Click **Launch API Documentation** to display the Swagger API documentation in your browser. You can also try a test comparison from there. Refer to *Verifying Installation*.

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

- Click **Save Installation Script** if you want to save your installation settings for further Compare Server installs.

12. Click **Exit**.

Verifying Installation

To verify your installation, run a test comparison as follows:

1. Click **Launch API Documentation** in the final page of the Installation Wizard.
2. Click **Expand Operations** to show the options to perform comparisons via GET and POST.
3. Scroll down and click the **Try It Out** button.

If the configuration is correct and the Workshare Compare Server is running, you should see the response to the request appear after a few seconds (look for a 200 in the **Response Code** box to indicate that the comparison completed successfully).

Additionally, once installation is complete, you can verify the installation as follows:

- When installed as a website hosted within IIS, go to IIS Manager, expand the Sites node and verify the Workshare Compare Server web service is there. By default, it's called **Workshare Comparer**.
- When installed as a Windows service, verify that Workshare Compare Service is included in the Services list. Its **Status** should be **Started** and its **Startup Type** should be **Automatic**.

Note: Workshare Compare Server continues to include SOAP and WCF-based APIs for compatibility with earlier versions. These legacy APIs are not recommended for new projects. Samples showing the use of these legacy APIs can be found at: <https://github.com/workshare/compare-service.samples>.

Uninstalling

Upgrades from previous versions of Workshare Compare Server are not supported – the installer of Workshare Compare Server 9.5 will detect earlier versions of Workshare Compare Server and stop the installation. It's necessary to manually uninstall previous versions of Workshare Compare Server before installing Workshare Compare Server 9.5.

You can uninstall previous versions from Add/Remove Programs or by re-running the original installer.

When uninstalling Workshare Compare Server, some files, such as log files and configuration files, may not be removed from the machine even after completely uninstalling the product. If you want these files removed, you must do so manually.

Chapter 3: Configuration

This chapter describes how to configure Workshare Compare Server. It includes the following sections:

- **Overview**, page 14, provides an overview of the configuration of Workshare Compare Server.
- **Licensing**, page 14, describes how to license Workshare Compare Server.
- **Event Logging**, page 15, describes the server-side logging performed by Workshare Compare Server that can be helpful to diagnose runtime issues.

Overview

This chapter outlines the various configuration changes that can be applied to Workshare Compare Server. As an API, Workshare Compare Server is a highly customizable tool and it is not the purpose of this chapter to describe the full potential of this API. However, this chapter does describe how to configure the Workshare-specific functionality.

Workshare Compare Server is configured via its configuration file. The location of this file depends on the type of installation:

- Where Compare Server is hosted in IIS: **C:\Program Files\Workshare\Compare Service\web.config**
- Where Compare Server is hosted as a Windows service: **C:\Program Files\Workshare\Compare Service\bin\Workshare.CompareService.ServiceHost.exe.config**

***Note:** Workshare Support is available to assist you with any queries directly related to the Workshare Compare Server API. However, we do not provide support on issues related to third-party applications or customized add-ins.*

Licensing

Licensing for the Compare Service is based on a service expiry date. The **product.lic** file, specified at the time of install, determines how the service license is configured and when the license expires. The **product.lic** file is automatically copied into the service installation folder during setup and is required at runtime in order to authorize each comparison. The Compare Service references this file via a path variable stored within the relevant config file. If you experience licensing errors, please check that the **product.lic** file is correctly installed in the Compare service's web folder on the server and that the **web.config** or **Workshare.CompareService.ServiceHost.Exe.config** have a **LicenseFileName** key that correctly specifies the full path to the file.

For example:

```
<appSettings>
  <add key="LicenseFileName" value="C:\Program Files\Workshare\Compare
Service\bin\product.lic" />
</appSettings>
```

Event Logging

On installation of Workshare Compare Server, the following log files are created:

- **compare_service_audit.log**: This log file contains information about the comparison requests sent to Workshare Compare Server, such as the size of the original and modified files, time taken to perform the comparison and so on.
- **compare_service_host.log**: This log file contains information such as when Workshare Compare Server started, when it was shut down, what protocols are available and so on.
- **compare_service_system.log**: This log records everything happening in Workshare Compare Server and includes information and error log entries.

API log files

With a default install, the API log files are as follows:

Location	Purpose
C:\inetpub\logs\LogFiles\W3SVC1	Includes all requests coming into the REST endpoint
C:\inetpub\WorkshareCompareApi\App_Data\logs	Includes some requests and all errors

Analytics

By default, Workshare gathers anonymous usage statistics and environment information used towards product evolution and improvement. If you want to disable this customer experience reporting, you can go so in the relevant config file.

Find the text `<add key="EnableCustomerExperienceReporting" value="true"/>` in **web.config** or **Workshare.CompareService.ServiceHost.Exe.config**.

Change the value to `false`.

Customizing the API

If you want to configure the API to use a different port or configure it to receive requests over https, you can make the required changes using IIS Manager.

You will find detailed Microsoft documentation for common IIS Manager tasks at: [https://technet.microsoft.com/en-us/library/cc771341\(v=ws.10\).aspx](https://technet.microsoft.com/en-us/library/cc771341(v=ws.10).aspx). Although the documentation refers to IIS version 7, the instructions also apply to later versions of IIS.

Chapter 4: Troubleshooting

This chapter describes how to troubleshoot Workshare Compare Server. It includes the following sections:

- **General Checks**, page 17, describes some general checks to perform when troubleshooting Workshare Compare Server.
- **Swagger Troubleshooting**, page **Error! Bookmark not defined.**, describes some general checks to perform if you are unable to access Swagger.
- **Comparing Large Files**, page 18, describes how to deal with issues that might arise when comparing large files.

General Checks

This section describes some basic checks to carry out in some general situations.

Installer fails

- Ensure any previous Workshare Compare Server installs are uninstalled.
- Is IIS started?
- Check the install log (WorkshareCompareServiceInstallEventLog.log) in the current user's Temp folder, for example, C:\Documents and Settings\Administrator\Local Settings\Temp.

Swagger troubleshooting

This section describes some checks if you are unable to access Swagger.

- Ensure that Javascript is enabled in your web browser.
- Use Chrome, or Firefox.
- Do not use Internet Explorer.
- Test the Workshare Compare engine using the C# sample. If it succeeds, the issue lies with the API, if it fails, the issue may be with the comparison engine.

Note: When using the Swagger UI to perform comparisons using the POST method, the only output option that can be selected is RTF. This is because a limitation in the Swagger UI means that binary comparison results can become corrupted when using the POST method. The full range of comparison output methods may be specified when using the POST method from any other source without any problems.

C# sample does not work

- Check that the service address is correct and (for C#) is appended with **/compare5**.
- If **Test Connection** returns an error, the issue may be security related.
 - Does the Java sample work? (The basic HTTP endpoint does not use client credentials.)
 - Are the user credentials valid on the server machine? You can test this by setting up a new, temporary user account and using those credentials.
 - Is there a firewall enabled on the server?

- If **Test Connection** works but **Compare** returns an error, the issue may be document related.
 - Do the default documents shipped in the **samples\data** folder compare correctly?
 - Are the compared documents very large? (try smaller)
- In all instances check the Event Logs (all keys) for error info.

The Compare Service page doesn't display

Http://localhost/wcs/comparewebservice.svc does not display:

- Is IIS started?
- Is the default website started? If the default website will not start, try changing the TCP Port. If this is successful there is a port conflict with another server.

Comparing Large Files

The default configuration should support comparison of most source files up to 100MB in size. For extremely large and complicated files, you may need to increase the quotas and limits configured in the Compare Server engine and API.

To do this edit the config files:

- For the comparison engine, either the web.config or Workshare.CompareService.ServiceHost.Exe.config
- For the API, the config file at C:\inetpub\WorkshareCompareApi by default

In these files search for and replace:

314572800, which is 300Mb (ie 300x1024x1024). Replace this with a larger value to allow larger documents to be processed. This value is used in a number of places in each file as a size limit for message requests to the compare engine.

00:20:00, ie 20 minutes. Replace this with a longer timeout to allow documents which take a very long time to be compared. This value is used in a number of places in each file as a timeout for requests to the compare engine.

Note: *Even though an individual file may be smaller than the supported maximum, the total packaged transaction (original file + modified file + message details) may exceed this limit.*

SOAP Endpoint Issues

Client side issues

The default maximum message size quota, generated by the Visual Studio Service Reference Wizard, is 64KB. This means that, although the server is configured to allow for large files, failures may occur if the **web.config** file of the REST endpoint proxy (located in C:\CompareProxy by default) is not updated.

When the client-side buffers are too small, the transport channel may throw one of the following exceptions:

`System.ServiceModel.CommunicationException` - "The maximum message size quota for incoming messages has been exceeded."

`System.ServiceModel.FaultException` - "The maximum string content length quota has been exceeded."

`System.ServiceModel.FaultException` - "The maximum array length quota has been exceeded."

To resolve this issue you should edit the **web.config** file for the REST endpoint proxy and increase the binding's `maxReceivedMessageSize`, `maxStringContentLength` and `maxArrayLength` values.

Timeouts

Sometimes large files may fail to compare because the session has timed out. To extend the session, perform the following configuration:

1. Update the bindings section in the **web.config** file (where Compare Service is hosted in IIS) or in the **Workshare.CompareService.ServiceHost.Exe.config** file (where Compare Service is hosted as a Windows service) with the following.

Note: The important part is the addition of **receiveTimeout** to "00:10:00" to both bindings.

```

<bindings>
  <basicHttpBinding>
    <binding name="UnsecureBinding" closeTimeout="00:10:00"
openTimeout="00:10:00" sendTimeout="00:10:00"
maxBufferSize="67000000" maxBufferPoolSize="67000000"
maxReceivedMessageSize="67000000" messageEncoding="Text"
transferMode="Buffered">
      <readerQuotas maxStringContentLength="67000000"
maxArrayLength="67000000" maxBytesPerRead="67000000" />
    </binding>
  </basicHttpBinding>
  <wsHttpBinding>
    <binding name="SecureBinding" closeTimeout="00:10:00"
openTimeout=
"00:10:00" sendTimeout="00:10:00" receiveTimeout="00:10:00"
maxBufferPoolSize="67000000" maxReceivedMessageSize="67000000"
messageEncoding="Mtom">
      <readerQuotas maxDepth="67000000" maxStringContentLength=
"67000000" maxArrayLength="67000000" maxBytesPerRead="67000000"
maxNameTableCharCount="67000000" />
      <reliableSession ordered="true" enabled="true" />
    </binding>
  </wsHttpBinding>
</bindings>

```

2. Update the host section inside the **web.config** or **Workshare.CompareService.ServiceHost.Exe.config** file and increase the timeouts.

```

<host>
  <timeouts closeTimeout="00:10:00" openTimeout="00:10:00"
/>
</host>

```

3. Change the request execution in the IIS Configuration.
 - In IIS go to the ASP.Net Tab and select **Edit Configuration**.
 - Select the Application tab.
 - Change the **Request execution timeout(seconds)** to 600.

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