[MS-DOCO]:
Windows Protocols Documentation Roadmap

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Revision Summary

Date	Revision History	Revision Class	Comments
12/16/2011	1.0	New	Released new document.
03/30/2012	2.0	Major	Significantly changed the technical content.
07/12/2012	3.0	Major	Significantly changed the technical content.
10/25/2012	4.0	Major	Significantly changed the technical content.
01/31/2013	4.1	Minor	Clarified the meaning of the technical content.
08/08/2013	5.0	Major	Significantly changed the technical content.
11/14/2013	6.0	Major	Significantly changed the technical content.
02/13/2014	7.0	Major	Significantly changed the technical content.

Contents

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1 Introduction

This document describes the Windows protocols documentation set and provides a roadmap for navigating it. The Windows protocols documentation set contains detailed technical specifications for protocols, including extensions and profiles to industry-standard or other published protocols. These protocols are used by Windows to provide file, print, and administration services, among others, to Windows work group networks.

The Windows protocols documentation set also includes a set of companion overview and reference documents that supplement the technical specifications with conceptual background, overviews of inter-protocol relationships, and technical reference information, such as common data types and error codes.

1.1 Glossary

The following terms are defined in [MS-GLOS]:

.NET Framework
ABNF
account domain
Active Directory
American National Standards Institute (ANSI) character set
authentication
authorization
big-endian
certificate
certificate authority (CA)
certificate services
code page
Common Information Model (CIM)
directory service (DS)
Distributed Component Object Model (DCOM)
Distributed File System (DFS)
domain
domain controller (DC)
Domain Name System (DNS)
Dynamic Host Configuration Protocol (DHCP)
endpoint
failover cluster
Group Policy
Group Policy Object (GPO)
HTTP
Interface Definition Language (IDL)
Kerberos
Lightweight Directory Access Protocol (LDAP)
little-endian
Microsoft Interface Definition Language (MIDL)
named pipe
NetBIOS
NetBIOS name
NT LAN Manager (NTLM) Authentication Protocol
OleTx
remote procedure call (RPC)

schema
security identifier (SID)
security principal
Simple and Protected GSS-API Negotiation Mechanism (SPNEGO)
SOAP
SOAP message
Stock Keeping Unit (SKU)
terminal server
Terminal Services
transaction
Transmission Control Protocol (TCP)
two-phase commit
Unicode
Unicode string
User Datagram Protocol (UDP)
Windows Management Instrumentation (WMI)
Windows registry
Web services
Web Services Description Language (WSDL)
Windows Internet Name Service (WINS)
XML
XML namespace

The following terms are specific to this document:

Plugfest: Plugfest is a recurring event for ISVs organized by Microsoft to help developers create interoperability solutions by using Windows protocols and protocol extensions.

Technical Account Manager (TAM): Technical Account Managers help Microsoft customers create and maintain efficient and stable business systems. TAMs partner with customers to help design customized services for hosted Microsoft environments, facilitate support services and resources, and provide technical information to IT staff.

technical area: A broad categorization of the interoperability technologies that are addressed by the documents of the Windows protocols documentation set. The technical areas are described in Documentation Contents (section 2).

technology collection: A technology overview and the technical specifications it references. For more information, see Relationships Among Documents (section 1.3.2).

1.2   References

This section lists external references that are cited in this document. Entries for members of the Windows protocols documentation set are not included, but links to all such documents are provided in Documentation Contents (section 2) and in Appendix A: Cross-Reference Matrixes (section 4).

[ANSI] ANSI, "American National Standards Institute (ANSI)", http://ansi.org

Note There is a charge to download the specification.

[DMTF] DMTF, "Distributed Management Task Force (DMTF)", http://dmtf.org

[ECMA] ECMA, "ECMA International", http://www.ecma-international.org/

[FIPS] FIPS PUBS, "Federal Information Processing Standards (FIPS)", http://www.itl.nist.gov/fipspubs/

[IANA] IANA, "Internet Assigned Numbers Authority (IANA)", http://www.iana.org

[IEEE] IEEE, "Institute of Electrical and Electronics Engineers (IEEE) Standards Association", http://standards.ieee.org

[IETF] IETF, "The Internet Engineering Task Force (IETF)", http://www.ietf.org/

[INCITS] INCITS, "International Committee on Information Technology Standards (INCITS)", http://incits.org

Note There is a charge to download the specification.

[ISO] International Organization for Standardization, "ISO - International Organization for Standardization - Homepage", 2006, http://www.iso.org/iso/en/ISOOnline.frontpage

[MSDN] Microsoft Corporation, "MSDN Home Page", http://msdn.microsoft.com/en-us/default.aspx

[MSDN-EXCHANGE] Microsoft Corporation, "Exchange Server Protocols", http://msdn.microsoft.com/en-us/library/cc307725(v=EXCHG.80).aspx

[MSDN-Library] Microsoft Corporation, "MSDN Library", http://msdn.microsoft.com/en-us/library/ms123401.aspx

[MSDN-LIC] Microsoft Corporation, "Licensing Programs", http://msdn.microsoft.com/en-us/library/dd346586(v=PROT.10).aspx

[MSDN-LIC-MIPS] Microsoft Corporation, "Microsoft Interoperability Program Overview", http://msdn.microsoft.com/en-us/library/gg134029.aspx

[MSDN-LIC-WSPP] Microsoft Corporation, "Workgroup Server Protocol Program", http://msdn.microsoft.com/en-us/library/gg285297.aspx

[MSDN-OFFICE] Microsoft Corporation, "Microsoft Office Protocols", http://msdn.microsoft.com/en-us/library/cc307282(v=office.12).aspx

[MSDN-OPEN] Microsoft Corporation, "Open Specifications", http://msdn.microsoft.com/en-us/library/dd208104(v=prot.10).aspx

[MSDN-PREVIEW] Microsoft Corporation, "Preview Specifications", http://msdn.microsoft.com/en-us/library/ee941641.aspx

[MSDN-SHAREPOINT] Microsoft Corporation, "SharePoint Products and Technologies Protocols", http://msdn.microsoft.com/en-us/library/cc339475(v=office.12).aspx

[MSDN-SQL] Microsoft Corporation, "Microsoft SQL Server Protocols", http://msdn.microsoft.com/en-us/library/ee210043.aspx

[MSDN-WIN] Microsoft Corporation, "Windows Protocols", http://msdn.microsoft.com/en-us/library/cc216517(v=prot.20).aspx

[MSDN-WSPP] Microsoft Corporation, "Windows Server Protocols (WSPP)", http://msdn.microsoft.com/en-us/library/cc964399(PROT.13).aspx

[MSFT-AppliedInterop] Microsoft Corporation, "Applied Interoperability", http://cspauthoring:8000/openspecifications/en/us/applied-interoperability/default.aspx

[MSFT-DeveloperCenter] Microsoft Corporation, "Open Specifications Developer Center", http://msdn.microsoft.com/en-us/openspecifications/cc721659.aspx

[MSFT-DeveloperForums] Microsoft Corporation, "Open Specifications Developer Forums",
http://social.msdn.microsoft.com/Forums/en-US/category/openspecifications

[MSFT-DeveloperTraining] Microsoft Corporation, "Open Specifications Developer Training",
http://cspauthoring:8000/openspecifications/en/us/applied-interoperability/resources/developer-training/default.aspx

[MSFT-InteroperLabs] Microsoft Corporation, "Interoperability Labs,
http://cspauthoring:8000/openspecifications/en/us/applied-interoperability/testing/interoperability-labs/default.aspx

[MSFT-NMTP] Microsoft Corporation, "Network Monitor Tool and Parsers",
http://cspauthoring:8000/openspecifications/en/us/applied-interoperability/testing/network-monitor/default.aspx

[MSFT-Plugfest] Microsoft Corporation, "Plugfests and Events",
http://cspauthoring:8000/openspecifications/en/us/applied-interoperability/testing/plugfests-and-events/default.aspx

[MSFT-TECHNET-WIKI] Microsoft Corporation, "TechNet wiki",
http://social.technet.microsoft.com/wiki/

[MSFT-WGSPPP] Microsoft Corporation, "Work Group Server Protocol Program Patents",
http://www.microsoft.com/openspecifications/en/us/programs/wspp/wspp-patents/default.aspx

[MS-GLOS] Microsoft Corporation, "Windows Protocols Master Glossary".

[NIST] Microsoft Corporation, "National Institute of Standards and Technology (NIST)",
http://www.nist.gov

[OASIS] OASIS, Organization for the Advancement of Structured Information Standards(OASIS)",
http://www.oasis-open.org

[OPENGROUP] OPENGROUP, "The Open Group", http://opengroup.org

[RFC] "RFC Editor", http://www.rfc-editor.org/index.html

[RFC2251] Wahl, M., Howes, T., and Kille, S., "Lightweight Directory Access Protocol (v3)", RFC 2251, December 1997, http://www.ietf.org/rfc/rfc2251.txt

[TCG-TNC] TCG-TNC, "Trusted Computing Group, Network Security",
http://www.trustedcomputinggroup.org/solutions/network_access_and_identity

[W3C] W3C, "World Wide Web Consortium (W3C)" http://www.w3.org

1.3 Overview

The information in the Windows Protocols Documentation Roadmap is grouped into the following sections.

1. Introduction (section 1): An introduction, which provides general information that may apply throughout the document, including a glossary and a list of references.

2. Documentation Contents (section 2): A description of document contents, which provides a classification of the different types of documents.

3. Navigating the Documentation Set (section 3): A description of where to find the Windows protocols documentation set in the MSDN Library and how to navigate within it.

4. Appendix A: Cross-Reference Matrices (section 4): Links to the documents of the Windows protocols documentation set and cross-references that show their relationships.

5. Appendix B: Open Specification Site Map (section 5): A diagram showing the entire node structure of the Windows protocols documentation set in the MSDN Library.

It is suggested that the reader become familiar with the classification of Windows technical documents and their contents before proceeding to the navigation section, because that knowledge will help clarify the document relationships.

This section provides an overview of this document and the Windows protocols documentation set. The following information is presented:

- Purpose and scope of this document.

- The relationship of this document to the other documents in the Windows protocols documentation set.

- Naming conventions used in the Windows protocols documentation set.

- The system for identifying versions of documents in the Windows protocols documentation set.

1.3.1   Purpose and Scope

The purpose of the Windows Protocols Documentation Roadmap is to provide a useful starting point for obtaining the information needed to create interoperable protocol software. By traversing the links in this document, the reader can navigate the entire documentation set and discover additional helpful technical information that complements the documentation set.

The scope of this document includes the following:

- The Windows Workgroup Server Protocol Program (WSPP) documentation set, which includes technical specifications for protocols that are used by the Windows Server operating system to provide file, print, and user and group administration services to Windows workgroup networks.

   The versions of Windows Server covered in the WSPP documentation set include the following:

   - Windows NT 3.1 operating system

   - Windows NT Server 3.1 operating system

   - Windows NT 3.5 operating system

   - Windows NT 3.51 operating system

   - Windows NT Server 3.51 operating system

   - Windows NT 4.0 operating system

   - Windows 2000 operating system

   - Windows Server 2003 operating system

   - Windows Server 2003 R2 operating system

   - Windows Server 2008 operating system

   - Windows Server 2008 R2 operating system

- Windows Server 2012 operating system

- Windows Server 2012 R2 operating system

The versions of Windows work group systems covered in the WSPP documentation set include the following:

- Microsoft Windows 98 operating system

- Windows Millennium Edition operating system

- Windows 2000

- Windows XP operating system

- Windows Vista operating system

- Windows 7 operating system

- Windows 8 operating system

- Windows 8.1 operating system

- The **.NET Framework** and Other Protocols technical documentation set, which includes technical specifications for protocols that support communication among server applications, ASP.NET applications, and **XML Web services**. The technologies supported by these protocols include the following:

    - message queuing (MSMQ)

    - **OleTx two-phase commit** transaction processing

    - **DCOM**

    - Windows Presentation Foundation (WPF)

    - Windows Communication Foundation (WFC)

    - Windows Workflow Foundation (WF)

    - **SOAP message** exchange

    - Microsoft Peer-to-Peer collaboration technologies, which provide a peer-to-peer, serverless framework for collaborative planning, communication, content distribution, and multiplayer game-matchmaking applications

1.3.2 Relationships Among Documents

The Windows protocols documentation set consists of the following types of documents:

- High-level overviews that contain information about the organization and content of the entire Windows protocols documentation set.

- Technology overviews that provide information about groups of related technical specifications.

- Technical specifications that specify the details of particular protocols, structures, algorithms, and so on.

The relationships among these types of documents are shown in the following diagram.
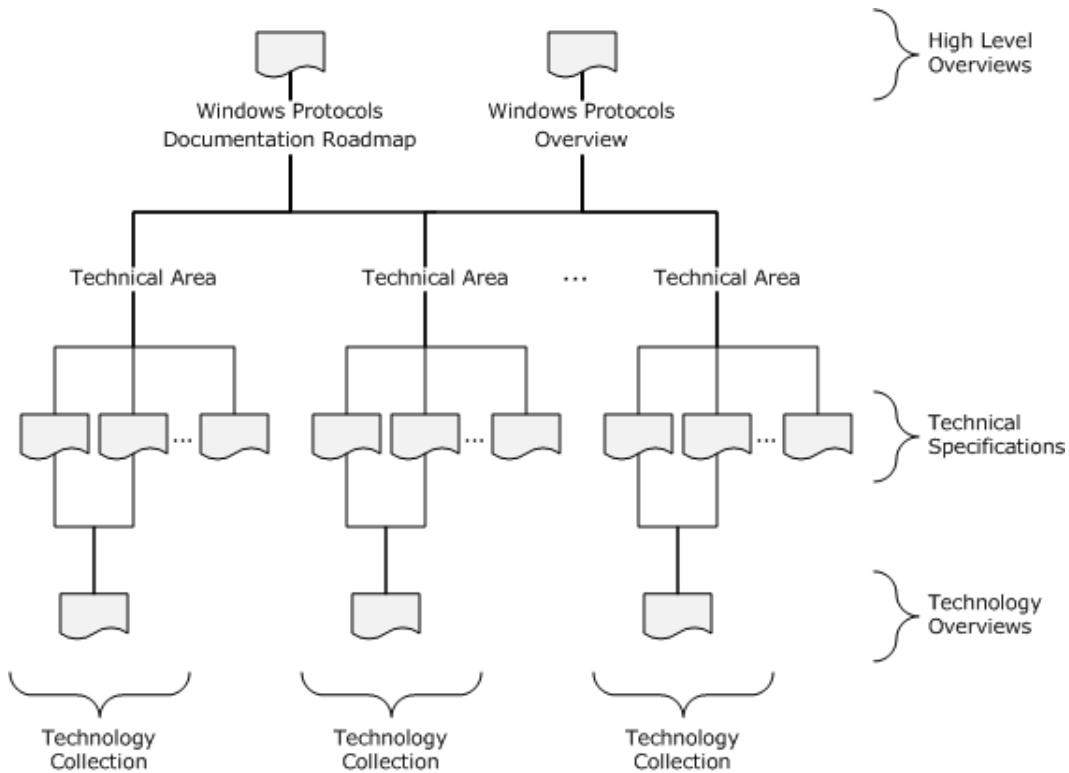
Figure 1: Relationships among documents

As shown in the diagram, the technical specifications of the Windows protocols documentation set are categorized according to **technical area**. Within a technical area, a technology overview and related technical specifications make up a **technology collection**. More than one technology collection can be defined in a technical area. The technical areas and different document types are described in Documentation Contents (section 2). The technical specifications are listed in the Technical Specification Cross-Reference Matrix (section 4.1); the technical areas are listed in the Technical Area Cross-Reference Matrix (section 4.2); and the technology collections are listed in the Technology Collection Cross-Reference Matrix (section 4.3).

1.3.3   Naming Conventions

The Windows protocols documentation set uses the following naming conventions for all overview documents, technical specifications, and reference documents.

▪ All documents are assigned a short name enclosed in square brackets. The short name is used when citing the document or reference. Examples of short names are "[MS-DOCO]", "[MSDN-WSPP]", and "[RFC2119]".

▪ All short names for documents in the Windows protocols documentation set have one of the following forms:

   ▪ [MC-XXX] was originally used for documents that specify technology that has never shipped with Windows. However, that restriction has been removed, and there is now no distinction between documents with short names prefaced with "MC" and those with short names prefaced with "MS". An example of this type of short name is "[MC-BUP]", where the suffix "BUP" is an abbreviation for "Background Intelligent Transfer Service (BITS) Upload Protocol".

- [MS-XXXOD] is used for technology overviews (section 2.1.3). An example of this type of short name is "[MS-AUTHSOD]", where the suffix "AUTHS" is an abbreviation for "Authentication Services Protocols".

- [MS-XXX] is used for all other overview, technical, and reference documents with short names that do not follow one of the preceding conventions. The suffix "XXX" is an abbreviation that refers to the subject covered by the document. An example of this type of short name is "[MS-WPO]", where "WPO" is an abbreviation for "Windows Protocols Overview". The short name of the current document, "[MS-DOCO]", also falls into this category.

- Short names for reference documents that describe Microsoft technology conform to the following naming conventions:

  - [MSDN-XXX] is used for information on the Microsoft Developer Network (MSDN).

  - [MSFT-XXX] is used for information in Microsoft TechNet articles.

  - [KBNNNNN] and [MSKB-NNNNN] are used for MSDN Knowledge Base articles, where NNNNN is the article number.

  - [PRA-XXX] is used for downloadable MSDN informative technical documents in PDF format.

- Short names for RFC documents are in the form [RFCNNNNN], where NNNNN is the RFC number.

- Each document in the Windows protocols documentation set has a title that conforms to the following conventions:

  - The titles of technology overviews end with the word "Overview".

  - The titles of technical specifications that specify Microsoft extensions to non-Microsoft protocols and structures end with either the word "Extension" or "Extensions".

  - The titles of technical specifications that specify algorithms, protocols, and structures end with the word "Specification".

  - **Note** The titles of [MS-DOCO] and [MS-WPO] are exceptions to these document title conventions.

- Each document in the Windows protocols documentation set has a long name, which is composed of its short name, a colon, and its title. Examples of long names are "[MS-DOCO]: Windows Protocols Documentation Roadmap" and "[MS-RPRN]: Print System Remote Protocol Specification".

1.3.4   Document Versions

Documents in the Windows protocols documentation set are assigned a version number that changes each time the document is updated. The title page of each document contains a revision summary table that shows the top-level history of changes to the document. This revision summary table contains the date of each release and the corresponding version number, revision class, and comment that describes the change.

The version number and revision class are correlated as shown in the following table:

Version number	Revision class	Version number change	Description
1.0	New	Not applicable	First release of the document.

Version number	Revision class	Version number change	Description
2.0	Major	Number to the left of the first decimal point	Significantly changed the technical content.
2.1	Minor	Number to the right of the first decimal point	Clarified the meaning of the technical content.
2.1.1	Editorial	Number to the right of the second decimal point	Changed language and/or formatting of the technical content.
2.1.1	None	No change	No change to the meaning, language or formatting of the technical content.

Note Starting with Windows 8 operating system, the initial release version number was standardized at 1.0. Documents created prior to Windows 8 may have a different initial release version number, such as 0.1 or 0.01.

Each overview document and technical specification also contains its own more detailed Change Tracking Appendix, which lists the changes made to each section in the latest release.

1.4 Audience

The Windows documentation set is intended for use in conjunction with publicly available and standards-based specifications, network programming background material, and Windows distributed systems concepts. It assumes that the reader either is familiar with this material or has immediate access to it.

The documentation set provides the following levels of audience support:

- For implementers: Conceptual and reference information for an implementation of one or more protocol specifications for a given task or scenario.

- For architects: Structural and interoperability information for an implementation of a technology consisting of a group of related protocols.

1.5 Localization

The Windows documentation set is not localized, but individual documents may contain locale-specific information.

1.6 Licensing

The Windows protocols documentation set is available to view and download from the MSDN Library at no charge. Some specifications include patented inventions, and others do not. Implementers may benefit from a patent license if using any of the technical specifications covered by Microsoft patents. In addition, patent licensees may receive additional benefits such as:

- Optional **Technical Account Manager (TAM)** to help resolve documentation questions

- Optional viewing rights to Windows source code to assist with implementing the protocols

- Access to **Plugfests** [MSFT-Plugfest] and Interoperability Labs [MSFT-InteroperLabs]

The following Licensing Programs are available. They vary principally with respect to the scope of the protocols and technical specifications that are covered:

- Microsoft Interoperability Program Overview: This program includes technical specifications for communications protocols in specific versions of Windows client, Windows Server operating system, Microsoft PC productivity applications, Microsoft Exchange Server, and Windows SharePoint Services and technologies that are used by certain Microsoft client and server products, as well as certain standards, languages, and file formats supported by such products.

- Workgroup Server Protocol Program: This program includes technical specifications for communications protocols between specific versions of Windows client and Windows Server as well as between specific versions of Windows Server to provide file, print and user and group administration services in a Windows workgroup network.

For more information about patent license and patent covenant agreements available for Windows, visit Microsoft Open Specifications Patents and Warranty Agreements.

1.7 Support

Many types of support are available for the protocol implementer. These resources can be found on the Open Specifications Developer Center.

- Questions about Windows documentation can be submitted on the Open Specifications Developer Forums.

- Plugfests and Events, provide software developers with an in-person opportunity to learn more about Windows protocols and to test their implementations.

- Interoperability Labs provide focused one-on-one testing sessions.

- Network Monitor Tool and Parsers allow an implementer to view and monitor in real time specific protocol communications between two products.

- An online library of developer training videos is available at Open Specifications Developer Training.

- Test Lab Guides provide resources for developing test platforms for protocols.

Additional information concerning support is available on the Applied Interoperability web site.

2 Documentation Contents

This section describes the documents that are part of the Windows protocols documentation set and the information they contain. The following types of documents are defined:

- Overview documents

- Technical specifications

- Reference documents

The sections that follow contain details of each document type.

As described in [Relationships Among Documents (section 1.3.2)](#), the technical specifications and technology overviews are grouped into technical areas according to applicable technology. The following technical areas are defined:

Application services: Application services enable the components of an application to interoperate with components of other applications. These components can involve processes that are running on one or more computers or different operating systems.

Collaboration and communications: Collaboration and communications refers to services that facilitate interaction among people and enables client applications to locate each other on a network. The software used for collaboration includes application sharing, email, whiteboarding, sharing a calendar, instant messaging, and text chat. This technical area also includes protocols that enable content to be streamed over the Internet or an intranet and the creation, distribution, and playback of audio and video content.

Directory services: Directory services provide functionality for the centralized storage of identity and account information, as well as other forms of data such as group policies and printer location information. The protocols in this technical area make up the client and server behavior of **Active Directory**, which provides a foundation for authentication services in a domain environment, domain services, and directory replication services in Windows.

File, fax, and printing: File, fax, and printing refers to services for applications to access, share, manage and replicate files, and for managing and accessing fax and print systems in a distributed environment. This technical area also includes Windows SharePoint Services (WSS), which provide features and technologies that allow users to create, manage, and build their own collaborative websites.

Home server: Home server refers to services that enable two or more computers to connect directly to each other in order to communicate and to organize, share, and back up documents over a Home Server network. Home Server is a platform for private residences and small businesses that supports the management of devices within the household or on the Internet.

Multiplayer games: Multiplayer games refers to services that provide DirectPlay functionality for playing games over the Internet, including game configuration and connection, game state and event handling, communication between players, and remote configuration.

Networking: Networking refers to services that enable the communication of computers with each other over networks including wireless devices and links, IP transports, and client/server transports such as **remote procedure call (RPC)** and DCOM. This technical area includes protocols that support dynamic configuration of IP addresses, the enforcement of computer health policies, the management of Web services, and wireless service discovery.

Remote connectivity: Remote connectivity refers to services that allow users to access applications and data on a remote computer over a network. Remote connectivity includes remote desktop services protocols, which provide secure connections and communication between remote clients and servers and allow clients to use server applications and resources.

Security and identity management: Security and identity management refers to services for **authentication** and **authorization**, **certificate** management, rights management, and interoperability over the web. This technical area includes protocols that support identity verification, credential validation, and the process of granting a person, computer process, or device access to certain information, services or functionality, the protection and security of digital information, and Web services based on XML, **SOAP** and **WSDL**.

Systems management: Systems management refers to services that support clustering, configuration and administration of client and server computers, content indexing queries, remote device management, **Group Policy** enforcement, remote management of computer and network resources, performance monitoring and event logging, deployment and management of storage technologies, system infrastructure functionality, management of **Common Information Model (CIM)** objects, deployment of Microsoft product updates, and Windows name resolution for network basic input/output system (**NetBIOS**) names.

Terminal services: Terminal services provide functionality for communicating remote graphical desktop interaction and display data packets, and sound, file redirection, and print redirection data packets from client applications to a Windows server configured as a **terminal server**.

2.1   Overview Documents

This section describes the overview documents in the Windows protocols documentation set. In general, overview documents provide information that pertains to groups of documents in the documentation set and about how protocols for specific technologies are related and used together. The following types of overview documents are defined:

- The Windows Protocols Documentation Roadmap (section 2.1.1)

- The Windows Protocols Overview (section 2.1.2)

- Technology overviews (section 2.1.3)

2.1.1   Windows Protocols Documentation Roadmap

[MS-DOCO]: Windows Protocols Documentation Roadmap is the starting point for navigating within and understanding all the other documents in the Windows protocols documentation set.

2.1.2   Windows Protocols Overview

[MS-WPO]: Windows Protocols Overview provides a conceptual overview of Windows protocols, including their functionality, how they interact, and their relationships to Windows technologies. Each technology is further broken down into subsystems with information about the technology overviews (section 2.1.3) and technical specifications (section 2.2) that pertain to each subsystem. The Windows technologies are grouped into the technical areas described in Documentation Contents (section 2).

The following technical area subsystems are described:

Application services:

- Application server

- Core services

- Internet information services

Collaboration and communication:

- Collaboration services

- Media services

File, fax, and printing:

- Content caching

- **Distributed File System (DFS)** and file replication

- File access services

- File services management

- Print and Fax services

- Storage services

Networking:

- Networking services

- Presentation layer technologies

- Session layer technologies

- Transport layer technologies

- Network layer technologies

- Link layer technologies

- .NET Framework

Security and identity management:

- Authentication

- Authorization

- Impersonation

- Certificate services

- Rights management services

- Federation services

Systems management:

- Monitoring services

- Server management

▪ **WINS** management

2.1.3 Technology Overviews

Technology overviews provide informative content that describes protocols in a technical area that are functionally related or are commonly used together to accomplish specific goals. The technology overview and technical specifications it describes comprise a technology collection. The technology collections in the Windows protocols documentation set are listed in the Technology Collection Cross-Reference Matrix (section 4.3). The technical areas to which the technology overviews correspond are described in Documentation Contents (section 2).

Each technology overview provides the following types of information.

▪ A conceptual description of the architecture, communication, and relationships among the protocols and with other technology collections.

▪ The intended users and uses of the technology collection, its environment, and its role within the architecture of Windows.

▪ Scenarios that illustrate use cases for the technology collection, including common errors, which describe the actors; the actors' intentions and goals; any necessary preconditions; an overall flow of data and events with common alternatives; and typical results.

▪ The Microsoft products that implement the technology collection, and its versions and capabilities in each Microsoft product.

The following technology overviews describe protocols in the application services technical area:

▪ [MS-MQOD]: Message Queuing Protocols Overview: This document describes the functionality of Microsoft Message Queuing (MSMQ), a communications service that enables reliable and secure asynchronous messaging between applications over a variety of deployment topologies. MSMQ temporarily decouples the sending of a message from the receipt of that message, allowing applications to communicate even if their execution lifetimes do not overlap.

▪ [MS-NETOD]: Microsoft .NET Framework Protocols Overview: This document describes the functionality, interrelationships, and protocol layering of the communication protocols implemented in the .NET Remoting and Windows Communication Foundation (WCF) components of the .NET Framework.

▪ [MS-TPSOD]: Transaction Processing Services Protocols Overview: This document provides an overview of the functionality and relationships of **transaction** processing protocols. Transaction processing is designed to maintain a computation system in a known, consistent state by allowing multiple individual operations to be linked together as a single, indivisible operation, so that either all of the changes are processed or none of the changes are processed.

The following technology overview describes protocols in the collaboration and communications technical area:

▪ [MS-MSSOD]: Media Streaming Server Protocols Overview: This document describes the functionality of the media streaming server protocols, which are used to convert both live and prerecorded audio format and to distribute the content over a network or the Internet. Media streaming server technologies support publishing secure content to a media server, streaming content from a media server, and requesting a license from a license server.

The following technology overview describes protocols in the directory services technical area:

- [MS-ADOD]: Active Directory Protocols Overview: This document describes the functionality and relationships of the Active Directory protocols, which provide directory services for the centralized storage of identity, account information, group policies, and printer location information, a foundation for authentication services in a **domain** environment, domain services, and directory replication services in Windows.

The following technology overviews describe protocols in the file, fax, and printing technical area:

- [MS-CCROD]: Content Caching and Retrieval Protocols Overview: This document describes the protocols, data structures, and security mechanisms that are required to enable a system of content caching and retrieval to interoperate with Windows systems, and content retrieval scenarios such as accessing content from a file or web server.

- [MS-FASOD]: File Access Services Protocols Overview: This document describes the use of the protocols for network file access services interoperation with Windows, which allows applications to access and share files located on a file server on a network in a secure and managed environment.

- [MS-FSMOD]: File Services Management Protocols Overview: This document describes the use of the protocols for remote administration and management of file servers that share data within an organization.

- [MS-PRSOD]: Print Services Protocols Overview: This document describes the distributed system of print servers that manage printers and make them available to print clients.

- [MS-STOROD]: Storage Services Protocols Overview: This document describes the interaction of protocols that provide disk and volume management services, data backup and restore, removable media management, file access control, and file encryption in Windows.

The following technology overview describes protocols in the networking technical area:

- [MS-NAPOD]: Network Access Protection Protocols Overview: This document describes the functionality to allow client computers to gain access to network resources based on the client's identity and compliance with a corporate governance policy, and how various components work together to promote the health and protection of networked systems.

The following technology overview describes protocols in the remote connectivity technical area:

- [MS-RDSOD]: Remote Desktop Services Protocols Overview: This document describes the **Terminal Services** system, which enables a remote client to display and interact with a desktop or application running on a distant server. Using this technology, a remote client connected to the server can use software and resources available to the server.

The following technology overviews describe protocols in the security and identity management technical area:

- [MS-AUTHSOD]: Authentication Services Protocols Overview: This document describes the functionality and relationships of protocols in the identity verification of users, computers, and services through interactive logon and network logon authentication processes.

- [MS-AZOD]: Authorization Protocols Overview: This document describes the functionality and relationships of the protocols that control the granting of access to resources, once authentication has been accomplished, by using one of several Windows authorization models.

- [MS-CERSOD]: Certificate Services Protocols Overview: This document provides an overview of how the certificate enrollment, certificate policy and certificate remote administration protocols are implemented in the **certificate services** system, the standalone and enterprise models of

the **certificate authority (CA)**, the protocols involved, and how they communicate with each other.

- [MS-RMSOD]: Rights Management Services Protocols Overview: This document describes the protocols of the Rights Management Services (RMS) system, which allows individuals and administrators to encrypt and specify access and usage restrictions on various types of data, including documents and email messages.

- [MS-SECO]: Windows Security Overview: This document describes the following basic concepts of the Windows security model, which apply throughout the Windows protocols documentation set:

  - Identity, such as the set of users on a single computer or the identities that are available in a domain.

  - Accounts, which are relationships or points of management between a system and a user/administrator.

  - **Security identifiers (SIDs)**, which are values that identify **security principals** and encapsulate the hierarchical relationships between issuing authorities and accounts.

  - Groups, which are collections of user accounts, computer accounts, and other groups that can be managed as single units from a security perspective.

  - **Account domains**, including local and remote domains, which are the **SID** namespaces for which particular machines are authoritative.

  - **Domain controller (DCs)**, which are servers that have made their account databases available to other machines in a controlled manner.

  - Domain membership, which is the state of trusting a third party (the DC) for identity and authentication information.

  - Descriptions and communication flow diagrams for **NT LAN Manager (NTLM)**, **Kerberos**, and the **Simple and Protected GSS-API Negotiation Mechanism (SPNEGO)**.

The following technology overviews describe protocols in the systems management technical area:

- [MS-GPOD]: Group Policy Protocols Overview: This document describes the protocols used for Group Policy, which enables administrators to define and manage required computer configurations or policy settings for a large number of users and computers within an Active Directory environment.

- [MS-WMOD]: Windows Management Protocols Overview: Provides an overview of the functionality and relationships of the Windows Management protocols, which provide the ability to control settings and collect data for a set of client and server computers, to query another system or computer, and to perform administrative operations to monitor, troubleshoot, and conduct hardware and software inventories in remote computers.

- [MS-WSUSOD]: Windows Server Update Services Protocols Overview: This document describes the Windows Server Update Services system, which enables IT administrators to distribute and manage software updates from a central location to a large number of computers.

2.2 Technical Specifications

Technical specifications specify details of specific protocols, structures and standards. The goal of the technical specifications is to support interoperability, not to describe the Windows

implementations of the technology. For example, many protocols specify client and server roles; for such protocols, the information contained in technical specifications fulfills the three general interoperability cases:

▪ Implement a client that interoperates with a server implemented in Windows.

▪ Implement a server that interoperates with a client implemented in Windows.

▪ Implement a client and a server that interoperate with each other on a non-Windows operating system.

Other types of protocols, as well as structures, algorithms, and so on, are documented to support interoperability in both Windows and non-Windows operating environments.

As described in Relationship Among Documents (section 1.3.2), the technical specifications of protocols that work together are grouped into technology collections according to technical area. The technical areas are described in Documentation Contents (section 2); the technical specifications that are associated with each technical area are listed in the Technical Area Cross-Reference Matrix (section 4.2); and the technical specifications that are associated with each technology collection are listed in the Technology Collection Cross-Reference Matrix (section 4.3).

Technical specifications consist of both normative and informative content. The normative content is written using the prescriptive language of RFCs as defined in [RFC2119], including the verbs MAY, MUST, MUST NOT, SHOULD and SHOULD NOT. Normative content is essential for implementation and includes the following categories of information:

▪ Classes of functionality (roles)

▪ Data definitions (constants, enumerations, structures, and so on)

▪ Encryption

▪ Message formats and processing

▪ Method signatures and return values

▪ Schemas and namespaces

▪ State transitions

▪ Timers, events, and event processing

▪ Transport

▪ Vendor-extensible field

Technical specifications that use common data types specify the following normative reference:

▪ [MS-DTYP]: Windows Data Types

Technical specifications that specify HRESULT, NTStatus, or Win32 error codes cite the following normative reference:

▪ [MS-ERREF]: Windows Error Codes

Content that is not normative in technical specifications is informative, and it is provided only as a helpful guide to the implementer. Informative content is not essential for implementation and includes the following categories of information:

- Abstract data model

- Capability negotiation

- Examples

- Implementation-specific parameters

- Relationships to other protocols

- Security parameters

- Versioning

- Windows-version-specific behavior

Windows-version-specific behavior is described in footnotes to the main body of a specification. That information is not normative and is provided to support interoperability across multiple versions of Windows servers and clients. The following criteria are used to determine whether information is not appropriate in the body of a technical specification and should be placed in a product behavior footnote:

- The information varies by Windows **Stock Keeping Unit (SKU)**.

- The information concerns an implementation limit for a data structure; for example, maximum entries or queue size.

- The information concerns a retry interval.

- The information concerns a retry count prior to returning a specified error code.

- The information concerns a specific buffer size choice, when other buffer sizes will work.

- The information concerns loading implementation-specific configuration information from the **Windows registry**.

In general, each technical specification conforms to one of the following document templates, based on the type of information that is conveyed by the associated protocol or structure:

- Algorithm: Algorithms used in network communication.

- Block: Generic message-based protocols.

- Data Structure: Data structures used by one or more protocols.

- File Structure: The formats of files used to convey information between systems.

- HTTP: Protocols based on HTTP APIs, including RESTful and REST-like protocols.

- RPC: Remote procedure call (RPC) method-based client/server protocols.

- SOAP: Request/response protocols that are defined by using Web Services Description Language (WSDL).

- Standards Support: Microsoft implementation conformance with an external standard.

The following sections provide general descriptions of these document templates. The template used for each technical specification in the Windows protocols documentation set is listed in Technical Specification Cross-Reference Matrix (section 4.1).

2.2.1 Algorithm

An algorithm technical specification specifies an algorithm or extension to an algorithm that is used in network communication. An algorithm document defines no data structure or data sent over the wire. If the algorithm is associated with a data structure, they are either documented separately in algorithm and structure technical specifications or together in a block technical specification. A technical specification that specifies a protocol can refer to an algorithm document, but if the algorithm is specific to the protocol, it may be documented within the protocol document.

If the algorithm inherently has different classes of functionality, or "roles", normative information is provided for each. If enough logic is common between roles that it makes sense to not duplicate it, a section titled "Common Algorithm Details" may be specified. For example, for compression and decompression algorithms, a section for common details may be included with the role-specific sections "Compression Algorithm Details" and "Decompression Algorithm Details".

Algorithm technical specifications can contain the following types of normative information, where applicable:

- Classes of functionality (roles)

- Processing rules

- State transitions

2.2.2 Block

A block technical specification specifies a packet-based protocol. The name "block" is a reference to the block diagrams that are frequently used to express interaction patterns. The block type of technical specification is also used if no other type of document is appropriate for the protocol or format being specified.

Block technical specifications specify exactly how data is marshaled that is sent or received over a network, which requires a definition of the byte order of packet data. Message syntax is specified by using packet diagrams that are 32-bits wide, with bit 0 on the far left, as shown in the following example.

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
Field Name 1																Field Name 2															
Field Name 3 (optional)																															
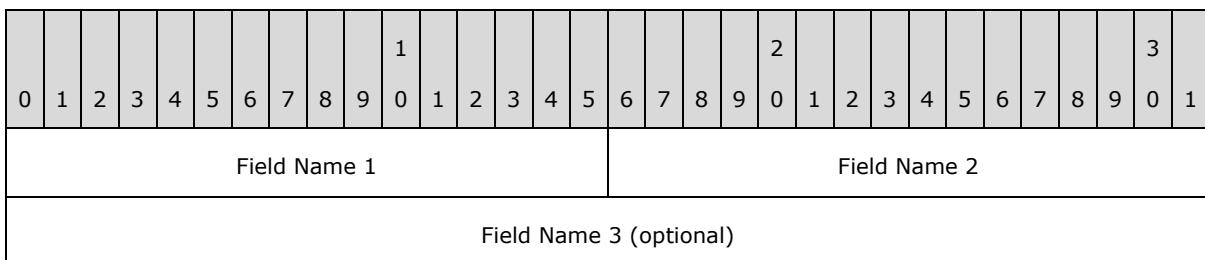
The bit numbering convention that is followed is big-endian; namely, the most significant bit of the first byte to traverse the network is bit 0, and the least significant bit of the last byte to traverse the network is in bit 31. The byte order format can be different in the operating environment, so it is specified in the document for multi-byte data fields.

Block technical specifications can contain the following types of normative information, where applicable:

- Classes of functionality (roles)

- Data definitions (constants, enumerations, structures, and so on)

- Directory service schema classes and attributes

- Encryption

- Message formats and processing

- Schemas and namespaces

- State machine description

- Timers, events, and event processing

- Transport

- Vendor-extensible fields

If the block protocol references directory service schema element class/attribute pairs, one or more of the following normative references may be appropriate:

- [MS-ADA1]: Active Directory Schema Attributes A-L

- [MS-ADA2]: Active Directory Schema Attributes M

- [MS-ADA3]: Active Directory Schema Attributes N-Z

- [MS-ADSC]: Active Directory Schema Classes

- [MS-ADLS]: Active Directory Lightweight Directory Services Schema

If the block protocol specifies XML namespaces, one of the following normative references may be appropriate:

- [XMLNS-2ED] World Wide Web Consortium, "Namespaces in XML 1.0 (Second Edition)", August 2006, http://www.w3.org/TR/2006/REC-xml-names-20060816/

- [XMLNS] World Wide Web Consortium, "Namespaces in XML 1.0 (Third Edition)", December 2009, http://www.w3.org/TR/2009/REC-xml-names-20091208/

2.2.3   Data Structure

A data structure technical specification specifies a common structure or an extension to a common data structure that is used by multiple protocols. The description does not include related behavior. Behavior is defined in the specifications for protocols that use the data structure.

Data structure technical specifications specify how data is decoded and encoded as it is processed in the specific operating environment. If the data is in XML, the schemas and namespaces are specified.

Data structure technical specifications can contain the following types of normative information, where applicable:

- Data definitions (constants, enumerations, structures, and so on)

- Encryption

- Schemas and namespaces

- Vendor-extensible fields

Specific data structure technical specifications that are cited normatively by other technical specifications are described in the following subsections.

2.2.3.1   Active Directory Objects

Active Directory objects are normative definitions of the objects that exist in the Microsoft Active Directory. The objects of type "attribute" that exist in the Active Directory schema are presented in the following technical specifications:

- [MS-ADA1]: Active Directory Schema Attributes A-L

- [MS-ADA2]: Active Directory Schema Attributes M

- [MS-ADA3]: Active Directory Schema Attributes N-Z

The objects of type "class" that exist in the Active Directory schema are presented in the following technical specification:

- [MS-ADSC]: Active Directory Schema Classes

The objects of types "attribute" and "class" that exist in the Active Directory Lightweight Directory Services schema are presented in the following technical specification:

- [MS-ADLS]: Active Directory Lightweight Directory Services Schema

These specifications are not intended to stand on their own; they are intended to serve as appendixes to the Active Directory Technical Specification. For details about the Active Directory schema, see [MS-ADTS]: Active Directory Technical Specification.

2.2.3.2   Windows Data Types

Windows data types are common data types that are used in the Windows protocols documentation set. They are presented in the following document:

- [MS-DTYP]: Windows Data Types

The Windows data types are categorized as follows:

- Common base types: Primitive data types, including **IDL** base types, which are natively supported by Microsoft compilers; for example, byte, handle_t, and wchar_t.

- Common data types: Simple data types, including aliases for C/C++ primitive data types, which are frequently used by many protocols; for example, BYTE, DWORD, and WCHAR.

- Common data structures: User-defined data types, including those supporting RPC protocols, which are defined in C/C++ or **ABNF**; for example, FILETIME, GUID, and RPC_UNICODE_STRING.

- Constructed security types: Types used to define structures that are specific to the Windows security model; for example, security identifier (SID), and SECURITY_DESCRIPTOR.

- Impersonation abstract interface: Methods for managing the underlying security infrastructure for server roles in Windows.

2.2.3.3   Windows Error Codes

Windows error codes are method return values and status codes that are used in the Windows protocols documentation set. They are presented in the following document:

- [MS-ERREF]: Windows Error Codes

The following information is provided in the Windows error codes specification:

- HRESULT: The HRESULT data type is commonly used as a return value from RPC methods. The most significant bit is used to indicate success or failure. The following details about HRESULT are provided:

  - The structure of the HRESULT data type.

  - Requirements for vendor-specific values.

  - Values in a 32-bit numbering space.

  - Descriptions of the error conditions returned.

  - Parameter substitution in value descriptions.

  - The HRESULT from WIN32 error code macro, which converts a Win32 error code to an HRESULT value.

- Win32 error codes: Win32 error codes are 16-bit values extended to 32-bits with zero fill, and they can be returned by methods or in structures. In general, they are not vendor-extendable. The following details about Win32 error codes are provided:

  - Success and error values.

  - Descriptions of the error conditions returned

  - Parameter substitution in value descriptions.

- NTSTATUS: The NTSTATUS data type is a standard, 32-bit structure that is used to communicate system information. The following details about Win32 error codes are provided:

  - Identification of levels of severity: Success, Informational, Warning and Error.

  - The structure of the NTSTATUS data type.

  - Requirements for vendor-specific values.

  - Values in a 32-bit numbering space.

  - Descriptions of the error conditions returned.

  - Parameter substitution in value descriptions.

- LDAP result codes: Windows contains an implementation of the **LDAP** resultCode [RFC2251], which is used by higher-layer protocols to interpret the results of an LDAP operation. Each LDAP error value is mapped to the closest Win32 error value; this mapping is provided.

2.2.3.4   Windows Language Code Identifier (LCID) Reference

Windows language code identifiers (LCID) are presented in the following document:

- [MS-LCID]: Windows Language Code Identifier (LCID) Reference

Also known as culture identifiers, LCID values are used to identify specific languages for the purpose of customizing software for particular locales and cultures. For example, an LCID value can specify the way dates, times, and numbers are formatted as strings, as well as paper sizes and preferred sort order based on language elements.

The following information is provided in the Windows language code identifier reference:

- The structure of the LCID data type.

- All LCID values that are available in all versions of Windows.

- Locale-specific sort order values.

2.2.4   File Structure

A file structure technical specification specifies the structure and contents of a file that can be sent over the network. Rules for accessing and processing the contents of the file can be specified in this type of technical specification.

File structure technical specifications specify how data is encoded by the creator and decoded by the consumer as it is passed within the operating environment. If the data is in XML, the schemas and namespaces are specified.

File structure technical specifications can contain the following types of normative information, where applicable:

- Data definitions (constants, enumerations, structures, and so on)

- Encryption

- Portability considerations

- Record structure

- Schemas and namespaces

- Vendor-extensible fields

2.2.5   HTTP

An HTTP technical specification specifies a protocol that uses an **HTTP**-based API with a simplified set of HTTP functions, such as GET and POST, to make API calls. It can also use a REST client/server architecture in which requests and responses are built around the transfers of resource representations, which are documents that capture the current or intended states of resources. HTTP technical specifications specify the web resources that are accessed and manipulated by the protocol, HTTP operations that can be applied to the resources, and the syntax of request/response payloads.

An HTTP technical specification can specify either a REST-like or RESTful protocol. In general, "REST-like" refers to a protocol that uses simple URI-based requests to a specific domain over HTTP. "RESTful" refers to a protocol that conforms to certain constraints including a client/server architecture, statelessness, and a uniform interface.

HTTP technical specifications can contain the following types of normative information, where applicable:

- Augmented Backus–Naur Form (ABNF) syntax

- Classes of functionality (roles)

- Conceptual Schema Definition Language (CSDL) schemas

- Custom HTTP methods and headers

- Data definitions (constants, enumerations, structures, and so on)

- Directory service schema elements

- Encryption

- JavaScript Open Notation (JSON) schemas

- State machine description

- URI parameters

- XML schemas and namespaces

HTTP technical specifications that use XML namespaces specify the following normative reference:

- [XMLNS] World Wide Web Consortium, "Namespaces in XML 1.0 (Third Edition)", December 2009, http://www.w3.org/TR/2009/REC-xml-names-20091208/

One or more of the following additional references are commonly cited in HTTP technical specifications:

- [RFC2616] Fielding, R., et al., "Hypertext Transfer Protocol -- HTTP/1.1", RFC 2616, June 1999, http://www.ietf.org/rfc/rfc2616.txt

- [RFC2818] Rescorla, E., "HTTP Over TLS", RFC 2818, May 2000, http://www.ietf.org/rfc/rfc2818.txt

- [RFC3986] Berners-Lee, T., Fielding, R., and Masinter, L., "Uniform Resource Identifier (URI): Generic Syntax", STD 66, RFC 3986, January 2005,http://www.ietf.org/rfc/rfc3986.txt

- [XML-INFOSET] Cowan, John, and Tobin, Richard, "XML Information Set (Second Edition)", W3C Recommendation, February 2004, http://www.w3.org/TR/2004/REC-xml-infoset-20040204

- [XML10] World Wide Web Consortium, "Extensible Markup Language (XML) 1.0 (Third Edition)", February 2004, http://www.w3.org/TR/REC-xml

- [XMLSCHEMA1] Thompson, H.S., Ed., Beech, D., Ed., Maloney, M., Ed., and Mendelsohn, N., Ed., "XML Schema Part 1: Structures", W3C Recommendation, May 2001, http://www.w3.org/TR/2001/REC-xmlschema-1-20010502/

- [XMLSCHEMA2] Biron, P.V., Ed., and Malhotra, A., Ed., "XML Schema Part 2: Datatypes", W3C Recommendation, May 2001, http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/

If the HTTP protocol specifies directory service schema element class/attribute pairs, one or more of the following normative references may be appropriate:

- [MS-ADA1]: Active Directory Schema Attributes A-L

- [MS-ADA2]: Active Directory Schema Attributes M

- [MS-ADA3]: Active Directory Schema Attributes N-Z

- [MS-ADLS]: Active Directory Lightweight Directory Services Schema

- [MS-ADSC]: Active Directory Schema Classes

If the HTTP protocol uses CSDL schema elements, the following normative references may be included:

- [MC-CSDL] Microsoft Corporation, "Conceptual Schema Definition File Format"

- [MS-ODATA] Microsoft Corporation, "Open Data Protocol (OData) Specification"

2.2.6   RPC

An RPC technical specification specifies method-based protocols, which use a formal syntax with calls and return codes, and in which the protocol client initiates all communication and the protocol server responds to the protocol client; and request/response protocols, in which all arguments come directly from the higher layer, and all return codes, output parameters, and exceptions are passed unmodified.

Some RPC technical specifications specify protocols that use the **Distributed Component Object Model (DCOM)** as their transport, which uses the TCP/IP RPC protocol sequence. Such protocols can use the DCOM security and authentication framework and interface activation.

RPC technical specifications use **Interface Definition Language (IDL)** to specify the syntax of protocol methods and marshaling of protocol data. Such interface definitions can be compiled by using the **Microsoft Interface Definition Language (MIDL)** compiler with command-line parameters, as follows: "midl /target NT60 /nologo". To avoid duplicating the definitions of common data types, RPC protocol IDL sections can contain one or more import directives for IDL data from other technical specifications, including the following:

- [MS-DCOM]: Distributed Component Object Model (DCOM) Remote Protocol Specification Appendix A: Full IDL (section 6)

- [MS-DTYP]: Windows Data Types Appendix A: Full MS-DTYP IDL (section 5)

- [MS-OAUT]: OLE Automation Protocol Specification Appendix A: Full IDL (section 6)

RPC technical specifications can contain the following types of normative information, where applicable.

- Class IDs or **UUIDs** of interfaces

- Classes of functionality (roles)

- Custom-marshaled data structures

- Data definitions (constants, enumerations, structures, and so on)

- **Directory service schema** classes and attributes

- Encryption

- Microsoft Interface Definition Language (MIDL) options

- **Named pipes**

- Schemas and namespaces

- Security service provider

- Standard **TCP** or **UDP** port

- State machine description

- Well-known **endpoints**

All RPC technical specifications specify the following normative references:

- [C706] The Open Group, "DCE 1.1: Remote Procedure Call", C706, August 1997, http://www.opengroup.org/public/pubs/catalog/c706.htm

- [MS-RPCE]: Remote Procedure Call Protocol Extensions

For DCOM-based RPC protocols, the following normative reference is included:

- [MS-DCOM]: Distributed Component Object Model (DCOM) Remote Protocol Specification

If the RPC protocol references directory service schema element class/attribute pairs, one or more of the following normative reference may be appropriate:

- [MS-ADA1]: Active Directory Schema Attributes A-L

- [MS-ADA2]: Active Directory Schema Attributes M

- [MS-ADA3]: Active Directory Schema Attributes N-Z

- [MS-ADSC]: Active Directory Schema Classes

- [MS-ADLS]: Active Directory Lightweight Directory Services Schema

If the RPC protocol specifies **XML namespaces**, one of the following normative references may be appropriate:

- [XMLNS-2ED] World Wide Web Consortium, "Namespaces in XML 1.0 (Second Edition)", August 2006, http://www.w3.org/TR/2006/REC-xml-names-20060816/

- [XMLNS] World Wide Web Consortium, "Namespaces in XML 1.0 (Third Edition)", December 2009, http://www.w3.org/TR/2009/REC-xml-names-20091208/

2.2.7 SOAP

A SOAP technical specification describes packet-based protocols. Unlike block technical specifications, SOAP technical specifications specify request/response, SOAP-based protocols that use Web Services Description Language (WSDL). SOAP technical specifications typically apply to Web services.

A SOAP technical specification uses the mechanisms defined in XML Schema and WSDL to define the protocol as closely as those mechanisms allow. SOAP services support the feature of returning XML Schema and WSDL documents that describe the protocol that the service implements. If the XML Schema includes character data that follows a particular grammar that cannot be described in the XML Schema, the grammar may be defined in the technical specification, or a normative reference to the grammar definition is provided. If the character data has some internal syntax that is not defined in a normative reference, the syntax is specified in the technical specification by using "Augmented" BNF (ABNF).

If the XML Schema includes binary data that follows a particular grammar that cannot be described in the XML Schema, the grammar is defined in the technical specification, or a normative reference to the grammar definition is provided. If the grammar is defined in the technical specification, the packet definition format used in block technical specifications (see section 2.2.2) may be used.

SOAP technical specifications can contain the following types of normative information, where applicable:

▪ Augmented Backus–Naur Form (ABNF) syntax

▪ Classes of functionality (roles)

▪ Directory service schema elements

▪ Schemas and namespaces

▪ State machine description

▪ WSDL messages

All SOAP technical specifications specify the following normative references:

▪ [WSDL] Christensen, E., Curbera, F., Meredith, G., and Weerawarana, S., "Web Services Description Language (WSDL) 1.1", W3C Note, March 2001, http://www.w3.org/TR/2001/NOTE-wsdl-20010315

▪ [XMLNS] World Wide Web Consortium, "Namespaces in XML 1.0 (Third Edition)", December 2009, http://www.w3.org/TR/2009/REC-xml-names-20091208/

▪ [XMLSCHEMA1] Thompson, H.S., Ed., Beech, D., Ed., Maloney, M., Ed., and Mendelsohn, N., Ed., "XML Schema Part 1: Structures", W3C Recommendation, May 2001, http://www.w3.org/TR/2001/REC-xmlschema-1-20010502/

▪ [XMLSCHEMA2] Biron, P.V., Ed., and Malhotra, A., Ed., "XML Schema Part 2: Datatypes", W3C Recommendation, May 2001, http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/

One or more of the following additional references are commonly cited in SOAP technical specifications:

▪ [RFC2396] Berners-Lee, T., Fielding, R., and Masinter, L., "Uniform Resource Identifiers (URI): Generic Syntax", RFC 2396, August 1998, http://www.ietf.org/rfc/rfc2396.txt

▪ [RFC2616] Fielding, R., et al., "Hypertext Transfer Protocol -- HTTP/1.1", RFC 2616, June 1999, http://www.ietf.org/rfc/rfc2616.txt

▪ [RFC2818] Rescorla, E., "HTTP Over TLS", RFC 2818, May 2000, http://www.ietf.org/rfc/rfc2818.txt

▪ [SOAP1.1] Box, D., Ehnebuske, D., Kakivaya, G., Layman, A., Mendelsohn, N., Nielsen, H. F., Thatte, S., and Winer, D., "Simple Object Access Protocol (SOAP) 1.1", May 2000, http://www.w3.org/TR/2000/NOTE-SOAP-20000508/

▪ [SOAP1.2-1/2007] Gudgin, M., Hadley, M., Mendelsohn, N., et al., "SOAP Version 1.2 Part 1: Messaging Framework (Second Edition) ", W3C Recommendation 27, April 2007, http://www.w3.org/TR/2007/REC-soap12-part1-20070427/

- [SOAP1.2-2/2007] Gudgin, M., Hadley, M., Mendelsohn, N., et al., "SOAP Version 1.2 Part 2: Adjuncts (Second Edition)", W3C Recommendation, April 2007, http://www.w3.org/TR/2007/REC-soap12-part2-20070427

- [XML-INFOSET] Cowan, John, and Tobin, Richard, "XML Information Set (Second Edition)", W3C Recommendation, February 2004, http://www.w3.org/TR/2004/REC-xml-infoset-20040204

- [XML10] World Wide Web Consortium, "Extensible Markup Language (XML) 1.0 (Third Edition)", February 2004, http://www.w3.org/TR/REC-xml

If the SOAP protocol specifies directory service schema element class/attribute pairs, one or more of the following normative references may be appropriate:

- [MS-ADA1]: Active Directory Schema Attributes A-L

- [MS-ADA2]: Active Directory Schema Attributes M

- [MS-ADA3]: Active Directory Schema Attributes N-Z

- [MS-ADSC]: Active Directory Schema Classes

- [MS-ADLS]: Active Directory Lightweight Directory Services Schema

2.2.8 Standards Support

A structure support technical specification describes how a Microsoft implementation or set of implementations conform to or vary from an existing specification such as a standard, a third-party specification, or any published specification.

A standards support document is essentially an appendix of implementation choices made and information about those choices. For example, a standard might specify that an implementation should provide any of seven date/time values. A standards support document would indicate which date/time values are supported in the Microsoft implementation. If the implementation provides an eighth value—that is, one not from the standard, that variance from the standard would be defined in a normative section of the standards support document.

Standards support technical specifications can contain the following types of normative information, where applicable:

- Error handling variations from the standard

- Extensions to the standard

- Normative variations from the standard

2.3 Reference Documents

Reference documents specify informative information that is supplementary to the overview and technical documents in the Windows documentation set and are generally not specific to a particular protocol or technical area. They consolidate related information and are intended to be helpful for understanding and using the documentation set.

Reference documents contain the following categories of information:

- Shared abstract data model elements

- Windows protocols master glossary

- Windows protocols master reference directory

- Windows protocols Unicode reference

2.3.1 Shared Abstract Data Model Elements

This reference is a companion reference to the protocol specifications, which describes the public abstract data model (ADM) elements that are shared between two or more protocols in the Windows protocols documentation set. It is presented in the following document:

- [MS-ADMS]: Shared Abstract Data Model Elements

A public ADM element is an element that can be directly accessed from outside a protocol. For each public ADM element, this document lists the specifications, section numbers, and names of the local elements that access the public ADM element.

The following specific topics are covered by [MS-ADMS]:

- ADM elements that are shared among systems

- An ADM for the Group Policy system, defining containers for policy and configuration data

- An ADM for the Rights Management Services system for maintaining machine and account certificates

- An ADM for Windows Server Update Services for maintaining state data used for communication among servers and between client and server.

2.3.2 Windows Protocols Master Glossary

This reference provides a listing of all global terms used in the specifications of the Windows protocols documentation set. They are presented in the following document:

- [MS-GLOS]: Windows Protocols Master Glossary

This reference contains the terms, with their definitions, which are used in more than one document in the documentation set. An individual technical specification may define additional terms that are used exclusively within that document. The global terms are listed alphabetically, and acronyms for terms are provided where appropriate.

Some terms have more than one definition. Multiple definitions are denoted by a number in parentheses: "(1)", "(2)", and so on. When a term with multiple definitions is used in a technical specification, the ordinal of the applicable definition is specified in the list of global terms in the glossary section. The ordinal does not appear where the term is used in the body of the document.

2.3.3 Windows Protocols Master Reference

This reference provides a listing of all normative and informative references that are used in the specifications of the Windows protocols documentation set. They are presented in the following document:

- [MS-REF]: Windows Protocols Master Reference

Each reference is assigned a short name (Naming Conventions (section 1.3.3)) that is used in technical specifications to cite the reference. The following information is provided in the Windows protocols master reference:

- A list of external references, alphabetized by document short name. External references refer to sources of information outside the Windows protocols documentation set. Both Microsoft and non-Microsoft sources of information are represented, including published standards.

- A list of internal references, alphabetized by document short name. Internal references refer to documents produced within Microsoft that have short name prefixes "MC" or "MS". This group includes all the documents in the Windows protocols documentation set, but may include others as well.

- Links to the internal and external references.

- Version and date of publication for external references.

- A contact email to request assistance for finding normative references.

- An indication of whether a charge is required to download the reference. This applies to external references only, and any charges are imposed by an external entity, not Microsoft.

The documents listed in the master reference are not identified as normative or informative. That designation is specific to the technical specifications that cite the references. In general, however, the following documents can be cited normatively:

- Documents published by Standards Bodies (section 2.4.2).

- Request for Comment (RFC) documents.

- Specifications in the Windows protocols documentation set.

In general, the following documents may only be cited informatively:

- [MS-GLOS]: Windows Protocols Master Glossary

- MSDN documents

- Internal documents that are not part of the Windows protocols documentation set

2.3.4   Windows Protocols Unicode Reference

This reference provides related **Unicode** processing algorithms on the Windows platform, including **Unicode string** comparison and conversion of Unicode to legacy **code pages**. They are presented in the following document:

- [MS-UCODEREF]: Windows Protocols Unicode Reference

The following information is provided in the Windows protocols Unicode reference:

- **UTF-16** string comparison: Provides linguistic-specific comparisons between two Unicode strings and provides the comparison result based on the language and region for a specific user.

- Mapping of UTF-16 strings to earlier **ANSI** code pages: Converts Unicode strings to strings in the earlier code pages that are used in older versions of Windows and the applications that are written for these earlier code pages.

- The mechanism for the transport of Windows protocols Unicode reference messages.

- Windows protocols Unicode reference message syntax.

2.4 External References

This section describes general categories of external references used by the Windows protocols documentation set, including the following:

▪ Information made available by the Microsoft Corporation

▪ Documents published by standards bodies.

2.4.1 Microsoft Corporation

Microsoft makes available supplementary documentation that may be cited by Windows technical documents to provide helpful information to the implementer, including the following:

▪ Interoperability documents from other divisions of Microsoft, including Microsoft Office Protocols, Exchange Server Protocols, SharePoint Products and Technologies Protocols, and Microsoft SQL Server Protocols.

▪ Microsoft Developers Network (MSDN) articles, providing informative content and resources around specific products and technologies.

▪ The TechNet wiki, providing community-generated content about Microsoft technologies.

2.4.2 Standards Bodies

This section describes the information from non-Microsoft standards bodies that is cited normatively and informatively in the Windows protocols documentation set.

American National Standards Institute (ANSI)**:** Represents the U.S. standards and conformity assessment system and oversees the creation and use of norms and guidelines in nearly all business sectors. ANSI also accredits programs that assess conformance to standards and operates the National Standards System Network (NSSN).

   International Committee on Information Technology Standards (INCITS)**:** INCITS is part of ANSI. It is the primary U.S. standards group in the field of Information and Communications Technologies (ICT), encompassing storage, processing, transfer, display, management, organization, and retrieval of information. INCITS also serves as ANSI's Technical Advisory Group for ISO/IEC Joint Technical Committee 1. JTC 1 is responsible for international standardization in the field of Information Technology.

Distributed Management Task Force (DMTF)**:** An IT industry organization that facilitates the development, validation, and promotion of systems management standards.

ECMA International**:** Standards organization for communications technology and consumer electronics.

Federal Information Processing Standards (FIPS)**:** Standards and guidelines issued by the National Institute of Standards and Technology (NIST). NIST develops FIPS when there are compelling Federal government requirements such as for security and interoperability and there are no acceptable industry standards or solutions.

Institute of Electrical and Electronics Engineers (IEEE) Standards Association**:** The IEEE-SA helps develop and advance global technologies by creating standards that drive the functionality, capabilities. and interoperability of a wide range of products and services.

International Organization for Standardization (ISO)**:** ISO is a network of the national standards institutes of 161 countries. Member institutions come from both government and the private

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sector. ISO enables a consensus to be reached on solutions that meet both the requirements of business and the broader needs of society.

International Telecommunications Union (ITU): The United Nations agency for information and communication technology issues, and the global focal point for governments and the private sector in developing networks and services.

Internet Assigned Numbers Authority (IANA): The organization responsible for coordinating some of the key elements that keep the Internet running smoothly. IANA provides technical coordination of key parts of the Internet.

Internet Engineering Task Force (IETF): The IETF helps to make the Internet work better by producing high quality, relevant technical documents that influence the way people design, use, and manage the Internet.

Internet Society (ISOC): The Internet Society (ISOC) is a nonprofit organization that provides leadership in Internet -related standards, education, and policy.

National Institute of Standards and Technology (NIST): An agency of the U.S. Department of Commerce, the mission of NIST is to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life.

Organization for the Advancement of Structured Information Standards (OASIS): OASIS is a nonprofit consortium that drives the development, convergence and adoption of open standards. OASIS promotes industry consensus and produces worldwide standards for security, cloud computing, SOAP, web services, the Smart Grid, electronic publishing, emergency management, and other areas.

The Open Group: The Open Group is a vendor- and technology-neutral consortium that works towards enabling access to integrated information within and between enterprises based on open standards and global interoperability.

The Unicode Consortium: The Unicode Consortium is a nonprofit organization that develops standards in the area of internationalization including defining the behavior and relationships between Unicode characters.

Trusted Computing Group, Trusted Network Connect: The Trusted Computing Group (TCG) is a nonprofit organization that is focused on developing, defining, and promoting open standards for trusted computing. TCG's Trusted Network Connect (TNC) network security offers interoperable standards for secure guest access, user authentication, endpoint integrity, clientless endpoint management, and coordinated security.

World Wide Web Consortium (W3C): The W3C is an international community that develops standards to ensure the long-term growth of the web. The W3C mission is to develop protocols and guidelines that ensure the long-term growth of the web.

2.4.3 RFCs

RFCs constitute a large body of standards and proposed standards describing methods, behaviors, research, and innovations applicable to the working of network-connected systems. Technical specifications in the Windows documentation set make numerous references to RFCs via the RFC Editor website.

3   Navigating the Documentation Set

This section describes how to navigate within the online MSDN Library to find information in the Windows protocols documentation set. Navigating to the Windows protocols documentation set starts at the Open Specifications node of the MSDN Library as shown in the following diagram. All documents can be reached from this node.
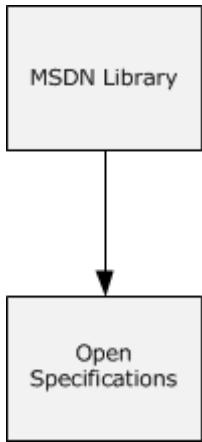
Figure 2: Open specifications

The subsections that follow describe:

- Finding documents by MSDN Library node: The structure of the Open Specifications node and the documents within it.

- Finding documents by document type: Where specific types of documents are located in the MSDN Library.

- Finding documents by document links: How documents are linked to each other.

A complete site map of the Open Specifications node tree for the Windows protocols documentation set is presented in Appendix B: Open Specification Site Map (section 5).

3.1   By MSDN Node

This section describes the documents in the Windows protocols documentation set that are found in each node of the MSDN Library, starting from the Open Specifications node. That node contains the nodes shown in the following diagram:
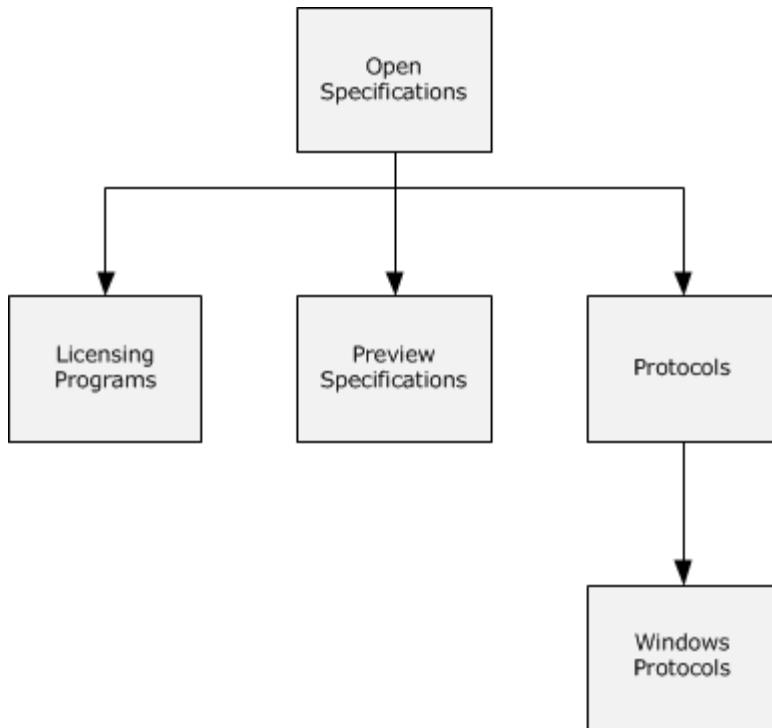
Figure 3: Open specifications with additional nodes

The nodes shown in the diagram can be traversed to reach overview and reference documents and technical specifications in the Windows protocols documentation set. They reflect the different ways in which access to the Windows protocols documentation set is organized, as follows:

- Licensing Programs: This node is organized according to the MIP and WSPP licensing programs described in Licensing (section 1.6). This node is described in section 3.1.1.

- Preview Specifications: This node provides access to prerelease versions of documents in the Windows protocols documentation set for community review and feedback. The preview periods for each specification presented in this way are determined by the individual teams responsible for the documentation. Not every specification will be published for preview. After the preview period, the preview specification will be published in the appropriate location in the overall Open Specifications library for further reference.

- Windows Protocols: This node is organized according to document type and interoperability.

  - Overview documents

  - Technical documents

  - References

  This node is described in section 3.1.2.

3.1.1   Licensing Programs

The Licensing Programs node is reached from the Open Specifications node as shown in the section By Node (section 3.1). From this node it is possible to navigate to the nodes shown in the following diagram:
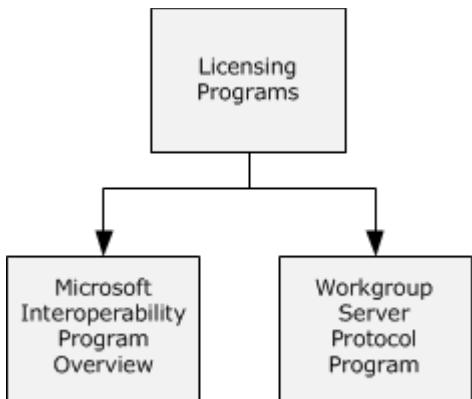
Figure 4: Licensing programs

The nodes shown in the diagram reflect the different Licensing Programs (section 3.1.1) that are available to the implementer. These nodes are described in the following subsections.

3.1.1.1   Microsoft Interoperability Program Overview

The Microsoft Interoperability Program (MIP) Overview node is reached from the Licensing Programs node as shown in Licensing Programs (section 3.1.1). From this node it is possible to navigate to the nodes shown in the following diagram:
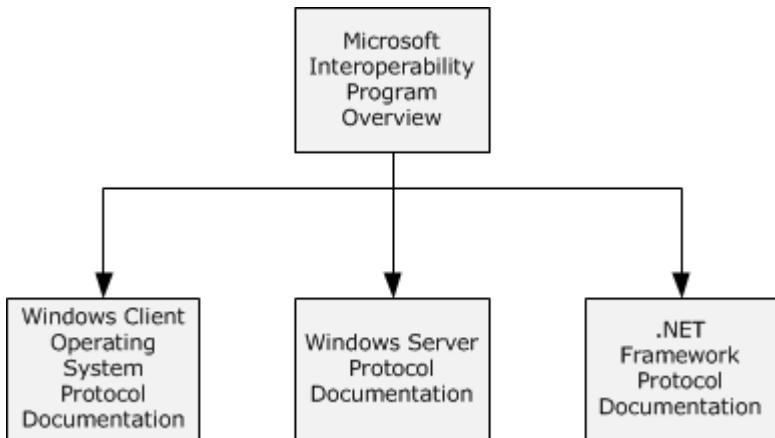
Figure 5: Microsoft interoperability program overview

The nodes shown in the diagram contain links to documents in the Windows protocols documentation set, as follows:

▪ Windows Client Operating System Protocol Documentation: This node contains links to technical specifications and overview documents for protocols that are implemented in the Windows Client Operating System and are used to communicate with Microsoft server software products.

This node also contains links to the following reference documents:

- [MS-GLOS]: Windows Protocols Master Glossary

- [MS-REF]: Windows Protocols Master Reference

- [MS-UCODEREF]: Windows Protocols Unicode Reference

- Windows Server Protocol Documentation: This node contains links to technical specifications and overview documents for protocols that are implemented in the Windows Server operating system and are used to communicate with other Microsoft server software products.

  This node also contains links to the following reference documents:

  - [MS-GLOS]: Windows Protocols Master Glossary

  - [MS-REF]: Windows Protocols Master Reference

- .NET Framework Protocol Documentation: This node contains links to technical specifications and overview documents for protocols that are implemented in an instance of the .NET Framework that are used to communicate with another instance of the .NET Framework.

  This node also contains links to the following reference documents:

  - [MS-GLOS]: Windows Protocols Master Glossary

  - [MS-REF]: Windows Protocols Master Reference

3.1.1.2   Workgroup Server Protocol Program

The Workgroup Server Protocol Program (WSPP) node is reached from the Licensing Programs node as shown in Licensing Programs (section 3.1.1). From this node it is possible to navigate to the nodes shown in the following diagram:
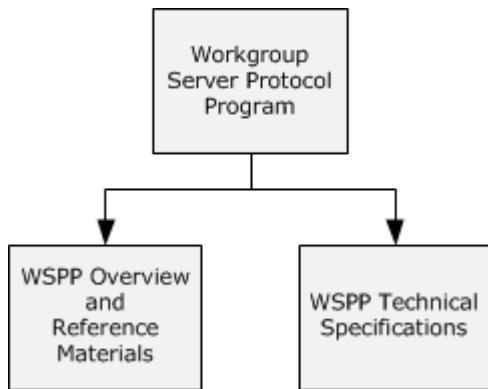
Figure 6: Workgroup Server Protocol Program

The nodes shown in the diagram contain links to documents in the Windows protocols documentation set, as follows:

- WSPP Overview and Reference Materials: This node contains links to overview documents for the WSPP licensing program.

  This node also contains links to the following technical specifications:

- ▪ [MS-ERREF]: Windows Error Codes

- ▪ [MS-LCID]: Windows Language Code Identifier (LCID) Reference

This node also contains links to the following reference documents:

- ▪ [MS-GLOS]: Windows Protocols Master Glossary

- ▪ [MS-REF]: Windows Protocols Master Reference

- ▪ [MS-UCODEREF]: Windows Protocols Unicode Reference

- ▪ WSPP Technical Specifications: This node contains links to technical specifications for protocols, including extensions to industry-standard or other published protocols, which are used by Windows Server operating system to provide file and print, and user and group administration services to Windows workgroup networks.

3.1.2   Windows Protocols

The Windows Protocols node is reached from the Open Specifications node. From this node it is possible to navigate to the nodes shown in the following diagram:
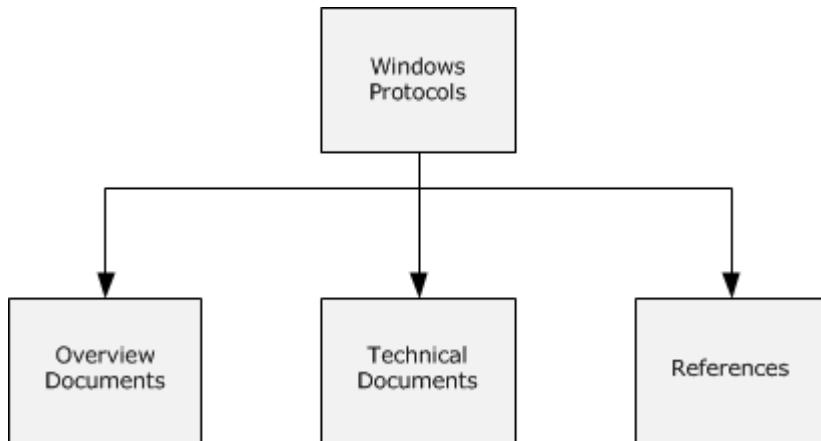
Figure 7: Windows protocols

The nodes shown in the diagram contain links to documents in the Windows protocols documentation set, as follows:

- ▪ Overview Documents: This node contains links to the following overview documents:

  - ▪ [MS-ADOD]: Active Directory Protocols Overview

  - ▪ [MS-AUTHSOD]: Authentication Services Protocols Overview

  - ▪ [MS-AZOD]: Authorization Protocols Overview

  - ▪ [MS-CCROD]: Content Caching and Retrieval Protocols Overview

  - ▪ [MS-CERSOD]: Certificate Services Protocols Overview

  - ▪ [MS-DOCO]: Windows Protocols Documentation Roadmap

  - ▪ [MS-FASOD]: File Access Services Protocols Overview

- [MS-FSMOD]: File Services Management Protocols Overview

- [MS-GPOD]: Group Policy Protocols Overview

- [MS-MQOD]: Message Queuing Protocols Overview

- [MS-MSSOD]: Media Streaming Server Protocols Overview

- [MS-NAPOD]: Network Access Protection Protocols Overview

- [MS-NETOD]: Microsoft .NET Framework Protocols Overview

- [MS-PRSOD]: Print Services Protocols Overview

- [MS-RDSOD]: Remote Desktop Services Protocols Overview

- [MS-RMSOD]: Rights Management Services Protocols Overview

- [MS-STOROD]: Storage Services Protocols Overview

- [MS-TPSOD]: Transaction Processing Services Protocols Overview

- [MS-WMOD]: Windows Management Protocols Overview

- [MS-WPO]: Windows Protocols Overview

- [MS-WSUSOD]: Windows Server Update Services Protocols Overview

- Technical Documents: This node contains links to technical specifications for protocols, including extensions to industry-standard or other published protocols, which are used by Windows Server operating system to interoperate with Windows client operating systems.

  This node also contains a link to the following reference document:

  - [MS-ADMS]: Shared Abstract Data Model Elements

- References: This node contains links to the following reference documents:

  - [MS-GLOS]: Windows Protocols Master Glossary

  - [MS-REF]: Windows Protocols Master Reference

  - [MS-UCODEREF]: Windows Protocols Unicode Reference

  This node also contains links to the following technical specifications:

  - [MS-DTYP]: Windows Data Types

  - [MS-ERREF]: Windows Error Codes

  - [MS-LCID]: Windows Language Code Identifier (LCID) Reference

3.2   By Document Type

This section describes how to find documents in the Windows protocols documentation set according to the document types described in Documentation Contents (section 2):

- Overview documents

- Technical specifications

- Reference documents

This information is presented relative to the following nodes:

- Licensing Programs

- Windows Protocols

The locations of these nodes relative to the Open Specifications node is shown in By Node (section 3.1).

3.2.1 Licensing Programs

This section shows the location of documents by type relative to the Licensing Programs node.

3.2.1.1 Overview Documents

Overview documents of the Windows protocols documentation set can be reached from the Licensing Programs node as shown in the following diagram:
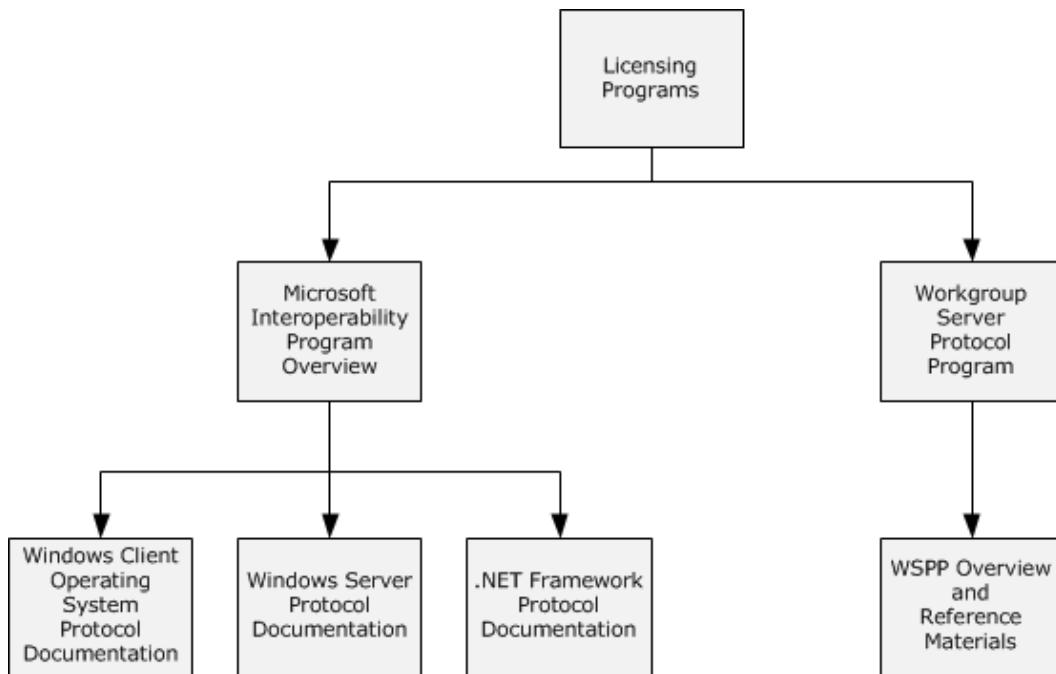
Figure 8: Overview documents

The nodes shown in the diagram contain links to documents in the Windows protocols documentation set, as follows:

- Windows Client Operating System Protocol Documentation: This node contains links to overview documents for protocols that are implemented in the Windows client operating system.

- Windows Server Protocol Documentation: This node contains links to overview documents for protocols that are implemented in the Windows Server operating system.

- .NET Framework Protocol Documentation: This node contains links to overview documents for protocols that are implemented in an instance of the .NET Framework.

- WSPP Overview and Reference Materials: This node contains links to overview documents for the WSPP licensing program.

3.2.1.2 Technical Specifications

Technical specifications of the Windows protocols documentation set can be reached from the Licensing Programs node as shown in the following diagram:
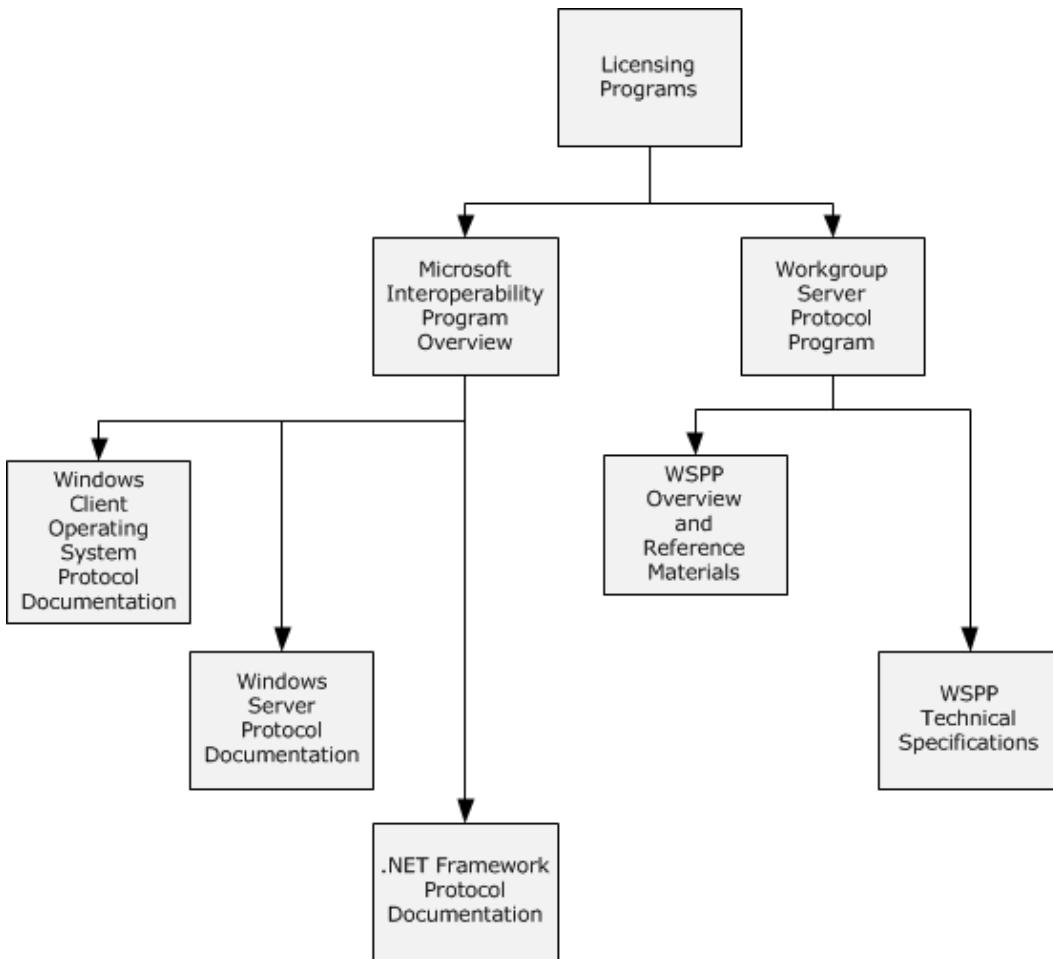
Figure 9: Technical specifications

The nodes shown in the diagram contain links to documents in the Windows protocols documentation set, as follows:

- Windows Client Operating System Protocol Documentation: This node contains links to technical specifications for protocols that are implemented in the Windows client operating system and are used to communicate with Microsoft server software products.

- **Windows Server Protocol Documentation**: This node contains links to technical specifications for protocols that are implemented in the Windows Server operating system and are used to communicate with other Microsoft server software products.

- **.NET Framework Protocol Documentation**: This node contains links to technical specifications for protocols that are implemented in an instance of the .NET Framework that are used to communicate with another instance of the .NET Framework.

- **WSPP Overview and Reference Materials**: This node contains links to the following technical specifications:

  - [MS-ERREF]: Windows Error Codes

  - [MS-LCID]: Windows Language Code Identifier (LCID) Reference

- **WSPP Technical Specifications**: This node contains links to technical specifications for protocols, including extensions to industry-standard or other published protocols, which are used by Windows servers to provide file and print, and user and group administration services to Windows workgroup networks.

3.2.1.3   Reference Documents

Reference documents of the Windows protocols documentation set can be reached from the Licensing Programs node as shown in the following diagram:
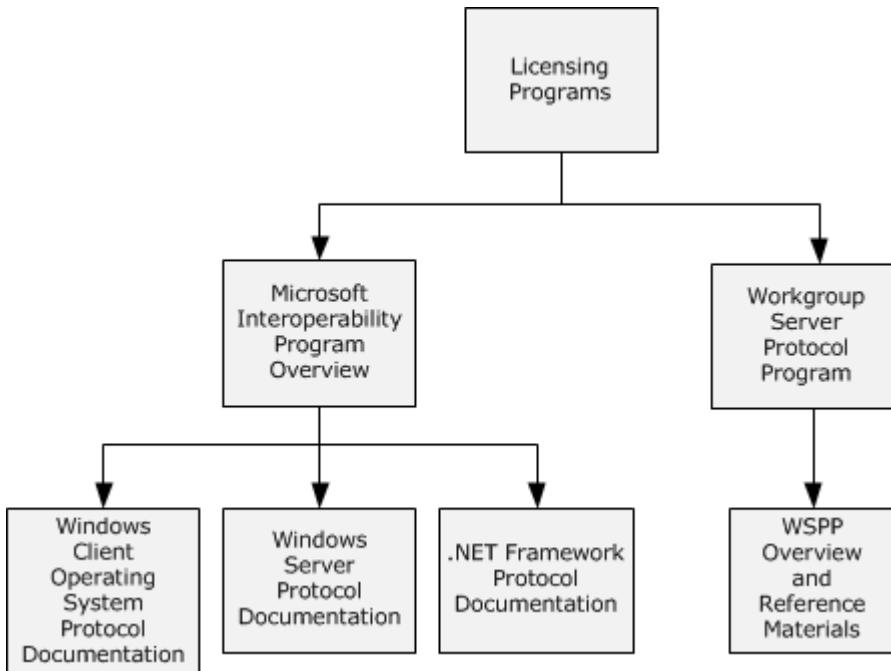
Figure 10: Reference documents

The nodes shown in the diagram contain links to documents in the Windows protocols documentation set, as follows:

- **Windows Client Operating System Protocol Documentation**: This node contains links to the following reference documents:

- - [MS-GLOS]: Windows Protocols Master Glossary

  - [MS-REF]: Windows Protocols Master Reference

  - [MS-UCODEREF]: Windows Protocols Unicode Reference

- Windows Server Protocol Documentation: This node contains links to the following reference documents:

  - [MS-GLOS]: Windows Protocols Master Glossary

  - [MS-REF]: Windows Protocols Master Reference

- .NET Framework Protocol Documentation: This node contains links to technical specifications and overview document for protocols that are implemented in an instance of the .NET Framework that are used to communicate with another instance of the .NET Framework.

  This node also contains links to the following reference documents:

  - [MS-GLOS]: Windows Protocols Master Glossary

  - [MS-REF]: Windows Protocols Master Reference

- WSPP Overview and Reference Materials: This node contains links to the following reference documents:

  - [MS-GLOS]: Windows Protocols Master Glossary

  - [MS-REF]: Windows Protocols Master Reference

  - [MS-UCODEREF]: Windows Protocols Unicode Reference

3.2.2 Windows Protocols

This section shows the location of documents by type relative to the Windows Protocols node.

3.2.2.1 Overview Documents

Overview documents of the Windows protocols documentation set can be reached from the Windows Protocols node as shown in the following diagram:
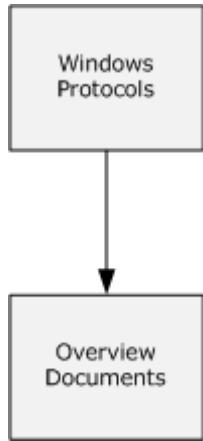
Figure 11: Overview documents

The node shown in the diagram contains links to documents in the Windows protocols documentation set, as follows:

▪ Overview Documents: This node contains links to the overview documents listed in Windows Protocols (section 3.1.2).

3.2.2.2 Technical Specifications

Technical specifications of the Windows protocols documentation set can be reached from the Windows Protocols node as shown in the following diagram:
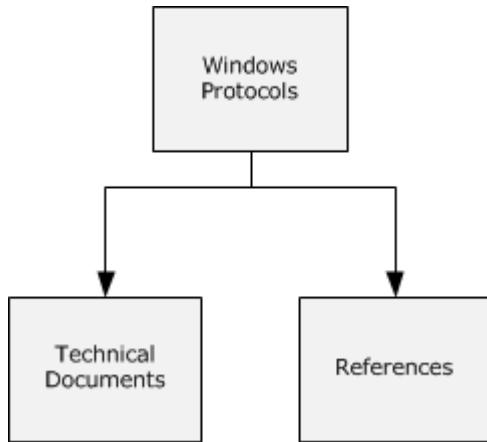

Figure 12: Technical specifications

The nodes shown in the diagram contain links to documents in the Windows protocols documentation set, as follows:

▪ Technical Documents: This node contains links to technical specifications for protocols, including extensions to industry-standard or other published protocols, which are used by Windows servers to interoperate with Windows client operating systems.

▪ References: This node contains links to the following technical specifications:

  ▪ [MS-DTYP]: Windows Data Types

  ▪ [MS-ERREF]: Windows Error Codes

  ▪ [MS-LCID]: Windows Language Code Identifier (LCID) Reference

3.2.2.3 Reference Documents

Reference documents of the Windows protocols documentation set can be reached from the Windows Protocols node as shown in the following diagram:

Release: Thursday, February 13, 2014
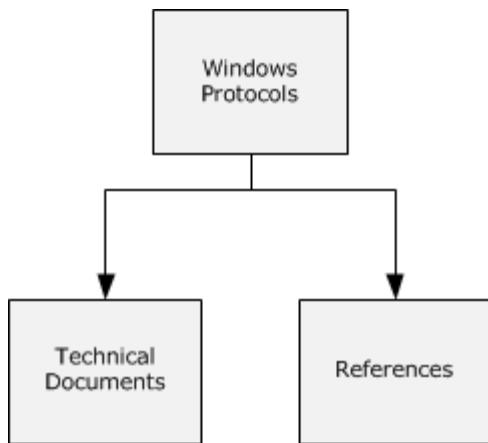
Figure 13: Reference documents

The nodes shown in the diagram contain links to documents in the Windows protocols documentation set, as follows:

▪ Technical Documents: This node contains a link to the following reference document:

  ▪ [MS-ADMS]: Shared Abstract Data Model Elements

▪ References: This node contains links to the following reference documents:

  ▪ [MS-GLOS]: Windows Protocols Master Glossary

  ▪ [MS-REF]: Windows Protocols Master Reference

  ▪ [MS-UCODEREF]: Windows Protocols Unicode Reference

3.3 By Document Reference

it is possible to navigate to every other document in the Windows protocols documentation set from the Windows Protocols Documentation Roadmap. The following figure shows the hierarchy of document references in the Windows protocols documentation set:
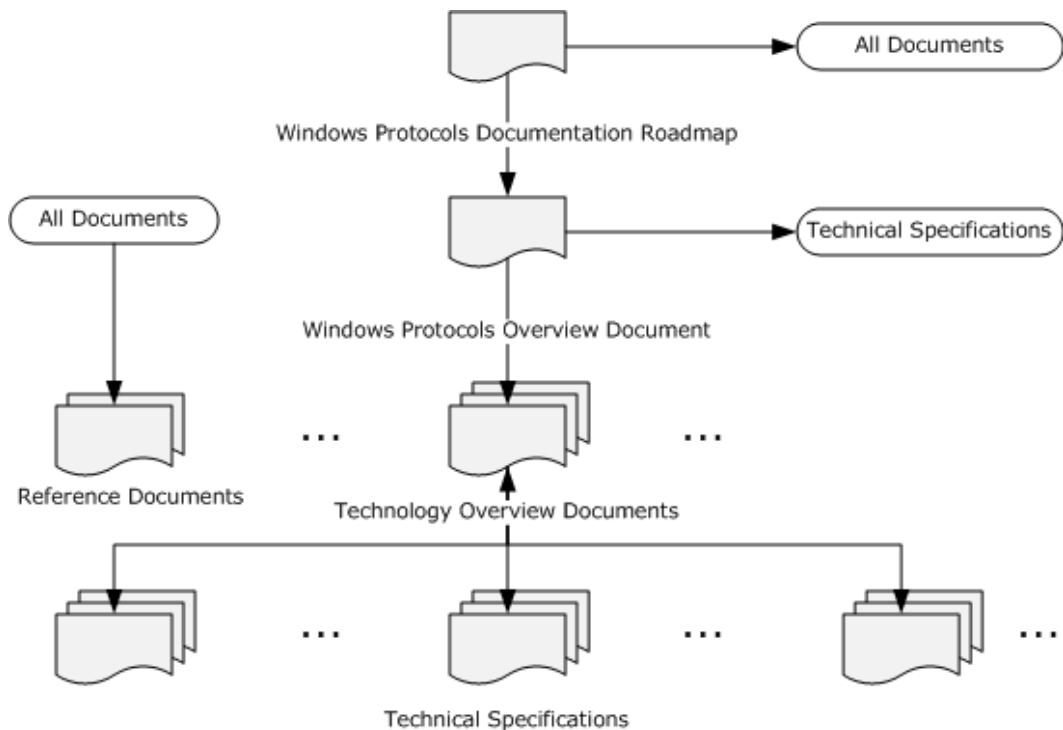
Figure 14: Links in the Windows protocols documentation set

The connections represented in this figure can be summarized as follows:

- The Windows Protocols Documentation Roadmap contains links to all other types of documents.

- The Windows Protocols Overview contains links to technology overviews, technical specifications, and reference documents.

- Technology overview documents contain links to technical specifications and reference documents.

- Technical specifications contain links to technology overviews and reference documents.

- All documents can contain links to reference documents.

The contents of each type of document shown in the figure are described in Documentation Contents (section 2).

Each technical specification contains lists of the normative and informative references it cites, with links. References that are part of the Windows protocols documentation set do not include dates of publication, because the citations always link to the latest version. References to other documents include a publishing year when one is available.

The subsections in this section describe the types of links in the Windows protocols documentation set.

3.3.1 Normative References

Normative content refers to information that must be available in order to understand or implement the technology defined in a technical specification, or whose technology must be present for the technology defined in a technical specification to work.

References to normative content are distinguished by the use of the verb "defined" or "specified", or the noun "details".

3.3.1.1 External Normative References

External normative references include citations to the following:

- Documents published by standards organizations, including those listed in section 2.4.2.

- RFCs, described in section 2.4.3.

- Normative content in other technical specifications in the Windows protocols documentation set.

All external normative references must be listed in the normative references section of the referencing technical specification.

3.3.1.2 Internal Normative References

Internal normative references include citations to normative content within a technical specification. The sections—including subsections—that include normative content in a technical specification are defined according to the template type, as follows:

Algorithm protocol template:

- 1.6 Standards Assignments

- 2.0 Algorithm Details

Block, HTTP, RPC, and SOAP protocol templates:

- 1.5 Prerequisites and Preconditions

- 1.8 Vendor Extensible Fields

- 1.9 Standards Assignments

- 2.0 Messages

- 3.0 Protocol Details

Data and file structure templates:

- 1.7 Vendor -Extensible Fields

- 2.0 Structures

3.3.2 Informative References

Informative content refers to information that is not required in order to understand or implement the technology defined in a technical specification. It provides supplementary information that is relevant to the technology, such as background or historical information. Informative references are not required to implement the technology in the subject protocol.

References to informative content are distinguished by the use of the verb "described", or the noun "information".

3.3.2.1 External Informative References

External informative references can include the following:

- Any content that can be a normative reference.

- [MSDN](#) articles.

- Overview documents in the Windows protocols documentation set.

- Informative content in other technical specifications.

- Reference documents.

All external informative references must be listed in the informative references section of the referencing technical specification.

3.3.2.2 Internal Informative References

Internal informative references can include citations to informative content within a technical specification. Informative content is all non-normative content, including Windows product behavior.

4 Appendix A: Cross-Reference Matrixes

4.1 Technical Specification Cross-Reference Matrix

This section contains a table that provides, for each technical specification, the following information:

- A link to the document

- Document title

- Template type (section 2.2)

- Technical area (section 2)

- Protocols specified

- Other technical specifications normatively cited

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
[MC-BUP]	Background Intelligent Transfer Service (BITS) Upload Protocol Specification	Block	Systems Management	Background Intelligent Transfer Service (BITS) Upload Protocol	[MS-BPCR] [MS-ERREF] [MS-NTHT] [MS-SMB]
[MC-CCFG]	Server Cluster: Configuration (ClusCfg) Protocol Specification	RPC	Systems Management	Server Cluster: Configuration (ClusCfg) Protocol	[MS-CMRP] [MS-DCOM] [MS-ERREF] [MS-OAUT] [MS-RPCE] [MS-RRP] [MS-SCMR]
[MC-COMQC]	Component Object Model Plus (COM+) Queued Components Protocol Specification	Block	Application services	Component Object Model Plus (COM+) Queued Components Protocol	[MS-COM] [MS-DCOM] [MS-MQDMPR] [MS-MQMP] [MS-MQMQ] [MS-OAUT]
[MC-CSDL]	Conceptual Schema Definition File Format	Structure	Networking	Conceptual Schema Definition File Format	None
[MC-DPL4CS]	DirectPlay 4 Protocol: Core and Service Providers Specification	Block	Multiplayer Games	DirectPlay 4 Protocol: Core and Service Providers	[MC-DPL4R] [MC-DPLVP] [MS-DPDX] [MS-ERREF]

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Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
					[MS-NLMP]
[MC-DPL4R]	DirectPlay 4 Protocol: Reliable Specification	Block	Multiplayer Games	DirectPlay 4 Protocol	[MC-DPL4CS] [MS-DPDX]
[MC-DPL8CS]	DirectPlay 8 Protocol: Core and Service Providers Specification	Block	Multiplayer Games	DirectPlay 8 Protocol: Core and Service Providers	[MC-DPL8R] [MS-DPDX] [MS-ERREF]
[MC-DPL8R]	DirectPlay 8 Protocol: Reliable Specification	Block	Multiplayer Games	DirectPlay 8 Protocol	[MS-DPDX] [MS-DTYP]
[MC-DPLHP]	DirectPlay 8 Protocol: Host and Port Enumeration Specification	Block	Multiplayer Games	DirectPlay 8 Protocol: Host and Port Enumeration	[MC-DPL8CS] [MC-DPL8R] [MS-DPDX] [MS-DTYP]
[MC-DPLNAT]	DirectPlay 8 Protocol: NAT Locator Specification	Block	Multiplayer Games	DirectPlay 8 Protocol: NAT Locator	[MC-DPL8CS] [MC-DPL8R] [MS-DPDX] [MS-DTYP]
[MC-DPLVP]	DirectPlay Voice Protocol Specification	Block	Multiplayer Games	DirectPlay Voice Protocol	[MC-DPL4CS] [MC-DPL8CS] [MC-DPL8R] [MS-DPDX] [MS-DTYP] [MS-ERREF]
[MC-DRT]	Distributed Routing Table (DRT) Version 1.0 Specification	Block	Home server	Distributed Routing Table (DRT) Version 1.0	[MS-PNRP]
[MC-DTCXA]	MSDTC Connection Manager: OleTx XA Protocol Specification	Block	Application Services	MSDTC Connection Manager: OleTx XA Protocol	[MS-CMP] [MS-CMPO] [MS-DTCO] [MS-DTYP] [MS-ERREF]
[MC-EDMX]	Entity Data Model for Data Services Packaging Format	Structure	Networking	Entity Data Model for Data Services Packaging Format	[MC-CSDL]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
[MC-IISA]	Internet Information Services (IIS) Application Host COM Protocol Specification	RPC	Application Services	Internet Information Services (IIS) Application Host COM Protocol	[MS-DTYP] [MS-ERREF] [MS-OAUT] [MS-RPCE]
[MC-MQAC]	Message Queuing (MSMQ): ActiveX Client Protocol Specification	RPC	Application Services	Message Queuing (MSMQ): ActiveX Client Protocol	[MS-ADTS] [MS-COM] [MS-DCOM] [MS-DTCO] [MS-DTYP] [MS-ERREF] [MS-MQDMPR] [MS-MQDSSM] [MS-MQMR] [MS-MQMQ] [MS-MQQB] [MS-OAUT] [MS-RPCE]
[MC-MQSRM]	Message Queuing (MSMQ): SOAP Reliable Messaging Protocol (SRMP) Specification	Block	Application Services	Message Queuing (MSMQ): SOAP Reliable Messaging Protocol (SRMP)	[MS-DTYP] [MS-MQDMPR] [MS-MQDSSM] [MS-MQMQ] [MS-MQQB]
[MC-NBFS]	.NET Binary Format: SOAP Data Structure	Structure	Application Services	.NET Binary Format: SOAP Data Structures .NET Binary Format: for XML	[MC-NBFSE] [MC-NBFX] [MC-NMF]
[MC-NBFSE]	.NET Binary Format: SOAP Extension	Structure	Application Services	.NET Binary Format: SOAP Extension .NET Binary Format for XML	[MC-NBFS] [MC-NBFX] [MC-NMF]
[MC-NBFX]	.NET Binary Format: XML Data Structure	Structure	Application Services	.NET Binary Format: XML Data Structure .NET Binary Format: for XML	[MS-OAUT]
[MC-NETCEX]	.NET Context Exchange Protocol Specification	Block	Application Services	.NET Context Exchange Protocol	None

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
[MC-NMF]	.NET Message Framing Protocol Specification	Block	Application Services	.NET Message Framing Protocol	[MC-NBFS] [MC-NBFSE] [MS-DTYP] [MS-MQMQ]
[MC-NPR]	.NET Packet Routing Protocol Specification	Block	Application Services	.NET Packet Routing Protocol	None
[MC-PRCH]	Peer Channel Protocol Specification	SOAP	Home server	Peer Channel Protocol	[MC-NBFS] [MC-NBFSE] [MC-NMF] [MS-DTYP] [MS-ERREF] [MS-WSPOL]
[MC-PRCR]	Peer Channel Custom Resolver Protocol Specification	SOAP	Home server	Peer Channel Custom Resolver Protocol	[MC-NBFS] [MC-NBFSE] [MC-NMF] [MS-DTYP] [MS-WSPOL]
[MC-SMP]	Session Multiplex Protocol Specification	Block	Application Services	Session Multiplex Protocol	[MS-DTYP]
[MC-SQLR]	SQL Server Resolution Protocol Specification	Block	Application Services	SQL Server Resolution Protocol	None
[MS-ABTP]	Automatic Bluetooth Pairing Protocol	Block	Device-Specific	Automatic Bluetooth Pairing Protocol	None
[MS-ADA1]	Active Directory Schema Attributes A-L	Structure	Directory Services	Active Directory Schema Attributes A-L	[MS-ADA3] [MS-ADTS] [MS-DTYP] [MS-LSAD] [MS-SAMR]
[MS-ADA2]	Active Directory Schema Attributes M	Structure	Directory Services	Active Directory Schema Attributes M	[MS-ADTS] [MS-DRSR] [MS-DTYP] [MS-LSAD] [MS-RCMP] [MS-SAMR]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
[MS-ADA3]	Active Directory Schema Attributes N-Z	Structure	Directory Services	Active Directory Schema Attributes N-Z	[MS-ADSC] [MS-ADTS] [MS-DRSR] [MS-DTYP] [MS-LSAD] [MS-SAMR]
[MS-ADCAP]	Active Directory Web Services: Custom Action Protocol Specification	SOAP	Directory Services	Active Directory Web Services: Custom Action Protocol	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADDM] [MS-ADLS] [MS-ADSC] [MS-ADTS] [MS-DRSR] [MS-DTYP] [MS-ERREF] [MS-NNS] [MS-SAMR] [MS-WSDS] [MS-WSPELD] [MS-WSTIM]
[MS-ADDM]	Active Directory Web Services: Data Model and Common Elements	Structure	Directory Services	Active Directory Web Services: Custom Action Protocol WS-Transfer: Identity Management Operations for Directory Access Protocol Extensions WS-Transfer: Directory Services Protocol Extensions WS-Enumeration: Directory Services Protocol Extensions	[MS-ADCAP] [MS-ADTS] [MS-DTYP] [MS-ERREF] [MS-WSDS] [MS-WSPELD] [MS-WSTIM]
[MS-ADFSOAL]	Active Directory Federation Services OAuth	HTTP	Security and Identity	Active Directory Federation Services OAuth	None

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Authorization Code Lookup Protocol		Management	Authcode Lookup Protocol	
[MS-ADFSPIP]	Active Directory Federation Services and Proxy Integration Protocol	HTTP/SOAP	Security and Identity Management	Active Directory Federation Services Proxy and Web Application Proxy Integration Protocol Active Directory Federation Services and Proxy Configuration Protocol Active Directory Federation Services and Proxy Communication Protocol Federation Service Proxy Protocol	[MS-OAPX]
[MS-ADFSPP]	Active Directory Federation Service (AD FS) Proxy Protocol	Block	Security and Identity Management	Federation Service Web Agent Protocol	[MS-MWBF]
[MS-ADFSWAP]	Active Directory Federation Service (AD FS) Web Agent Protocol	SOAP	Security and Identity Management	Federation Service Web Agent and Proxy Protocol	[MS-ADTS] [MS-MWBF]
[MS-ADLS]	Active Directory Lightweight Directory Services Schema	Structure	Directory Services	Active Directory Lightweight Directory Services Schema	[MS-ADTS] [MS-DTYP]
[MS-ADMS]	Shared Abstract Data Model Elements	Structure	Reference	Shared Abstract Data Model Elements	[MS-APDS] [MS-BPAU] [MS-BPCR] [MS-CMOM] [MS-CMP] [MS-CMPO] [MS-CSRA]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
					[MS-DHCPM] [MS-DSSP] [MS-DTCM] [MS-DTCO] [MS-EFSR] [MS-GPEF] [MS-GPOL] [MS-KILE] [MS-LSAD] [MS-MQDMPR] [MS-NRPC] [MS-RPCE] [MS-SAMR] [MS-RRP] [MS-WCCE] [MS-WKST]
[MS-ADSC]	Active Directory Schema Classes	Structure	Directory Services	Active Directory Schema Classes	[MS-ADTS]
[MS-ADTG]	Remote Data Services (RDS) Transport Protocol Specification	Block	Networking	DCOM Interfaces for Remote Data Services Remote Data Services Transport Protocol (RDST) DCOM Interfaces for Remote Data Services Remote Data Services Transport Protocol (RDST)	[MS-DTYP] [MS-ERREF] [MS-LCID] [MS-OAUT]
[MS-ADTS]	Active Directory Technical Specification	Block	Directory Services	Lightweight Directory Access Protocol (LDAP) V3: Microsoft Profile Active Directory Lightweight Directory Access Protocol (LDAP) Extensions Active Directory Data Structures	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADLS] [MS-ADSC] [MS-APDS] [MS-DRSR] [MS-DTYP] [MS-ERREF] [MS-FRS1]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
				Active Directory Algorithms	[MS-KILE] [MS-LSAD] [MS-MAIL] [MS-NLMP] [MS-NRPC] [MS-PAC] [MS-SAMR] [MS-SFU] [MS-SPNG] [MS-SRPL] [MS-W32T]
[MS-AIPS]	Authenticated Internet Protocol Specification	Block	Security and Identity Management	Authenticated Internet Protocol	[MS-ERREF] [MS-IKEE] [MS-KILE] [MS-NLMP]
[MS-APDS]	Authentication Protocol Domain Support Specification	Block	Security and Identity Management	Authentication Protocol Domain Support (APDS) NetLogon Remote Protocol: Challenge Handshake Authentication Protocol (CHAP)/EAP-MD5 SubAuthentication Extension	[MS-ADA3] [MS-ADTS] [MS-DPSP] [MS-DTYP] [MS-ERREF] [MS-KILE] [MS-LSAD] [MS-NLMP] [MS-NRPC] [MS-PAC] [MS-RCMP] [MS-RPCE] [MS-SAMR]
[MS-ASP]	ASP.NET State Server Protocol Specification	Block	Application Services	ASP.NET State Server Protocol	None
[MS-AZMP]	Authorization Manager (AzMan) Policy File Format	Structure	Security and Identity Management Application Services	Authorization Manager (AzMan) Policy File Format	None
[MS-BDSRR]	Business Document Scanning: Scan Repository Capabilities and Status Retrieval Protocol	SOAP	File, Fax, and Printing	Business Document Scanning: Scan Repository Capabilities and Status Retrieval Protocol	None

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Specification				
[MS-BKRP]	BackupKey Remote Protocol Specification	RPC	Security and Identity Management	BackupKey Remote Protocol	[MS-DTYP] [MS-ERREF] [MS-KILE] [MS-LSAD] [MS-NLMP] [MS-RPCE] [MS-SMB] [MS-SMB2] [MS-SPNG]
[MS-BKUP]	Microsoft NT Backup File Structure	Structure	File, Fax, and Printing	File Replication Service (FRS) Protocol	[MS-FRS1] [MS-FRS2] [MS-FSCC]
[MS-BPAU]	Background Intelligent Transfer Service (BITS) Peer-Caching: Peer Authentication Protocol Specification	RPC	Systems Management	Background Intelligent Transfer Service (BITS) Peercaching: Peer Authentication Protocol	[MS-DTYP] [MS-ERREF] [MS-KILE] [MS-RPCE]
[MS-BPCR]	Background Intelligent Transfer Service (BITS) Peer-Caching: Content Retrieval Protocol Specification	RPC	Systems Management	Background Intelligent Transfer Service (BITS) Peercaching: Content Retrieval Protocol	[MS-BPAU] [MS-BPDP] [MS-DTYP] [MS-ERREF]
[MS-BPDP]	Background Intelligent Transfer Service (BITS) Peer-Caching: Peer Discovery Protocol Specification	RPC	Systems Management	Background Intelligent Transfer Service (BITS) Peercaching: Peer Discovery Protocol	[MS-DTYP]
[MS-BRWS]	Common Internet File System (CIFS) Browser Protocol Specification	RPC	File, Fax, and Printing	Common Internet File System (CIFS) Browser Protocol	[MS-BRWSA] [MS-ERREF] [MS-LSAD] [MS-MAIL] [MS-NBTE] [MS-RAP] [MS-SAMR]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
					[MS-SMB] [MS-SRVS] [MS-WKST]
[MS-BRWSA]	Common Internet File System (CIFS) Browser Auxiliary Protocol Specification	RPC	File, Fax, and Printing	Common Internet File System (CIFS) Browser Auxiliary Protocol	[MS-DTYP] [MS-RPCE] [MS-SMB]
[MS-CAPR]	Central Access Policy Identifier (ID) Retrieval Protocol	RPC	File, Fax, and Printing	Central Access Policy ID Retrieval Protocol	[MS-DTYP] [MS-ERREF] [MS-LSAT] [MS-RPCE]
[MS-CBCP]	Callback Control Protocol Specification	Block	Networking	Callback Control Protocol	[MS-DTYP]
[MS-CER]	Corporate Error Reporting Version 1.0 Protocol Specification	Block	Systems Management	Corporate Error Reporting Version 1.0 Protocol	[MS-SMB]
[MS-CER2]	Corporate Error Reporting V.2 Protocol Specification	Block	Systems Management	Corporate Error Reporting V.2 Protocol	[MS-LCID] [MS-NTHT]
[MS-CFB]	Compound File Binary File Format	Structure	Networking	Compound File Binary File Format	None
[MS-CHAP]	Extensible Authentication Protocol Method for Microsoft Challenge Handshake Authentication Protocol (CHAP) Specification	RPC	Networking	Extensible Authentication Protocol Method for Microsoft Challenge Handshake Authentication Protocol (CHAP)	None
[MS-CIFS]	Common Internet File System (CIFS) Protocol Specification	Block	File, Fax, and Printing	Common Internet File System (CIFS) Protocol	[MS-BRWS] [MS-DFSC] [MS-DFSNM] [MS-DTYP] [MS-ERREF] [MS-FSCC]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
					[MS-LSAD] [MS-MSRP] [MS-NLMP] [MS-RAP] [MS-RPCE] [MS-SRVS]
[MS-CMOM]	MSDTC Connection Manager: OleTx Management Protocol Specification	Block	Application Services	MSDTC Connection Manager: OleTx Management Protocol	[MC-DTCXA] [MS-CMP] [MS-CMPO] [MS-CMRP] [MS-DTCLU] [MS-DTCM] [MS-DTCO] [MS-DTYP] [MS-RRP] [MS-SCMR]
[MS-CMP]	MSDTC Connection Manager: OleTx Multiplexing Protocol Specification	Block	Application Services	MSDTC Connection Manager: OleTx Multiplexing Protocol	[MS-CMPO] [MS-ERREF]
[MS-CMPO]	MSDTC Connection Manager: OleTx Transports Protocol Specification	RPC	Application Services	MSDTC Connection Manager: OleTx Transports Protocol	[MS-DTYP] [MS-ERREF] [MS-RPCE]
[MS-CMRP]	Failover Cluster: Management API (ClusAPI) Protocol Specification	RPC	Systems Management	Failover Cluster: Management API (ClusAPI) Protocol	[MS-DMRP] [MS-DTYP] [MS-ERREF] [MS-LSAD] [MS-NLMP] [MS-RPCE] [MS-RRP] [MS-SCMR] [MS-SPNG]
[MS-COM]	Component Object Model Plus (COM+) Protocol Specification	RPC	Application Services	Component Object Model Plus (COM+) Protocol	[MS-DCOM] [MS-DTCO] [MS-DTYP] [MS-ERREF]
[MS-	Component	RPC	Application	Component	[MS-CIFS]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
COMA]	Object Model Plus (COM+) Remote Administration Protocol Specification		Services	Object Model Plus (COM+) Remote Administration Protocol	[MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-LCID] [MS-OAUT] [MS-RPCE]
[MS-COMEV]	Component Object Model Plus (COM+) Event System Protocol Specification	RPC	Application Services	Object Model Plus (COM+) Event System Protocol	[MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-OAUT]
[MS-COMT]	Component Object Model Plus (COM+) Tracker Service Protocol Specification	RPC	Application Services	Component Object Model Plus (COM+) Tracker Service Protocol	[MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-OAUT] [MS-RPCE]
[MS-CPSP]	Connection Point Services: Phonebook Data Structure	Structure	Networking	Connection Point Services: Phonebook Data Structure	None
[MS-CRTD]	Certificate Templates Structure	Structure	Security and Identity Management	Certificate Templates	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADTS] [MS-DTYP] [MS-WCCE]
[MS-CSRA]	Certificate Services Remote Administration Protocol Specification	RPC	Security and Identity Management	Certificate Services Remote Administration Protocol	[MS-ADA1] [MS-ADTS] [MS-CRTD] [MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-ICPR] [MS-KILE] [MS-LSAD] [MS-LSAT] [MS-NLMP] [MS-NRPC] [MS-OAUT] [MS-RPCE] [MS-RRP]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
					[MS-WCCE]
[MS-CSSP]	Credential Security Support Provider (CredSSP) Protocol Specification	Block	Security and Identity Management	Certificate Services Remote Administration Protocol	[MS-KILE] [MS-NLMP] [MS-SPNG]
[MS-CSVP]	Failover Cluster: Setup and Validation Protocol (ClusPrep) Specification	RPC	Systems Management	Failover Cluster: Setup and Validation Protocol (ClusPrep)	[MS-CMRP] [MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-FASP] [MS-OAUT] [MS-RPCE] [MS-SMB2]
[MS-CTA]	Claims Transformation Algorithm	Algorithm	Security and Identity Management	Claims Transformation Algorithm	None
[MS-DCHT]	Desktop Chat Protocol Specification	Block	Collaboration and Communications	Desktop Chat Protocol	[MS-DTYP]
[MS-DCLB]	Desktop Clipboard Protocol Specification	Block	Collaboration and Communications	Desktop Clipboard Protocol	[MS-DTYP] [MS-EMF] [MS-WMF]
[MS-DCOM]	Distributed Component Object Model (DCOM) Remote Protocol Specification	RPC	Networking	Distributed Component Object Model (DCOM) Remote Protocol	[MS-DTYP] [MS-ERREF] [MS-RPCE]
[MS-DFSC]	Distributed File System (DFS): Referral Protocol Specification	RPC	File, Fax, and Printing	Distributed File System (DFS): Namespace Referral Protocol	[MS-ADTS] [MS-CIFS] [MS-DFSNM] [MS-DRSR] [MS-ERREF] [MS-NRPC] [MS-SMB] [MS-SMB2]
[MS-DFSNM]	Distributed File System (DFS): Namespace Management	RPC	File, Fax, and Printing	Distributed File System (DFS): Namespace Management	[MS-ADA2] [MS-ADA3] [MS-ADSC]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Protocol Specification			Protocol	[MS-ADTS] [MS-DFSC] [MS-DTYP] [MS-ERREF] [MS-RPCE] [MS-SMB] [MS-SMB2] [MS-SRVS]
[MS-DFSRH]	DFS Replication Helper Protocol Specification	RPC	File, Fax, and Printing	Distributed File System: Replication Helper Protocol (DFS-R Helper)	[MS-ADTS] [MS-DCOM] [MS-FRS2] [MS-OAUT] [MS-RPCE]
[MS-DHCPE]	Dynamic Host Configuration Protocol (DHCP) Extensions	Block	Networking	Dynamic Host Configuration Protocol (DHCP) Extensions Dynamic Host Configuration Protocol (DHCP): User Class Option Extensions Dynamic Host Configuration Protocol (DHCP): Remote Access Server (RAS) Specific Client Identifier Extensions Dynamic Host Configuration Protocol (DHCP) Server Management: Secondary DHCP Server Delay Response Extensions	[MS-ADA1] [MS-ADSC] [MS-ADTS] [MS-DHCPM]
[MS-DHCPF]	DHCP Failover Protocol Extension	Block	Networking	DHCP Failover Protocol Extension	None
[MS-DHCPM]	Microsoft Dynamic Host Configuration	Block	Networking	Microsoft Dynamic Host Configuration	[MS-DHCPE] [MS-DHCPN] [MS-DTYP]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Protocol (DHCP) Server Management Protocol Specification			Protocol (DHCP) Server Management Protocol	[MS-ERREF] [MS-LSAT] [MS-RPCE] [MS-SAMR]
[MS-DHCPN]	Dynamic Host Configuration Protocol (DHCP) Extensions for Network Access Protection (NAP)	Block	Networking	Dynamic Host Configuration Protocol (DHCP) Extensions for Network Access Protection (NAP)	[MS-DHCPE] [MS-RNAP]
[MS-DLNHND]	Digital Living Network Alliance (DLNA) Networked Device Interoperability Guidelines: Microsoft Extensions	Block	Collaboration and Communications	Digital Living Network Alliance (DLNA) Networked Device Interoperability Guidelines: Microsoft Extensions	[MS-DTYP] [MS-RTSP] [MS-UPMC]
[MS-DLTCS]	Distributed Link Tracking Central Store Protocol Specification	Block	File, Fax, and Printing	Distributed Link Tracking: Central Store Protocol	[MS-ADTS] [MS-DLTM] [MS-SMB]
[MS-DLTM]	Distributed Link Tracking: Central Manager Protocol Specification	Block	File, Fax, and Printing	Distributed Link Tracking: Central Manager Protocol	[MS-ADTS] [MS-DLTW] [MS-DTYP] [MS-ERREF] [MS-RPCE] [MS-SAMR] [MS-SMB] [MS-SPNG]
[MS-DLTW]	Distributed Link Tracking: Workstation Protocol Specification	RPC	File, Fax, and Printing	Distributed Link Tracking: Workstation Protocol	[MS-DTYP] [MS-ERREF] [MS-FSCC] [MS-RPCE] [MS-SMB] [MS-SMB2]
[MS-DMCT]	Device Media Control Protocol Specification	Block	Systems Management	Device Media Control Protocol	[MS-DSLR] [MS-DTYP] [MS-RTSP]
[MS-DMRP]	Disk Management Remote Protocol	RPC	Systems Management	Disk Management	[MS-DCOM] [MS-DTYP]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Specification			Remote Protocol	[MS-ERREF] [MS-RPCE]
[MS-DNSP]	Domain Name Service (DNS) Server Management Protocol Specification	RPC	Systems Management	Domain Name Service (DNS) Server Management Protocol	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADSC] [MS-ADTS] [MS-DTYP] [MS-ERREF] [MS-NRPC] [MS-RPCE]
[MS-DPDX]	DirectPlay DXDiag Usage Protocol Specification	Block	Multiplayer Games	DirectPlay DXDiag Usage Protocol	[MS-DTYP]
[MS-DPSP]	Digest Protocol Extensions	Block	Security and Identity Management	Digest Access Authentication: Microsoft Extensions	None
[MS-DPWSRP]	Devices Profile for Web Services (DPWS): Shared Resource Publishing Data Structure	Structure	File, Fax, and Printing	DPWS: Shared Resource Publishing	[MS-SHLLINK] [MS-HGRP]
[MS-DPWSSN]	Devices Profile for Web Services (DPWS): Size Negotiation Extension	SOAP	Systems Management	Devices Profile for Web Services (DPWS): Size Negotiation Extension	None
[MS-DRM]	Digital Rights Management License Protocol Specification	Block	Collaboration and Communications	Management License Protocol	[MS-DTYP] [MS-ERREF]
[MS-DRMCD]	Windows Media Digital Rights Management (WMDRM): MTP Command Extension	Block	Collaboration and Communications	WMDRM MTP Command Extension	[MS-DRM]
[MS-DRMND]	Windows Media Digital Rights Management	Block	Collaboration and Communications	WMDRM Network Devices Protocol	[MS-DTYP]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	(WMDRM): Network Devices Protocol Specification				
[MS-DRMRI]	Windows Media Digital Rights Management for Network Devices (WMDRM-ND): Registrar Initiation Protocol Specification	Block	Collaboration and Communications	WMDRM-ND: Registrar Initiation Protocol	[MS-DSLR] [MS-DRMND]
[MS-DRSR]	Directory Replication Service (DRS) Remote Protocol Specification	RPC (modified)	Directory Services	Directory Replication Service Remote Protocol (drsuapi) - Replication Directory Replication Service Remote Protocol (drsuapi) - Management	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADLS] [MS-ADSC] [MS-ADTS] [MS-DTYP] [MS-ERREF] [MS-KILE] [MS-LSAD] [MS-NRPC] [MS-RPCE] [MS-SRPL]
[MS-DSLR]	Device Services Lightweight Remoting Protocol Specification	Block	Systems Management	Device Services Lightweight Remoting Protocol	[MS-DTYP] [MS-ERREF]
[MS-DSML]	Directory Services Markup Language (DSML) 2.0 Protocol Extensions	SOAP	Security and Identity Management	Directory Services Markup Language (DSML) 2.0 Protocol Extensions Directory Services Markup Language (DSML) 2.0 Protocol Extensions	[MS-ADDM]
[MS-DSMN]	Device Session Monitoring Protocol	Block	Systems Management	Device Session Monitoring Protocol	[MS-DSLR] [MS-DTYP]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Specification				
[MS-DSPA]	Device Session Property Access Protocol Specification	Block	Systems Management	Device Session Property Access Protocol	[MS-DSLR] [MS-DTYP]
[MS-DSSP]	Directory Services Setup Remote Protocol Specification	RPC	Systems Management	Directory Services Setup Remote Protocol	[MS-ADTS] [MS-DRSR] [MS-DTYP] [MS-ERREF] [MS-RPCE] [MS-SAMR] [MS-SMB]
[MS-DTAG]	Device Trust Agreement Protocol Specification	SOAP	Security and Identity Management	Device Trust Agreement Protocol	None
[MS-DTCLU]	MSDTC Connection Manager: OleTx Transaction Protocol Logical Unit Mainframe Extension	Block	Application Services	MSDTC Connection Manager: OleTx Transaction Protocol Logical Unit Mainframe Extension	[MS-CMP] [MS-CMPO] [MS-DTCO]
[MS-DTCM]	MSDTC Connection Manager: OleTx Transaction Internet Protocol Specification	Block	Application Services	Connection Manager: OleTx Transaction Internet Protocol	[MS-CMP] [MS-CMPO] [MS-DTCO] [MS-DTYP] [MS-RPCE]
[MS-DTCO]	MSDTC Connection Manager: OleTx Transaction Protocol Specification	Block	Application Services	MSDTC Connection Manager: OleTx Transaction Protocol	[MS-CMOM] [MS-CMP] [MS-CMPO] [MS-CMRP] [MS-DTYP] [MS-RRP] [MS-TIPP] [MS-WSRVCAT]
[MS-DTYP]	Windows Data Types	Structure	Reference	Windows Data Types	[MS-ADTS] [MS-APDS] [MS-ERREF] [MS-KILE] [MS-LSAD]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
					[MS-NBTE] [MS-NLMP] [MS-RPCE] [MS-SFU] [MS-TLSP]
[MS-DVRD]	Device Registration Discovery Protocol	HTTP	Device-Specific	Device Registration Discovery Protocol	[MS-DVRE]
[MS-DVRE]	Device Registration Enrollment Protocol	SOAP	Device-Specific	Device Registration Enrollment Protocol	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADSC] [MS-DVRD] [MS-WSTEP]
[MS-ECS]	Enterprise Client Synchronization Protocol	HTTP	Device-Specific	Enterprise Client Synchronization Protocol	[MS-DTYP]
[MS-EERR]	Extended Error Remote Data Structure	Structure	Networking	Extended Error Remote Data Structure	[MS-DTYP] [MS-RPCE]
[MS-EFSR]	Encrypting File System Remote (EFSRPC) Protocol Specification	RPC	File, Fax, and Printing	Encrypting File System Remote Protocol	[MS-ADTS] [MS-CRTD] [MS-DTYP] [MS-ERREF] [MS-RPCE] [MS-SMB] [MS-SMB2] [MS-WCCE]
[MS-EMF]	Enhanced Metafile Format	Structure	File, Fax, and Printing	Enhanced Metafile (EMF) Format	[MS-WMF]
[MS-EMFPLUS]	Enhanced Metafile Format Plus Extensions	Structure	File, Fax, and Printing	Enhanced Metafile (EMF) Format: Plus Extensions (EMF+)	[MS-EMF] [MS-WMF]
[MS-EMFSPOOL]	Enhanced Metafile Spool Format	Structure	File, Fax, and Printing	Enhanced Metafile (EMF) Spool Format	[MS-DTYP] [MS-EMF] [MS-RPRN] [MS-WMF]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
[MS-ERREF]	Windows Error Codes	Structure	Reference	Windows Error Codes	None
[MS-EVEN]	EventLog Remoting Protocol Specification	RPC	Systems Management	EventLog Remoting Protocol Version 1.0	[MS-ADTS] [MS-DTYP] [MS-EERR] [MS-ERREF] [MS-LCID] [MS-LSAD] [MS-LSAT] [MS-RPCE] [MS-RRP] [MS-SMB]
[MS-EVEN6]	EventLog Remoting Protocol Version 6.0 Specification	RPC	Systems Management	EventLog Remoting Protocol Version 6.0	[MS-DTYP] [MS-ERREF] [MS-EVEN] [MS-GPSI] [MS-KILE] [MS-LSAD] [MS-NLMP] [MS-RPCE]
[MS-FASP]	Firewall and Advanced Security Protocol Specification	RPC	Networking	Firewall and Advanced Security Protocol	[MS-AIPS] [MS-DTYP] [MS-ERREF] [MS-GPFAS] [MS-IKEE] [MS-IPHTTPS] [MS-KILE] [MS-NLMP] [MS-RPCE]
[MS-FAX]	Fax Server and Client Remote Protocol Specification	RPC	File, Fax, and Printing	Fax Server and Client Remote Protocol	[MS-DTYP] [MS-ERREF] [MS-RPCE] [MS-SMB]
[MS-FCIADS]	File Classification Infrastructure Alternate Data Stream (ADS) File Format	Structure	File, Fax, and Printing	File Classification Infrastructure ADS File Format	[MS-DTYP] [MS-FSRM]
[MS-FRS1]	File Replication Service Protocol	RPC	File, Fax, and Printing	File Replication Service (FRS)	[MS-ADA1] [MS-ADA2]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Specification			Protocol	[MS-ADA3] [MS-ADLS] [MS-ADSC] [MS-ADTS] [MS-BKUP] [MS-DFSC] [MS-DFSNM] [MS-DFSRH] [MS-DRSR] [MS-DTYP] [MS-ERREF] [MS-FRS2] [MS-FSCC] [MS-RPCE] [MS-RRP]
[MS-FRS2]	Distributed File System Replication Protocol Specification	RPC	File, Fax, and Printing	Distributed File System: Replication (DFS-R) Protocol	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADLS] [MS-ADSC] [MS-ADTS] [MS-BKUP] [MS-DTYP] [MS-FSCC] [MS-KILE] [MS-LSAD] [MS-NLMP] [MS-RDC] [MS-RPCE]
[MS-FSA]	File System Algorithms	Algorithm	File, Fax, and Printing	File System Algorithms	[MS-DTYP] [MS-ERREF] [MS-FSCC] [MS-LSAD]
[MS-FSCC]	File System Control Codes	Structure	File, Fax, and Printing	Server Message Block (SMB) Version 1.0 Protocol Server Message Block (SMB) Version 2 Protocol Common Internet File	[MS-DTYP] [MS-ERREF] [MS-LSAD] [MS-SMB] [MS-SMB2]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
				System (CIFS) Protocol File System Control Codes File Level Trim Data Structure	
[MS-FSRM]	File Server Resource Manager Protocol Specification	Block	File, Fax, and Printing	File Server Resource Manager Protocol	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADLS] [MS-ADSC] [MS-ADTS] [MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-OAUT] [MS-RPCE]
[MS-FSRVP]	File Server Remote VSS Protocol Specification	RPC	File, Fax, and Printing	File Server Remote VSS Protocol	[MS-CIFS] [MS-DTYP] [MS-ERREF] [MS-RPCE] [MS-SMB2] [MS-SRVS]
[MS-FTPS]	File Transfer Protocol over Secure Sockets Layer (FTPS) Specification	Block	File, Fax, and Printing	File Transfer Protocol over Secure Sockets Layer (FTPS)	None
[MS-GKDI]	Group Key Distribution Protocol Specification	RPC	Systems Management, Security and Identity Management	Group Key Distribution Protocol	[MS-ADA2] [MS-ADSC] [MS-ADTS] [MS-DTYP] [MS-ERREF] [MS-NRPC] [MS-RPCE] [MS-SPNG]
[MS-GPAC]	Group Policy: Audit Configuration Extension	Block	Systems Management	Group Policy: Audit Configuration Extension	[MS-DTYP] [MS-GPOL]
[MS-GPCAP]	Group Policy: Central Access Policies Protocol	Block	Systems Management	Group Policy: Central Access Policies Protocol	[MS-ADA2] [MS-ADSC]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Extension			Extension	[MS-ADTS] [MS-DTYP] [MS-GPOL] [MS-SMB] [MS-SMB2]
[MS-GPDPC]	Group Policy: Deployed Printer Connections Extension	Block	Systems Management	Group Policy: Deployed Printer Connections Protocol Extension	[MS-ADA3] [MS-ADSC] [MS-DTYP] [MS-GPOL] [MS-RPRN] [MS-SPNG]
[MS-GPEF]	Group Policy: Encrypting File System Extension	Block	Systems Management	Group Policy: Encrypting File System Extension	[MS-DTYP] [MS-EFSR] [MS-GPOL] [MS-GPREG]
[MS-GPFAS]	Group Policy: Firewall and Advanced Security Data Structure	Block	Systems Management	Group Policy: Firewall and Advanced Security Data Structure	[MS-FASP] [MS-GPOL] [MS-GPREG]
[MS-GPFR]	Group Policy: Folder Redirection Protocol Extension	Block	Systems Management	Group Policy: Folder Redirection Protocol Extension	[MS-DTYP] [MS-GPOL] [MS-SMB]
[MS-GPIE]	Group Policy: Internet Explorer Maintenance Extension	Block	Systems Management	Group Policy: Internet Explorer Maintenance Extension	[MS-GPOL] [MS-GPREG]
[MS-GPIPSEC]	Group Policy: IP Security (IPsec) Protocol Extension	Block	Networking, Systems Management	Group Policy: IP Security (IPsec) Protocol Extension	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADSC] [MS-DTYP] [MS-GPOL] [MS-NRPC]
[MS-GPNAP]	Group Policy: Network Access Protection (NAP) Extension	Structure	Systems Management	Group Policy: Network Access Protection (NAP) Extension	[MS-DHCPN] [MS-DTYP] [MS-GPOL] [MS-GPREG] [MS-HCEP]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
					[MS-LCID] [MS-PEAP] [MS-TSGU] [MS-WSH]
[MS-GPNRPT]	Group Policy: Name Resolution Policy Table (NRPT) Data Extension	Block	Systems Management	Group Policy: NRPT Data Extension	[MS-GPOL] [MS-GPREG]
[MS-GPOL]	Group Policy: Core Protocol Specification	Block	Systems Management	Group Policy: Core Protocol	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADLS] [MS-ADSC] [MS-ADTS] [MS-DFSC] [MS-DRSR] [MS-DTYP] [MS-GPFR] [MS-GPSI] [MS-GPIPSEC] [MS-GPREG] [MS-GPSCR] [MS-KILE] [MS-NLMP] [MS-NRPC] [MS-SPNG] [MS-WMI]
[MS-GPPREF]	Group Policy: Preferences Extension Data Structure	Block	Systems Management	Group Policy: Preferences Extension	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADLS] [MS-ADSC] [MS-ADTS] [MS-GPOL] [MS-SMB] [MS-SMB2]
[MS-GPREG]	Group Policy: Registry Extension Encoding	Block	Systems Management	Group Policy: Registry Extension Encoding	[MS-GPOL]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
[MS-GPSB]	Group Policy: Security Protocol Extension	Block	Systems Management	Group Policy: Host Security Configuration	[MS-DTYP] [MS-GPOL] [MS-KILE] [MS-LSAD] [MS-SAMR] [MS-SCMR] [MS-SMB] [MS-SMB2] [MS-RRP]
[MS-GPSCR]	Group Policy: Scripts Extension Encoding	Block	Systems Management	Group Policy: Scripts Protocol Extension	[MS-GPOL]
[MS-GPSI]	Group Policy: Software Installation Protocol Extension	Block	Systems Management	Group Policy: Software Installation Protocol Extension	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADSC] [MS-DTYP] [MS-KILE] [MS-LCID] [MS-SPNG]
[MS-GPWL]	Group Policy: Wireless/Wired Protocol Extension	Block	Systems Management	Group Policy: Wireless/Wired Protocol Extension	[MS-ADA2] [MS-ADSC] [MS-ADTS] [MS-CHAP] [MS-GPOL] [MS-PEAP]
[MS-GSSA]	Generic Security Service Algorithm for Secret Key Transaction Authentication for DNS (GSS-TSIG) Protocol Extension	Block	Networking, Security and Identity Management	Generic Security Service Algorithm for Secret Key Transaction Authentication for DNS (GSS-TSIG) Protocol Extension	None
[MS-H245]	H.245 Protocol: Microsoft Extensions	Block	Collaboration and Communications	Microsoft Extensions to H.245 protocol	None
[MS-H26XPF]	Real-Time Transport Protocol (RTP/RTCP):	Block	Collaboration and Communications	RTP/RTCP: H.261 and H.263 Video Streams	[MS-RTPME]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	H.261 and H.263 Video Streams Extensions			Extensions	
[MS-HCEP]	Health Certificate Enrollment Protocol Specification	Block	Networking	Health Certificate Enrollment Protocol	[MS-WCCE]
[MS-HGRP]	HomeGroup Protocol Specification	Block	File, Fax, and Printing, Home Server, Networking, Systems Management	DPWS: Printer Sharing Protocol HomeGroup Credential Distribution Protocol	[MS-DTYP] [MS-FSCC] [MS-PPGRH] [MS-PPSEC] [MS-RPRN] [MS-WMF]
[MS-HNDS]	Host Name Data Structure Extension	Structure	Networking	Host Name Data Structure Extension	None
[MS-ICPR]	ICertPassage Remote Protocol Specification	RPC	Security and Identity Management	ICertPassage Remote Protocol	[MS-CRTD] [MS-DCOM] [MS-DTYP] [MS-RPCE] [MS-WCCE]
[MS-HTTPE]	Hypertext Transfer Protocol (HTTP) Extensions	Block		Hypertext Transfer Protocol (HTTP) Extensions	[MS-UCODEREF] [RFC2119] [RFC2616] [RFC3629] [RFC5890] [TR46]
[MS-IISS]	Internet Information Services (IIS) ServiceControl Protocol Specification	RPC	Application Services	IIS ServiceControl Protocol	[MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-OAUT] [MS-RPCE] [MS-SCMR]
[MS-IKEE]	Internet Key Exchange Protocol Extensions	Block	Security and Identity Management	Internet Key Exchange Protocol Extensions IKE: Fragmentation Extension IKEv2:	[MS-AIPS] [MS-ERREF]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
				Negotiation Correlation Extension	
[MS-IMSA]	Internet Information Services (IIS) IMSAdminBaseW Remote Protocol Specification	RPC	Application Services	IIS IMSAdminBaseW Remote Protocol	[MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-OAUT] [MS-RPCE]
[MS-IOI]	IManagedObject Interface Protocol Specification	RPC	Application Services	IManagedObject Interface Protocol	[MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-NRBF] [MS-NRTP]
[MS-IPAMM]	IP Address Management (IPAM) Management Protocol	SOAP	Systems Management	IPAM Management Protocol	[MS-DTYP] [MS-EVEN6] [MS-NMFTB] [MS-NRTP] [MS-WSPOL]
[MS-IPAMM2]	IP Address Management (IPAM) Management ProtocolVersion 2	SOAP	Networking	IP Address Management (IPAM) Protocol	[MS-DTYP] [MS-EVEN6] [MS-NMFTB] [MS-IPAMM] [MS-NRTP] [MS-TDS] [MS-WSPOL]
[MS-IPHTTPS]	IP over HTTPS (IP-HTTPS) Tunneling Protocol Specification	Block	Networking	IP over HTTPS (IP-HTTPS) Protocol	None
[MS-IRDA]	IrDA Object Exchange (OBEX) Protocol Profile	Block	Networking	IrDA Object Exchange (OBEX) Protocol	None
[MS-IRP]	Internet Information Services (IIS) Inetinfo Remote Protocol Specification	RPC	Application Services	IIS Inetinfo Remote Protocol	[MS-DTYP] [MS-ERREF] [MS-LCID] [MS-RPCE]
[MS-KILE]	Kerberos Protocol	Block	Security and Identity	Kerberos Network	[MS-ADA1]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Extensions		Management	Authentication Service (V5) Extensions	[MS-ADA2] [MS-ADA3] [MS-ADSC] [MS-ADTS] [MS-DRSR] [MS-DTYP] [MS-GPSB] [MS-LSAD] [MS-PAC] [MS-RPCE] [MS-SAMR] [MS-SNTP] [MS-SPNG]
[MS-KKDCP]	Kerberos Key Distribution Center (KDC) Proxy Protocol Specification	Block	Security and Identity Management	Kerberos Key Distribution Center (KDC) Proxy Protocol	[MS-NRPC]
[MS-L2TPIE]	Layer 2 Tunneling Protocol (L2TP) IPsec Extensions	Block	Networking	L2TP IPsec Extensions	[MS-DTYP]
[MS-LCID]	Windows Language Code Identifier (LCID) Reference	Structure	Reference	Windows Language Code Identifier (LCID) Reference	[MS-DTYP]
[MS-LLMNRP]	Link Local Multicast Name Resolution (LLMNR) Profile	Block	Networking	Link Local Multicast Name Resolution (LLMNR) Profile	None
[MS-LLTD]	Link Layer Topology Discovery (LLTD) Protocol Specification	Block	Networking	LLTD Protocol	None
[MS-LREC]	Live Remote Event Capture (LREC) Protocol	RPC/Block	Live Remote Event Capture Data Protocol	Live Remote Event Capture Control Protocol Networking	[MS-DTYP] [MS-ERREF] [MS-EVEN] [MS-EVEN6] [MS-RPCE]
[MS-LSAD]	Local Security Authority (Domain Policy)	RPC	Directory Services, Security and Identity	Local Security Authority (Domain Policy)	[MS-ADA1] [MS-ADA2]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Remote Protocol Specification		Management	Remote Protocol	[MS-ADA3] [MS-ADSC] [MS-ADTS] [MS-DTYP] [MS-ERREF] [MS-GPEF] [MS-KILE] [MS-LSAT] [MS-RPCE] [MS-SAMR] [MS-SMB] [MS-SMB2] [MS-WKST]
[MS-LSAT]	Local Security Authority (Translation Methods) Remote Protocol Specification	RPC	Security and Identity Management	Local Security Authority (Translation Methods) Remote Protocol	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADSC] [MS-ADTS] [MS-DRSR] [MS-DTYP] [MS-ERREF] [MS-LSAD] [MS-NRPC] [MS-RPCE] [MS-SAMR] [MS-SCMR]
[MS-LWSSP]	Lightweight Web Services Security Profile	Block	Networking, Security and Identity Management	Lightweight Web Services Profile	None
[MS-MAIL]	Remote Mailslot Protocol Specification	Block	Networking	Remote Mailslot Protocol	[MS-DTYP] [MS-SMB]
[MS-MCIS]	Content Indexing Services Protocol Specification	Block	Systems Management	Content Indexing Services Protocol	[MS-DTYP] [MS-ERREF] [MS-LCID] [MS-SMB]
[MS-MDE]	Mobile Device Enrollment Protocol	SOAP	Networking	Mobile Device Management Enrollment Protocol	[MS-MDM] [MS-WSTEP] [MS-XCEP]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
[MS-MDM]	Mobile Device Management Protocol	HTTP	Networking	Mobile Device Management Protocol	[MS-MDE]
[MS-MMSP]	Microsoft Media Server (MMS) Protocol Specification	Block	Collaboration and Communications	MMS Protocol	[MS-DTYP] [MS-ERREF] [MS-NLMP]
[MS-MNPR]	Microsoft NetMeeting Protocol Specification	Block	Collaboration and Communications	Microsoft NetMeeting Protocol	[MS-DTYP] [MS-EMF] [MS-H245] [MS-RDPBCGR] [MS-WMF]
[MS-MQBR]	Message Queuing (MSMQ): Binary Reliable Message Routing Algorithm	Block	Application Services	MSMQ: Binary Reliable Message Routing Algorithm	[MS-DTYP] [MS-MQDMPR] [MS-MQDSSM] [MS-MQMQ] [MS-MQQB]
[MS-MQCN]	Message Queuing (MSMQ): Directory Service Change Notification Protocol Specification	Block	Application Services	MSMQ:: Directory Service Change Notification Protocol	[MS-ADTS] [MS-DTYP] [MS-MQBR] [MS-MQDMPR] [MS-MQDS] [MS-MQDSSM] [MS-MQMQ] [MS-MQQB]
[MS-MQDMPR]	Message Queuing (MSMQ): Common Data Model and Processing Rules	Block	Application Services	MSMQ: Common Data Model and Processing Rules	[MS-ADTS] [MS-DTCO] [MS-DTYP] [MS-ERREF] [MS-LSAD] [MS-MQDSSM] [MS-MQMQ] [MS-MQRR]
[MS-MQDS]	Message Queuing (MSMQ): Directory Service Protocol Specification	RPC	Application Services	MSMQ: Directory Service Protocol	[MS-ADTS] [MS-DTYP] [MS-MQCN] [MS-MQDMPR] [MS-MQDSSM] [MS-MQMQ] [MS-RPCE]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
					[MS-RDPBCGR]
[MS-MQDSSM]	Message Queuing (MSMQ): Directory Service Schema Mapping	RPC	Application Services	MSMQ: Directory Service Schema Mapping	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADSC] [MS-ADTS] [MS-DTYP] [MS-MQDMPR] [MS-MQMQ]
[MS-MQMP]	Message Queuing (MSMQ): Queue Manager Client Protocol Specification	RPC	Application Services	MSMQ: Queue Manager Client Protocol	[MS-DTCO] [MS-DTYP] [MS-ERREF] [MS-MQDMPR] [MS-MQMQ] [MS-MQQB] [MS-MQQP] [MS-MQRR] [MS-RPCE]
[MS-MQMQ]	Message Queuing (MSMQ): Data Structures	Structure	Application Services	MSMQ: Data Structures	[MS-ADTS] [MS-DTYP] [MS-ERREF] [MS-MQMR] [MS-MQRR] [MS-RDPBCGR] [MS-SAMR]
[MS-MQMR]	Message Queuing (MSMQ): Queue Manager Management Protocol Specification	RPC	Application Services	MSMQ: Queue Manager Management Protocol	[MS-DTYP] [MS-ERREF] [MS-MQDMPR] [MS-MQMQ] [MS-MQQB] [MS-RPCE]
[MS-MQQB]	Message Queuing (MSMQ): Message Queuing Binary Protocol Specification	Block	Application Services	MSMQ: Message Queuing Binary Protocol	[MS-ADTS] [MS-DTYP] [MS-LCID] [MS-MQBR] [MS-MQDMPR] [MS-MQDSSM] [MS-MQMQ] [MS-PAC] [MS-SFU]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
[MS-MQQP]	Message Queuing (MSMQ): Queue Manager to Queue Manager Protocol Specification	RPC	Application Services	MSMQ: Queue Manager to Queue Manager Protocol	[MS-DTYP] [MS-ERREF] [MS-MQDMPR] [MS-MQDSSM] [MS-MQMQ] [MS-MQMP] [MS-MQRR] [MS-RPCE]
[MS-MQRR]	Message Queuing (MSMQ): Queue Manager Remote Read Protocol Specification	RPC	Application Services	MSMQ: Queue Manager Remote Read Protocol	[MC-MQSRM] [MS-DTCO] [MS-DTYP] [MS-ERREF] [MS-MQBR] [MS-MQDMPR] [MS-MQMQ] [MS-MQQB] [MS-MQQP] [MS-RPCE]
[MS-MQSD]	Message Queuing (MSMQ): Directory Service Discovery Protocol Specification	Block	Application Services	Message Queuing (MSMQ): Directory Service Discovery Protocol	[MS-DTYP] [MS-MQDMPR] [MS-MQMP]
[MS-MSB]	Media Stream Broadcast (MSB) Protocol Specification	Block	Collaboration and Communications	Media Stream Broadcast (MSB) Protocol	[MS-DTYP] [MS-WMLOG]
[MS-MSBD]	Media Stream Broadcast Distribution (MSBD) Protocol Specification	Block	Collaboration and Communications	Media Stream Broadcast Distribution (MSBD) Protocol	[MS-DTYP] [MS-ERREF] [MS-MSB]
[MS-MSRP]	Messenger Service Remote Protocol Specification	Block	Collaboration and Communications, File, Fax, and Printing, Networking	Messenger Service Name Management Protocol Messenger Service Messaging Protocol	[MS-DTYP] [MS-ERREF] [MS-MAIL] [MS-NBTE] [MS-RPCE] [MS-SMB]
[MS-	Microsoft Web	Block	Security and	WS-Federation:	[MS-ADA1]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
MWBE]	Browser Federated Sign-On Protocol Extensions		Identity ManagementIdentity management	Marshaling and SAML Advice Extensions	[MS-ADA2] [MS-DTYP] [MS-MWBF]
[MS-MWBF]	Microsoft Web Browser Federated Sign-On Protocol Specification	Block	Security and Identity Management	WS-Federation: Browser Extensions Version 2 WS-Federation: Browser Extensions	[MS-ADA1] [MS-ADA3] [MS-ADTS] [MS-DTYP] [MS-MWBE]
[MS-N2HT]	Negotiate and Nego2 HTTP Authentication Protocol Specification	Block	Security and Identity Management	Negotiate and Nego2 HTTP Authentication Protocol	[MS-SPNG]
[MS-NBTE]	NetBIOS over TCP (NetBT) Extensions	Block	Networking	NetBIOS over TCP (NetBT) Extensions NetBT Name Data Structure Extension	None
[MS-NETTR]	.NET Tracing Protocol Specification	Block	Application Services	.NET Tracing Protocol	[MS-DTYP]
[MS-NKPU]	Network Key Protector Unlock Protocol Specification	Block	Networking	Network Key Protector Unlock (NKPU) Protocol	None
[MS-NLMP]	NT LAN Manager (NTLM) Authentication Protocol Specification	Block	Security and Identity Management	NT LAN Manager (NTLM) Authentication Protocol	[MS-APDS] [MS-DTYP] [MS-RPCE] [MS-SMB] [MS-SPNG]
[MS-NMFMB]	.NET Message Framing MSMQ Binding Protocol Specification	SOAP	Application Services	.NET Message Framing MSMQ Binding Protocol	[MC-NBFS] [MC-NBFSE] [MC-NMF] [MS-MQDMPR] [MS-MQMQ] [MS-MQQB]
[MS-NMFTB]	.NET Message Framing TCP Binding Protocol Specification	SOAP	Application Services	.NET Message Framing TCP Binding Protocol	[MC-NBFS] [MC-NBFSE] [MC-NMF]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
[MS-NNS]	.NET NegotiateStream Protocol Specification	Block	Security and Identity Management Networking	.NET NegotiateStream Protocol	[MS-ERREF] [MS-NLMP] [MS-SPNG]
[MS-NNTP]	NT LAN Manager (NTLM) Authentication: Network News Transfer Protocol (NNTP) Extension	Block	Collaboration and Communications	NTLM Authentication: Network News Transfer Protocol	[MS-NLMP]
[MS-NRBF]	.NET Remoting: Binary Format Data Structure	Structure	Networking	.NET Remoting: Binary Format Data Structure	[MS-DTYP] [MS-NRTP]
[MS-NRLS]	.NET Remoting: Lifetime Services Extension	RPC	Networking	.NET Remoting: Lifetime Services Extension	[MS-NRTP]
[MS-NRPC]	Netlogon Remote Protocol Specification	RPC	Security and Identity Management	Netlogon Remote Protocol	[MS-ADA1] [MS-ADA3] [MS-ADSC] [MS-ADTS] [MS-APDS] [MS-CIFS] [MS-DTYP] [MS-ERREF] [MS-GPSB] [MS-LSAD] [MS-LSAT] [MS-MAIL] [MS-NLMP] [MS-PAC] [MS-RCMP] [MS-RPCE] [MS-RPRN] [MS-RRP] [MS-SAMR] [MS-SAMS] [MS-SMB] [MS-SNTP]
[MS-NRTP]	.NET Remoting: Core Protocol Specification	Block	Networking	.NET Remoting: Core Protocol	[MS-DTYP] [MS-NLMP] [MS-NNS]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
					[MS-NRBF] [MS-NRLS] [MS-OAUT]
[MS-NSPI]	Name Service Provider Interface (NSPI) Protocol Specification	Block (modified)	Directory Services	Name Service Provider Interface (NSPI) Protocol	[MS-KILE]
[MS-NTHT]	NTLM Over HTTP Protocol Specification	Block	Security and Identity Management	HTTP Authentication: NTLM over HTTP	[MS-NLMP] [MS-RPCE]
[MS-OAPX]	OAuth 2.0 Protocol Extensions	HTTP	Security and Identity Management	OAuth 2.0 Protocol Extensions	None
[MS-OAUT]	OLE Automation Protocol Specification	RPC	Networking	OLE Automation Protocol	[MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-RPCE]
[MS-OCSP]	Online Certificate Status Protocol (OCSP) Extensions	Block	Security and Identity Management	Online Certificate Status Protocol (OCSP) Extensions	[MS-CSRA] [MS-OCSPA]
[MS-OCSPA]	Microsoft OCSP Administration Protocol Specification	RPC	Security and Identity Management	Microsoft OCSP Administration Protocol	[MS-CRTD] [MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-KILE] [MS-NLMP] [MS-OAUT] [MS-OCSP] [MS-RPCE] [MS-WCCE]
[MS-ODATA]	Open Data Protocol (OData) Specification	Block	Networking	Open Data Protocol (OData)	[MC-CSDL] [MC-EDMX]
[MS-OLEDS]	Object Linking and Embedding (OLE) Data Structures	Structure	Networking	OLE Data Structures	[MS-CFB] [MS-DTYP] [MS-EMF] [MS-ERREF] [MS-RPRN]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
					[MS-WMF]
[MS-OLEPS]	Object Linking and Embedding (OLE) Property Set Data Structures	Structure	Networking	Object Linking and Embedding (OLE): Property Set Data Structures	[MS-CFB] [MS-OAUT]
[MS-OTPCE]	One-Time Password Certificate Enrollment Protocol Specification	Block	Other	One-Time Password Certificate Enrollment Protocol	[MS-ADTS]
[MS-PAC]	Privilege Attribute Certificate Data Structure	Structure	Security and Identity Management	Privilege Attribute Certificate (PAC) Data Structure	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADTS] [MS-APDS] [MS-DTYP] [MS-KILE] [MS-NLMP] [MS-NRPC] [MS-PKCA] [MS-RCMP] [MS-RPCE] [MS-SAMR] [MS-SFU]
[MS-PAN]	Print System Asynchronous Notification Protocol Specification	RPC	File, Fax, and Printing	Print System Asynchronous Notification Protocol	[MS-DTYP] [MS-ERREF] [MS-RPCE] [MS-SPNG]
[MS-PAR]	Print System Asynchronous Remote Protocol Specification	RPC	File, Fax, and Printing	Print System Asynchronous Remote Protocol	[MS-DTYP] [MS-ERREF] [MS-RPCE] [MS-RPRN] [MS-SMB2] [MS-SPNG]
[MS-PASS]	Passport Server Side Include (SSI) Version 1.4 Protocol Specification	Block	Security and Identity Management	Server Side Include (SSI) 1.4 Protocol	None
[MS-PBSD]	Publication	Structure	Home Server	Publication	[MS-DPWSSN]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Services Data Structure			Services Data Structure	[MS-DTYP]
[MS-PCCRC]	Peer Content Caching and Retrieval: Content Identification	Structure	Networking	Peer Content Caching & Retrieval: Discovery Protocol Peer Content Caching and Retrieval: Hosted Cache Protocol Peer Content Caching & Retrieval: Content Identification Peer Content Caching & Retrieval: Retrieval Protocol	[MS-DTYP] [MS-PCCRD] [MS-PCCRR]
[MS-PCCRD]	Peer Content Caching and Retrieval Discovery Protocol Specification	SOAP	Networking	Peer Content Caching and Retrieval: Discovery Protocol	[MS-PCCRC] [MS-PCCRR]
[MS-PCCRR]	Peer Content Caching and Retrieval: Retrieval Protocol Specification	Block	Networking	Peer Content Caching and Retrieval: Retrieval Protocol	[MS-DTYP] [MS-PCCRC] [MS-PCCRD]
[MS-PCCRTP]	Peer Content Caching and Retrieval: HTTP Extensions	Block	Networking	Peer Content Caching and Retrieval: Hypertext Transfer Protocol	[MS-PCCRC]
[MS-PCHC]	Peer Content Caching and Retrieval: Hosted Cache Protocol Specification	Block	Networking	Peer Content Caching and Retrieval: Hosted Cache Protocol	[MS-DTYP] [MS-PCCRC] [MS-PCCRR] [MS-SPNG]
[MS-PCQ]	Performance Counter Query Protocol	RPC	Systems Management	Performance Counter Query Protocol	[MS-DTYP] [MS-ERREF]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Specification				[MS-LCID] [MS-RPCE]
[MS-PEAP]	Protected Extensible Authentication Protocol (PEAP) Specification	Block	Networking	Protected Extensible Authentication Protocol (PEAP)	[MS-DTYP]
[MS-PKCA]	Public Key Cryptography for Initial Authentication (PKINIT) in Kerberos Protocol Specification	Block	Security and Identity Management	Public Key Cryptography for Initial Authentication in Kerberos (PKINIT): Microsoft Extensions	[MS-KILE] [MS-NLMP] [MS-PAC]
[MS-PLA]	Performance Logs and Alerts Protocol Specification	RPC	Systems Management	Performance Logs and Alerts Protocol	[MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-OAUT] [MS-PCQ] [MS-RPCE] [MS-RRP] [MS-TSCH] [MS-WMI]
[MS-PNRP]	Peer Name Resolution Protocol (PNRP) Version 4.0 Specification	Block	Home Server Systems Management	Peer Name Resolution Protocol (PNRP) Version 4.0	None
[MS-POP3]	NT LAN Manager (NTLM) Authentication: Post Office Protocol - Version 3 (POP3) Extension	Block	Networking, Security and Identity Management	POP3 Authentication Command Protocol Extension Post Office Protocol - Version 3 Extension	[MS-NLMP]
[MS-PPGRH]	Peer-to-Peer Graphing Protocol Specification	Block	Home Server	Peer-to-Peer Graphing Protocol	None
[MS-PPPI]	PPP Over IrDA Dialup Protocol Specification	Block	Networking	PPP Over IrDA Dialup Protocol	None

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
[MS-PPSEC]	Peer-to-Peer Grouping Security Protocol Specification	Block	Home Server	Peer-to-Peer Grouping Security Protocol	[MS-PNRP] [MS-PPGRH]
[MS-PROPSTORE]	Property Store Binary File Format	Structure	Other	Property Store Binary File Format	[MS-SHLLINK] [MS-OLEPS]
[MS-PSDP]	Proximity Service Discovery Protocol Specification	Block	Networking	Proximity Service Discovery Protocol Specification	None
[MS-PSRP]	PowerShell Remoting Protocol Specification	Block	Systems Management	PowerShell Remoting Protocol	[MS-NRBF] [MS-NRTP] [MS-WSMV]
[MS-PTPT]	Point-to-Point Tunneling Protocol (PPTP) Profile	Block	Networking	Point-to-Point Tunneling Protocol	None
[MS-QDP]	Quality Windows Audio/Video Experience (qWave): Wireless Diagnostics Protocol Specification	Block	Networking	Quality Windows Audio/Video Experience (qWave): Wireless Diagnostics Protocol	None
[MS-QLPB]	Quality Windows Audio/Video Experience (qWave): Layer 3 Probing Protocol Specification	Block	Networking	Quality Windows Audio/Video Experience (qWave): Layer 3 Probing Protocol	None
[MS-RA]	Remote Assistance Protocol Specification	Block	Systems Management	Remote Assistance Protocol	[MS-DTYP] [MS-PNRP] [MS-RAI] [MS-RAIOP] [MS-RDPBCGR] [MS-RDPEGDI] [MS-RDPEMC]
[MS-RAA]	Remote	RPC	File, Fax, and	Remote	[MS-DTYP]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Authorization API Protocol Specification		Printing	Authorization API Protocol	[MS-ERREF] [MS-KILE] [MS-LSAT] [MS-RPCE] [MS-SFU]
[MS-RAI]	Remote Assistance Initiation Protocol Specification	RPC	Systems Management	Remote Assistance Initiation Protocol	[MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-OAUT] [MS-RA] [MS-RDPBCGR] [MS-RPCE]
[MS-RAIOP]	Remote Assistance Initiation over PNRP Protocol Specification	Block	Systems Management	Remote Assistance Initiation over PNRP Protocol	[MS-PNRP] [MS-RA] [MS-RAI]
[MS-RAIW]	Remote Administrative Interface: WINS Specification	RPC	Systems Management	Remote Administrative Interface: WINS	[MS-DTYP] [MS-ERREF] [MS-RPCE] [MS-WINSRA]
[MS-RAP]	Remote Administration Protocol Specification	Block	File, Fax, and Printing	Remote Administration Protocol (RAP)	[MS-BRWS] [MS-CIFS] [MS-ERREF] [MS-RPRN] [MS-SAMR] [MS-SMB] [MS-SRVS]
[MS-RASA]	Remote Access Server Advertisement (RASADV) Protocol Specification	Block	Networking	Remote Access Server Advertisement (RASADV) Protocol	None
[MS-RCMP]	Remote Certificate Mapping Protocol Specification	Block	Security and Identity Management	Remote Certificate Mapping Protocol	[MS-ADA1] [MS-ADA3] [MS-ADTS] [MS-ERREF] [MS-KILE] [MS-NRPC] [MS-PAC]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
[MS-RDC]	Remote Differential Compression Algorithm Specification	Block	File, Fax, and Printing	Remote Differential Compression (RDC) Algorithm	None
[MS-RDPADRV]	Remote Desktop Protocol: Audio Level and Drive Letter Persistence Virtual Channel Extension	Block	Remote Connectivity	Remote Desktop Protocol: Audio Level and Drive Letter Persistence Virtual Channel Extension	[MSDN-EDataFlow] [MS-RDPEDYC] [RFC2119]
[MS-RDPBCGR]	Remote Desktop Protocol: Basic Connectivity and Graphics Remoting Specification	Block	Remote Connectivity	Remote Desktop Protocol: Basic Connectivity and Graphics Remoting	[MS-CSSP] [MS-DTYP] [MS-ERREF] [MS-RDPEA] [MS-RDPEGDI] [MS-RDPELE] [MS-RDPERP] [MS-RDPNSC] [MS-RDPRFX]
[MS-RDPCR2]	Remote Desktop Protocol: Composited Remoting V2 Specification	Block	Remote Connectivity	Remote Desktop Protocol: Composited Remoting V2	[MS-ERREF] [MS-RDPBCGR] [MS-RDPEDC] [MS-RDPEDYC] [MS-RDPEGDI]
[MS-RDPEA]	Remote Desktop Protocol: Audio Output Virtual Channel Extension	Block	Remote Connectivity	Remote Desktop Protocol: Audio Output Virtual Channel Extension	[MS-RDPBCGR] [MS-RDPEDYC]
[MS-RDPEAI]	Remote Desktop Protocol: Audio Input Redirection Virtual Channel Extension	Block	Remote Connectivity	Remote Desktop Protocol: Audio Input Redirection Virtual Channel Extension	[MS-ERREF] [MS-RDPBCGR] [MS-RDPEA] [MS-RDPEDYC]
[MS-RDPECLIP]	Remote Desktop Protocol: Clipboard Virtual Channel Extension	Block	Remote Connectivity	Remote Desktop Protocol: Clipboard Virtual Channel Extension	[MS-RDPBCGR] [MS-WMF]
[MS-RDPEDC]	Remote Desktop Protocol: Desktop	Block	Remote Connectivity	Remote Desktop Protocol: Desktop	[MS-RDPBCGR] [MS-RDPEGDI]

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	Composition Virtual Channel Extension			Composition Virtual Channel Extension	
[MS-RDPEDISP]	Remote Desktop Protocol: Display Update Virtual Channel Extension	Block	Remote Connectivity	Remote Desktop Protocol: Display Control Virtual Channel Extension	[MS-DTYP] [MS-RDPBCGR] [MS-RDPEDYC] [MS-RDPEGFX]
[MS-RDPEDYC]	Remote Desktop Protocol: Dynamic Virtual Channel Extension	Block	Remote Connectivity	Remote Desktop Protocol: Dynamic Virtual Channel Extension	[MS-DTYP] [MS-ERREF] [MS-RDPBCGR]
[MS-RDPEECO]	Remote Desktop Protocol: Virtual Channel Echo Extension	Block	Remote Connectivity	Remote Desktop Protocol: Virtual Channel Echo Extension	[MS-DTYP] [MS-RDPEDYC]
[MS-RDPEFS]	Remote Desktop Protocol: File System Virtual Channel Extension	Block	Remote Connectivity	Remote Desktop Protocol: File System Virtual Channel Extension	[MS-ERREF] [MS-FSCC] [MS-RDPBCGR] [MS-RDPEPC] [MS-RDPESC] [MS-RDPESP] [MS-SMB2]
[MS-RDPEGDI]	Remote Desktop Protocol: Graphics Devices Interfaces (GDI) Acceleration Extension	Block	Remote Connectivity	Remote Desktop Protocol: GDI Acceleration Extensions	[MS-EMFPLUS] [MS-RDPBCGR] [MS-RDPEDC] [MS-RDPEPC] [MS-RDPERP]
[MS-RDPEGFX]	Remote Desktop Protocol: Graphics Pipeline Extension	Block	Remote Connectivity	Remote Desktop Protocol: Graphics Pipeline Extension	[MS-RDPBCGR] [MS-RDPEDYC] [MS-RDPEGDI] [MS-RDPNSC] [MS-RDPRFX]
[MS-RDPEGT]	Remote Desktop Protocol: Geometry Tracking Virtual Channel Protocol Extension	Block	Remote Connectivity	Remote Desktop Protocol: Geometry Tracking Virtual Channel Extension	[MS-ERREF] [MS-RDPBCGR] [MS-RDPEDYC]
[MS-RDPEI]	Remote Desktop Protocol: Input	Block	Remote Connectivity	Remote Desktop Protocol: Input	[MS-RDPBCGR]

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Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Virtual Channel Extension			Virtual Channel Extension	[MS-RDPEDYC]
[MS-RDPELE]	Remote Desktop Protocol: Licensing Extension	Block	Remote Connectivity	Remote Desktop Protocol: Licensing Extension	[MS-RDPBCGR]
[MS-RDPEMC]	Remote Desktop Protocol: Multiparty Virtual Channel Extension	Block	Remote Connectivity	Remote Desktop Protocol: Multiparty Virtual Channel Extension	[MS-ERREF] [MS-RDPBCGR] [MS-RDPEPS]
[MS-RDPEMT]	Remote Desktop Protocol: Multitransport Extension	Block	Remote Connectivity	Remote Desktop Protocol: Multitransport Extension	[MS-ERREF] [MS-RDPBCGR] [MS-RDPEUDP]
[MS-RDPEPC]	Remote Desktop Protocol: Print Virtual Channel Extension	Block	Remote Connectivity	Remote Desktop Protocol: Print Virtual Channel Extension	[MS-ERREF] [MS-RDPEFS] [MS-RDPESP]
[MS-RDPEPNP]	Remote Desktop Protocol: Plug and Play Devices Virtual Channel Extension	Block	Remote Connectivity	Remote Desktop Protocol: Plug and Play Devices Virtual Channel Extension	[MS-DTYP] [MS-ERREF] [MS-RDPBCGR] [MS-RDPEDYC]
[MS-RDPEPS]	Remote Desktop Protocol: Session Selection Extension	Block	Remote Connectivity	Remote Desktop Protocol: Session Selection Extension	[MS-RDPBCGR] [MS-RAI]
[MS-RDPERP]	Remote Desktop Protocol: Remote Programs Virtual Channel Extension	Block	Remote Connectivity	Remote Desktop Protocol: Remote Programs Virtual Channel Extension	[MS-DTYP] [MS-ERREF] [MS-RDPBCGR] [MS-RDPEGDI]
[MS-RDPESC]	Remote Desktop Protocol: Smart Card Virtual Channel Extension	RPC	Remote Connectivity	Remote Desktop Protocol: Smart Card Virtual Channel Extension	[MS-DCOM] [MS-RPCE] [MS-RDPEFS]
[MS-RDPESP]	Remote Desktop Protocol: Serial and Parallel Port Virtual Channel Extension	Block	Remote Connectivity	Remote Desktop Protocol: Serial and Parallel Port Virtual Channel Extension	[MS-ERREF] [MS-RDPBCGR] [MS-RDPEFS] [MS-SMB2]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
[MS-RDPET]	Remote Desktop Protocol: Telemetry Virtual Channel Extension	Block		Remote Desktop Protocol: Telemetry Virtual Channel Extension	[MS-RDPBCGR] [MS-RDPEDYC] [RFC2119]
[MS-RDPEUDP]	Remote Desktop Protocol: UDP Transport Extension	Block	Remote Connectivity	Remote Desktop Protocol: UDP Transport Extension	[MS-DTYP]
[MS-RDPEUSB]	Remote Desktop Protocol: USB Devices Virtual Channel Extension	Block	Remote Connectivity	Remote Desktop Protocol: USB Devices Virtual Channel Extension	[MS-DTYP] [MS-ERREF] [MS-RDPEDYC] [MS-RDPEXPS]
[MS-RDPEV]	Remote Desktop Protocol: Video Redirection Virtual Channel Extension	Block	Remote Connectivity	Remote Desktop Protocol: Video Redirection Virtual Channel Extension	[MS-DTYP] [MS-ERREF] [MS-RDPBCGR] [MS-RDPEDYC] [MS-RDPEXPS]
[MS-RDPEVOR]	Remote Desktop Protocol: Video Optimized Remoting Virtual Channel Extension	Block	Remote Connectivity	Remote Desktop Protocol: Video Optimized Remoting Virtual Channel Extension	[MS-ERREF] [MS-RDPBCGR] [MS-RDPEDYC] [MS-RDPEGT]
[MS-RDPEXPS]	Remote Desktop Protocol: XML Paper Specification (XPS) Print Virtual Channel Extension	Block	Remote Connectivity	Remote Desktop Protocol: XML Paper Specification (XPS) Print Virtual Channel Extension	[MS-DTYP] [MS-ERREF] [MS-RDPBCGR] [MS-RDPEDYC] [MS-RDPEFS] [MS-RDPEPC] [MS-RDPERP]
[MS-RDPNSC]	Remote Desktop Protocol: NSCodec Extension	Block	Remote Connectivity	Remote Desktop Protocol: NSCodec Extension	[MS-RDPBCGR] [MS-RDPEGDI]
[MS-RDPRFX]	Remote Desktop Protocol: RemoteFX Codec Extension	Block	Remote Connectivity	Remote Desktop Protocol: RemoteFX Codec Extension	[MS-RDPBCGR]
[MS-RDWR]	Remote Desktop Workspace Runtime Protocol	SOAP	Remote Connectivity	Remote Desktop Workspace Runtime Protocol	None

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Specification				
[MS-RMPR]	Rights Management Services (RMS): Client-to-Server Protocol Specification	SOAP	Security and Identity Management	Rights Management Services (RMS): Client-Server Protocol	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADSC] [MS-DTYP] [MS-KILE] [MS-MWBE] [MS-MWBF] [MS-NLMP] [MS-NTHT] [MS-PAC]
[MS-RMPRS]	Rights Management Services (RMS): Server-to-Server Protocol Specification	SOAP	Security and Identity Management	Rights Management Services (RMS): Server-Server Protocol	[MS-NLMP] [MS-RMPR]
[MS-RMSI]	Rights Management Services (RMS): ISV Extension Protocol Specification	SOAP	Security and Identity Management	Rights Management Services (RMS): ISV Extension Protocol	[MS-DTYP] [MS-MWBF] [MS-RMPR]
[MS-RNAP]	Vendor-Specific RADIUS Attributes for Network Access Protection (NAP) Data Structure	Block	Networking	Remote Access Dial In User Service (RADIUS): Network Access Protection (NAP) Attributes Protocol Extensions	[MS-DTYP] [MS-HCEP] [MS-MSRP]
[MS-RNDIS]	Remote Network Driver Interface Specification (RNDIS) Protocol Specification	Block	Systems Management	Remote Network Driver Interface Specification (RNDIS) Protocol	None
[MS-RPCE]	Remote Procedure Call Protocol Extensions	Block	Networking	Remote Procedure Call Protocol Extensions	[MS-APDS] [MS-CIFS] [MS-DTYP] [MS-EERR] [MS-ERREF]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
					[MS-KILE] [MS-NLMP] [MS-NRPC] [MS-RPCH] [MS-RPCL] [MS-SPNG] [MS-TLSP]
[MS-RPCH]	Remote Procedure Call over HTTP Protocol Specification	Block	Networking	Remote Procedure Call (RPC) over HTTP Protocol	[MS-DTYP] [MS-EERR] [MS-ERREF] [MS-NTHT] [MS-RPCE]
[MS-RPCL]	Remote Procedure Call Location Services Extension	RPC	Networking	Remote Procedure Call Location Services Protocol Extensions	[MS-ADA1] [MS-ADA3] [MS-ADSC] [MS-ADTS] [MS-DTYP] [MS-MAIL] [MS-NRPC] [MS-RPCE] [MS-SPNG]
[MS-RPRN]	Print System Remote Protocol Specification	RPC	File, Fax, and Printing	Print System Remote Protocol Print System Asynchronous Remote Protocol	[MS-ADA3] [MS-ADSC] [MS-ADTS] [MS-DRSR] [MS-DTYP] [MS-ERREF] [MS-LCID] [MS-PAR] [MS-RPCE] [MS-RRP] [MS-SMB] [MS-SMB2]
[MS-RRASM]	Routing and Remote Access Server (RRAS) Management Protocol Specification	RPC	Systems Management	Routing and Remote Access Server (RRAS) Management Protocol	[MS-DTYP] [MS-ERREF] [MS-L2TPIE] [MS-RNAP] [MS-RPCE] [MS-RRP] [MS-SSTP] [MS-TRP]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
[MS-RRP]	Windows Remote Registry Protocol Specification	RPC	Systems Management	Windows Remote Registry Protocol	[MS-DTYP] [MS-ERREF] [MS-RPCE] [MS-SMB] [MS-SMB2]
[MS-RRSP2]	Remote Rendering Server Protocol Version 2.0 Specification	Block	Collaboration and Communications	Remote Rendering Server Protocol Version 2.0	[MS-DSPA] [MS-DTAG] [MS-RXAD]
[MS-RSMP]	Removable Storage Manager (RSM) Remote Protocol Specification	Block	Systems Management	Removable Storage Manager (RSM) Remote Protocol	[MS-DCOM] [MS-DTYP] [MS-RPCE]
[MS-RSP]	Remote Shutdown Protocol Specification	RPC	Remote Connectivity	Remote Shutdown Protocol InitShutdown Protocol	[MS-ERREF] [MS-RPCE] [MS-RRP] [MS-SMB]
[MS-RSVD]	Remote Shared Virtual Disk Protocol	Block	Networking	Remote Shared Virtual Disk Protocol	[MS-SMB2]
[MS-RTPDT]	Real-Time Transport Protocol (RTP/RTCP): DTMF Digits, Telephony Tones and Telephony Signals Data Extensions	Block	Collaboration and Communications	RTP/RTCP: DTMF Digits, Telephony Tones and Telephony Signals Data Extensions	[MS-RTPME] [MS-RTPRAD] [MS-SDP]
[MS-RTPME]	Real-Time Transport Protocol (RTP/RTCP): Microsoft Extensions	Block	Collaboration and Communications	Real-Time Transport Protocol (RTP/RTCP): Microsoft Extensions	None
[MS-RTPRAD]	Real-Time Transport Protocol (RTP/RTCP): Redundant Audio Data Extensions	Block	Collaboration and Communications	RTP/RTCP: Redundant Audio Data Extensions	[MS-RTPME] [MS-SDP]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
[MS-RTSP]	Real-Time Streaming Protocol (RTSP) Windows Media Extensions	Block	Collaboration and Communications	Real-Time Streaming Protocol (RTSP) Windows Media Extensions	[MS-WMLOG] [MS-WMSP]
[MS-RXAD]	Remote Experience Advertisement Protocol Specification	SOAP	Systems Management	Remote Experience Advertisement Protocol	None
[MS-SAMLPR]	Security Assertion Markup Language (SAML) Proxy Request Signing Protocol Specification	SOAP	Security and Identity Management	Security Assertion Markup Language (SAML) Proxy Request Signing Protocol	None
[MS-SAMR]	Security Account Manager (SAM) Remote Protocol Specification (Client-to-Server)	RPC	Security and Identity Management	Security Account Manager (SAM) Remote Protocol (Client-to-Server)	[MS-ADTS] [MS-DRSR] [MS-KILE] [MS-LSAD] [MS-LSAT] [MS-NLMP] [MS-NRPC] [MS-PAC] [MS-RPCE] [MS-SMB]
[MS-SAMS]	Security Account Manager (SAM) Remote Protocol Specification (Server-to-Server)	Block	Security and Identity Management	Security Account Manager Remote Protocol (Server-to-Server)	[MS-ADTS] [MS-DRSR] [MS-KILE] [MS-NRPC] [MS-RPCE] [MS-SAMR]
[MS-SCMP]	Shadow Copy Management Protocol Specification	RPC	File, Fax, and Printing	Shadow Copy Management Protocol	[MS-DCOM] [MS-OAUT] [MS-RPCE]
[MS-SCMR]	Service Control Manager Remote Protocol Specification	RPC	Systems Management	Service Control Manager Remote Protocol	[MS-CIFS] [MS-DTYP] [MS-LSAD] [MS-RPCE]
[MS-SDP]	Session	Block	Collaboration and	Session	[MS-SIP]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Description Protocol (SDP) Extensions		Communications	Description Protocol (SDP) Extensions	
[MS-SFMWA]	Server and File Management Web APIs Protocol	HTTP	Systems Management	Server and File Management Web APIs Protocol	None
[MS-SFU]	Kerberos Protocol Extensions: Service for User and Constrained Delegation Protocol Specification	Block	Security and Identity Management	Kerberos Network Authentication Service (V5) Service for User (S4U) Extension	[MS-ADA2] [MS-KILE] [MS-PAC]
[MS-SHLLINK]	Shell Link (.LNK) Binary File Format	Structure	File, Fax, and Printing	Shell Link Binary File Format	[MS-DFSNM] [MS-DTYP] [MS-LCID] [MS-PROPSTORE]
[MS-SIP]	Session Initiation Protocol Extensions	Block	Collaboration and Communications	Session Initiation Protocol	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADSC] [MS-KILE] [MS-NLMP]
[MS-SMB]	Server Message Block (SMB) Protocol Specification	Block	File, Fax, and Printing	Server Message Block (SMB) Version 1.0 Protocol	[MS-CIFS] [MS-DFSC] [MS-DTYP] [MS-EFSR] [MS-FSA] [MS-FSCC] [MS-KILE] [MS-NLMP] [MS-RAP] [MS-SPNG]
[MS-SMB2]	Server Message Block (SMB) Version 2 Protocol Specification	Block	File, Fax, and Printing	Server Message Block (SMB) Version 2 Protocol	[MS-CIFS] [MS-DFSC] [MS-DTYP] [MS-ERREF] [MS-FSCC] [MS-KILE] [MS-NLMP]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
					[MS-PCCRC] [MS-RPCE] [MS-SMB] [MS-SPNG] [MS-SRVS]
[MS-SMBD]	SMB2 Remote Direct Memory Access (RDMA) Transport Protocol Specification	Block	File, Fax, and Printing	SMB2 RDMA Transport Protocol	None
[MS-SMTPNTLM]	NT LAN Manager (NTLM) Authentication: Simple Mail Transfer Protocol (SMTP) Extension	Block	Collaboration and Communications, Security and Identity Management	NTLM Authentication: Simple Mail Transfer Protocol	[MS-NLMP]
[MS-SNID]	Server Network Information Discovery Protocol	Block	Networking	Server Network Information Discovery Protocol	None
[MS-SNTP]	Network Time Protocol (NTP) Authentication Extensions	Block	Systems Management	Simple Network Time Protocol (SNTP) Network Time Protocol (NTP) Authentication Extensions	[MS-ADTS] [MS-NRPC] [MS-RRP] [MS-SCMR] [MS-W32T]
[MS-SPNG]	Simple and Protected GSS-API Negotiation Mechanism (SPNEGO) Extension	Block	Security and Identity Management	Simple and Protected Generic Security Service Application Program Interface Negotiation Mechanism (SPNEGO): Microsoft Extension	None
[MS-SQMCS]	Software Quality Metrics (SQM) Client-to-Service Version 1 Protocol Specification	Block	Systems Management	SQM Client-to-Service Protocol Version 1	[MS-DTYP]

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[MS-SQMCS2]	Software Quality Metrics (SQM) Client-to-Service Version 2 Protocol Specification	Block	Other	SQM Client-to-Service Protocol Version 2	[MS-SQMCS] [MS-TPXS]
[MS-SRPL]	Directory Replication Service (DRS) Protocol Extensions for SMTP	Block	Directory Services	SMTP Replication Protocol Extensions	[MS-ADTS] [MS-DRSR] [MS-RPCE] [MS-WCCE]
[MS-SRVS]	Server Service Remote Protocol Specification	RPC	File, Fax, and Printing, Systems Management	Server Service Remote Protocol (SRVSVC)	[MS-CIFS] [MS-DFSC] [MS-DFSNM] [MS-DTYP] [MS-EERR] [MS-ERREF] [MS-NRPC] [MS-RPCE] [MS-SMB] [MS-SMB2]
[MS-SSDP]	SSDP: Networked Home Entertainment Devices (NHED) Extensions	Block	Systems Management	SSDP: NHED Extensions	None
[MS-SSEAN]	Simple Mail Transfer Protocol (SMTP) AUTH Extension for SPNEGO	Block	Collaboration and Communications	Simple Mail Transfer Protocol (SMTP) AUTH Extension for SPNEGO	[MS-SPNG] [RFC2119] [RFC2222] [RFC2554] [RFC4752]
[MS-SSTP]	Secure Socket Tunneling Protocol (SSTP) Specification	Block	Networking	Secure Socket Tunneling Protocol (SSTP)	[MS-DTYP] [MS-PEAP]
[MS-SSTR]	Smooth Streaming Protocol Specification	Block	Collaboration and Communications	Smooth Streaming Protocol	None
[MS-SWN]	Server Message Block Version 2 (SMB2) Witness	RPC	File, Fax, and Printing	SMB2 Witness Protocol	[MS-DTYP] [MS-ERREF]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Protocol Specification				[MS-RPCE]
[MS-SWSB]	SOAP Over WebSocket Protocol Binding Specification	SOAP	Application Services	SOAP Over WebSocket Protocol Binding	None
[MS-TAIL]	Telephony API Internet Locator Service Protocol Specification	Block	Collaboration and Communications	Telephony API Internet Locator Service Protocol	[MS-ADA3] [MS-ADSC] [MS-ADTS] [MS-NLMP]
[MS-TCC]	Tethering Control Channel Protocol	Block	Device-Specific	Tethering Control Channel Protocol	None
[MS-TDS]	Tabular Data Stream Protocol Specification	Block	File, Fax, and Printing	Tabular Data Stream (TDS) Protocol	None
[MS-THCH]	Tracing HTTP Correlation Header Protocol Specification	Block	Application Services	Tracing HTTP Correlation Header	None
[MS-TIPP]	Transaction Internet Protocol (TIP) Extensions	Block	Application Services	TIP Profile Extensions	[MS-DTCO]
[MS-TLSP]	Transport Layer Security (TLS) Profile	Block	Security and Identity Management	Transport Layer Security (TLS) Profile	None
[MS-TNAP]	Telnet: NT LAN Manager (NTLM) Authentication Protocol Specification	Block	Networking	Telnet: NT LAN Manager (NTLM) Authentication Protocol	[MS-DTYP] [MS-NLMP]
[MS-TPMVSC]	Trusted Platform Module (TPM) Virtual Smart Card Management Protocol Specification	RPC	Systems Management	TPM Virtual Smart Card Device Management Protocol	[MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-RPCE] [MS-SPNG]
[MS-TPXS]	Telemetry Protocol XML Schema	Structure	Other	Telemetry Protocol XML Schema	None
[MS-TRP]	Telephony Remote Protocol	RPC	Collaboration and Communications	Telephony Remote Protocol	[MS-ADA3] [MS-DTYP]

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	Specification				[MS-ERREF] [MS-RPCE]
[MS-TSCH]	Task Scheduler Service Remoting Protocol Specification	RPC	Systems Management	Task Scheduler Service Remoting Protocol	[MS-CIFS] [MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-EVEN] [MS-EVEN6] [MS-RPCE] [MS-RRP] [MS-SFU] [MS-SMB]
[MS-TSGU]	Terminal Services Gateway Server Protocol Specification	RPC	Remote Connectivity	Terminal Services Gateway Server Protocol	[MS-DTYP] [MS-ERREF] [MS-RDPBCGR] [MS-RNAP] [MS-RPCE] [MS-RPCH]
[MS-TSRAP]	Telnet Server Remote Administration Protocol Specification	RPC	Networking	Telnet Server Remote Administration Protocol	[MS-DCOM] [MS-DTYP] [MS-OAUT] [MS-RPCE]
[MS-TSTS]	Terminal Services Terminal Server Runtime Interface Protocol Specification	RPC	Remote Connectivity	Terminal Services Terminal Server Runtime Interface Protocol	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADSC] [MS-DTYP] [MS-ERREF] [MS-RDPBCGR] [MS-RDPERP] [MS-RPCE] [MS-RPCH]
[MS-TSWP]	Terminal Services Workspace Provisioning Protocol Specification	RPC	Remote Connectivity	Terminal Services Workspace Provisioning Protocol	None
[MS-TVTT]	Telnet: VTNT Terminal Type Format Data	Structure	Remote Connectivity	Telnet: VTNT Terminal Type Format Data	None

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	Structure			Structure	
[MS-UAMG]	Update Agent Management Protocol Specification	RPC	Systems Management	Update Agent Management Protocol	[MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-OAUT] [MS-RPCE]
[MS-UCODEREF]	Windows Protocols Unicode Reference	Block	Reference	Windows Protocols Unicode Reference	None
[MS-UNMP]	User Name Mapping Protocol Specification	Block	File, Fax, and Printing	User Name Mapping (UNM) Protocol	[MS-DTYP]
[MS-UPIGD]	UPnP Device and Service Templates: Internet Gateway Device (IGD) Extensions	Structure	Systems Management	UPnP: Device & Service Templates: Internet Gateway Device (IGD) Extensions	None
[MS-UPMC]	UPnP Device and Service Templates: Media Property and Compatibility Extensions	Structure	Collaboration and Communications	UPnP Device and Service Templates: Media Property and Compatibility Extensions	[MS-DTYP]
[MS-V4OF]	IPv4 Over IEEE 1394 Protocol Extensions	Block	Networking	IPv4 over IEEE 1394 Protocol Extensions	None
[MS-VDS]	Virtual Disk Service (VDS) Protocol Specification	Block	Systems Management	Virtual Disk Service (VDS) Remote Protocol	[MS-CHAP] [MS-DCOM] [MS-DMRP] [MS-DTYP] [MS-ERREF] [MS-RPCE]
[MS-VUVP]	VT-UTF8 and VT100+ Protocols Specification	Block	Networking	VT-UTF8 and VT100+ Protocols	None
[MS-W32T]	W32Time Remote Protocol Specification	RPC	Systems Management	W32Time Remote Protocol	[MS-ERREF] [MS-RPCE]

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Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
					[MS-SMB] [MS-SPNG]
[MS-WCCE]	Windows Client Certificate Enrollment Protocol Specification	RPC	Security and Identity Management	Windows Client Certificate Enrollment Protocol	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADSC] [MS-ADTS] [MS-CRTD] [MS-CSRA] [MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-ICPR] [MS-LSAT] [MS-NRPC] [MS-RPCE]
[MS-WCFESAN]	WCF-Based Encrypted Server Administration and Notification Protocol	SOAP	Windows - General	WCF-Based Encrypted Server Administration and Notification Protocol	[MS-ADA1] [IANAPORT] [MS-KILE] [MS-NMFTB] [MS-WSPOL] [RFC2119] [RFC2246] [RFC4122] [SOAP1.2-1/2007] [SOAP1.2-2/2007] [WSADDSoapBind1.0] [WSDL] [XMLNS-2ED] [XMLSCHEMA1] [XMLSCHEMA2]
[MS-WDSC]	Windows Deployment Services Control Protocol Specification	RPC	Networking	Windows Deployment Services Control Protocol	[MS-DTYP] [MS-ERREF] [MS-RPCE]
[MS-WDSMA]	Windows Deployment Services Multicast Application Protocol	Block	Networking	Windows Deployment Services Multicast Application Protocol	None

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Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Specification				
[MS-WDSMSI]	Windows Deployment Services Multicast Session Initiation Protocol Specification	Block	Networking	Windows Deployment Services Multicast Session Initiation Protocol	[MS-ERREF] [MS-WDSC] [MS-WDSMT]
[MS-WDSMT]	Windows Deployment Services Multicast Transport Protocol Specification	Block	Networking	Windows Deployment Services Multicast Transport Protocol	[MS-WDSMSI] [MS-WDSMA]
[MS-WDSOSD]	Windows Deployment Services Operation System Deployment Protocol Specification	Block	Networking	Windows Deployment Services Operation System Deployment Protocol	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADLS] [MS-ADSC] [MS-ERREF] [MS-WDSC]
[MS-WDV]	Web Distributed Authoring and Versioning (WebDAV) Protocol: Client Extensions	Block	File, Fax, and Printing	Web Distributed Authoring and Versioning (WebDAV) Protocol: Client Extensions	None
[MS-WDVSE]	Web Distributed Authoring and Versioning (WebDAV) Protocol: Server Extensions	Block	File, Fax, and Printing	Web Distributed Authoring and Versioning (WebDAV) Protocol: Server Extensions	None
[MS-WFDAA]	Wi-Fi Direct (WFD) Application to Application Protocol	Block	Device-Specific	Wi-Fi Direct (WFD) Protocol: Proximity Extensions	
[MS-WFIM]	Workflow Instance Management Protocol Specification	SOAP	Application Services	Workflow Instance Management Protocol	[MS-DTCO] [MS-DTYP] [MS-WSPOL]
[MS-	Windows	Block	Networking	Windows	[MS-DTYP]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
WINSRA]	Internet Naming Service (WINS) Replication and Autodiscovery Protocol Specification			Internet Naming Service (WINS) Replication Protocol	
[MS-WKST]	Workstation Service Remote Protocol Specification	RPC	File, Fax, and Printing	Workstation Service Remote Protocol (WKSSVC)	[MS-ADA1] [MS-ADA2] [MS-ADA3] [MS-ADSC] [MS-ADTS] [MS-BRWS] [MS-BRWSA] [MS-CIFS] [MS-DTYP] [MS-ERREF] [MS-LSAT] [MS-NLMP] [MS-NRPC] [MS-RPCE] [MS-SMB] [MS-SMB2] [MS-SPNG]
[MS-WMF]	Windows Metafile Format	Structure	File, Fax, and Printing	Windows Metafile (WMF) Format	[MS-DTYP]
[MS-WMHTTP]	Windows Media HTTP Push Distribution Protocol Specification	Block	Collaboration and Communications	Windows Media HTTP Push Distribution Protocol	[MS-DTYP] [MS-ERREF] [MS-NLMP] [MS-NTHT] [MS-WMSP]
[MS-WMI]	Windows Management Instrumentation Remote Protocol Specification	RPC	Systems Management	Windows Management Instrumentation Remote Protocol	[MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-LCID] [MS-OAUT] [MS-RPCE] [MS-WMIO]
[MS-WMIO]	Windows Management Instrumentation Encoding Version 1.0	Structure	Systems Management	Windows Management Instrumentation Remote Protocol Windows	[MS-DCOM] [MS-WMI]

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Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Protocol Specification			Management Instrumentation Encoding Version 1.0	
[MS-WMLOG]	Windows Media Log Data Structure	Structure	Collaboration and Communications	Windows Media Log Data Structure	None
[MS-WMSP]	Windows Media HTTP Streaming Protocol Specification	Block	Collaboration and Communications	Windows Media HTTP Streaming Protocol	[MS-DTYP] [MS-ERREF] [MS-NLMP] [MS-NTHT] [MS-OAUT] [MS-RTSP] [MS-WMLOG]
[MS-WPE376]	WordPad ECMA 376 Standards Support	Standards Support	Other	WordPad ECMA 376 Standards Support	None
[MS-WPODF]	WordPad ODF 1.1 Standards Support	Standards Support	Other	WordPad ODF 1.1 Standards Support	None
[MS-WPRN]	Web Point-and-Print Protocol Specification	Block	File, Fax, and Printing	Web Point-and-Print Protocol	[MS-DTYP] [MS-RPRN] [MS-RRP]
[MS-WSDS]	WS-Enumeration: Directory Services Protocol Extensions	SOAP	Directory Services	WS-Enumeration: Directory Services Protocol Extensions	[MS-ADDM] [MS-ADTS]
[MS-WSH]	Windows Security Health Agent (WSHA) and Windows Security Health Validator (WSHV) Protocol Specification	Block	Networking	Windows Security Health Agent (WSHA) and Windows Security Health Validator (WSHV) Protocol	[MS-DTYP]
[MS-WSMAN]	Web Services Management Protocol Extensions for Windows Server 2003	SOAP	Systems Management	WS-Management Protocol Extensions	[MS-DTYP] [MS-WSMV]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
[MS-WSMV]	Web Services Management Protocol Extensions for Windows Vista	SOAP	Systems Management	WS-Management Protocol: Extensions Version 2.0	[MS-CSSP] [MS-DTYP] [MS-WMI]
[MS-WSP]	Windows Search Protocol Specification	Block	File, Fax, and Printing	Windows Search Protocol	[MS-DTYP] [MS-ERREF] [MS-LCID] [MS-SMB] [MS-SMB2]
[MS-WSPE]	WebSocket Protocol Extensions	Block	Networking	WebSocket Protocol	None
[MS-WSPELD]	WS-Transfer and WS-Enumeration Protocol Extension for Lightweight Directory Access Protocol v3 Controls Specification	SOAP	Directory Services	WS-Transfer: Lightweight Directory Access Protocol (LDAP) v3 Control Extension	[MS-ADDM] [MS-ADTS] [MS-WSDS] [MS-WSTIM]
[MS-WSPOL]	Web Services: Policy Assertions and WSDL Extensions	SOAP	Application Services	Web Services: Policy Assertions and WSDL Extensions	[MC-NBFS] [MC-NBFSE] [MC-NMF] [MC-NPR] [MS-NNS] [MS-NTHT]
[MS-WSRM]	Windows System Resource Manager (WSRM) Protocol Specification	RPC	Systems Management	Windows System Resource Manager (WSRM) Protocol	[MS-DCOM] [MS-DTYP] [MS-ERREF] [MS-OAUT] [MS-RPCE]
[MS-WSRVCAT]	WS-AtomicTransaction (WS-AT) Version 1.0 Protocol Extensions	Block	Application Services Networking	WS-AtomicTransaction (WS-AT) Version 1.0 Protocol	[MS-CMP] [MS-CMPO] [MS-DTCO] [MS-DTYP]
[MS-WSRVCRM]	WS-ReliableMessaging Protocol: Advanced Flow	Block	Application Services	WS-ReliableMessaging Protocol: Advanced Flow	None

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Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Control Extension			Control Extension	
[MS-WSRVCRR]	WS-ReliableMessaging Protocol: Reliable Request-Reply Extension	Block	Application Services	WS-ReliableMessaging Protocol: Reliable Request-Reply Extension	None
[MS-WSSO]	Windows SharePoint Services Overview	Block	File, Fax, and Printing	Windows SharePoint Services (WSS): File Operations Database Communications Protocol	[MS-ADTS] [MS-TDS] [MS-WDV] [MS-WDVSE]
[MS-WSTC]	WS-Discovery: Termination Criteria Protocol Extensions	SOAP	Application Services	WS-Discovery: Termination Criteria Protocol	None
[MS-WSTEP]	WS-Trust X.509v3 Token Enrollment Extensions	SOAP	Security and Identity Management	WS-Trust X.509v3 Token Enrollment Protocol Extensions	[MS-ADA1] [MS-ADSC] [MS-WCCE]
[MS-WSTIM]	WS-Transfer: Identity Management Operations for Directory Access Extensions	SOAP	Security and Identity Management	WS-Transfer: Identity Management Operations for Directory AccessExtensions	[MS-ADA1] [MS-ADDM] [MS-ADTS]
[MS-WSUSSS]	Windows Update Services: Server-Server Protocol Specification	SOAP	Systems Management	Windows Server Update Services: Server-Server Protocol	[MS-DRSR] [MS-LCID] [MS-WUSP]
[MS-WUSP]	Windows Update Services: Client-Server Protocol Specification	SOAP	Systems Management	Windows Server Update Services: Client-Server Protocol	[MS-ERREF] [MS-GPOL] [MS-LCID]
[MS-XCA]	Xpress Compression Algorithm	Algorithm	Application Services	Xpress Compression Algorithm	None
[MS-XCEP]	X.509 Certificate	SOAP	Security and Identity	X.509 Certificate	[MS-ADLS]

Document short name	Document title	Template type	Technical area	Protocols specified	Technical specifications cited
	Enrollment Policy Protocol Specification		Management	Enrollment Policy Protocol	[MS-CRTD] [MS-WCCE] [MS-WSTEP]
[MS-XOPP]	XML-binary Optimized Packaging (XOP) Profile	SOAP	Networking, Security and Identity Management	Lightweight Web Services Profile	None

4.2 Technical Area Cross-Reference Matrix

This section contains a table that shows, for each technical area, the following information:

▪ Technology overviews (section 2.1.3) in the technical area

▪ Technical specifications in the technical area

Note The categorization of a technical specification in a technical area does not guarantee that the specification is cited by one of the technology overviews in that technical area. See the Technology Collection Cross-Reference Matrix (section 4.3) for listings of such relationships.

Technical area	Technology overviews	Technical specifications
Application Services	[MS-MQOD] [MS-TPSOD]	[MC-COMQC] [MC-DTCXA] [MC-IISA] [MC-MQAC] [MC-MQSRM] [MS-CMOM] [MS-CMP] [MS-CMPO] [MS-COM] [MS-COMA] [MS-COMEV] [MS-COMT] [MS-DTCLU] [MS-DTCM] [MS-DTCO] [MS-IISS] [MS-IMSA] [MS-IRP] [MS-MQBR] [MS-MQCN] [MS-MQDMPR] [MS-MQDS] [MS-MQDSSM]

Technical area	Technology overviews	Technical specifications
		[MS-MQMP]
		[MS-MQMQ]
		[MS-MQMR]
		[MS-MQQB]
		[MS-MQQP]
		[MS-MQRR]
		[MS-MQSD]
		[MS-SWSB]
		[MS-THCH]
		[MS-TIPP]
		[MS-WSRVCAT]
		[MS-XCA]
Collaboration and Communication	[MS-MSSOD]	[MS-DCHT]
		[MS-DCLB]
		[MS-DLNHND]
		[MS-DRM]
		[MS-DRMCD]
		[MS-DRMND]
		[MS-DRMRI]
		[MS-H245]
		[MS-H26XPF]
		[MS-MMSP]
		[MS-MNPR]
		[MS-MSB]
		[MS-MSBD]
		[MS-NNTP]
		[MS-RRSP2]
		[MS-RTPDT]
		[MS-RTPME]
		[MS-RTPRAD]
		[MS-RTSP]
		[MS-SDP]
		[MS-SIP]
		[MS-SMTPNTLM]
		[MS-SSEAN]
		[MS-SSTR]
		[MS-TAIL]
		[MS-TRP]
		[MS-UPMC]
Directory Services	[MS-ADOD]	[MS-ADA1]
		[MS-ADA2]
		[MS-ADA3]
		[MS-ADCAP]

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Technical area	Technology overviews	Technical specifications
		[MS-ADDM]
		[MS-ADLS]
		[MS-ADSC]
		[MS-ADTS]
		[MS-DRSR]
		[MS-DSSP]
		[MS-DVRD]
		[MS-DVRE]
		[MS-LSAD]
		[MS-LSAT]
		[MS-MAIL]
		[MS-NSPI]
		[MS-SAMR]
		[MS-SAMS]
		[MS-SRPL]
		[MS-WSDS]
		[MS-WSPELD]
		[MS-WSTIM]
File, Fax, and Printing	[MS-CCROD]	[MC-BUP]
	[MS-FASOD]	[MS-BDSRR]
	[MS-FSMOD]	[MS-BKUP]
	[MS-PRSOD]	[MS-BPCR]
	[MS-STOROD]	[MS-BPDP]
		[MS-BRWS]
		[MS-BRWSA]
		[MS-CAPR]
		[MS-CIFS]
		[MS-DFSC]
		[MS-DFSNM]
		[MS-DFSRH]
		[MS-DLTCS]
		[MS-DLTM]
		[MS-DLTW]
		[MS-DMRP]
		[MS-DPWSRP]
		[MS-EFSR]
		[MS-EMF]
		[MS-EMFPLUS]
		[MS-EMFSPOOL]
		[MS-FAX]
		[MS-FCIADS]
		[MS-FRS1]
		[MS-FRS2]
		[MS-FSA]

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Technical area	Technology overviews	Technical specifications
		[MS-FSCC]
		[MS-FSRM]
		[MS-FSRVP]
		[MS-FTPS]
		[MS-HGRP]
		[MS-PAN]
		[MS-PAR]
		[MS-PCCRC]
		[MS-PCHC]
		[MS-RAA]
		[MS-RAP]
		[MS-RDC]
		[MS-RPRN]
		[MS-RSMP]
		[MS-SCMP]
		[MS-SHLLINK]
		[MS-SMB]
		[MS-SMB2]
		[MS-SMBD]
		[MS-SRVS]
		[MS-SWN]
		[MS-TDS]
		[MS-UNMP]
		[MS-VDS]
		[MS-WDV]
		[MS-WDVSE]
		[MS-WKST]
		[MS-WMF]
		[MS-WPE376]
		[MS-WPODF]
		[MS-WPRN]
		[MS-WSP]
Home Server		[MC-DRT]
		[MC-PRCR]
		[MS-HGRP]
		[MS-PBSD]
		[MS-PNRP]
		[MS-PPGRH]
		[MS-PPSEC]
Multiplayer Games		[MC-DPL4CS]
		[MC-DPL4R]
		[MC-DPL8CS]
		[MC-DPL8R]

Technical area	Technology overviews	Technical specifications
		[MC-DPLHP]
		[MC-DPLNAT]
		[MC-DPLVP]
		[MS-DPDX]
Networking	[MS-NAPOD]	[MC-CSDL]
	[MS-NETOD]	[MC-EDMX]
		[MC-NBFS]
		[MC-NBFSE]
		[MC-NBFX]
		[MC-NMF]
		[MC-NPR]
		[MC-PRCH]
		[MS-ADTG]
		[MS-ASP]
		[MS-CBCP]
		[MS-CFB]
		[MS-CHAP]
		[MS-CPSP]
		[MS-DHCPE]
		[MS-DHCPF]
		[MS-DHCPM]
		[MS-DHCPN]
		[MS-DSML]
		[MS-EERR]
		[MS-FASP]
		[MS-HCEP]
		[MS-HNDS]
		[MS-IOI]
		[MS-IPAMM2]
		[MS-IPHTTPS]
		[MS-IRDA]
		[MS-L2TPIE]
		[MS-LLMNRP]
		[MS-LLTD]
		[MS-LWSSP]
		[MS-MSRP]
		[MS-NBTE]
		[MC-NETCEX]
		[MS-NETTR]
		[MS-NKPU]
		[MS-NMFMB]
		[MS-NMFTB]
		[MS-NNS]
		[MS-NRBF]

Technical area	Technology overviews	Technical specifications
		[MS-NRLS]
		[MS-NRTP]
		[MS-OAUT]
		[MS-ODATA]
		[MS-OLEDS]
		[MS-OLEPS]
		[MS-PEAP]
		[MS-PPPI]
		[MS-PSDP]
		[MS-PTPT]
		[MS-QDP]
		[MS-QLPB]
		[MS-RASA]
		[MS-RNAP]
		[MS-RPCE]
		[MS-RPCH]
		[MS-RPCL]
		[MS-SNID]
		[MS-SSTP]
		[MS-TNAP]
		[MS-TSRAP]
		[MS-V4OF]
		[MS-VUVP]
		[MS-WDSC]
		[MS-WDSMA]
		[MS-WDSMSI]
		[MS-WDSMT]
		[MS-WDSOSD]
		[MS-WFIM]
		[MS-WINSRA]
		[MS-WSH]
		[MS-WSPE]
		[MS-WSPOL]
		[MS-WSRVCAT]
		[MS-WSRVCRM]
		[MS-WSRVCRR]
		[MS-WSTC]
		[MS-XOPP]
Remote Connectivity	[MS-RDSOD]	[MS-RDPADRV]
		[MS-RDPBCGR]
		[MS-RDPCR2]
		[MS-RDPEA]
		[MS-RDPEAI]
		[MS-RDPECLIP]

Technical area	Technology overviews	Technical specifications
		[MS-RDPEDC]
		[MS-RDPEDISP]
		[MS-RDPEDYC]
		[MS-RDPEECO]
		[MS-RDPEFS]
		[MS-RDPEGDI]
		[MS-RDPEGFX]
		[MS-RDPEGT]
		[MS-RDPEI]
		[MS-RDPELE]
		[MS-RDPEMC]
		[MS-RDPEMT]
		[MS-RDPEPC]
		[MS-RDPEPNP]
		[MS-RDPEPS]
		[MS-RDPERP]
		[MS-RDPESC]
		[MS-RDPESP]
		[MS-RDPEUDP]
		[MS-RDPEUSB]
		[MS-RDPEV]
		[MS-RDPEVOR]
		[MS-RDPEXPS]
		[MS-RDPNSC]
		[MS-RDPRFX]
		[MS-RDWR]
		[MS-RSP]
		[MS-TSGU]
		[MS-TSTS]
		[MS-TSWP]
		[MS-TVTT]
Security and Identity Management	[MS-AUTHSOD] [MS-CERSOD] [MS-RMSOD] [MS-SECO]	[MS-ADFSOAL] [MS-ADFSPIP] [MS-ADFSPP] [MS-ADFSWAP] [MS-AIPS] [MS-APDS] [MS-AZMP] [MS-BKRP] [MS-CRTD] [MS-CSRA] [MS-CSSP] [MS-CTA] [MS-DPSP]

Technical area	Technology overviews	Technical specifications
		[MS-DTAG]
		[MS-GKDI]
		[MS-GPREG]
		[MS-GSSA]
		[MS-ICPR]
		[MS-IKEE]
		[MS-KILE]
		[MS-KKDCP]
		[MS-LWSSP]
		[MS-MWBE]
		[MS-MWBF]
		[MS-N2HT]
		[MS-NLMP]
		[MS-NRPC]
		[MS-NTHT]
		[MS-OAPX]
		[MS-OCSP]
		[MS-OCSPA]
		[MS-PAC]
		[MS-PASS]
		[MS-PKCA]
		[MS-POP3]
		[MS-RCMP]
		[MS-RMPR]
		[MS-RMPRS]
		[MS-RMSI]
		[MS-SAMLPR]
		[MS-SFU]
		[MS-SMTPNTLM]
		[MS-SPNG]
		[MS-TLSP]
		[MS-WCCE]
		[MS-WSTEP]
		[MS-XCEP]
Systems Management	[MS-GPOD] [MS-WMOD] [MS-WSUSOD]	[MC-CCFG] [MS-BPAU] [MS-CER] [MS-CER2] [MS-CMRP] [MS-CSVP] [MS-DCOM] [MS-DMCT] [MS-DNSP] [MS-DPWSSN]

Technical area	Technology overviews	Technical specifications
		[MS-DSCPM]
		[MS-DSLR]
		[MS-DSMN]
		[MS-DSPA]
		[MS-EVEN]
		[MS-EVEN6]
		[MS-GPAC]
		[MS-GPCAP]
		[MS-GPDPC]
		[MS-GPEF]
		[MS-GPFAS]
		[MS-GPFR]
		[MS-GPIE]
		[MS-GPIPSEC]
		[MS-GPNAP]
		[MS-GPNRPT]
		[MS-GPOL]
		[MS-GPPREF]
		[MS-GPSB]
		[MS-GPSCR]
		[MS-GPSI]
		[MS-GPWL]
		[MS-HGRP]
		[MS-IPAMM]
		[MS-LREC]
		[MS-MCIS]
		[MS-PCQ]
		[MS-PLA]
		[MS-PSRP]
		[MS-RA]
		[MS-RAI]
		[MS-RAIOP]
		[MS-RAIW]
		[MS-RNDIS]
		[MS-RRASM]
		[MS-RRP]
		[MS-RXAD]
		[MS-SCMR]
		[MS-SFMWA]
		[MS-SNTP]
		[MS-SQMCS]
		[MS-SQMCS2]
		[MS-SSDP]
		[MS-TPMVSC]

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Technical area	Technology overviews	Technical specifications
		[MS-TSCH]
		[MS-UAMG]
		[MS-UPIGD]
		[MS-W32T]
		[MS-WMI]
		[MS-WMIO]
		[MS-WSMAN]
		[MS-WSMV]
		[MS-WSRM]
		[MS-WSUSSS]
		[MS-WUSP]

4.3 Technology Collection Cross-Reference Matrix

This section contains a table that shows the technology collections in the Windows protocols documentation set. Each technology collection consists of a technology overview (section 2.1.3) in a technical area (section 2) and its accompanying technical specifications.

Technology overview	Technical area	Technical specifications
[MS-ADOD]: Active Directory Protocols Overview	Directory Services	[MS-ADA1]
		[MS-ADA2]
		[MS-ADA3]
		[MS-ADCAP]
		[MS-ADDM]
		[MS-ADLS]
		[MS-ADSC]
		[MS-ADTS]
		[MS-APDS]
		[MS-CIFS]
		[MS-DFSC]
		[MS-DPSP]
		[MS-DRSR]
		[MS-DSSP]
		[MS-DVRE]
		[MS-KILE]
		[MS-LSAD]
		[MS-LSAT]
		[MS-MAIL]
		[MS-NLMP]
		[MS-NRPC]
		[MS-PAC]
		[MS-RCMP]
		[MS-RPCE]
		[MS-SAMR]

Technology overview	Technical area	Technical specifications
		[MS-SAMS]
		[MS-SMB]
		[MS-SMB2]
		[MS-SNTP]
		[MS-SRPL]
		[MS-WSDS]
		[MS-WSPELD]
		[MS-WSTIM]
[MS-AUTHSOD]: Authentication Services Protocols Overview	Security and Identity Management	[MS-ADFSOAL]
		[MS-ADFSPIP]
		[MS-APDS]
		[MS-CIFS]
		[MS-CSSP]
		[MS-DPSP]
		[MS-KILE]
		[MS-KKDCP]
		[MS-NLMP]
		[MS-NNTP]
		[MS-NRPC]
		[MS-PAC]
		[MS-PKCA]
		[MS-POP3]
		[MS-RCMP]
		[MS-RDPBCGR]
		[MS-SFU]
		[MS-SMB]
		[MS-SMB2]
		[MS-SNTP]
		[MS-SPNG]
		[MS-TLSP]
		[MS-WSMV]
[MS-AZOD]: Authorization Protocols Overview	Security and Identity Management	[MS-ADA3]
		[MS-ADSC]
		[MS-ADTS]
		[MS-APDS]
		[MS-AZMP]
		[MS-CAPR]
		[MS-CIFS]
		[MS-COMA]
		[MS-CTA]
		[MS-DPSP]
		[MS-FCIADS]

Technology overview	Technical area	Technical specifications
		[MS-FSA] [MS-FSRM] [MS-GPCAP] [MS-KILE] [MS-LSAD] [MS-NLMP] [MS-NRPC] [MS-PAC] [MS-PAN] [MS-PKCA] [MS-RAA] [MS-RCMP] [MS-RPRN] [MS-RRP] [MS-SFU] [MS-SMB] [MS-SMB2] [MS-SPNG] [MS-TDS] [MS-TLSP]
[MS-CCROD]: Content Caching and Retrieval Protocols Overview	File, Fax, and Printing	[MC-BUP] [MS-BPCR] [MS-BPDP] [MS-CIFS] [MS-FSA] [MS-FSCC] [MS-KILE] [MS-PCCRC] [MS-PCCRD] [MS-PCCRR] [MS-PCCRTP] [MS-PCHC] [MS-SMB] [MS-SMB2] [MS-TLSP]
[MS-CERSOD]: Certificate Services Protocols Overview	Security and Identity Management	[MS-ADTS] [MS-CRTD] [MS-CSRA] [MS-DCOM] [MS-DRSR] [MS-GPREG] [MS-ICPR]

Technology overview	Technical area	Technical specifications
		[MS-WCCE]
		[MS-WSTEP]
		[MS-XCEP]
[MS-FASOD]: File Access Services Protocols Overview	File, Fax, and Printing	[MS-BRWS]
		[MS-BRWSA]
		[MS-CIFS]
		[MS-DFSC]
		[MS-FSA]
		[MS-FSCC]
		[MS-FSRM]
		[MS-PCHC]
		[MS-RAP]
		[MS-RPCE]
		[MS-RRP]
		[MS-SMB]
		[MS-SMB2]
		[MS-SMBD]
		[MS-SRVS]
		[MS-UNMP]
		[MS-WDV]
		[MS-WDVSE]
		[MS-WKST]
[MS-FSMOD]: File Services Management Protocols Overview	File, Fax, and Printing	[MS-BRWS]
		[MS-CIFS]
		[MS-DCOM]
		[MS-DFSNM]
		[MS-DFSRH]
		[MS-FRS1]
		[MS-FRS2]
		[MS-FSRM]
		[MS-RAP]
		[MS-RDC]
		[MS-RPCE]
		[MS-SMB]
		[MS-SMB2]
		[MS-SRVS]
		[MS-WKST]
[MS-GPOD]: Group Policy Protocols Overview	Systems Management	[MS-ADTS]
		[MS-GPAC]
		[MS-GPCAP]
		[MS-GPDPC]
		[MS-GPEF]

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Technology overview	Technical area	Technical specifications
		[MS-GPFAS]
		[MS-GPFR]
		[MS-GPIE]
		[MS-GPIPSEC]
		[MS-GPNAP]
		[MS-GPOL]
		[MS-GPPREF]
		[MS-GPREG]
		[MS-GPSB]
		[MS-GPSCR]
		[MS-GPSI]
		[MS-GPWL]
		[MS-KILE]
		[MS-NLMP]
		[MS-NRPC]
		[MS-SMB]
		[MS-SPNG]
		[MS-WMI]
		[MS-WUSP]
[MS-MQOD]: Message Queuing Protocols Overview	Application Services	[MC-COMQC]
		[MC-MQAC]
		[MC-MQSRM]
		[MS-ADA2]
		[MS-ADTS]
		[MS-DTCO]
		[MS-MQBR]
		[MS-MQCN]
		[MS-MQDMPR]
		[MS-MQDS]
		[MS-MQDSSM]
		[MS-MQMP]
		[MS-MQMQ]
		[MS-MQMR]
		[MS-MQQB]
		[MS-MQQP]
		[MS-MQRR]
		[MS-MQSD]
		[MS-RDPBCGR]
[MS-MSSOD]: Media Streaming Server Protocols Overview	Collaboration and Communications	[MS-DRM]
		[MS-MMSP]
		[MS-MSB]
		[MS-MSBD]

Technology overview	Technical area	Technical specifications
		[MS-NLMP]
		[MS-RTSP]
		[MS-WMHTTP]
		[MS-WMLOG]
		[MS-WMSP]
[MS-NAPOD]: Network Access Protection Protocols Overview	Networking	[MS-APDS]
		[MS-DHCPM]
		[MS-DHCPN]
		[MS-GPNAP]
		[MS-HCEP]
		[MS-IKEE]
		[MS-PEAP]
		[MS-PTPT]
		[MS-RNAP]
		[MS-SNTP]
		[MS-TLSP]
		[MS-TSGU]
		[MS-WCCE]
		[MS-WSH]
[MS-NETOD]: Microsoft .NET Framework Protocols Overview	Networking	[MC-CSDL]
		[MC-EDMX]
		[MC-NBFS]
		[MC-NBFSE]
		[MC-NBFX]
		[MC-NETCEX]
		[MC-NPR]
		[MC-PRCH]
		[MC-PRCR]
		[MS-ASP]
		[MS-DSML]
		[MS-IOI]
		[MS-NETTR]
		[MS-NMFMB]
		[MS-NMFTB]
		[MS-NNS]
		[MS-NRBF]
		[MS-NRLS]
		[MS-NRTP]
		[MS-NTHT]
		[MS-ODATA]
		[MS-PNRP]
		[MS-WFIM]

Technology overview	Technical area	Technical specifications
		[MS-WSPOL] [MS-WSRVCAT] [MS-WSRVCRM] [MS-WSRVCRR] [MS-WSTC]
[MS-PRSOD]: Print Services Protocols Overview	File, Fax, and Printing	[MS-ADLS] [MS-ADSC] [MS-BRWS] [MS-CIFS] [MS-DRSR] [MS-EMFSPOOL] [MS-FSCC] [MS-GPDPC] [MS-GPOL] [MS-NRPC] [MS-PAN] [MS-PAR] [MS-RAP] [MS-RPRN] [MS-SMB] [MS-SMB2] [MS-SPNG] [MS-WPRN] [MS-WUSP]
[MS-RDSOD]: Remote Desktop Services Protocols Overview	Remote Connectivity	[MS-RDPBCGR] [MS-RDPCR2] [MS-RDPEA] [MS-RDPEAI] [MS-RDPECLIP] [MS-RDPEDC] [MS-RDPEDISP] [MS-RDPEDYC] [MS-RDPEECO] [MS-RDPEFS] [MS-RDPEGDI] [MS-RDPEGFX] [MS-RDPEI] [MS-RDPELE] [MS-RDPEMC] [MS-RDPEMT] [MS-RDPEPC] [MS-RDPEPNP]

Technology overview	Technical area	Technical specifications
		[MS-RDPEPS] [MS-RDPERP] [MS-RDPESC] [MS-RDPESP] [MS-RDPEUDP] [MS-RDPEUSB] [MS-RDPEV] [MS-RDPEVOR] [MS-RDPEXPS] [MS-RDPNSC] [MS-RDPRFX] [MS-TSGU] [MS-TSTS] [MS-TSWP]
[MS-RMSOD]: Rights Management Services Protocols Overview	Security and Identity Management	[MS-MWBE] [MS-MWBF] [MS-NTHT] [MS-RMPR] [MS-RMPRS] [MS-RMSI]
[MS-STOROD]: Storage Services Protocols Overview	File, Fax, and Printing	[MS-ADTS] [MS-DCOM] [MS-DMRP] [MS-EFSR] [MS-FSRVP] [MS-OAUT] [MS-RPCE] [MS-RSMP] [MS-SCMP] [MS-VDS] [MS-WCCE]
[MS-TPSOD]: Transaction Processing Services Protocols Overview	Application Services	[MC-DTCXA] [MS-CMOM] [MS-CMP] [MS-CMPO] [MS-COM] [MS-DTCLU] [MS-DTCM] [MS-DTCO] [MS-RPCE] [MS-TIPP] [MS-WSRVCAT]

| Technology overview	Technical area	Technical specifications
[MS-WMOD]: Windows Management Protocols Overview	Systems Management	[MS-DCOM] [MS-KILE] [MS-NLMP] [MS-ODATA] [MS-PSRP] [MS-WMI] [MS-WMIO] [MS-WSMAN] [MS-WSMV]
[MS-WSUSOD]: Windows Server Update Services Protocols Overview	Systems Management	[MS-GPOL] [MS-WSUSSS] [MS-WUSP]

5   Appendix B: Open Specification Site Map
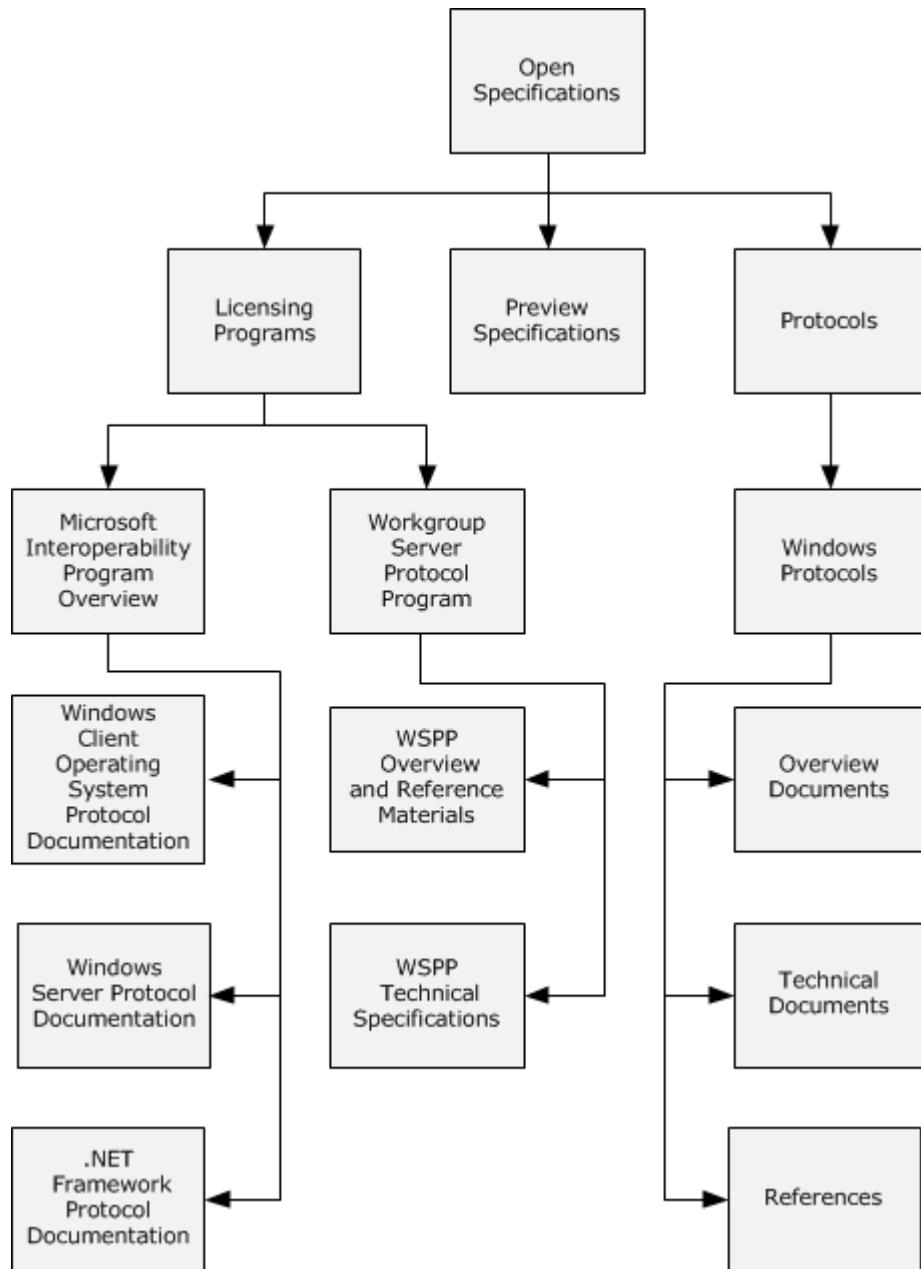
Figure 15: Open specification site map

6 Change Tracking

This section identifies changes that were made to the [MS-DOCO] protocol document between the November 2013 and February 2014 releases. Changes are classified as New, Major, Minor, Editorial, or No change.

The revision class **New** means that a new document is being released.

The revision class **Major** means that the technical content in the document was significantly revised. Major changes affect protocol interoperability or implementation. Examples of major changes are:

- A document revision that incorporates changes to interoperability requirements or functionality.

- The removal of a document from the documentation set.

The revision class **Minor** means that the meaning of the technical content was clarified. Minor changes do not affect protocol interoperability or implementation. Examples of minor changes are updates to clarify ambiguity at the sentence, paragraph, or table level.

The revision class **Editorial** means that the formatting in the technical content was changed. Editorial changes apply to grammatical, formatting, and style issues.

The revision class **No change** means that no new technical changes were introduced. Minor editorial and formatting changes may have been made, but the technical content of the document is identical to the last released version.

Major and minor changes can be described further using the following change types:

- New content added.

- Content updated.

- Content removed.

- New product behavior note added.

- Product behavior note updated.

- Product behavior note removed.

- New protocol syntax added.

- Protocol syntax updated.

- Protocol syntax removed.

- New content added due to protocol revision.

- Content updated due to protocol revision.

- Content removed due to protocol revision.

- New protocol syntax added due to protocol revision.

- Protocol syntax updated due to protocol revision.

- Protocol syntax removed due to protocol revision.

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- Obsolete document removed.

Editorial changes are always classified with the change type **Editorially updated.**

Some important terms used in the change type descriptions are defined as follows:

- **Protocol syntax** refers to data elements (such as packets, structures, enumerations, and methods) as well as interfaces.

- **Protocol revision** refers to changes made to a protocol that affect the bits that are sent over the wire.

The changes made to this document are listed in the following table. For more information, please contact dochelp@microsoft.com.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
4.1 Technical Specification Cross-Reference Matrix	Removed reference to [MS-REMSI].	Y	Content updated.
4.2 Technical Area Cross-Reference Matrix	Removed reference to [MS-REMSI].	Y	Content updated.
4.2 Technical Area Cross-Reference Matrix	Removed reference to [MS-WSSEC].	N	Content updated.
4.3 Technology Collection Cross-Reference Matrix	Removed reference to [MS-WSSEC].	N	Content updated.

7 Index

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