Introduction to Microsoft's Commitment to Interoperability
sambaXP 2023, May 10-11

Hagit Galatzer
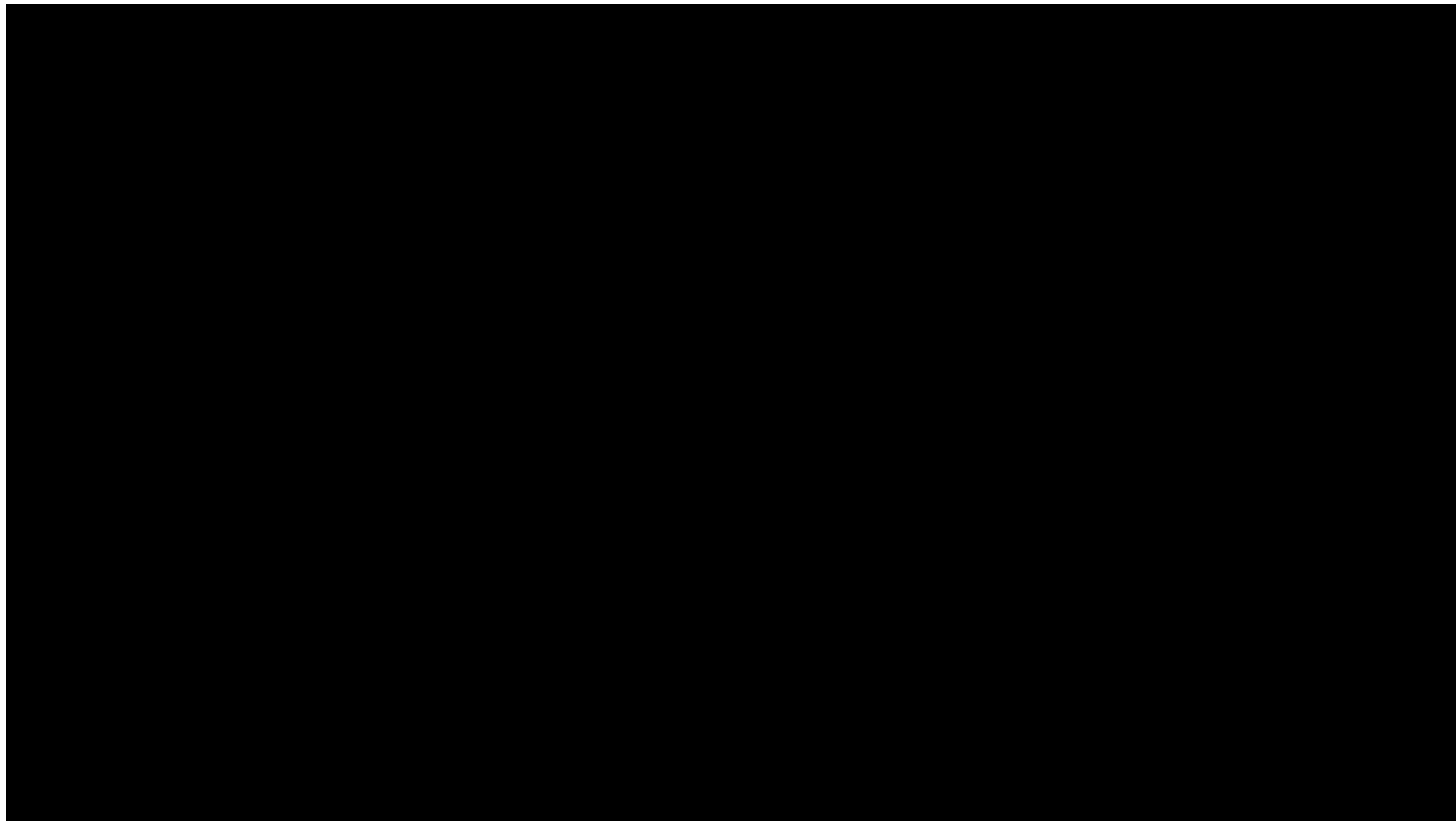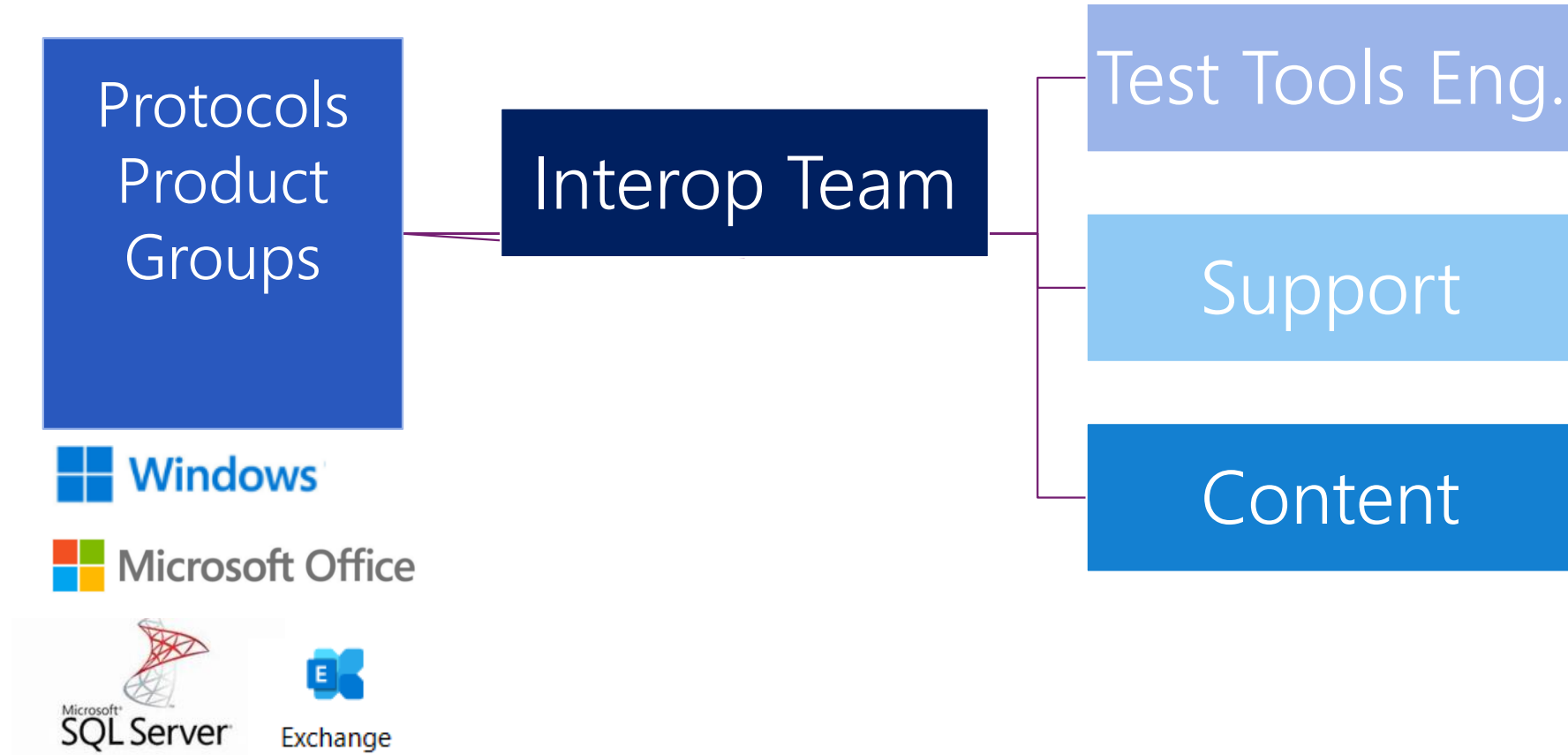### Senior Program Management, Microsoft

Microsoft

Agenda

- Who are we?
- Interop program guidelines
- The Open Specification documents
- Developers test tools
- Support channels and resources
- What next today?

A message from our team ☺

The Interoperability Team – Who are we?

Guiding Principles

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

We love our developers!

Docs   Support   Tools   Events

Interoperability Initiatives

Events		
>90 Events	>10k Participants	>1000 Companies

Open engagement on a global basis

Docs	
>900 Open Specifications	>110k Pages

Up to date and published regularly

Support		
24/7 Support	$0 Support Fee	10 Engineers

Experienced support team

Tools	
11 + New releases this past year	>200 Specs have an associated tool/test

Building Microsoft interoperability ecosystem

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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> 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.

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

Article • 02/28/2023   🖒 Feedback

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

Date	Protocol Revision	Revision Class	Downloads
2/27/2023	67.0	Major	PDF ⊠	DOCX ⊠	Diff ⊠

Click here to download a zip file of all PDF files for Windows Protocols. ⊠

Previous Versions

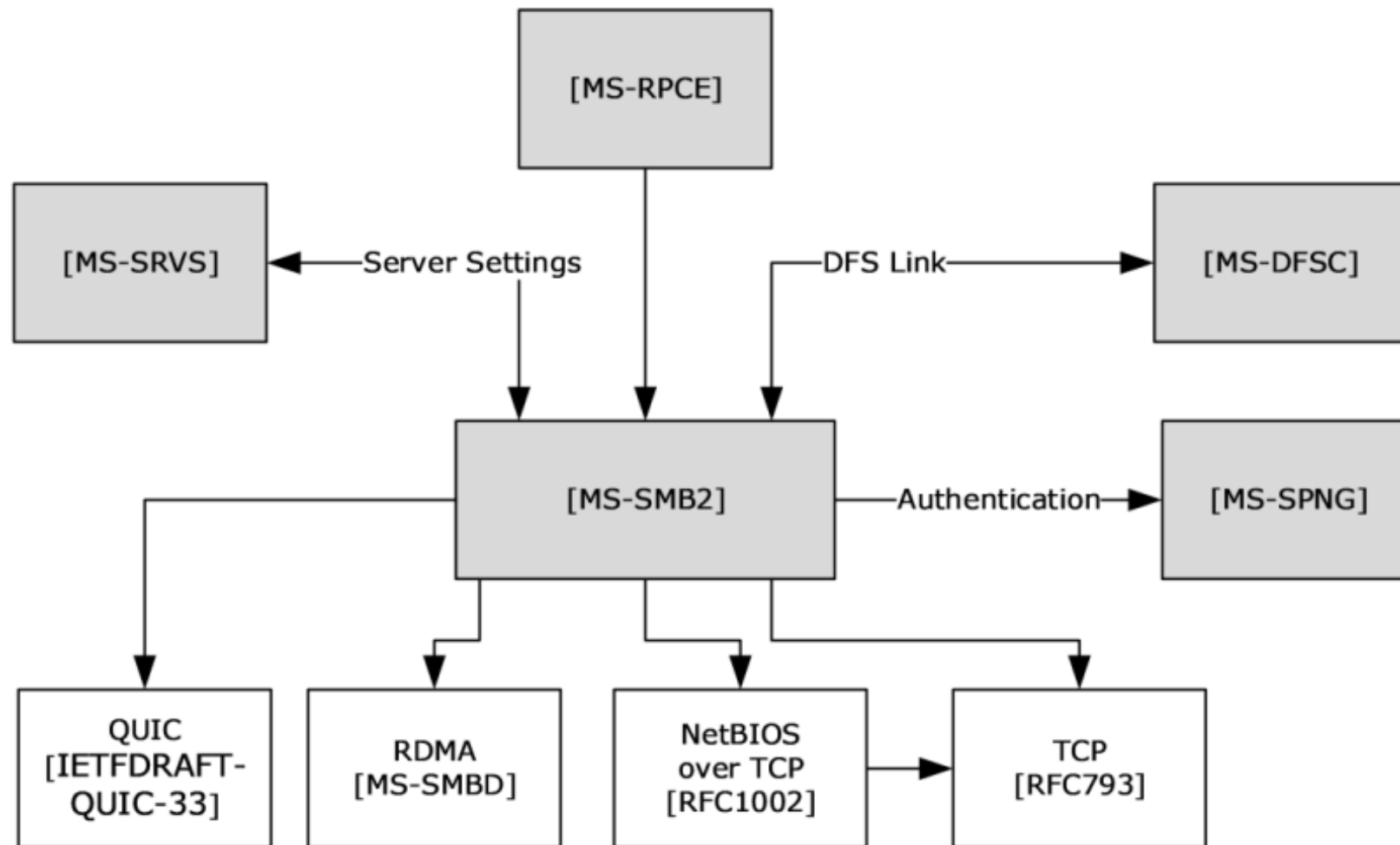| Date	Protocol Revision	Revision Class	Downloads
4/29/2022	66.0	Major	PDF ⊠	DOCX ⊠	Errata ⊠	Diff ⊠
10/6/2021	65.0	Major	PDF ⊠	DOCX ⊠	Errata ⊠	Diff ⊠
6/25/2021	64.0	Major	PDF ⊠	DOCX ⊠	Errata ⊠	Diff ⊠
6/2/2021	63.0	Major	PDF ⊠	DOCX ⊠	Diff ⊠
4/7/2021	62.0	Major	PDF ⊠	DOCX ⊠	Errata ⊠	Diff ⊠

Table of Contents

Figure 2: Relationship to other protocols

2.2.3 SMB2 NEGOTIATE Request

The SMB2 NEGOTIATE Request packet is used by the client to notify the server what dialects of the SMB 2 Protocol the client understands. This request is composed of an SMB2 header, as specified in section 2.2.1, followed by this request structure.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
StructureSize																	DialectCount														
SecurityMode																	Reserved														
Capabilities																															
ClientGuid																															
...																															
...																															
...																															
(NegotiateContextOffset,NegotiateContextCount,Reserved2)/ClientStartTime																															
...																															
Dialects (variable)																															
...																															
Padding (variable)																															
...																															

Developer Tools & Resources

Comprehensive portfolio of developer tools available to you!

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

[Windows](#) Protocol Test Suites

Network Parsers

Solution Accelerators

Sample code

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.

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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

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

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

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

Next on the Microsoft Interoperability Track

Jinlin Xu
PRINCIPAL SOFTWARE ENGINEER

Integrate the Power of Office365 through Co-Auth and File Synchronization Protocols.

Michael Bowen
ESCAL ENG

Use the Capabilities of Azure Artificial Intelligence with the Open XML SDK to Protect Personally Identifiable Information.

Obaro Ogbo
SENIOR SOFTWARE ENGINEER

File Sharing test suites overview and demo

Amalachukwu Offiah
PROGRAM MANAGER 2 - GRC

Steven French
PRINCIPAL SOFTWARE ENGINEER

SMB3.1.1 POSIX Extensions and Accessing files remotely from the smallest to the largest devices (and the cloud): SMB3.1.1 improvements to the Linux client.

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

And hope to see you in our future events:
SNIA SDC SMB3 IO Lab, Sept 18-21
Redmond, samba SMB3 IO Lab, Sept 26-28

Thank you!

Questions?