



April 7-8, 2025
sambaXP Conference

Microsoft Interoperability Track





Introduction to Microsoft's Commitment to Interoperability

sambaXP 2025, April 7-8

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April 7-10, 2025

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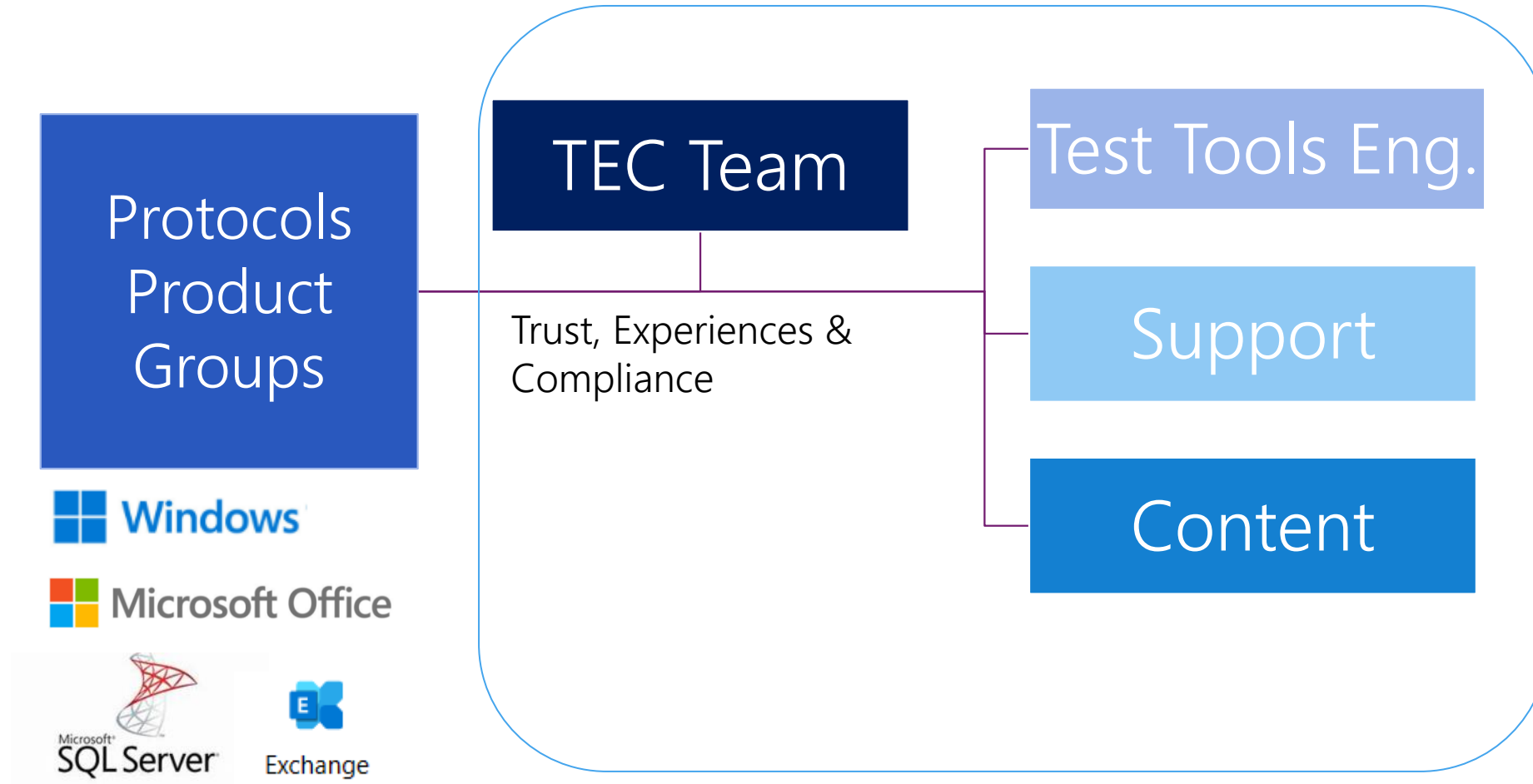
SMB3 Interoperability
Lab

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TESTING
SMB3 IO LAB

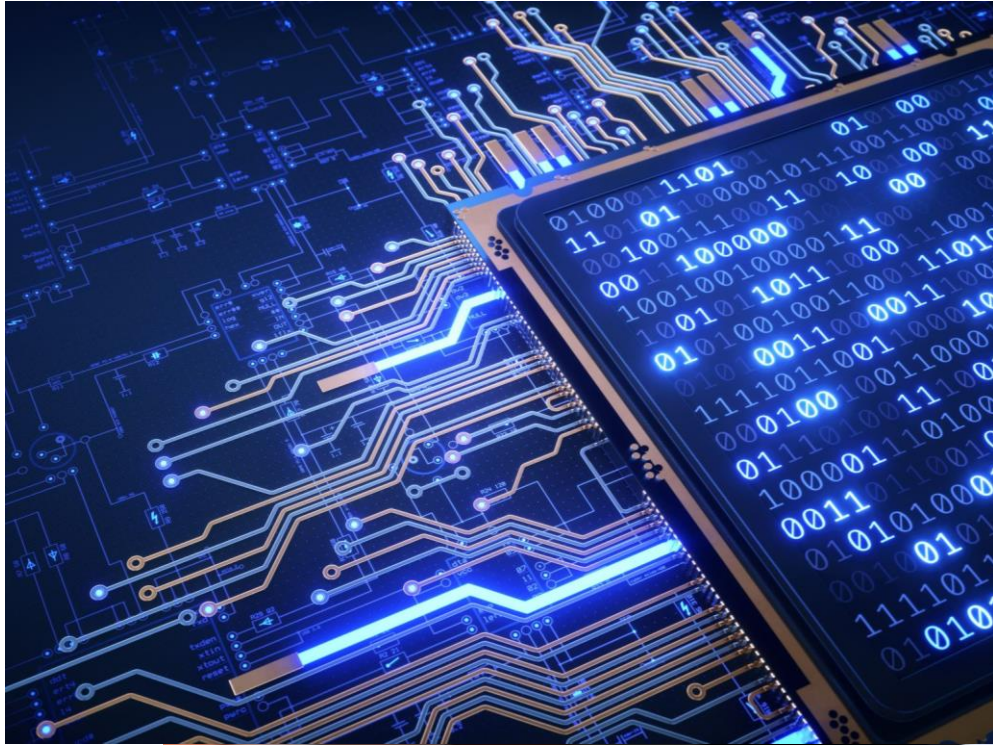
Agenda

- Who are we?
- Interop program guidelines
- The Open Specification docs
- Developers test tools
- Support channels and resources
- Customer Empowerment
- Responsible AI: Trust & Value
- What's next today?

The Interoperability Team - Who are we?



Interoperability?



The ability of different systems, devices, or software to interact and exchange data seamlessly.

Guiding Principles – Interop Program

Ensure developers have access to the interoperability information, tools and resources to successfully develop for Microsoft's products and platforms.



Docs



Support



Tools



Events

Program Scope

- **Windows Protocols** related to file sharing, remote desktop, Active Directory, and more...
- **Office Protocols** covering Exchange Server, SharePoint Server, and Office Clients
- **SQL Protocols** used by SQL server to interop or communicate with other Microsoft products
- **Office File Formats** - Binary file formats, OOXML, and Office Standards



Open Specifications

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 Filter by title

Open Specifications

- > Protocols
- > Computer Languages
- > Standards Support
- > Data Portability

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Open Specifications

Article • 10/07/2021 • 2 contributors

Feedback

Through the Open Specifications program, Microsoft is helping developers open new opportunities by making technical documents related to interoperability for certain popular Microsoft products available to view and download at no charge.

Although the Open Specifications technical documents are freely available, many of them include patented inventions. Some of these patents are available at no charge under the [Open Specifications Promise](#) or the [Microsoft Community Promise](#). The remaining patents are available through various licensing programs. For more information, please visit the [Microsoft Open Specifications Dev Center](#) website or send an email message to the [IP Licensing Team](#).

	Protocols Microsoft publishes technical documents for protocols that are implemented in Windows client (including .NET Framework) and Windows Server (collectively Windows), Office, SharePoint Products and Technologies, Exchange Server, and Microsoft SQL Server and are used to communicate with other Microsoft software products.
	Computer Languages Microsoft publishes technical documents for the VBA programming language and Extensible Application Markup Language (XAML).
	Standards Support Microsoft publishes technical documents that describe support for specific standards implemented in Exchange Server and Outlook; Internet Explorer; OData; Microsoft SQL Server; Windows WordPad; and Word, Excel, and PowerPoint.
	Data Portability Microsoft publishes technical documents for the file formats created by Word, Excel, PowerPoint, and Outlook and by SQL Server.

The Doc page

Filter by title

Open Specifications

Protocols

Windows Protocols

Windows Protocols

Technical Documents

Technical Documents

[MS-SMB2]: Server Message Block (SMB) Protocol Versions 2 and 3

[MS-SMB2]: Server Message Block (SMB) Protocol Versions 2 and 3

> 1 Introduction

> 2 Messages

> 3 Protocol Details

> 4 Protocol Examples

> 5 Security

6 Appendix A: Product Behavior

7 Change Tracking

8 Index

[MS-SMB2]: Server Message Block (SMB) Protocol Versions 2 and 3

Article • 07/03/2024

Feedback

In this article

- [Published Version](#)
- [Previous Versions](#)
- [Preview Versions](#)
- [Development Resources](#)
- [Intellectual Property Rights Notice for Open Specifications Documentation](#)

Specifies the Server Message Block (SMB) Protocol Versions 2 and 3, which support the sharing of file and print resources between machines and extend the concepts from the Server Message Block Protocol.

This page and associated content may be updated frequently. We recommend you subscribe to the [RSS feed](#) to receive update notifications.

Published Version

Expand table

Date	Protocol Revision	Revision Class	Downloads
11/19/2024	80.0	Major	PDF DOCX

[Click here to download a zip file of all PDF files for Windows Protocols.](#)

Previous Versions

Expand table

Date	Protocol Revision	Revision Class	Downloads
7/29/2024	79.0	Major	PDF DOCX Diff
7/8/2024	78.0	Major	PDF DOCX Diff
6/10/2024	77.0	Major	PDF DOCX Diff

What's New and Changed?

Filter by title

Open Specifications

Protocols

Windows Protocols

Windows Protocols

What's New and Changed

Preview Documents

Errata

Overview Documents

Technical Documents

Reference Documents

Archive Documents

Supporting Technologies Archive

This section provides descriptions of and links to the Windows technical documents that are new or have been revised to reflect the functionality of the latest product version.

New Documentation

Expand table

Specification	Description	Release date
[MS-GIPUSB]: Gaming Input Protocol (GIP) Universal Serial Bus (USB) Extension	Specifies the Gaming Input Protocol (GIP) Universal Serial Bus (USB) Extension of the USB 2.0 interface that provides extended semantics for interaction between game controller devices and a host. This protocol includes enumeration of device capabilities, determining of device type and subtype, transfer of gamepad and voice data, and support for an expansion device on the controller.	September 16, 2024
[MS-XUSB]: Xbox Universal Serial Bus Protocol (XUSB) Interface Extension	Specifies the Xbox Universal Serial Bus Protocol (XUSB) Interface Extension of the USB 2.0 interface that provides extended semantics for interaction between game controller devices and a host. This protocol includes enumeration of device capabilities, determining of device type and subtype, transfer of gamepad and voice data, and support for an expansion device on the controller.	September 16, 2024

Service Releases

The following documents were updated for servicing releases.

Please note: Protocol behavior changes and updates will be summarized on this page. Document update descriptions can also be found in each document's Change Tracking entries at the end of each document.

Difference documents for each release of protocol documents will no longer be published. Each document release will include the protocol document in PDF and Word format: You can use Word Compare functionality, or an equivalent tool, to create difference documents between document versions.

Expand table

Specification	Description	Release date
[MS-MDE2]: Mobile Device Enrollment Protocol Version 2 Microsoft Learn	This document has been updated as follows: Added new ContextItems for diagnostics returned to the server.	March 10, 2025
[MS-WSP]: Windows Search Protocol Microsoft Learn	This document has been updated as follows: Added a new message type, CPMExternalSearchResultIn, to the existing named pipe the indexer uses. Added 2 new restriction types, RTCoerce_MinMax and RTRankMerge.	March 10, 2025
[MS-TSTS]: Terminal Services Terminal Server Runtime Interface Protocol Microsoft Learn	This document has been updated as follows: Added a new value (WTSSessionActivityId) to the WTS_INFO_CLASS and a new RPC function (RpcGetActivityId) to TermSrvSession.	February 10, 2025
[MS-WUSP]: Windows Update Services: Client-Server Protocol Microsoft Learn	This document has been updated as follows: Added support for encrypted file digest on top of plaintext binaries to enable Secure Flighting.	January 27, 2025

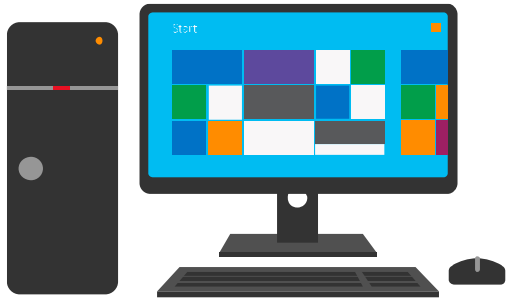
Developer Tools & Resources

Comprehensive portfolio of developer tools available to you!

Scenarios

Client Implementation

Application connecting to a Microsoft Server



Server Implementation

Client connecting to a Microsoft Server



Man-in-the-Middle

Application manipulating traffic over the wire

Tools & Resources

[Office](#) Protocol Test Suites

Network Parsers

Sample code

[Windows](#) Protocol Test Suites

Solution Accelerators

Informative Content

Test Driven Quality Assurance

1 Open Specification Review

- Ambiguity Review
- Simulation of the implementation Process

2 Requirement Analysis

- Normative language
- Requirement Extraction

3 Test Suite Development

- Requirements become Test Cases
- Groups of Test Cases become Scenarios

3.1.4.9 CreateWeb

This operation is used to create a new subsite of the current site (2).<14>

```
<wsdl:operation name="CreateWeb">
  <wsdl:input message="tns:CreateWebSoapIn" />
  <wsdl:output message="tns:CreateWebSoapOut" />
</wsdl:operation>
```

The client sends a **CreateWebSoapIn** request message and the server responds with a **CreateWebSoapOut** response message upon successful completion of creating the subsite. In the case that any of the error conditions specified by the following table occur, this method MUST return a SOAP fault with the specified error code.

Error Code	Specification
0x800700b7	The location specified by CreateWeb/url is already in use.
	teName does not exist.

∴, this method MUST return a SOAP fault with the specified error code.

Promise or Community Promise, as applicable, patent licenses are available by contacting jplg@microsoft.com.

- **License Programs.** To see all of the protocols in scope under a specific license program and the associated patents, visit the [Patent Map](#).
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Tools. The Open Specifications documentation does not require the use of Microsoft programming tools or programming environments in order for you to develop an implementation. If you have access to Microsoft programming tools and environments, you are free to take advantage of them. Certain Open Specifications documents are intended for use in conjunction with publicly available standards specifications and network programming art and, as such, assume that the reader either is familiar with the aforementioned material or has immediate access to it.

Support. For questions and support, please contact dochelp@microsoft.com.

<https://github.com/OfficeDev/Interop-TestSuites>

SharePoint

- MS-LISTSWS
- MS-VERSS
- MS-SITESS
- MS-DWSS
- MS-ADMINS
- MS-MEETS
- MS-OUTSPS
- MS-WDVMODUU
- MS-WEBSS
- MS-WWSP
- MS-AUTHWS
- MS-SHDACCWS
- MS-CPSWS
- MS-WSSREST
- MS-OFFICIALFILE
- MS-COPYS
- MS-VIEWSS

File Sync & WOPI

- MS-FSSHTTP
- MS-FSSHTTPB
- MS-FSSHTTPD
- MS-WOPI
- **MS-ONESTORE**

EWS

- MS-OXWSATT
- MS-OXWSBTRF
- MS-OXWSCONT
- MS-OXWSCORE
- MS-OXWSFOLD
- MS-OXWSMSG
- MS-OXWSMTGS
- MS-OXWSSYNC
- MS-OXWSTASK
- MS-OXWSITEMID

EAS

- MS-ASAIRS
- MS-ASCAL
- MS-ASWBXML
- MS-ASCNTC
- MS-ASCON
- MS-ASDOC
- MS-ASEMAIL
- MS-ASHTTP
- MS-ASNOTE
- MS-ASPROV
- MS-ASRM
- MS-ASTASK
- MS-ASCMD
- MS-ASDTYPE

MAPIHTTP

- MS-OXCFOLD
- MS-OXCFXICS
- MS-OXCMAPIHTTP
- MS-OXCMSG
- MS-OXCNOTIF
- MS-OXCPerm
- MS-OXCPRPT
- MS-OXCROPS
- MS-OXCRPC
- MS-OXCSTOR
- MS-OXCTABL
- MS-OXNSPI
- MS-OXORULE

<https://github.com/microsoft/WindowsProtocolTestSuites>

File Server

- MS-SMB2
- MS-DFSC
- MS-SWN
- MS-FSRVP
- MS-FSA
- MS-FSCC
- MS-RSVD
- MS-SQOS

RDP

- MS-RDPBCGR
- MS-RDPEDISP
- MS-RDPEDYC
- MS-RDPEGFX
- MS-RDPEGT
- MS-RDPEI
- MS-RDPEMT
- MS-RDPEUDP
- MS-RDPEUSB
- MS-RDPEVOR
- MS-RDPRFX
- [MS-RDPBCGR
- MS-RDPEDYC
- MS-RDPEMT
- MS-RDPELE

Kerberos

- MS-KILE
- MS-KKDCP
- MS-PAC

SMB Direct

- MS-SMBD
- MS-SMB2

ADOD

- MS-ADOD

Active Directory

- MS-ADA1
- MS-ADA2
- MS-ADA3
- MS-ADLS
- MS-ADSC
- MS-ADTS
- MS-APDS
- MS-DRSR
- MS-FRS2
- MS-LSAD
- MS-LSAT
- MS-SAMR
- MS-NRPC

ADFS Proxy & Web Application Proxy

- MS-ADFSPIP

Brand Cache

- MS-PCCRTP
- MS-PCCRR
- MS-PCHC
- MS-PCCRC

Open Specifications Support



Dedicated Support Team based in the USA, multiple Escalation Engineers offering complimentary interop support for Windows and Office protocol and file format.



Email: **DocHelp@Microsoft.com** for direct, fast and private communication to the support team



Forums: **aka.ms/dochelp** - anonymous posting and community driven involvement. Constantly monitored by the support team.



GitHub: Issues are publicly tracked and contributed to by support team on open-source projects

Interop Events – Customer Empowerment

- Broad and tailored events
 - Evolving program and resources
 - We engage, listen, and work with you
-
- Developments in the world:
Emerging Technology and your work
 - Developments from our team:
Trustworthy AI on the Windows platform



Conversations & Questions

- Does your organization use AI in your software development, and if so, how?
- If you had a magic wand, what would you change to increase the **trust and usage** of AI in your organization?
- If Microsoft developed AI-powered Testsuites generation, what features would you like to see?



AI Challenge

A promotional banner for the Microsoft AI Skills Fest. It features a dark background with colorful, abstract shapes at the top and bottom. The text "Microsoft AI Skills Fest" is written in a multi-colored font (red, pink, purple, blue), and "Register now!" is in black below it.

Microsoft AI Skills Fest
Register now!

- Want to learn AI skills and be a part of a GUINNESS WORLD RECORDS?
- [AI Skill Challenge](#): starts on April 8th, you can still register [today](#)!

Next on the Microsoft Interoperability Track



James Omitiran
Senior Software Engineer

SMB3 Test Suite Overview



Michael Bowen
Sr Tech Support Eng EE

Working with the Office Open XML File Format and Azure AI



Andrew Davidoff
SENIOR SOFTWARE ENGINEER

New Outlook (Monarch) Overview



Raymond Wang
PRINCIPAL SOFTWARE ENG LEAD



Genghis Karimov
PRINCIPAL SOFTWARE ENGINEER

SMB in Windows Server 2025 and Beyond



Dan Cuomo
PRINCIPAL PM LEAD

Online Resources



Support: dochelp@microsoft.com

Forums: aka.ms/dochelp

Documents: <https://learn.microsoft.com/en-us/openspecs>



Events: <https://interopevents.com>

GitHub Repos

Protocol Test Suites

<https://github.com/OfficeDev/Interop-TestSuites>

<https://github.com/microsoft/WindowsProtocolTestSuites>

Fiddler Inspectors

<https://github.com/OfficeDev/Office-Inspectors-for-Fiddler>

We want to hear from you!
interopdevevents@microsoft.com

And hope to see you in our future events:
SNIA SDC SMB3 IO Lab, CA, September 2025
DevDays ASIA, Taipei, September 2025

Thank you!



Questions?

