Implementing Microsoft Open Specifications

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Outline

- Microsoft Protocol Programs Overview
- Microsoft Support for Interoperability Efforts
- Resources to Aid Interoperability Efforts
- Microsoft Open Specifications
- Open Specification Technologies
  - Windows Open Specification Technology
  - Office Open Specification Technology
    - File Formats
    - SharePoint
    - Exchange

Introductions

- Neil Martin - Windows
- Michael Bowman - Office

Microsoft Protocol Program

- Historically Three Main Documentation Programs
  - **MCPP Microsoft Communications Protocol Program**
    - Protocols used by Windows client operating systems to communicate with Windows Se systems
  - **WSPP Windows Server Protocol Program**
    - Protocols used by Windows server operating systems to provide file and print and user administration services to Windows work group networks
      - Note these maybe be client to server or server to server
    - This is the program that Samba team signed up for
  - **Microsoft Interoperability Program (MIP)**
    - Above WSPP/MCPP specs plus:
      - **.**NET Framework Protocol Documentation
      - Microsoft PC Productivity Applications Protocol Documentation (Office)
      - SharePoint Protocols
      - Exchange-Outlook Protocols
      - File Format Documentation (Office file formats)
      - Standards Documentation (implementation of standards in Office)
      - XAML Documentation (The object mapping rules and vocabulary of types)

Microsoft Open Specification

- Available on MSDN
- Documents Protocols used by Microsoft High Volume
- Updated regularly
- Authored by the Product Teams
- Fully supported by Microsoft professional support

Open Specification Template

Block

- Most universal, documents structures and behavior

RPC

- Structures and behavior, customized for RPCs (includes IDL)

SOAP

- Structures and behavior, customized for SOAP (includes WSDL and XML schema)

HTTP

- Stru
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Structure

- Data structures only, always used by other protocols

Algorithm

- Behavior only, always used by other protocols

Standards

- Describes how Standards (RFCs) are implemented by Microsoft Products
- This template is very special

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TD Overview

- Technical Documents (TD)
  - Aka a Protocol Specification
    - Based on RFC layout (10 Sections)
      - Introduction
      - Messages
      - Protocol Details
        - ADM, Initialization, Timers, Events, Processing Rules
      - Protocol Examples
      - Security
      - Appendix …
        - Syntax, Windows Behaviour notes

Principles

- Written for experienced developers
- Format based on IETF RFC’s
- “Over the wire” communication between client and s
  (no APIs)
- Windows is not a dependency
- Well defined document structure

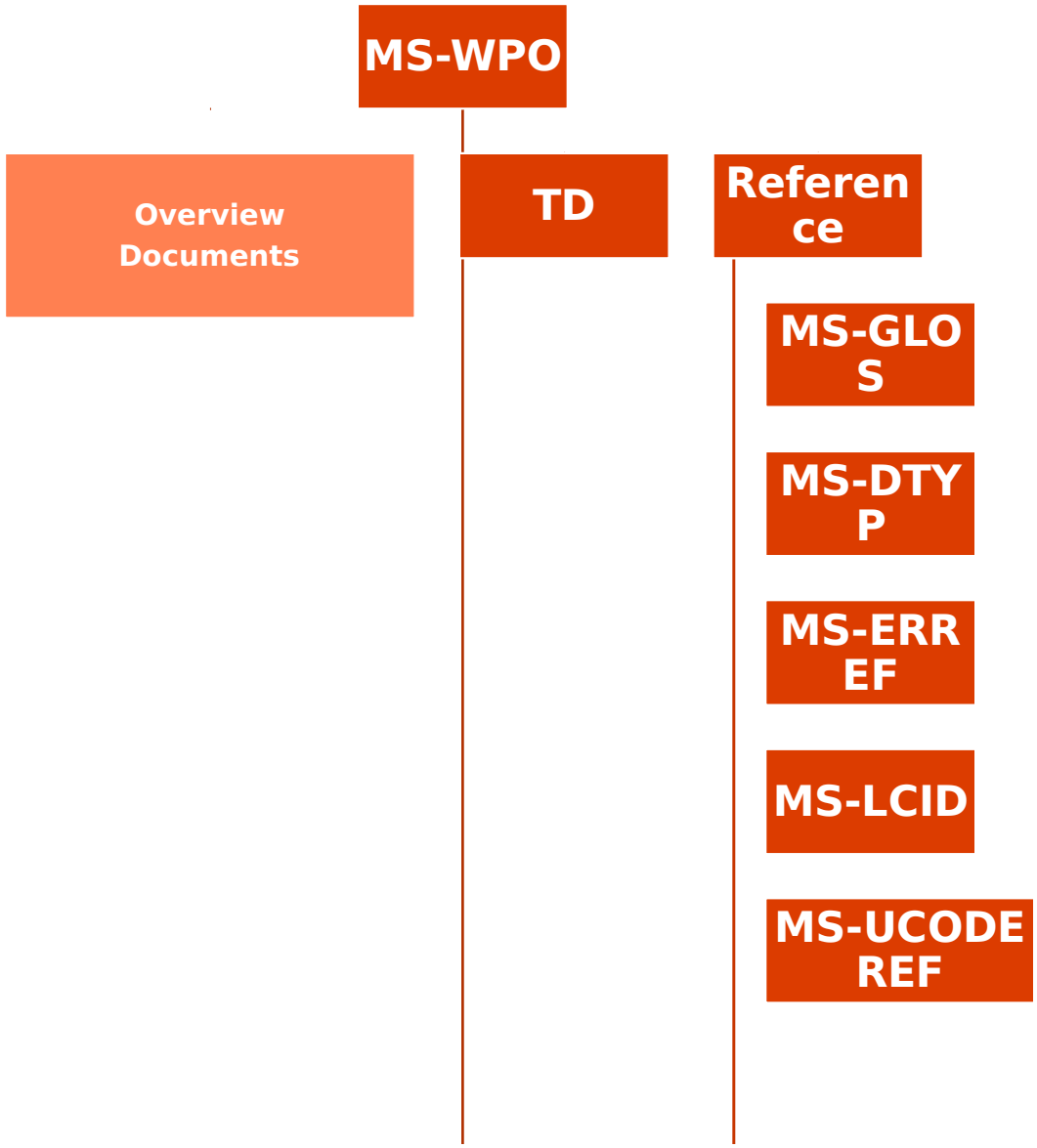
Normative Language

- "Normative" means strict compliance with RFC 2119
  - Normative: must be understood to implement interoperable software
  - Informative: Akin to comments in code
- Microsoft product names (Windows, Office, Exchange, etc.) are never u normative sections
- SHOULD and MAY keywords are used to document optional behavior
  - MAY == "Optional"
  - SHOULD =="Recommended"

MAY, SHOULD, MUST, SHOULD NOT, MUST NOT: These terms (in all caps) are used as described in [RFC2119]. All statements of optional behavior use either MAY, SHOULD, or SHOULD NOT.

- SHOULD and MAY with endnotes are used to specify versions of Micros where behavior is implemented
  - SHOULD<x> means that latest version implements this behavior
  - MAY<x> means that latest version does not implement this behavior

Windows Protocols Document Layout



MS-ADFSOD – Active Directory Federation Services
MS-ADOD - Active Directory Protocols
MS-AUTHSOD – Authentications Services
MS-AZOD – Authorization Protocols
MS-CCROD - Content Caching and Retrieval Protocols
MS-CERSOD – Certificate Services Protocols
MS-FASOD – File Access Services Protocols
MS-FSMOD – File Services Management Protocols
MS-GPOD – Group Policy Protocols
MS-MQOD – Message Queue Protocols

Windows Overview Documents -2

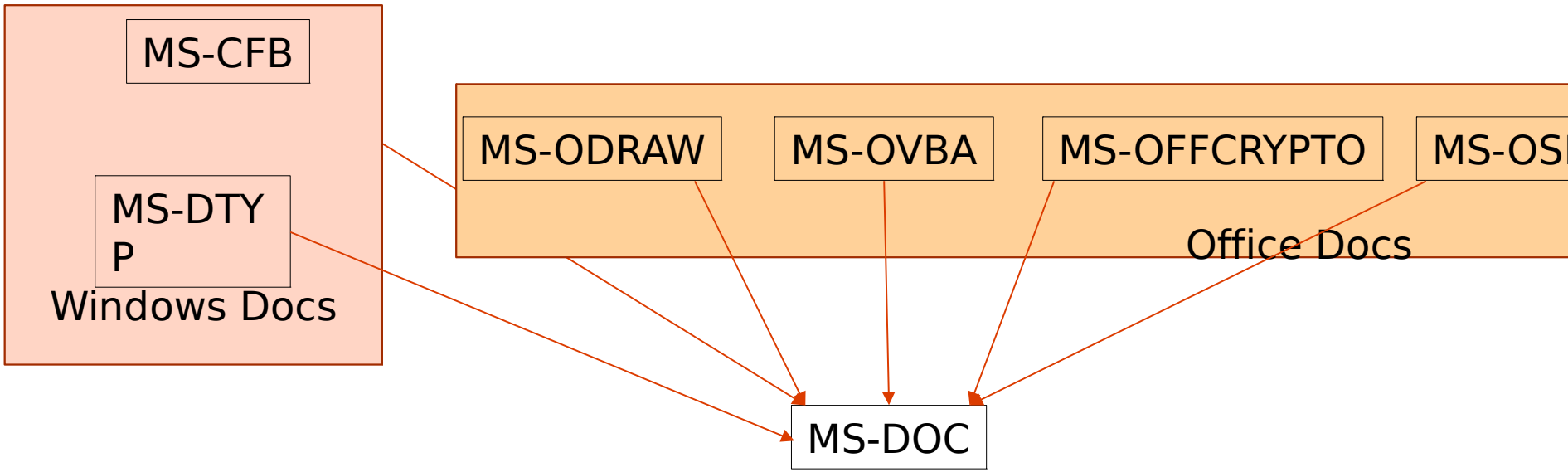
MS-MSSOD - Media Streaming Server Protocols
MS-NAPOD - Network Access Protection Protocols
MS-NETOD - .NET Framework Protocols
MS-PRSOD – Print Services Protocols
MS-RDSOD – Remote desktop Services Protocols
MS-RMSOD – Rights Management Services Protocols
MS-STOROD – Storage Services Protocols
MS-TPSOD - Transaction Processing Services Protocols
MS-WMOD – Windows Management Protocols
MS-WSUSOD – Windows Servers Update Services Protoc
MS-WPO – Windows Protocols

EU OD Capture Files @ Code

http://euodcap.codeplex.com/

- Network Captures
  - Available for download
  - Annotated with references to the protocol documents

Example MS-DOC – Word D



MS-CFB Compound File Binary File Format

Security (ACL’s etc) MS-DTYP

Microsoft Interoperability Supp

- MSDN Forums: http://social.msdn.microsoft.com/Forums/en/home?category=openspecifications
- Email Help dochelp@microsoft.com
- Patent Team: iplg@microsoft.com

Resources to aid Interoperabil Efforts

- Test Suites and Tools
  - Available on the download center and MSConnect
  - Developed for the most popular protocols
  - Test Suites available for Windows, Office, SharePoint, and
- Plugfests and Events
  - Available globally throughout the year
  - Attendance is free
  - Showcase event is on June 16-20 in Redmond

Office Open Specifications Overv

Lync Protocols	MS-OCSPROT
Office Protocols	MS-OCPROTO
Office File Formats	MS-OFFDI
SharePoint Protocols*	MS-SPO
Exchange Protocols	MS-OXPROTO

**MS-WSSO & MS-GRVPROT*

SharePoint

Click

SharePoint Products and Technology Protocols

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MS-SPO
(166 Protocols)

MS
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SharePoint Protocols Overview

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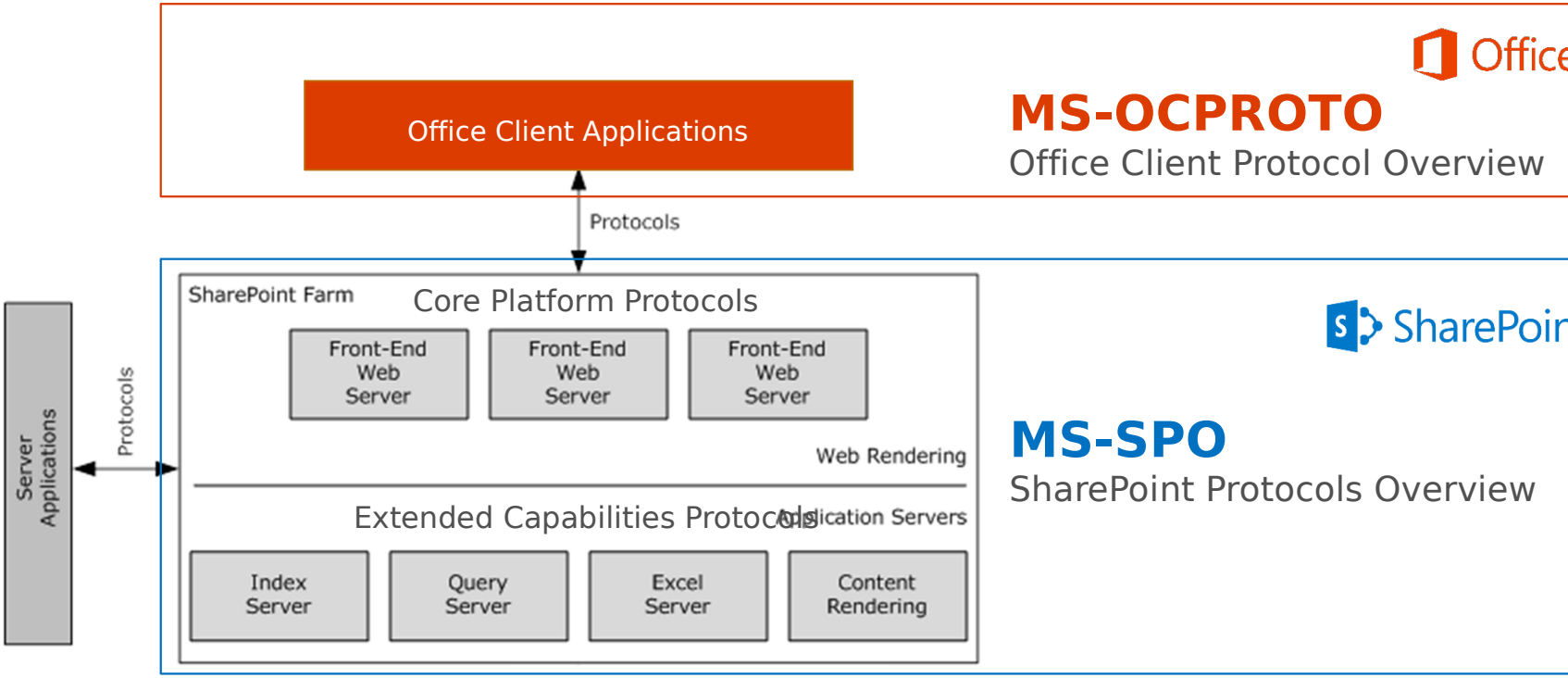
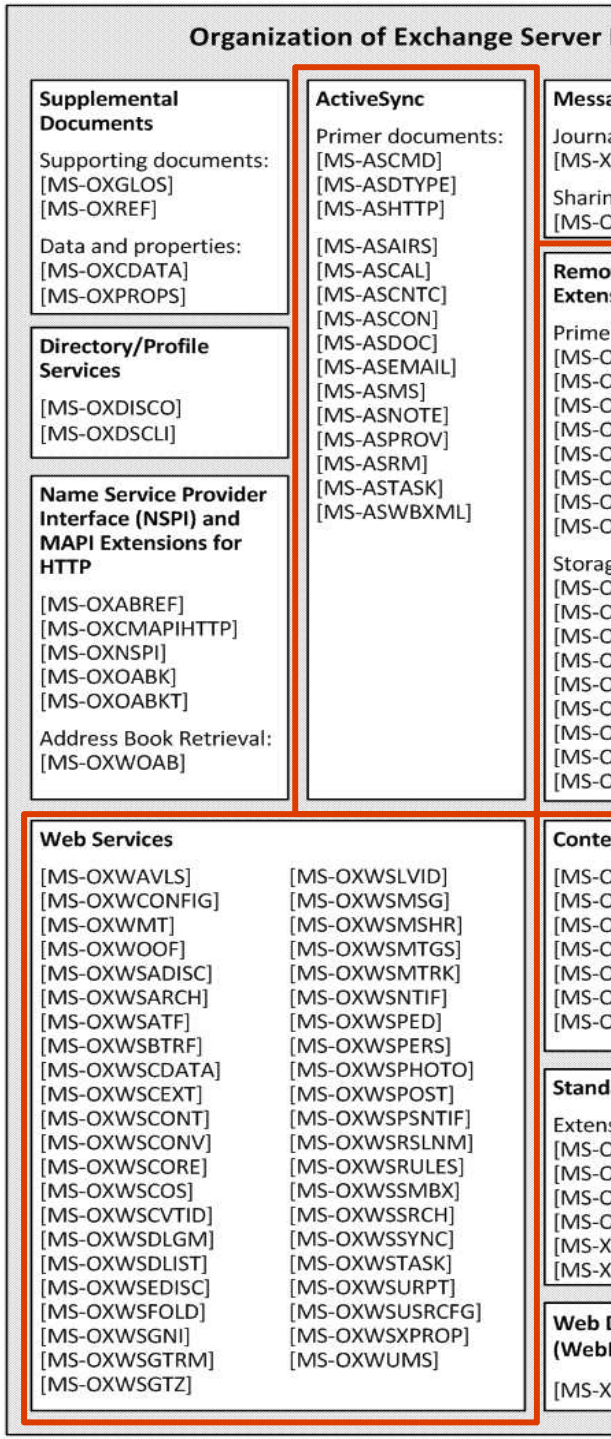
Proto

Protocol Architecture / Topolo

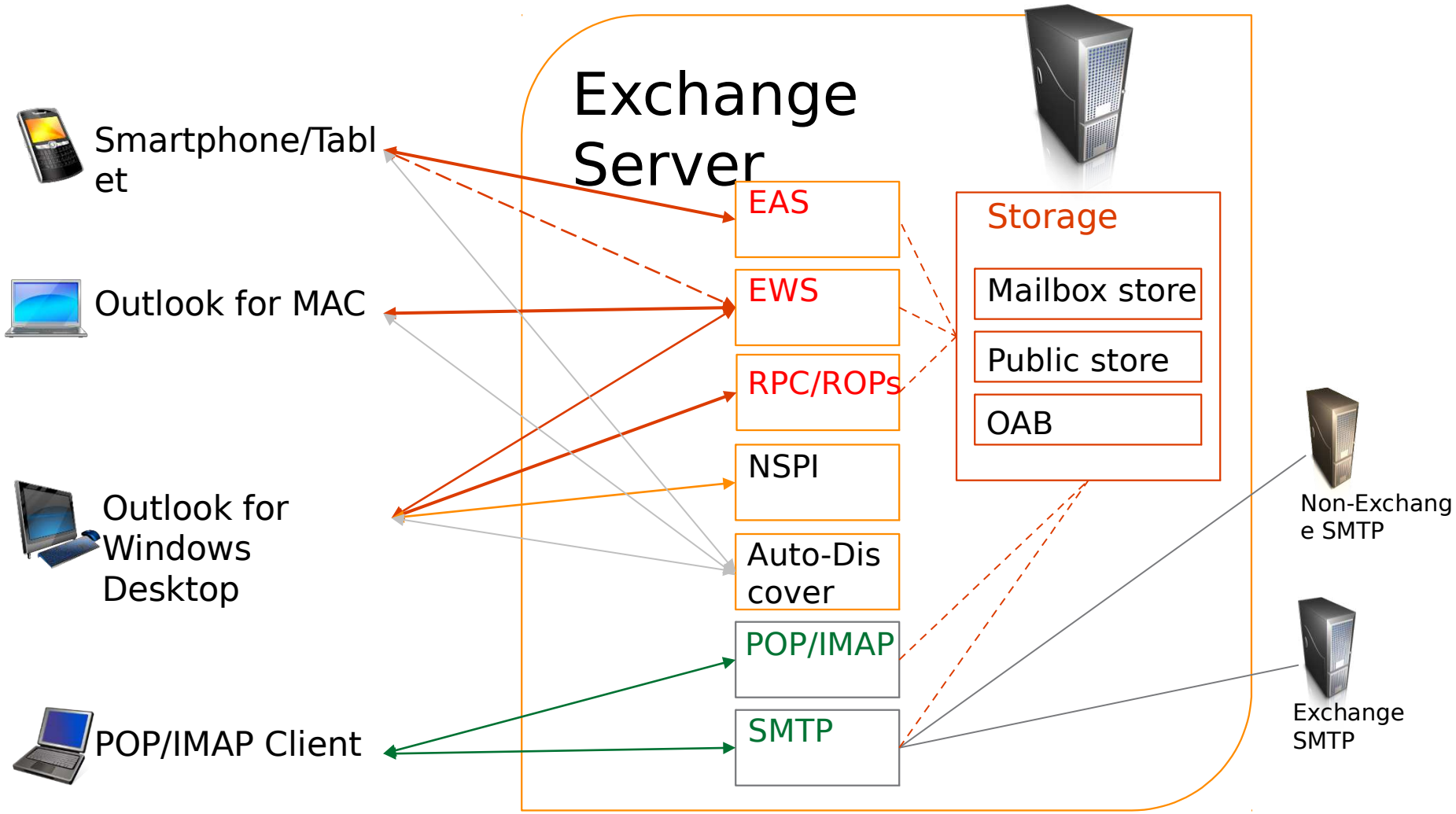


Exchange Overview Document (MS-OXPROTO)

- Great starting point for protocol development
- Official classification of Exchange Protocols
- Explains relationship between Exchange protocols
- Defines Exchange protocol families
- Informative and Scenario Based
- How multiple protocols work together in typical scenarios
- How to complete same task using different protocol families
  - Send email via RPC/ROPs, EWS or Exchange ActiveSync
  - Resolve a Recipient from an Address Book
  - Synchronize items
  - Provision mobile client using Exchange ActiveSync
  - Many other scenarios



Client Communication with Exch



Office File Format Overview

Extensive documentation provides full details of Office files

- Documentation Introduction (MS-OFFDI) provides overview of Word, Excel, and PowerPoint document formats
- Standards documents supplement the official standard specifications
  - **ISO/IEC 29500 (Open XML)**
  - **ISO/IEC 26300 (ODF 1.0, 1.1)**
  - **Ecma 376 Rev 1 (Open XML)**
  - **OASIS ODF 1.2**
- Binary Formats documents fully specify the legacy (Office 97-2003) Office Binary File Formats
- Additional information available on MSDN