

SharePoint File Sync and WOPI Protocol Test Suite Deployment Guide

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# Overview

The SharePoint File Sync and WOPI Protocol Test Suites are implemented as synthetic clients running against a server-side implementation of a given SharePoint protocol. They are designed in a client-to-server relationship and were originally developed for the in-house testing of the Microsoft Open Specifications. Test Suites have been used extensively in Plugfests and Interoperability Labs to test partner implementations.

The SharePoint File Sync and WOPI Protocol Test Suite Deployment Guide introduces the hardware and software requirements of the test suite client and the requirements of the system under test (SUT) if the test suites run against SharePoint Server. The guide also introduces how to deploy, configure and run the test suites, and view test suite reports.

# Prerequisites

This section describes the hardware and software requirements for the test suites. In a SharePoint server environment, the test suite deployment takes place on both the client and server side. The following information will help test suite users to plan their deployment.

* 1. Hardware requirements
     1. System under test

The SUT is the server side of the test suite environment. SharePoint server(s) and Active Directory have defined system requirements which should be taken into account during deployment. The SharePoint File Sync and WOPI Protocol test suites do not have any additional SUT resource requirements.

* + 1. Test suite client

The test suite client is the client side of the test suite environment. The following table shows the minimum resource requirements for the test suite client.

Test suite client resource requirements

|  |  |
| --- | --- |
| Component | Test suite client minimum requirement |
| RAM | 2GB |
| Hard Disk | 3GB of free space |
| Processor | >= 1GHz |

## Software requirements

* + 1. System under test

This section is only relevant when running the test suites against following versions of SharePoint Server:

* Microsoft SharePoint Foundation 2010 Service Pack 2 (SP2)
* Microsoft SharePoint Foundation 2013 Service Pack 1 (SP1)
* Microsoft SharePoint Server 2010 Service Pack 2 (SP2)
* Microsoft SharePoint Server 2013 Service Pack 1 (SP1)
* Microsoft SharePoint Server 2016
* Microsoft SharePoint Server 2019

The following table describes the necessary server roles required for a test suite deployment with a Microsoft implementation.

Required SUT roles

|  |  |
| --- | --- |
| Role | Description |
| Active Directory Domain Controller (AD DC) | Active Directory Domain Controller provides secure data for users and computers. An AD DC can coexist with a SharePoint server. A typical test configuration has an AD DC and SharePoint Server installed on separate machines. |
| SharePoint Server (SUT) | The SharePoint server in the topology. |

The following diagram is an example of what a typical SharePoint File Sync and WOPI Protocol Test Suite environment may look like. This example uses an IPv4, but IPv6 is also supported by the test suites.



* + 1. Test suite client

This section describes the prerequisite software for installing the SharePoint File Sync and WOPI Protocol test suites on the test suite client. The following table outlines the software dependencies for the test suite client.

Test suite client software dependencies

|  |  |
| --- | --- |
| Operating systems | Windows 7 x64 Service Pack 1 and above  Windows 8 x64 and above  Windows 2008 R2 x64 Service Pack 1 and above |
| Software | Microsoft Visual Studio 2013 Professional  Microsoft Protocol Test Framework 1.0.2220.0 and above |

# Deploying the test suites

This section describes the deployment of the SharePoint File Sync and WOPI Protocol test suites on the test suite client and the SUT. The SharePoint Server Protocol test suites are packaged in a .zip file which is available on [**Microsoft Connect**](http://go.microsoft.com/fwlink/?LinkId=516921). Once you download the test suites, you need to perform the following steps in order to be able to successfully configure the test suites.

1. Extract the **SharePoint File Sync and WOPI Protocol Test Suites** folder to a directory of your choice on the test suite client.
2. Copy the **SUT** and **Common** folders under **…\ SharePoint File Sync and WOPI Protocol Test Suites \Setup\** to a directory of your choice on the SUT. The SUT configuration scripts are the only requirement for the SUT. The scripts facilitate the SUT configuration process and are contained within the **SharePointFileSyncandWOPIProtocolTestSuites.zip** file.

**Notes**

* If you configure the SUT using the setup configuration scripts, remember that the path of the setup script should contain at most 256 characters.
* If your computer blocks scripts downloaded from the Internet for security reasons, you will need to follow these steps to unblock PowerShell scripts.

|  |  |
| --- | --- |
| 1. Right click xxx.ps1 and select **Properties**. | C:\Users\v-husu\Documents\1.png |
| 1. Click **Unblock** and then click **OK**. | C:\Users\v-liax\Desktop\1.jpg |

# Test suite directories

In this section you will find a list of the folder structures that are contained within the **SharePointFileSyncAndWOPIProtocolTestSuites.zip** file.

SharePointFileSyncAndWOPIProtocolTestSuites.zip file contents

|  |  |
| --- | --- |
| Directory/file | Description |
| EULA.rtf | The End-User License Agreement |
| ReadMe.txt | A file that contains information about the deployment guide and prerequisite software. |
| SharePoint File Sync and WOPI Protocol Test Suites |  |
| - Docs | A directory that contains documents of all protocol test suites. |
| - FssWopiTestSuiteDeploymentGuide.docx | A file relevant to the protocol test suite deployment guidance. |
| - FssWopiTestSuiteSpecification.docx | A file that contains test suites design, including test suites architecture, adapter and test suites details. |
| + MS-XXXX | MS-XXXX Help documentation |
| - [MS-XXXX].md | The technical specification for the protocol |
| - MS-XXXX\_SUTControlAdapter.chm | Contains information about the SUT control adapter class library such as declaration syntaxes and their description |
| - MS-XXXX\_RequirementSpecification.xlsx | A spreadsheet that outlines all requirements associated with the technical specification. |
| - Setup | A directory that contains configuration scripts. |
| - Test Suite Client | A directory that contains the configuration script to configure the test suite client. |
| - SharePointClientConfiguration.cmd | A command file that runs the  SharePointClientConfiguration.ps1 to configure the properties for the protocol test suites. |
| - SharePointClientConfiguration.ps1 | A configuration script that will be invoked by SharePointClientConfiguration.cmd. |
| - SUT | A folder that contains the configuration script to configure the SUT. |
| - SharePointSUTConfiguration.cmd | A command file that runs the  SharePointSUTConfiguration.ps1 to create resources and configure settings on the SUT. |
| - SharePointSUTConfiguration.ps1 | A configuration script that will be invoked by SharePointSUTConfiguration.cmd. |
| - Common | A folder that contains common configuration scripts and resources. |
| -CommonConfiguration.ps1 | A library that contains common functions for configuring Microsoft products and the test suite client. |
| -SharePointCommonConfiguration.ps1 | A library that contains common functions for configuring the SUT. |
| -SharePointTestSuite.config | The configuration file to store all configuration resources |
| - Source | A folder with Microsoft Visual Studio solution that contains the source code for the test suites. |
| - Common | A folder with Visual Studio projects that contains source code that are common to the test suites |
| -FssWopiCommonConfiguration.deployment.ptfconfig | The common configuration file |
| -SharePointFileSyncAndWOPIProtocolTestSuites.sln | A Visual Studio solution that contains projects of the protocol test suites source code |
| - SharePointFileSyncAndWOPIProtocolTestSuites.runsettings | A configuration file used for unit test |
| -SharePointFileSyncAndWOPIProtocolTestSuites.testsettings | A configuration file used for running test cases |
| - MS-XXXX | MS-XXXX test suite source code directory |
| + Adapter | Adapter test suite code |
| + TestSuite | Test suite code |
| - MS-XXXX.sln | A Visual Studio solution that contains projects of the MS-XXXX test suite |
| - MS-XXXX.runsettings | A configuration file used for MS-XXXX unit test |
| - MS-XXXX.testsettings | A configuration file used for MS-XXXX running test cases |
| -Scripts | SharePoint Server Protocol test suites can be run using Visual Studio or through batch scripts. The Scripts directory contains a collection of command files that allows users to run specific test cases in the test suite or the entire test suite |
| -RunAllSharePoint\_FileSyncAndWOPI\_TestCases.cmd | A script that can be used to run all test cases in the package |
| -MS-XXXX | A folder containing scripts that belong to the MS-XXXX test suite |
| - RunAllMSXXXXTestCases.cmd | A script that can be used to run all test cases of MS-XXXX |
| - RunMSXXXX\_SYY\_TCZZ\_Name.cmd | A script that can be used to run a single test case of MS-XXXX |

# Configuring the test suites

This section provides the necessary guidance to configure the SharePoint File Sync and WOPI Protocol test suites on the SUT and the test suite client. The configuration should be done in this order: configure the SUT, and then configure the test suite client.

For configuration script, the exit code definition is as follows:

1. A normal termination will set the exit code to 0.
2. An uncaught THROW will set the exit code to 1.
3. Script execution warning and issues will set the exit code to 2.
4. Exit code is set to the actual error code for other issues.

## Configuring the SUT

You can configure the SUT using automation scripts, as described in section [5.1.2](#_Configuring_the_SUT_1); or configure the SUT manually, as described in section [5.1.3](#_Configuring_the_SUT).

***Note****The scripts should be run by a user who has domain administrator rights on the SUT.*

### SUT resource requirements

Each test suite contained within the SharePoint File Sync and WOPI Protocol test suites package may require varying levels of resources on the SUT. The following table outlines these resources for each test suite. The SUT configuration scripts will automatically create all the required resources for the Microsoft server implementation.To configure the SUT manually, refer to section [5.1.3](#_Configuring_test_suite).

The client configuration script follows the naming convention shown in the following table. If a change to the resource name is required, the corresponding change to the resource name defined in the client configuration script will be required.

***Note****The MS-WOPI test suite only supports the following versions of SharePoint:*

* *Microsoft SharePoint Server 2013 Service Pack 1 (SP1)*
* *Microsoft SharePoint Foundation 2013 Service Pack 1 (SP1)*
* *Microsoft SharePoint Server 2016*
* *Microsoft SharePoint Server 2019*

SharePoint Server resources

|  |  |  |
| --- | --- | --- |
| Test suite | Resource type | Resource name |
| All | Domain User | User1 |
|  | Domain User | User2 |
|  | Domain User | User3 |
|  | Domain User | ReadOnlyUser |
|  | Domain User | NoUseRemoteUser |
|  | Text document | FileSyncWOPIBigTest.txt |
| MS-FSSHTTP-FSSHTTPB | Site collection | MSFSSHTTPFSSHTTPB\_SiteCollection |
|  | Document library | MSFSSHTTPFSSHTTPB\_DocumentLibrary |
|  | Zip file | FileSyncWOPI\_ZipTestData.zip |
|  | Text document | FileSyncWOPI\_TestData.txt |
|  | Note file | FileSyncWOPI\_OneNoteWithODB.one |
|  | Permission level | NoUseRemoteInterfacePermissionLevel |
| MS-WOPI | Site collection | MSWOPI\_SiteCollection |
|  | Document library | MSWOPI\_SharedDocumentLibrary |
|  | Document library | MSWOPI\_DocumentLibrary |
|  | Folder | MSWOPI\_TestFolder |
|  | Zip file | FileSyncWOPI\_ZipTestData.zip |
|  | Text document | FileSyncWOPI\_TestData.txt |
|  | Note file | FileSyncWOPI\_OneNoteWithODB.one |
|  | Text document | MSWOPI\_TestData1.txt |
|  | Text document | MSWOPI\_TestData2.txt |
|  | Secure Store Service Application | MSWOPI\_TargetAppWithNotGroupAndWindows |
|  | Secure Store Service Application | MSWOPI\_TargetAppWithGroupAndNoWindows |
|  | Domain User | MSWOPIUser |
|  | Domain User | FileSyncWOPIUser |
|  | Folder | MSWOPI\_TestFolderCreatedByUser1 |
|  | Permission level | NoUseRemoteInterfacePermissionLevel |
| MS-ONESTORE | Site collection | MSONESTORE\_SiteCollection |
|  | Document library | MSONESTORE\_DocumentLibrary |
|  | Permission level | Full Control |
|  | Note file | OneWithFileData.one |
|  | Note file | OneWithoutFileData.one |
|  | Note file | Encryption.one |
|  | Note file | LargeData.one |
|  | Note file | Open Notebook.onetoc2 |
|  | Note file | NoSection.onetoc2 |

### Configuring the SUT using the setup configuration script

*The setup configuration script is only used for configuring the SUT on the Windows platform.*

To configure SUT using the setup configuration script, navigate to the **SUT** folder, right-click the **SharePointSUTConfiguration.cmd** and select **Run as administrator**.

### Configuring the SUT manually

If the SUT is a non-Microsoft implementation of SharePoint Server, you will not be able to run the setup configuration script. The following steps explain what needs to be created or configured on the SUT in order to run the test suites.

1. In Windows Powershell, set the execution policy to **RemoteSigned**, enable remoting, and increase the memory allocated per shell for remote shell management to **1024MB** or more, if you plan to configure the SUT or test suite in PowerShell mode. If the user name has a prefix in the user policy of web application, you will need to add the user name without a prefix in the user policy.
2. Configure the SUT to support HTTPS.
3. Set the Alternate Access Mapping (AAM) value to HTTPS on the SUT.
4. Change the web application’s authentication mode to claims-based.
5. Create six domain users named User1, User2, User3, ReadOnlyUser, NoUseRemoteUser, and FileSyncWOPIUser.
6. Grant local administrator permissions to User1, User2 and FileSyncWOPIUser.
7. If a database server needs to be installed, grant database server administrator permissions to User1, User2, User3, ReadOnlyUser and FileSyncWOPIUser.

***Note****The following steps should be performed by the SUT administrator.*

#### MS-FSSHTTP-FSSHTTPB

For the MS-FSSHTTP-FSSHTTPB test suite, the SUT configuration steps are as follows:

1. Create a site collection named MSFSSHTTPFSSHTTPB\_SiteCollection.
2. Create a document library namedMSFSSHTTPFSSHTTPB\_DocumentLibrary in MSFSSHTTPFSSHTTPB\_SiteCollection.
3. Upload a file FileSyncWOPIBigTest.txtwith size of more than 1MB to MSFSSHTTPFSSHTTPB\_DocumentLibrary under MSFSSHTTPFSSHTTPB\_SiteCollection.
4. Upload a file FileSyncWOPI\_ZipTestData.zip to MSFSSHTTPFSSHTTPB\_DocumentLibrary under MSFSSHTTPFSSHTTPB\_SiteCollection.
5. Upload a file FileSyncWOPI\_TestData.txtto MSFSSHTTPFSSHTTPB\_DocumentLibrary under MSFSSHTTPFSSHTTPB\_SiteCollection.
6. Upload a file FileSyncWOPI\_OneNoteWithODB.oneto MSFSSHTTPFSSHTTPB\_DocumentLibrary under MSFSSHTTPFSSHTTPB\_SiteCollection.
7. Grant Full control permissions to User1, User2 and User3 on MSFSSHTTPFSSHTTPB\_SiteCollection
8. Create a permission level named NoUseRemoteInterfacePermissionLevel with the following permissions: ViewListItems, EditListItems, DeleteListItems, OpenItems, ViewVersions, Open, and ViewPages on MSFSSHTTPFSSHTTPB\_SiteCollection.
9. Grant NoUseRemoteInterfacePermissionLevel to NoUseRemoteUser on MSFSSHTTPFSSHTTPB\_SiteCollection.
10. Grant Read permissions to ReadOnlyUser on MSFSSHTTPFSSHTTPB\_SiteCollection.
11. Add the username for the user (who will configure the SUT) in the user policy. Please note that if the user policy of the web application has a username with a claim prefix (such as i:0#.w|), you will need to add the username without the claim in the user policy.
12. Make sure the MSFSSHTTPFSSHTTPB\_SiteCollection can be accessed before running the test suite.

#### MS-WOPI

For the MS-WOPI test suite, the SUT configuration steps are as follows:

1. Create a site collection namedMSWOPI\_SiteCollection*.*
2. Create a document library namedMSWOPI\_SharedDocumentLibraryin MSWOPI\_SiteCollection.
3. Upload a fileFileSyncWOPIBigTest.txt with size of more than 1MB to MSWOPI\_SharedDocumentLibrary under MSWOPI\_SiteCollection.
4. Upload a file FileSyncWOPI\_ZipTestData.zip to MSWOPI\_SharedDocumentLibrary under MSWOPI\_SiteCollection.
5. Upload a file FileSyncWOPI\_TestData.txt to MSWOPI\_SharedDocumentLibrary under MSWOPI\_SiteCollection.
6. Upload a fileFileSyncWOPI\_OneNoteWithODB.one to MSWOPI\_SharedDocumentLibrary under MSWOPI\_SiteCollection.
7. Grant Full control permissions to User1, User2, User3 and FileSyncWOPIUser on MSWOPI\_SiteCollection.
8. Add the username without prefix in the user policy for User1, User2, User3 and FileSyncWOPIUser on MSWOPI\_SiteCollection.
9. Create a document library namedMSWOPI\_DocumentLibraryin MSWOPI\_SiteCollection.
10. Upload a file MSWOPI\_TestData1.txtto MSWOPI\_DocumentLibrary under MSWOPI\_SiteCollection.
11. Create a folder named MSWOPI\_TestFolder on MSWOPI\_DocumentLibrary, and upload an arbitrary content .txt file named MSWOPI\_TestData2.txtinto this folder.
12. Create a folder named MSWOPI\_TestFolderCreatedByUser1 on MSWOPI\_DocumentLibrary by user User1.
13. Create a permission level named NoUseRemoteInterfacePermissionLevel with these permissions: ViewListItems, EditListItems, DeleteListItems, OpenItems, ViewVersions, Open, ViewPages on MSWOPI\_SiteCollection.
14. Grant NoUseRemoteInterfacePermissionLevel to NoUseRemoteUser on MSWOPI\_SiteCollection.
15. Grant Read permissions to ReadOnlyUser on MSWOPI\_SiteCollection.
16. Create a target application item in Secure Store named MSWOPI\_TargetAppWithNotGroupAndWindows. The target application item type is *Individual*.
17. Configure the Security Token Service to use HTTP.
18. Make sure the MSWOPI\_SiteCollection can be accessed before running the test suite.

#### MS-ONESTORE

For the MS-ONESTORE test suite, the SUT configuration steps are as follows:

1. Create a site collection namedMSONESTORE\_SiteCollection*.*
2. Create a document library namedMSONESTORE\_DocumentLibrary in MSONESTORE\_SiteCollection.
3. Grant full control permissions to the User1 on the site MSONESTORE\_SiteCollection.
4. Upload a fileOneWithFileData.one to MSONESTORE\_DocumentLibrary under MSONESTORE\_SiteCollection.
5. Upload a fileOneWithoutFileData.one to MSONESTORE\_DocumentLibrary under MSONESTORE\_SiteCollection.
6. Upload a fileEncryption.one to MSONESTORE\_DocumentLibrary under MSONESTORE\_SiteCollection.
7. Upload a fileInvalidData.one to MSONESTORE\_DocumentLibrary under MSONESTORE\_SiteCollection.
8. Upload a fileLargeData.one to MSONESTORE\_DocumentLibrary under MSONESTORE\_SiteCollection.
9. Upload a fileOpen Notebook.onetoc2 to MSONESTORE\_DocumentLibrary under MSONESTORE\_SiteCollection.
10. Upload a fileNoSection.onetoc2 to MSONESTORE\_DocumentLibrary under MSONESTORE\_SiteCollection.

## Configuring the test suite client

The test suite client is managed through a common configuration file, two test suite-specific configuration files and four SHOULD/MAY configuration files that have a “.ptfconfig” extension. These configuration files can be modified directly. The common configuration file and the test suite-specific configuration files can also be modified through a script.

* + 1. Common configuration file

The common configuration file contains configurable properties common to all SharePoint File Sync and WOPI Protocol test suites. This file must be modified to match the characteristics of the environment where the test suites are installed.

|  |  |
| --- | --- |
| **Configuration file** | **Description** |
| FssWopiCommonConfiguration.deployment.ptfconfig | The deployment configuration file provides the environmental details that are common to the test suites. |

* + 1. Test-suite specific configuration files

In addition to the common configuration file, each individual test suite has the following two configuration files for test suite-specific modification.

Test-suite specific configuration files

|  |  |
| --- | --- |
| Configuration file | Description |
| MS-XXXX\_TestSuite.deployment.ptfconfig | The deployment configuration file provides the environmental details that are specific to the test suite. The configuration file allows for the test suite-specific customization. |
| MS-XXXX\_TestSuite.ptfconfig | The test suite configuration file contains details that specify the behavior of the test suite operation. |

Both files are present in TestSuite folder of each test suite directory.

If you need to modify the common configuration values for a specific test suite, you must copy the common properties to the **MS-XXXX\_TestSuite.deployment.ptfconfig** file and change the values of the properties. The specific configuration file will take precedence over the common configuration file when the same property exists in both places.

* + - 1. **Set the test suite to interactive mode**

If the SUT is a non-Microsoft implementation of SharePoint Server, it is recommended that you further configure the test suite by setting the test suite to interactive mode. Interactive mode enables the test suite to function in a manual way, enabling you to perform setup, teardown, and other tasks in a step-by-step approach. To enable interactive mode for a specific test suite, do the following:

1. Browse to the **MS-XXXX\_TestSuite.ptfconfig** configuration file within the **\Source\MS-XXXX\TestSuite\**.
2. Set the type value of Adapter property to **interactive** for SUT control adapter\*\*.

Interactive mode values

|  |  |  |  |
| --- | --- | --- | --- |
| Property name | Default value\* | Optional value | Description |
| Adapter | managed or powershell | interactive\*\* | **managed**:  The SUT control adapter is implemented in C# managed code.  **powershell**:  The SUT control adapter is implemented through PowerShell.  **interactive**:  Interactive adapters are used for manually configuring the server. The interactive adapter displays a dialog box to perform a manual test each time one of its methods is called. The dialog box will show the method name, parameter names, and values\*\*\* |

*\*The Adapter property value is set to either* ***managed*** *or* ***powershell*** *depending on whether the SUT control adapter was implemented in managed C# code or through PowerShell.*

*\*\*When changing to interactive mode from managed mode, the “adaptertype” attribute must be deleted to avoid a runtime error. When changing to interactive mode from powershell mode, an additional step is required—delete the “scriptdir” attribute to avoid a runtime error.*

*\*\*\*When the manual operation completes successfully, enter the return value (if any) in* ***Action Results*** *and click* ***Succeed*** *in the dialog box. When manual operation is unable to complete, enter the error messages in the* ***Failure Message*** *text box and click the* ***Fail*** *to terminate the test. In this case, the test will be treated as “Inconclusive”.*

Further customization can be done by creating your own SUT control adapter that matches the server implementation. For information about how to create a SUT control adapter, see the Protocol Test Framework (PTF) user documentation.

* + - 1. **Configure TSAP broadcast**

Test Session Announcement Protocol (TSAP) is used by the PTF to broadcast test information when the test suite is running. TSAP broadcast helps in mapping test cases to captured frames.

By default, TSAP packets are broadcasted in the network. Users can disable TSAP broadcast by adding an entry “BeaconLogTargetServer” to TestSuite.deployment.ptfconfig to target the TSAP only to the specified machine.

To change TSAP packet broadcast, do the following:

1. Browse to the **MS-XXXX\_TestSuite.deployment.ptfconfig** configuration file within the **\Source\MS-XXXX\TestSuite\** folder.
2. Add a property “BeaconLogTargetServer” along with the value of the specified machine name.

For example: <Property name="BeaconLogTargetServer" value="SUT01" />

* + 1. SHOULD/MAY configuration files

The test suite has the following four SHOULD/MAY configuration files that are specific to all supported versions of the SUT. Each SHOULD/MAY requirement have an associated parameter with a value of either “true” or “false” corresponding to the server version that they support. “true” represents that the requirement must be validated, whereas “false” means that the requirement must not be validated.

If the SUT is a non-Microsoft implementation of SharePoint Server, configure the properties in the configuration file for the SharePoint Server which is the closest match to the SUT implementation.

SHOULD/MAY configuration files

|  |  |
| --- | --- |
| Configuration file | Description |
| MS-XXXX\_SharePointFoundation2010\_SHOULDMAY.deployment.ptfconfig | Provides the configuration properties for SHOULD and MAY requirements supported by Microsoft SharePoint Foundation 2010 Service Pack 2 (SP2). |
| MS-XXXX\_SharePointFoundation2013\_SHOULDMAY.deployment.ptfconfig | Provides the configuration properties for SHOULD and MAY requirements supported by Microsoft SharePoint Foundation 2013 Service Pack 1 (SP1). |
| MS-XXXX\_SharePointServer2010\_SHOULDMAY.deployment.ptfconfig | Provides the configuration properties for SHOULD and MAY requirements supported by Microsoft SharePoint Server 2010 Service Pack 2 (SP2). |
| MS-XXXX\_SharePointServer2013\_SHOULDMAY.deployment.ptfconfig | Provides the configuration properties for SHOULD and MAY requirements supported by Microsoft SharePoint Server 2013 Service Pack 1 (SP1). |
| MS-XXXX\_SharePointServer2016\_SHOULDMAY.deployment.ptfconfig | Provides the configuration properties for SHOULD and MAY requirements supported by Microsoft SharePoint Server 2016. |
| MS-XXXX\_SharePointServer2019\_SHOULDMAY.deployment.ptfconfig | Provides the configuration properties for SHOULD and MAY requirements supported by Microsoft SharePoint Server 2019. |

### Configuring the test suite client using setup configuration script

***Note*** *The setup configuration script is only implemented for configuring the test suite client on the Windows platform.*

To configure the test suite using the setup configuration script, navigate to the **Setup\Test Suite Client**\ folder, right-click **SharePointClientConfiguration.cmd** and select **Run as administrator.**

### Configuring the test suite client manually

If you didn’t use the setup configuration script to configure the test suite client as described in the previous section, follow the steps below to update configuration files and configure the test suite client.

1. Update the property value in the common configuration file and the test suite-specific configuration files according to the comment of the property.
2. By default, the test suites use PowerShell script in the SUT control adapter to configure the SUT. If you chose interactive mode for the SUT control adapter as described in section [5.2.2.1](#Configure_Interactive_Mode), skip this step.
   1. Set the execution policy to RemoteSigned.
   2. Add the SUT to the TrustedHosts to ensure that the Windows Remote Management (WinRM) client can process remote calls against the SUT if the test suite client is not joined to the domain.
3. If client don’t join the domain and you plan to use PowerShell mode of SUT control adapter, add SUT machine to the TrustedHosts configuration setting to ensure WinRM client can process remote calls against SUT machine.
4. Add a firewall rule to allow the TCP protocol for port 80.

# Running test suites

Once the required software has been installed and both the SUT and test suite client have been configured appropriately, the test suite is ready to run. The test suite can only run on the test suite client and can be initiated in one of the following two ways: Visual Studio or batch scripts.

***Note***   *Do not run MS-WOPI and MS-FSSHTTP-FSSHTTPB test suites simultaneously.*

## MicrosoftVisual Studio

A Visual Studio solution file **SharePointFileSyncAndWOPIProtocolTestSuites.sln** is provided in the **Source** folder.

|  |  |
| --- | --- |
| 1. Open **SharePointFileSyncAndWOPIProtocolTestSuites.sln** in Visual Studio. |  |
| 1. In the **Solution Explorer** pane, right-click **Solution** ‘**SharePointFileSyncAndWOPIProtocolTestSuites**’, and then click **Rebuild Solution**. | C:\Users\v-husu\Documents\DC\wopi\2.png |
| 1. Open **Test Explorer**. On the ribbon, click **TEST,** then click **Windows**, and finally click **Test Explorer**. | C:\Users\v-husu\Documents\DC\Pictures\3.png |
| 1. Select the test case to run, right-click the test case and then select **Run Selected Tests**. | C:\Users\v-husu\Documents\DC\wopi\3.png |

A Visual Studio solution file **MS-XXXX.sln** is provided in each test suite folder.

|  |  |
| --- | --- |
| 1. Select the test suite you would like to run. Let’s take MS-FSSHTTP-FSSHTTPB as an example here, so browse to the **Source\MS-FSSHTTP-FSSHTTPB** directory. | |
| 1. Open **MS-FSSHTTP-FSSHTTPB.sln** in Visual Studio. |  |
| 1. In the **Solution Explorer** pane, right-click **Solution** ‘**MS-FSSHTTP-FSSHTTPB**’, and then click **Rebuild Solution**. |  |
| 1. Open **Test Explorer**. On the ribbon, click **TEST**, then click **Windows**, and finally click **Test Explorer**. |  |
| 1. Select the test case to run. Right-click the test case and then select **Run Selected Tests**. |  |

## Batch scripts

SharePoint File Sync and WOPI Protocol Test Suites are installed with a collection of scripts that enable a user to run individual test cases (RunMSXXXX\_SYY\_TCZZ\_Name.cmd) or all test cases of one test suite (RunAllMSXXXXTestCases.cmd), or all test cases of SharePoint File Sync and WOPI Protocol Test Suites at once (RunAllSharePoint\_FileSyncAndWOPI\_TestCases.cmd). These scripts can be found in the **\Source\Scripts** directory.

**Note**   These scripts depend on having the compiled binaries in the bin folder.

|  |  |
| --- | --- |
| **Batch script** | **Script description** |
| RunAllSharePoint\_FileSyncAndWOPI\_TestCases.cmd | Runs all the test cases within the SharePoint File Sync and WOPI Protocol Test Suites. |
| RunAllMSXXXXTestCases.cmd | Runs all MS-XXXX test cases. |
| RunMSXXXX\_SYY\_TCZZ\_Name.cmd | Runs a specific test case within the test suite. |

# Test suite results, logs, and reporting

The test suites provide detailed reporting in a variety of formats that will enable users to quickly debug failures.

## Test suite configuration logs

The configuration logs contain information about whether each configuration step succeeds or not, and detail error information if the configuration step fails.

### SUT configuration logs

The SUT configuration scripts create a directory named **SetupLogs** under **…\Setup\SUT\** at runtime.The SUT configuration scripts save the logs as “SharePointSUTConfiguration.ps1.debug.log” and “SharePointSUTConfiguration.ps1.log”.

### Test suite client configuration logs

The configuration scripts create a directory named **SetupLogs** under **…\Setup\Test Suite Client\** at runtime. The test suite client configuration scripts save the logs as “SharePointClientConfiguration.ps1.debug.log” and “SharePointClientConfiguration.ps1.log”.

## Test suite reports

### Microsoft Visual Studio

Reports are created only after the package-level solution or an individual test suite solution has run successfully in Visual Studio.

* Reporting information for **SharePointFileSyncAndWOPIProtocolTestSuites.sln** is saved in **…\Source\TestResults**.
* Reporting information for an individual test suite **MS-XXXX.sln** is saved in **…\Source\MS-XXXX\TestResults**.

### Batch scripts

If the SharePoint Server Protocol test suites are run by the RunAllSharePoint\_FileSyncAndWOPI\_TestCases.cmd batch file, the reporting information is saved in **…\Source\Scripts\TestResults**.

If the test suite is run by the batch file RunAllMSXXXXTestCases.cmd or RunMSXXXX\_SYY\_TCZZ\_Name.cmd, the reporting information is saved in **…\Source\Scripts\MS-XXXX\TestResults.**

By default, a .trx file containing the pass/fail information of the run is created in the TestResults folder, along with an associated directory named **user\_MACHINENAME DateTimeStamp** that contains a log file in XML format and an HTML report.

# Appendix

|  |  |
| --- | --- |
| References | Description |
| [dochelp@microsoft.com](mailto:dochelp@microsoft.com) | Alias for Interoperability documentation help. Provides support for the Open Specifications and protocol test suites. |
| [Open Specifications Forums](http://go.microsoft.com/fwlink/?LinkId=111125) | Microsoft Customer Support Services forums. Actively monitored forums that provide support for the Open Specifications and Protocol test suites. |
| [Open Specifications Developer Center](http://go.microsoft.com/fwlink/?LinkId=254469) | Open Specifications home page on MSDN. |
| [Open Specifications](http://go.microsoft.com/fwlink/?LinkId=179743) | Open Specifications documentation on MSDN. |
| [SharePoint Products and Technologies Protocols](http://go.microsoft.com/fwlink/?LinkId=202122) | SharePoint Open Specifications documentation on MSDN. |
| [RFC2119](http://go.microsoft.com/fwlink/?LinkId=117453) | Normative language reference. |
| [Microsoft SharePoint Foundation 2010 deployment](http://go.microsoft.com/fwlink/?LinkId=517503) | Microsoft SharePoint Foundation 2010 deployment on TechNet. |
| [Microsoft SharePoint Foundation 2013 installation and configuration](http://go.microsoft.com/fwlink/?LinkId=517504) | Microsoft SharePoint Foundation 2013 installation and configuration on TechNet. |
| [Microsoft SharePoint Server 2010 deployment](http://go.microsoft.com/fwlink/?LinkId=517505) | Microsoft SharePoint Server 2010 deployment on TechNet. |
| [Microsoft SharePoint Server 2013 installation and configuration](http://go.microsoft.com/fwlink/?LinkId=517504) | Microsoft SharePoint Server 2013 installation and configuration on TechNet. |
| [Microsoft SharePoint Server 2016 installation and configuration](https://technet.microsoft.com/zh-cn/library/cc303422(v=office.16).aspx) | Microsoft SharePoint Server 2016 installation and configuration on TechNet. |
| [Microsoft SharePoint Server 2019 installation and configuration](https://docs.microsoft.com/en-us/sharepoint/install/install-for-sharepoint-server-2019) | Microsoft SharePoint Server 2019 installation and configuration on TechNet. |