

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

This document contains a partial list of the objects that exist in the Active Directory schema. Active Directory and all associated terms and concepts are described in the document titled "Active Directory Technical Specification", which has the following normative reference:

[MS-ADTS] Microsoft Corporation, "[Active Directory Technical Specification](#)", June 2007.

Note This document is not intended to stand on its own; it is intended to act as an appendix to the Active Directory Technical Specification, as specified in the normative reference shown above. For details about the Active Directory schema, see [\[MS-ADTS\]](#) section 3.1.1.2 (Active Directory Schema).

This document contains Active Directory schema objects of type "attribute" whose names start with the letters N through Z.

Note The object definitions in this document are also available for download in LDAP Data Interchange Format (LDIF) at the following location: [\[MSFT-ADSCHEMA\]](#).

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Revision Summary

Date	Revision History	Revision Class	Comments
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04/10/2007	1.1		Version 1.1 release
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07/10/2007	1.2.2	Editorial	Revised and edited the technical content.
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02/11/2011	17.1	Minor	Clarified the meaning of the technical content.
03/25/2011	17.2	Minor	Clarified the meaning of the technical content.
05/06/2011	17.3	Minor	Clarified the meaning of the technical content.
06/17/2011	17.4	Minor	Clarified the meaning of the technical content.

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1 References

References to Microsoft Open Specification documents do not include a publishing year because links are to the latest version of the documents, which are updated frequently. References to other documents include a publishing year when one is available.

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information. Please check the archive site, <http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624>, as an additional source.

[MS-ADSC] Microsoft Corporation, "[Active Directory Schema Classes](#)".

[MS-ADTS] Microsoft Corporation, "[Active Directory Technical Specification](#)".

[MS-DISO] Microsoft Corporation, "[Domain Interactions System Overview](#)".

[MS-DRSR] Microsoft Corporation, "[Directory Replication Service \(DRS\) Remote Protocol Specification](#)".

[MS-DTYP] Microsoft Corporation, "[Windows Data Types](#)".

[MS-LSAD] Microsoft Corporation, "[Local Security Authority \(Domain Policy\) Remote Protocol Specification](#)".

[MS-SAMR] Microsoft Corporation, "[Security Account Manager \(SAM\) Remote Protocol Specification \(Client-to-Server\)](#)".

[MSDN-PACKAGE-FLAGS] Microsoft Corporation, "Package-Flags", <http://msdn.microsoft.com/en-us/library/ms679099.aspx>

If you have any trouble finding [MSDN-PACKAGE-FLAGS], please check [here](#).

[MSDN-ExtUserIntDirObj] Microsoft Corporation, "Extending the User Interface for Directory Objects", <http://msdn.microsoft.com/en-us/library/ms676902.aspx>

[MSFT-ADSCHEMA] Microsoft Corporation, "Combined Active Directory Schema Classes and Attributes for Windows Server", February 2011, <http://www.microsoft.com/downloads/en/details.aspx?displaylang=en&FamilyID=da2fc73a-3d35-484c-9bea-f023dcba7275>

If you have any trouble finding [MSFT-ADSCHEMA], please check [here](#).

[RFC804] Drafting Group on Draft Recommendation T.4, "CCITT Draft Recommendation T.4 - STANDARDIZATION OF GROUP 3 FACSIMILE APPARATUS FOR DOCUMENT TRANSMISSION", RFC 804, <http://www.faqs.org/rfcs/rfc804.html>

[RFC822] Crocker, D.H., "Standard for ARPA Internet Text Messages", STD 11, RFC 822, August 1982, <http://www.ietf.org/rfc/rfc0822.txt>

[RFC1274] Barker, P., and Kille, S., "The COSINE and Internet X.500 Schema", RFC 1274, November 1991, <http://www.ietf.org/rfc/rfc1274.txt>

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

[RFC2307] Howard, L., "An Approach for Using LDAP as a Network Information Service", RFC 2307, March 1998, <http://www.ietf.org/rfc/rfc2307.txt>

[RFC2849] Good, G., "The LDAP Data Interchange Format (LDIF) - Technical Specification", RFC 2849, June 2000, <http://www.ietf.org/rfc/rfc2849.txt>

[RFC3280] Housley, R., Polk, W., Ford, W., and Solo, D., "Internet X.509 Public Key Infrastructure Certificate and Certificate Revocation List (CRL) Profile", RFC 3280, April 2002, <http://www.ietf.org/rfc/rfc3280.txt>

[X121] ITU-T, "Public data networks - Network aspects - International numbering plan for public data networks", Recommendation X.121, October 2000, <http://www.itu.int/rec/T-REC-X.121/en>

[X400] ITU-T, "Message handling systems - Message handling system and service overview", Recommendation F.400/X.400, June 1999, <http://www.itu.int/rec/T-REC-X.400/en>

[X420] ITU-T, "X.420 - Information technology - Message Handling Systems (MHS): Interpersonal Messaging System", Recommendation X.420 June 1999, <http://www.itu.int/rec/T-REC-X.420-199906-I/en>

[X500] ITU-T, "Information Technology - Open Systems Interconnection - The Directory: Overview of Concepts, Models and Services", Recommendation X.500, August 2005, <http://www.itu.int/rec/T-REC-X.500-200508-I/en>

Note There is a charge to download the specification.

[X509] ITU-T, "Information Technology - Open Systems Interconnection - The Directory: Public-Key and Attribute Certificate Frameworks", Recommendation X.509, August 2005, <http://www.itu.int/rec/T-REC-X.509/en>

Note There is a charge to download the specification.

2 Attributes

The following sections specify attributes in the Active Directory schema whose names start with the letters N through Z.

These sections normatively specify the schema definition of each attribute and version-specific behavior of those schema definitions (such as when the attribute was added to the schema). Additionally, as an aid to the reader some of the sections include informative notes about how the attribute can be used.

Note Lines of text in the attribute definitions that are excessively long have been "folded" in accordance with [\[RFC2849\]](#) Note 2.

2.1 Attribute name

This attribute specifies the relative distinguished name of an object. The relative distinguished name is the part of the object name that is an attribute of the object itself. Also known as the naming attribute. See the glossary entry for distinguished name in [\[MS-ADTS\]](#) section 1.1.

```
cn: RDN
ldapDisplayName: name
attributeId: 1.2.840.113556.1.4.1
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967a0e-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE| fANR | fATTINDEX
rangeLower: 1
rangeUpper: 255
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
mapiID: 33282
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.2 Attribute nameServiceFlags

This attribute specifies the configuration flags for remote procedure call (RPC) name service.

```
cn: Name-Service-Flags
ldapDisplayName: nameServiceFlags
attributeId: 1.2.840.113556.1.4.753
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 80212840-4bdc-11d1-a9c4-0000f80367c1
systemOnly: FALSE
```

```
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.3 Attribute nCName

This attribute specifies the distinguished name of the naming context (NC) for the object. See [\[MS-ADTS\]](#) section 7.1, "Special Objects and Forest Invariants", for more details on usage.

```
cn: NC-Name
ldapDisplayName: nCName
attributeId: 1.2.840.113556.1.2.16
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: bf9679d6-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.4 Attribute nETBIOName

This attribute specifies the name of the object to be used over NetBIOS.

```
cn: NETBIOS-Name
ldapDisplayName: nETBIOName
attributeId: 1.2.840.113556.1.4.87
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf9679d8-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fATTINDEX
rangeLower: 1
rangeUpper: 16
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.5 Attribute netbootAllowNewClients

This attribute is reserved for internal use.

```
cn: netboot-Allow-New-Clients
ldapDisplayName: netbootAllowNewClients
attributeId: 1.2.840.113556.1.4.849
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 07383076-91df-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.6 Attribute netbootAnswerOnlyValidClients

This attribute specifies whether the server answers all computers or only pre-staged client computers.

```
cn: netboot-Answer-Only-Valid-Clients
ldapDisplayName: netbootAnswerOnlyValidClients
attributeId: 1.2.840.113556.1.4.854
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 0738307b-91df-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.7 Attribute netbootAnswerRequests

This attribute enables the RIS server to accept any RIS requests.

```
cn: netboot-Answer-Requests
ldapDisplayName: netbootAnswerRequests
attributeId: 1.2.840.113556.1.4.853
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 0738307a-91df-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```


Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.8 Attribute netbootCurrentClientCount

The netboot-Current-Client-Count attribute is reserved for internal use.

```
cn: netboot-Current-Client-Count
ldapDisplayName: netbootCurrentClientCount
attributeId: 1.2.840.113556.1.4.852
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 07383079-91df-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.9 Attribute netbootGUID

This attribute specifies the diskless boot: Machine on-board GUID. Corresponds to the computer's network card MAC address.

```
cn: Netboot-GUID
ldapDisplayName: netbootGUID
attributeId: 1.2.840.113556.1.4.359
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 3e978921-8c01-11d0-afda-00c04fd930c9
systemOnly: FALSE
searchFlags: fATTINDEX
rangeLower: 16
rangeUpper: 16
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.10 Attribute netbootInitialization

This attribute specifies the default boot path for diskless boot.

```
cn: Netboot-Initialization
ldapDisplayName: netbootInitialization
attributeId: 1.2.840.113556.1.4.358
attributeSyntax: 2.5.5.12
omSyntax: 64
```

```
isSingleValued: TRUE
schemaIdGuid: 3e978920-8c01-11d0-afda-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.11 Attribute netbootIntelliMirrorOSes

The netboot-IntelliMirror-OSes attribute is reserved for internal use.

```
cn: netboot-IntelliMirror-OSes
ldapDisplayName: netbootIntelliMirrorOSes
attributeId: 1.2.840.113556.1.4.857
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 0738307e-91df-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.12 Attribute netbootLimitClients

The netboot-Limit-Clients attribute is reserved for internal use.

```
cn: netboot-Limit-Clients
ldapDisplayName: netbootLimitClients
attributeId: 1.2.840.113556.1.4.850
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 07383077-91df-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.13 Attribute netbootLocallyInstalledOSes

The netboot-Locally-Installed-OSes attribute is reserved for internal use.

```
cn: netboot-Locally-Installed-OSes
```

```
ldapDisplayName: netbootLocallyInstalledOSes
attributeId: 1.2.840.113556.1.4.859
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 07383080-91df-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.14 Attribute netbootMachineFilePath

This attribute specifies the server that answers the client. In Windows Server® 2003 operating system, it can indicate the startrom that the client gets.

```
cn: Netboot-Machine-File-Path
ldapDisplayName: netbootMachineFilePath
attributeId: 1.2.840.113556.1.4.361
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 3e978923-8c01-11d0-afda-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server 2003, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.15 Attribute netbootMaxClients

The netboot-Max-Clients attribute is reserved for internal use.

```
cn: netboot-Max-Clients
ldapDisplayName: netbootMaxClients
attributeId: 1.2.840.113556.1.4.851
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 07383078-91df-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.16 Attribute netbootMirrorDataFile

The Netboot-Mirror-Data-File attribute is reserved for internal use.

```
cn: Netboot-Mirror-Data-File
ldapDisplayName: netbootMirrorDataFile
attributeId: 1.2.840.113556.1.4.1241
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 2df90d85-009f-11d2-aa4c-00c04fd7d83a
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.17 Attribute netbootNewMachineNamingPolicy

This attribute specifies the naming scheme that new client computer accounts will use.

```
cn: netboot-New-Machine-Naming-Policy
ldapDisplayName: netbootNewMachineNamingPolicy
attributeId: 1.2.840.113556.1.4.855
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 0738307c-91df-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.18 Attribute netbootNewMachineOU

This attribute specifies where the new client computer account will be created.

```
cn: netboot-New-Machine-OU
ldapDisplayName: netbootNewMachineOU
attributeId: 1.2.840.113556.1.4.856
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: 0738307d-91df-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.19 Attribute netbootSCPBL

This attribute is the back link attribute of netbootServer and contains a list of service connection points that reference this netboot server.

```
cn: netboot-SCP-BL
ldapDisplayName: netbootSCPBL
attributeId: 1.2.840.113556.1.4.864
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 07383082-91df-11d1-aebc-0000f80367c1
systemOnly: TRUE
searchFlags: 0
linkID: 101
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, the following attributes are defined differently:

```
isSingleValued: TRUE
```

2.20 Attribute netbootServer

This attribute specifies the distinguished name of a netboot server.

```
cn: netboot-Server
ldapDisplayName: netbootServer
attributeId: 1.2.840.113556.1.4.860
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: 07383081-91df-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
linkID: 100
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.21 Attribute netbootSIFFile

The Netboot-SIF-File attribute is reserved for internal use.

```
cn: Netboot-SIF-File
ldapDisplayName: netbootSIFFile
attributeId: 1.2.840.113556.1.4.1240
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 2df90d84-009f-11d2-aa4c-00c04fd7d83a
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.22 Attribute netbootTools

The netboot-Tools attribute is reserved for internal use.

```
cn: netboot-Tools
ldapDisplayName: netbootTools
attributeId: 1.2.840.113556.1.4.858
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 0738307f-91df-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.23 Attribute networkAddress

This attribute specifies the TCP/IP address for a network segment, which is also called the subnet address.

```
cn: Network-Address
ldapDisplayName: networkAddress
attributeId: 1.2.840.113556.1.2.459
attributeSyntax: 2.5.5.4
omSyntax: 20
isSingleValued: FALSE
schemaIdGuid: bf9679d9-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 256
mapID: 33136
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.24 Attribute nextLevelStore

This attribute specifies the next class store to search.

```
cn: Next-Level-Store
ldapDisplayName: nextLevelStore
attributeId: 1.2.840.113556.1.4.214
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: bf9679da-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.25 Attribute nextRid

This attribute specifies the **Next Rid** field used by the mixed mode allocator. See [\[MS-SAMR\]](#) and [\[MS-DRSR\]](#) for more information on how RID pools are defined.

```
cn: Next-Rid
ldapDisplayName: nextRid
attributeId: 1.2.840.113556.1.4.88
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf9679db-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.26 Attribute nisMapEntry

This attribute specifies one map entry of a non-standard map.

```
cn: NisMapEntry
ldapDisplayName: nisMapEntry
attributeId: 1.3.6.1.1.1.1.27
attributeSyntax: 2.5.5.5
```

```
omSyntax: 22
isSingleValued: TRUE
schemaIdGuid: 4a95216e-fcc0-402e-b57f-5971626148a9
systemOnly: FALSE
searchFlags: 0
rangeUpper: 1024
```

Version-Specific Behavior: Implemented on Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.27 Attribute nisMapName

The attribute contains the name of the map to which the object belongs.

```
cn: NisMapName
ldapDisplayName: nisMapName
attributeId: 1.3.6.1.1.1.1.26
attributeSyntax: 2.5.5.5
omSyntax: 22
isSingleValued: TRUE
schemaIdGuid: 969d3c79-0e9a-4d95-b0ac-bdde7ff8f3a1
systemOnly: FALSE
searchFlags: 0
rangeUpper: 1024
```

Version-Specific Behavior: Implemented on Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.28 Attribute nisNetgroupTriple

This attribute specifies one entry from a netgroup map.

```
cn: NisNetgroupTriple
ldapDisplayName: nisNetgroupTriple
attributeId: 1.3.6.1.1.1.1.14
attributeSyntax: 2.5.5.5
omSyntax: 22
isSingleValued: FALSE
schemaIdGuid: a8032e74-30ef-4ff5-affc-0fc217783fec
systemOnly: FALSE
searchFlags: 0
rangeUpper: 153600
```

Version-Specific Behavior: Implemented on Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.29 Attribute nonSecurityMember

This attribute specifies non-security members of a group. Used for Microsoft® Exchange Server distribution lists.

```
cn: Non-Security-Member
ldapDisplayName: nonSecurityMember
```



```
attributeId: 1.2.840.113556.1.4.530
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 52458018-ca6a-11d0-afff-0000f80367c1
systemOnly: FALSE
searchFlags: 0
linkID: 50
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.30 Attribute nonSecurityMemberBL

This attribute is the back link attribute of nonSecurityMember and contains the list of nonsecurity members for a Microsoft® Exchange Server distribution list.

```
cn: Non-Security-Member-BL
ldapDisplayName: nonSecurityMemberBL
attributeId: 1.2.840.113556.1.4.531
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 52458019-ca6a-11d0-afff-0000f80367c1
systemOnly: TRUE
searchFlags: 0
linkID: 51
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.31 Attribute notes

This attribute specifies a free text field for general-purpose notes on an object.

```
cn: Additional-Information
ldapDisplayName: notes
attributeId: 1.2.840.113556.1.4.265
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 6d05fb41-246b-11d0-a9c8-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeUpper: 32768
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

On Windows 2000 Server, rangeUpper is not defined.

2.32 Attribute notificationList

This attribute is not necessary for Active Directory to function. The protocol does not define a format beyond that required by the schema.

```
cn: Notification-List
ldapDisplayName: notificationList
attributeId: 1.2.840.113556.1.4.303
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: 19195a56-6da0-11d0-afd3-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.33 Attribute nTGroupMembers

This attribute is not necessary for Active Directory to function. The protocol does not define a format beyond that required by the schema.

```
cn: NT-Group-Members
ldapDisplayName: nTGroupMembers
attributeId: 1.2.840.113556.1.4.89
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: bf9679df-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.34 Attribute nTMixedDomain

This attribute specifies whether the domain is in native mode or mixed mode. This attribute is found in the domainDNS (head) object for the domain. For more information on how AD uses this attribute, refer to [\[MS-ADTS\]](#) section 7.1.4.1.

```
cn: NT-Mixed-Domain
```

```
ldapDisplayName: nTMixedDomain
attributeId: 1.2.840.113556.1.4.357
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 3e97891f-8c01-11d0-afda-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.35 Attribute ntPwdHistory

This attribute specifies the password history of the user in Microsoft Windows NT® operating system one-way format (OWF). Microsoft Windows® 2000 operating system uses the Windows NT OWF.

For more information about usage, refer to [\[MS-SAMR\]](#) sections [3.1.1.6](#) and [3.1.1.9.1](#).

```
cn: Nt-Pwd-History
ldapDisplayName: ntPwdHistory
attributeId: 1.2.840.113556.1.4.94
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: bf9679e2-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.36 Attribute nTSecurityDescriptor

This attribute specifies the Microsoft Windows NT® operating system security descriptor for an object. For more information about how Active Directory uses this attribute, refer to [\[MS-ADTS\]](#) section 5.1.

```
cn: NT-Security-Descriptor
ldapDisplayName: nTSecurityDescriptor
attributeId: 1.2.840.113556.1.2.281
attributeSyntax: 2.5.5.15
omSyntax: 66
isSingleValued: TRUE
schemaIdGuid: bf9679e3-0de6-11d0-a285-00aa003049e2
```

```

systemOnly: FALSE
searchFlags: fPRESERVEONDELETE
rangeLower: 0
rangeUpper: 132096
mapiID: 32787
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_OPERATIONAL |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, the following attributes are defined differently:

```

systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER

```

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.37 Attribute o

This attribute specifies the name of the company or organization.

```

cn: Organization-Name
ldapDisplayName: o
attributeId: 2.5.4.10
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: bf9679ef-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
mapiID: 33025
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.38 Attribute objectCategory

This attribute specifies an object class name that is used to group objects of this or derived classes. Every object in Active Directory has this attribute. See [\[MS-ADTS\]](#) section 3.1.1.3.1.3.4 for more information about how Active Directory uses this attribute in searches.

```

cn: Object-Category
ldapDisplayName: objectCategory
attributeId: 1.2.840.113556.1.4.782
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: 26d97369-6070-11d1-a9c6-0000f80367c1
systemOnly: FALSE
searchFlags: fATTINDEX
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.39 Attribute objectClass

This attribute specifies the list of classes of which this object is an instance. See [\[MS-ADTS\]](#) section 3.1.1.2.4.3 for information about how this attribute is used.

```

cn: Object-Class
ldapDisplayName: objectClass
attributeId: 2.5.4.0
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: FALSE
schemaIdGuid: bf9679e5-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: fATTINDEX | fPRESERVEONDELETE
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Note If the DC functional level of the DC that initially created the forest is greater than or equal to DS_BEHAVIOR_WIN2008, then the fATTINDEX bit is present by default in the [searchFlags](#) attribute of the [objectClass](#) attribute; otherwise it is not present by default.

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.40 Attribute objectClassCategory

This attribute specifies the class type, such as abstract, auxiliary, or structured. See [\[MS-ADTS\]](#) for how this attribute is used by the Active Directory service.

```
cn: Object-Class-Category
ldapDisplayName: objectClassCategory
attributeId: 1.2.840.113556.1.2.370
attributeSyntax: 2.5.5.9
omSyntax: 10
isSingleValued: TRUE
schemaIdGuid: bf9679e6-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
rangeLower: 0
rangeUpper: 3
mapID: 33014
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.41 Attribute objectClasses

This attribute specifies a multivalued property containing strings that represent each class in the schema. Each value contains the governsID, LDAPDisplayName, mustContain, mayContain, and so on. For more information, refer to [\[MS-ADTS\]](#) section 3.1.1.3.1.1.1.

```
cn: Object-Classes
ldapDisplayName: objectClasses
attributeId: 2.5.21.6
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 9a7ad94b-ca53-11d1-bbd0-0080c76670c0
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
  FLAG_DOMAIN_DISALLOW_RENAME
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.42 Attribute objectCount

This attribute is not necessary for Active Directory to function. The protocol does not define a format beyond that required by the schema.

```

cn: Object-Count
ldapDisplayName: objectCount
attributeId: 1.2.840.113556.1.4.506
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 34aaa216-b699-11d0-afee-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.43 Attribute objectGUID

This attribute specifies the unique identifier for an object. The GUID data type is defined in [\[MS-DTYP\]](#) section 2.3.2. GUID usage by the Active Directory service is defined in [\[MS-ADTS\]](#), in particular in section [3.1.1.1.3](#).

```

cn: Object-Guid
ldapDisplayName: objectGUID
attributeId: 1.2.840.113556.1.4.2
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: bf9679e7-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE | fATTINDEX
rangeLower: 16
rangeUpper: 16
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
mapID: 35949
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER | FLAG_ATTR_NOT_REPLICATED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.44 Attribute objectSid

This attribute specifies a binary value that specifies the security identifier (SID) of a security principal object. The SID is a unique value used to identify security principal objects. For more information on the SID data type, refer to [\[MS-DTYP\]](#) section 2.4.2. SID usage is also discussed in [\[MS-ADTS\]](#), in particular in section [3.1.1.1.3](#).

Because this is an attribute of String(SID) syntax, an application writing to this attribute via the LDAP protocol can specify a value for this attribute as a valid SDDL SID string, as specified in [\[MS-](#)

[ADTS](#) section 3.1.1.3.1.2.5. The directory service will convert that value to its binary value equivalent.

```
cn: Object-Sid
ldapDisplayName: objectSid
attributeId: 1.2.840.113556.1.4.146
attributeSyntax: 2.5.5.17
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: bf9679e8-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE | fATTINDEX
rangeLower: 0
rangeUpper: 28
attributeSecurityGuid: 59ba2f42-79a2-11d0-9020-00c04fc2d3cf
mapiID: 32807
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, the following attributes are defined differently:

```
systemOnly: FALSE
```

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.45 Attribute objectVersion

This attribute specifies a generic store for a version number for the object. Active Directory uses this attribute for a few operations. Refer to [\[MS-ADTS\]](#) section 3.1.1.2.1 for more information.

```
cn: Object-Version
ldapDisplayName: objectVersion
attributeId: 1.2.840.113556.1.2.76
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 16775848-47f3-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
mapiID: 33015
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.46 Attribute oEMInformation

This attribute specifies OEM information.

```
cn: OEM-Information
ldapDisplayName: oEMInformation
attributeId: 1.2.840.113556.1.4.151
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf9679ea-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 32767
attributeSecurityGuid: b8119fd0-04f6-4762-ab7a-4986c76b3f9a
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute attributeSecurityGuid is not defined.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.47 Attribute oMObjectClass

This attribute specifies the unique object ID (OID) for the attribute or class. See [\[MS-ADTS\]](#) section 3.1.1.2.2.2, "LDAP Representation", for information on how this object is used by the Active Directory service.

```
cn: OM-Object-Class
ldapDisplayName: oMObjectClass
attributeId: 1.2.840.113556.1.2.218
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: bf9679ec-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
mapID: 33021
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.48 Attribute oMSyntax

Used as part of specifying the syntax of an attribute. See [\[MS-ADTS\]](#) section 3.1.1.2.2.2, LDAP Representation, for information on how this object is used by the Active Directory service.

```
cn: OM-Syntax
ldapDisplayName: oMSyntax
attributeId: 1.2.840.113556.1.2.231
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf9679ed-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE
mapiID: 33022
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.49 Attribute oMTGuid

This attribute specifies the unique identifier for a Link-Track-Object-Move table entry.

```
cn: OMT-Guid
ldapDisplayName: oMTGuid
attributeId: 1.2.840.113556.1.4.505
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: ddac0cf3-af8f-11d0-afeb-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 16
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.50 Attribute oMTIndxGuid

This attribute specifies the index identifier for a Link-Track-Object-Move table entry.

```
cn: OMT-Indx-Guid
ldapDisplayName: oMTIndxGuid
attributeId: 1.2.840.113556.1.4.333
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
```

```
schemaIdGuid: 1f0075fa-7e40-11d0-afd6-00c04fd930c9
systemOnly: FALSE
searchFlags: fATTINDEX
rangeLower: 0
rangeUpper: 16
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.51 Attribute oncRpcNumber

This attribute specifies a part of the RPC map and stores the RPC number for UNIX RPCs.

```
cn: OncRpcNumber
ldapDisplayName: oncRpcNumber
attributeId: 1.3.6.1.1.1.1.18
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 966825f5-01d9-4a5c-a011-d15ae84efa55
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: Implemented on Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.52 Attribute operatingSystem

This attribute specifies the operating system name (for example, Microsoft Windows NT® operating system).

```
cn: Operating-System
ldapDisplayName: operatingSystem
attributeId: 1.2.840.113556.1.4.363
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 3e978925-8c01-11d0-afda-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.53 Attribute operatingSystemHotfix

This attribute specifies the hotfix level of the operating system.

```
cn: Operating-System-Hotfix
ldapDisplayName: operatingSystemHotfix
attributeId: 1.2.840.113556.1.4.415
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bd951b3c-9c96-11d0-afdd-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.54 Attribute operatingSystemServicePack

This attribute specifies the operating system service pack ID string (for example, SP3).

```
cn: Operating-System-Service-Pack
ldapDisplayName: operatingSystemServicePack
attributeId: 1.2.840.113556.1.4.365
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 3e978927-8c01-11d0-afda-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.55 Attribute operatingSystemVersion

This attribute specifies the operating system version string (for example, 4.0).

```
cn: Operating-System-Version
ldapDisplayName: operatingSystemVersion
attributeId: 1.2.840.113556.1.4.364
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 3e978926-8c01-11d0-afda-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.56 Attribute operatorCount

The Operator-Count attribute is part of the mandatory User\Group properties (see [\[MS-ADTS\]](#) for more information).

```
cn: Operator-Count
ldapDisplayName: operatorCount
attributeId: 1.2.840.113556.1.4.144
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf9679ee-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.57 Attribute optionDescription

This attribute specifies a description of an option that is set on the DHCP server.

```
cn: Option-Description
ldapDisplayName: optionDescription
attributeId: 1.2.840.113556.1.4.712
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 963d274d-48be-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.58 Attribute options

This attribute specifies a bit field, where the meaning of the bits varies from objectClass to objectClass. Can occur on Inter-Site-Transport, NTDS-Connection, NTDS-DSA, NTDS-Site-Settings, and Site-Link objects. See [\[MS-DRSR\]](#) and [\[MS-ADTS\]](#) more for information.

```
cn: Options
ldapDisplayName: options
attributeId: 1.2.840.113556.1.4.307
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 19195a53-6da0-11d0-afd3-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.59 Attribute optionsLocation

This attribute specifies the options location for the DHCP server, and contains the distinguished name (DN) for alternate sites that contain the options information.

```
cn: Options-Location
ldapDisplayName: optionsLocation
attributeId: 1.2.840.113556.1.4.713
attributeSyntax: 2.5.5.5
omSyntax: 19
isSingleValued: FALSE
schemaIdGuid: 963d274e-48be-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.60 Attribute organizationalStatus

The organizationalStatus attribute specifies a category by which a person is often referred to in an organization. This attribute is part of the X.500 schema, as described in [\[RFC1274\]](#).

```
cn: organizationalStatus
ldapDisplayName: organizationalStatus
attributeId: 0.9.2342.19200300.100.1.45
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 28596019-7349-4d2f-adff-5a629961f942
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 256
```

Version-Specific Behavior: Implemented on Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.61 Attribute originalDisplayTable

This attribute specifies the MAPI (original) display table for an address entry.

```
cn: Original-Display-Table
ldapDisplayName: originalDisplayTable
attributeId: 1.2.840.113556.1.2.445
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 5fd424ce-1262-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 32768
mapiID: 33027
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.62 Attribute originalDisplayTableMSDOS

This attribute specifies the MAPI (original) display table for an MS-DOS address entry.

```
cn: Original-Display-Table-MSDOS
ldapDisplayName: originalDisplayTableMSDOS
attributeId: 1.2.840.113556.1.2.214
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 5fd424cf-1262-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 32768
mapiID: 33028
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.63 Attribute otherFacsimileTelephoneNumber

This attribute specifies a list of alternate facsimile numbers.

```
cn: Phone-Fax-Other
ldapDisplayName: otherFacsimileTelephoneNumber
attributeId: 1.2.840.113556.1.4.646
attributeSyntax: 2.5.5.12
omSyntax: 64
```

```
isSingleValued: FALSE
schemaIdGuid: 0296c11d-40da-11d1-a9c0-0000f80367c1
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.64 Attribute otherHomePhone

This attribute specifies a list of alternate home phone numbers.

```
cn: Phone-Home-Other
ldapDisplayName: otherHomePhone
attributeId: 1.2.840.113556.1.2.277
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: f0f8ffa2-1191-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapID: 14895
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.65 Attribute otherIpPhone

This attribute specifies a list of alternate TCP/IP addresses for the phone. Used by telephony.

```
cn: Phone-Ip-Other
ldapDisplayName: otherIpPhone
attributeId: 1.2.840.113556.1.4.722
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 4d146e4b-48d4-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```


Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.66 Attribute otherLoginWorkstations

This attribute specifies non-Microsoft Windows NT® operating system or LAN Manager workstations from which a user can log on.

```
cn: Other-Login-Workstations
ldapDisplayName: otherLoginWorkstations
attributeId: 1.2.840.113556.1.4.91
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: bf9679f1-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fCOPY
rangeLower: 0
rangeUpper: 1024
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.67 Attribute otherMailbox

This attribute specifies other additional mail addresses in a form such as CCMail: JeffSmith.

```
cn: Other-Mailbox
ldapDisplayName: otherMailbox
attributeId: 1.2.840.113556.1.4.651
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 0296c123-40da-11d1-a9c0-0000f80367c1
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.68 Attribute otherMobile

This attribute specifies a list of alternate cell phone numbers.

```
cn: Phone-Mobile-Other
ldapDisplayName: otherMobile
attributeId: 1.2.840.113556.1.4.647
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
```

```
schemaIdGuid: 0296c11e-40da-11d1-a9c0-0000f80367c1
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.69 Attribute otherPager

This attribute specifies a list of alternate pager numbers.

```
cn: Phone-Pager-Other
ldapDisplayName: otherPager
attributeId: 1.2.840.113556.1.2.118
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: f0f8ffa4-1191-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapID: 35950
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.70 Attribute otherTelephone

This attribute specifies a list of alternate office phone numbers.

```
cn: Phone-Office-Other
ldapDisplayName: otherTelephone
attributeId: 1.2.840.113556.1.2.18
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: f0f8ffa5-1191-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapID: 14875
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.71 Attribute otherWellKnownObjects

This attribute specifies a list of containers by GUID and distinguished name. This permits retrieving an object after it has been moved by using just the GUID and the domain name. Whenever the object is moved, the Active Directory system (see [\[MS-ADSO\]](#) section 2.1) will automatically update the distinguished name. See [\[MS-ADTS\]](#) section 7.1, "Special Objects and Forest Invariants".

```
cn: Other-Well-Known-Objects
ldapDisplayName: otherWellKnownObjects
attributeId: 1.2.840.113556.1.4.1359
attributeSyntax: 2.5.5.7
omSyntax: 127
omObjectClass: 1.2.840.113556.1.1.1.11
isSingleValued: FALSE
schemaIdGuid: 1ea64e5d-ac0f-11d2-90df-00c04fd91ab1
systemOnly: FALSE
searchFlags: 0
rangeLower: 16
rangeUpper: 16
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute rangeLower and rangeUpper are not defined.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.72 Attribute ou

This attribute specifies the name of the organizational unit. When used as a component of a directory name, it identifies an organizational unit with which the named object is affiliated.

```
cn: Organizational-Unit-Name
ldapDisplayName: ou
attributeId: 2.5.4.11
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: bf9679f0-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fATTINDEX
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
mapID: 33026
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

```
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.73 Attribute owner

This attribute specifies the name of some object that has some responsibility for the associated object. An attribute value for owner is a distinguished name (which could represent a group of names) and can recur.

```
cn: Owner
ldapDisplayName: owner
attributeId: 2.5.4.32
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: bf9679f3-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
linkID: 44
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.74 Attribute ownerBL

This attribute specifies the back-link to the owner attribute. Contains a list of owners for an object.

```
cn: ms-Exch-Owner-BL
ldapDisplayName: ownerBL
attributeId: 1.2.840.113556.1.2.104
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: bf9679f4-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
linkID: 45
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: Implemented on Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.75 Attribute packageFlags

This attribute specifies a bit field that contains the deployment state flags for an application. This attribute can be set to 0 or a combination of one or more of the values listed in [\[MSDN-PACKAGE-FLAGS\]](#).

```
cn: Package-Flags
ldapDisplayName: packageFlags
attributeId: 1.2.840.113556.1.4.327
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 7d6c0e99-7e20-11d0-afd6-00c04fd930c9
systemOnly: FALSE
searchFlags: fATTINDEX
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.76 Attribute packageName

This attribute specifies the deployment name for an application.

```
cn: Package-Name
ldapDisplayName: packageName
attributeId: 1.2.840.113556.1.4.326
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 7d6c0e98-7e20-11d0-afd6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.77 Attribute packageType

This attribute specifies the type of installation required for an application package. For example, MSI, EXE, CAB.

```
cn: Package-Type
ldapDisplayName: packageType
attributeId: 1.2.840.113556.1.4.324
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 7d6c0e96-7e20-11d0-afd6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
```

```
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.78 Attribute pager

This attribute specifies the primary pager number.

```
cn: Phone-Pager-Primary
ldapDisplayName: pager
attributeId: 0.9.2342.19200300.100.1.42
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: f0f8ffa6-1191-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapiID: 14881
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.79 Attribute parentCA

This attribute specifies the distinguished name of a CA object for a parent certificate authority.

```
cn: Parent-CA
ldapDisplayName: parentCA
attributeId: 1.2.840.113556.1.4.557
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: 5245801b-ca6a-11d0-afff-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.80 Attribute parentCACertificateChain

This attribute specifies the DER-encoded X509v3 certificate [\[X509\]](#) for a parent certificate authority.

```

cn: Parent-CA-Certificate-Chain
ldapDisplayName: parentCACertificateChain
attributeId: 1.2.840.113556.1.4.685
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 963d2733-48be-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.81 Attribute parentGUID

This attribute specifies a constructed attribute, invented to support the DirSync control. It holds the objectGuid of an object's parent when replicating an object's creation, rename, or move.

```

cn: Parent-GUID
ldapDisplayName: parentGUID
attributeId: 1.2.840.113556.1.4.1224
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 2df90d74-009f-11d2-aa4c-00c04fd7d83a
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
  FLAG_DOMAIN_DISALLOW_RENAME
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.82 Attribute partialAttributeDeletionList

This attribute specifies the internal replication state of partial replicas (that is, on global catalogs (GCs)). Attribute of the partial replica NC object. Used when the GC is in the process of removing attributes from the objects in its partial replica NCs. See [\[MS-DRSR\]](#) for more information on implementation usage.

```

cn: Partial-Attribute-Deletion-List
ldapDisplayName: partialAttributeDeletionList
attributeId: 1.2.840.113556.1.4.663
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 28630ec0-41d5-11d1-a9c1-0000f80367c1
systemOnly: TRUE
searchFlags: 0

```

```
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER | FLAG_ATTR_NOT_REPLICATED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.83 Attribute partialAttributeSet

This attribute specifies the internal replication state of partial replicas (that is, on GCs). It is an attribute of the partial replica NC object, and defines the set of attributes present on a particular partial replica NC. See [\[MS-DRSR\]](#) section [5.143](#) for more information on Active Directory service usage.

```
cn: Partial-Attribute-Set
ldapDisplayName: partialAttributeSet
attributeId: 1.2.840.113556.1.4.640
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 19405b9e-3cfa-11d1-a9c0-0000f80367c1
systemOnly: TRUE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER | FLAG_ATTR_NOT_REPLICATED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.84 Attribute pekKeyChangeInterval

This attribute specifies the password encryption key change interval. For more information, refer to [\[MS-SAMR\]](#).

```
cn: Pek-Key-Change-Interval
ldapDisplayName: pekKeyChangeInterval
attributeId: 1.2.840.113556.1.4.866
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: 07383084-91df-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```


Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.85 Attribute pekList

This attribute specifies a list of password encryption keys. This attribute is for internal use only and it is not replicated. Its content is not accessible through any protocol, for more information see [\[MS-ADTS\]](#).

```
cn: Pek-List
ldapDisplayName: pekList
attributeId: 1.2.840.113556.1.4.865
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 07383083-91df-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.86 Attribute pendingCACertificates

This attribute specifies the certificates that are about to become effective for this certificate authority.

```
cn: Pending-CA-Certificates
ldapDisplayName: pendingCACertificates
attributeId: 1.2.840.113556.1.4.693
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 963d273c-48be-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.87 Attribute pendingParentCA

This attribute specifies the reference to the certificate authorities that issued the pending certificates for this certificate authority.

```
cn: Pending-Parent-CA
```

```
ldapDisplayName: pendingParentCA
attributeId: 1.2.840.113556.1.4.695
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 963d273e-48be-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.88 Attribute perMsgDialogDisplayTable

This attribute specifies the per message options MAPI display table.

```
cn: Per-Msg-Dialog-Display-Table
ldapDisplayName: perMsgDialogDisplayTable
attributeId: 1.2.840.113556.1.2.325
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 5fd424d3-1262-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 32768
mapiID: 33032
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.89 Attribute perRecipDialogDisplayTable

This attribute specifies the per recipient options MAPI display table.

```
cn: Per-Recip-Dialog-Display-Table
ldapDisplayName: perRecipDialogDisplayTable
attributeId: 1.2.840.113556.1.2.326
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 5fd424d4-1262-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 32768
mapiID: 33033
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.90 Attribute personalTitle

This attribute specifies the user's title.

```
cn: Personal-Title
ldapDisplayName: personalTitle
attributeId: 1.2.840.113556.1.2.615
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 16775858-47f3-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapiID: 35947
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.91 Attribute photo

This attribute specifies an object encoded in G3 fax as explained in recommendation T.4 [\[RFC804\]](#), with an ASN.1 wrapper to make it compatible with an X.400 BodyPart as defined in [\[X420\]](#).

```
cn: photo
ldapDisplayName: photo
attributeId: 0.9.2342.19200300.100.1.7
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: 9c979768-ba1a-4c08-9632-c6a5c1ed649a
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: Implemented on Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.92 Attribute physicalDeliveryOfficeName

This attribute specifies the office location in the user's place of business.

```
cn: Physical-Delivery-Office-Name
ldapDisplayName: physicalDeliveryOfficeName
attributeId: 2.5.4.19
attributeSyntax: 2.5.5.12
omSyntax: 64
```

```

isSingleValued: TRUE
schemaIdGuid: bf9679f7-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fANR | fATTINDEX
rangeLower: 1
rangeUpper: 128
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapiID: 14873
systemFlags: FLAG_SCHEMA_BASE_OBJECT

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.93 Attribute physicalLocationObject

This attribute specifies a map from a device (for example, printer, computer, and so on) to a physical location.

```

cn: Physical-Location-Object
ldapDisplayName: physicalLocationObject
attributeId: 1.2.840.113556.1.4.514
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: b7b13119-b82e-11d0-afee-0000f80367c1
systemOnly: FALSE
searchFlags: fATTINDEX
systemFlags: FLAG_SCHEMA_BASE_OBJECT

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.94 Attribute pKICriticalExtensions

This attribute specifies a list of critical extensions in the certificate template.

```

cn: PKI-Critical-Extensions
ldapDisplayName: pKICriticalExtensions
attributeId: 1.2.840.113556.1.4.1330
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: fc5a9106-3b9d-11d2-90cc-00c04fd91ab1
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.95 Attribute pKIDefaultCSPs

This attribute specifies a list of cryptographic service providers for the certificate template.

```
cn: PKI-Default-CSPs
ldapDisplayName: pKIDefaultCSPs
attributeId: 1.2.840.113556.1.4.1334
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 1ef6336e-3b9e-11d2-90cc-00c04fd91ab1
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.96 Attribute pKIDefaultKeySpec

This attribute specifies the private key specification for the certificate template.

```
cn: PKI-Default-Key-Spec
ldapDisplayName: pKIDefaultKeySpec
attributeId: 1.2.840.113556.1.4.1327
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 426cae6e-3b9d-11d2-90cc-00c04fd91ab1
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.97 Attribute pKIEnrollmentAccess

The PKI-Enrollment-Access attribute is for internal use only.

```
cn: PKI-Enrollment-Access
ldapDisplayName: pKIEnrollmentAccess
attributeId: 1.2.840.113556.1.4.1335
attributeSyntax: 2.5.5.15
omSyntax: 66
isSingleValued: FALSE
schemaIdGuid: 926be278-56f9-11d2-90d0-00c04fd91ab1
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
```

```
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.98 Attribute pKIExpirationPeriod

This attribute specifies the validity period for the certificate template.

```
cn: PKI-Expiration-Period
ldapDisplayName: pKIExpirationPeriod
attributeId: 1.2.840.113556.1.4.1331
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 041570d2-3b9e-11d2-90cc-00c04fd91ab1
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.99 Attribute pKIExtendedKeyUsage

This attribute specifies the enhanced key usage OIDs for the certificate template.

```
cn: PKI-Extended-Key-Usage
ldapDisplayName: pKIExtendedKeyUsage
attributeId: 1.2.840.113556.1.4.1333
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 18976af6-3b9e-11d2-90cc-00c04fd91ab1
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.100 Attribute pKIKeyUsage

This attribute specifies the key usage extension for the certificate template.

```
cn: PKI-Key-Usage
ldapDisplayName: pKIKeyUsage
attributeId: 1.2.840.113556.1.4.1328
```

```
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: e9b0a87e-3b9d-11d2-90cc-00c04fd91ab1
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.101 Attribute pKIMaxIssuingDepth

This attribute specifies the maximum length of the certificate chain issued by the certificate.

```
cn: PKI-Max-Issuing-Depth
ldapDisplayName: pKIMaxIssuingDepth
attributeId: 1.2.840.113556.1.4.1329
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: f0bfdefa-3b9d-11d2-90cc-00c04fd91ab1
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.102 Attribute pKIOverlapPeriod

This attribute specifies the period during which the certificate should be renewed before it is expired.

```
cn: PKI-Overlap-Period
ldapDisplayName: pKIOverlapPeriod
attributeId: 1.2.840.113556.1.4.1332
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 1219a3ec-3b9e-11d2-90cc-00c04fd91ab1
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.103 Attribute pKT

This attribute specifies the DFS Partition Knowledge Table. Describes the structure of a Distributed File System (DFS) hierarchy.

```
cn: PKT
ldapDisplayName: pKT
attributeId: 1.2.840.113556.1.4.206
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 8447f9f1-1027-11d0-a05f-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeUpper: 10485760
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute rangeUpper is not defined.

2.104 Attribute pKTGuid

This attribute specifies the unique ID of a given DFS Partition Knowledge Table.

```
cn: PKT-Guid
ldapDisplayName: pKTGuid
attributeId: 1.2.840.113556.1.4.205
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 8447f9f0-1027-11d0-a05f-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeLower: 16
rangeUpper: 16
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.105 Attribute policyReplicationFlags

This attribute specifies which LSA properties are replicated to clients. This attribute is not necessary for Active Directory to function. The protocol does not define a format beyond that required by the schema.

```
cn: Policy-Replication-Flags
ldapDisplayName: policyReplicationFlags
attributeId: 1.2.840.113556.1.4.633
attributeSyntax: 2.5.5.9
omSyntax: 2
```



```
isSingleValued: TRUE
schemaIdGuid: 19405b96-3cfa-11d1-a9c0-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.106 Attribute portName

This attribute specifies a list of port names, for example, for printer ports or COM ports.

```
cn: Port-Name
ldapDisplayName: portName
attributeId: 1.2.840.113556.1.4.228
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 281416c4-1968-11d0-a28f-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.107 Attribute possibleInferiors

This attribute specifies the list of classes, instances of which can be child objects of instances of the class on which the possInferiors attribute is present. See [\[MS-ADTS\]](#) section 3.1.1.4.5.21 for more information on Active Directory usage.

```
cn: Possible-Inferiors
ldapDisplayName: possibleInferiors
attributeId: 1.2.840.113556.1.4.915
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: FALSE
schemaIdGuid: 9a7ad94c-ca53-11d1-bbd0-0080c76670c0
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
  FLAG_DOMAIN_DISALLOW_RENAME
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.108 Attribute possSuperiors

This attribute specifies a list of classes, instances of which can be parent objects of the instances of the class on which the possSuperiors attribute is present. See [\[MS-ADTS\]](#) section 3.1.1.2.4.4 for more information on Active Directory usage.

```
cn: Poss-Superiors
ldapDisplayName: possSuperiors
attributeId: 1.2.840.113556.1.2.8
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: FALSE
schemaIdGuid: bf9679fa-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.109 Attribute postalAddress

This attribute specifies the mailing address for the object.

```
cn: Postal-Address
ldapDisplayName: postalAddress
attributeId: 2.5.4.16
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: bf9679fc-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fCOPY
rangeLower: 1
rangeUpper: 4096
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapiID: 33036
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.110 Attribute postalCode

This attribute specifies the postal or ZIP code for mail delivery.

```
cn: Postal-Code
ldapDisplayName: postalCode
attributeId: 2.5.4.17
```

```
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf9679fd-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fCOPY
rangeLower: 1
rangeUpper: 40
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapiID: 14890
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.111 Attribute postOfficeBox

This attribute specifies the post office box number for this object.

```
cn: Post-Office-Box
ldapDisplayName: postOfficeBox
attributeId: 2.5.4.18
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: bf9679fb-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fCOPY
rangeLower: 1
rangeUpper: 40
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapiID: 14891
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.112 Attribute preferredDeliveryMethod

This attribute specifies the X.500-preferred way to deliver to the addressee, as specified in [\[X500\]](#).

```
cn: Preferred-Delivery-Method
ldapDisplayName: preferredDeliveryMethod
attributeId: 2.5.4.28
attributeSyntax: 2.5.5.9
omSyntax: 10
isSingleValued: FALSE
schemaIdGuid: bf9679fe-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapiID: 33037
```

```
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.113 Attribute preferredLanguage

This attribute specifies the preferred written or spoken language for a person.

```
cn: preferredLanguage
ldapDisplayName: preferredLanguage
attributeId: 2.16.840.1.113730.3.1.39
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 856be0d0-18e7-46e1-8f5f-7ee4d9020e0d
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: Implemented on Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.114 Attribute preferredOU

This attribute specifies the organizational unit to show by default on the user's desktop.

```
cn: Preferred-OU
ldapDisplayName: preferredOU
attributeId: 1.2.840.113556.1.4.97
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: bf9679ff-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fCOPY
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.115 Attribute prefixMap

The prefixMap attribute is for internal use only.

```
cn: Prefix-Map
ldapDisplayName: prefixMap
attributeId: 1.2.840.113556.1.4.538
attributeSyntax: 2.5.5.10
omSyntax: 4
```

```
isSingleValued: TRUE
schemaIdGuid: 52458022-ca6a-11d0-afff-0000f80367c1
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.116 Attribute presentationAddress

This attribute specifies a presentation address associated with an object representing an OSI application entity.

```
cn: Presentation-Address
ldapDisplayName: presentationAddress
attributeId: 2.5.4.29
attributeSyntax: 2.5.5.13
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.732
isSingleValued: TRUE
schemaIdGuid: a8df744b-c5ea-11d1-bbcb-0080c76670c0
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.117 Attribute previousCACertificates

This attribute specifies the last expired certificate for this certificate authority.

```
cn: Previous-CA-Certificates
ldapDisplayName: previousCACertificates
attributeId: 1.2.840.113556.1.4.692
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 963d2739-48be-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.118 Attribute previousParentCA

This attribute specifies a reference to the certificate authorities that issued the last expired certificate for a certificate authority.

```
cn: Previous-Parent-CA
ldapDisplayName: previousParentCA
attributeId: 1.2.840.113556.1.4.694
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 963d273d-48be-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.119 Attribute primaryGroupID

This attribute specifies the relative identifier (RID) for the primary group of the user. By default, this is the RID for the Domain Users group. The user is a member of its primary group, although the group is not listed in the user's [memberOf](#) attribute. Likewise, a group object's [member](#) attribute will not list the user objects whose [primaryGroupID](#) is set to the group. For more information, refer to [\[MS-SAMR\]](#) section 3.1.1.8.2, [\[MS-ADTS\]](#), and [\[MS-ADA2\]](#) sections [2.43](#) and [2.45](#).

```
cn: Primary-Group-ID
ldapDisplayName: primaryGroupID
attributeId: 1.2.840.113556.1.4.98
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967a00-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fCOPY| fATTINDEX
attributeSecurityGuid: 59ba2f42-79a2-11d0-9020-00c04fc2d3cf
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.120 Attribute primaryGroupToken

This attribute specifies a computed attribute that is the relative identifier (RID) of a group's SID. For more information refer to [\[MS-ADTS\]](#) section 3.1.1.4.5.11 and [\[MS-SAMR\]](#).

```
cn: Primary-Group-Token
ldapDisplayName: primaryGroupToken
attributeId: 1.2.840.113556.1.4.1412
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: c0ed8738-7efd-4481-84d9-66d2db8be369
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.121 Attribute **primaryInternationalISDNNumber**

This attribute specifies the primary ISDN number.

```
cn: Phone-ISDN-Primary
ldapDisplayName: primaryInternationalISDNNumber
attributeId: 1.2.840.113556.1.4.649
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 0296c11f-40da-11d1-a9c0-0000f80367c1
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.122 Attribute **primaryTelexNumber**

This attribute specifies the primary telex number.

```
cn: Telex-Primary
ldapDisplayName: primaryTelexNumber
attributeId: 1.2.840.113556.1.4.648
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 0296c121-40da-11d1-a9c0-0000f80367c1
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 64
```

```
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.123 Attribute printAttributes

This attribute specifies a bitmask of printer attributes.

```
cn: Print-Attributes
ldapDisplayName: printAttributes
attributeId: 1.2.840.113556.1.4.247
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 281416d7-1968-11d0-a28f-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.124 Attribute printBinNames

This attribute specifies a list of printer bin names.

```
cn: Print-Bin-Names
ldapDisplayName: printBinNames
attributeId: 1.2.840.113556.1.4.237
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 281416cd-1968-11d0-a28f-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.125 Attribute printCollate

This attribute specifies whether a printer has collating bins.

```
cn: Print-Collate
ldapDisplayName: printCollate
attributeId: 1.2.840.113556.1.4.242
attributeSyntax: 2.5.5.8
```



```
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 281416d2-1968-11d0-a28f-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.126 Attribute printColor

This attribute specifies whether a printer can print in color.

```
cn: Print-Color
ldapDisplayName: printColor
attributeId: 1.2.840.113556.1.4.243
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 281416d3-1968-11d0-a28f-00aa003049e2
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.127 Attribute printDuplexSupported

This attribute specifies the type of duplex support a printer has.

```
cn: Print-Duplex-Supported
ldapDisplayName: printDuplexSupported
attributeId: 1.2.840.113556.1.4.1311
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 281416cc-1968-11d0-a28f-00aa003049e2
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.128 Attribute printEndTime

This attribute specifies the time a print queue stops servicing jobs.

```
cn: Print-End-Time
ldapDisplayName: printEndTime
attributeId: 1.2.840.113556.1.4.234
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 281416ca-1968-11d0-a28f-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.129 Attribute printerName

This attribute specifies the display name of an attached printer.

```
cn: Printer-Name
ldapDisplayName: printerName
attributeId: 1.2.840.113556.1.4.300
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 244b296e-5abd-11d0-afd2-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.130 Attribute printFormName

This attribute specifies the name of the currently loaded form.

```
cn: Print-Form-Name
ldapDisplayName: printFormName
attributeId: 1.2.840.113556.1.4.235
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 281416cb-1968-11d0-a28f-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.131 Attribute printKeepPrintedJobs

This attribute specifies whether printed jobs are kept.

```
cn: Print-Keep-Printed-Jobs
ldapDisplayName: printKeepPrintedJobs
attributeId: 1.2.840.113556.1.4.275
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: ba305f6d-47e3-11d0-ala6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.132 Attribute printLanguage

This attribute specifies the supported page description language (for example, PostScript, PCL).

```
cn: Print-Language
ldapDisplayName: printLanguage
attributeId: 1.2.840.113556.1.4.246
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 281416d6-1968-11d0-a28f-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 256
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.133 Attribute printMACAddress

This attribute specifies the user-supplied MAC address.

```
cn: Print-MAC-Address
ldapDisplayName: printMACAddress
attributeId: 1.2.840.113556.1.4.288
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: ba305f7a-47e3-11d0-ala6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.134 Attribute printMaxCopies

This attribute specifies the maximum number of copies a device can print.

```
cn: Print-Max-Copies
ldapDisplayName: printMaxCopies
attributeId: 1.2.840.113556.1.4.241
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 281416d1-1968-11d0-a28f-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.135 Attribute printMaxResolutionSupported

This attribute specifies the maximum printer resolution.

```
cn: Print-Max-Resolution-Supported
ldapDisplayName: printMaxResolutionSupported
attributeId: 1.2.840.113556.1.4.238
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 281416cf-1968-11d0-a28f-00aa003049e2
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.136 Attribute printMaxXExtent

This attribute specifies the maximum horizontal print region.

```
cn: Print-Max-X-Extent
ldapDisplayName: printMaxXExtent
attributeId: 1.2.840.113556.1.4.277
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: ba305f6f-47e3-11d0-ala6-00c04fd930c9
systemOnly: FALSE
```

```
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.137 Attribute printMaxYExtent

This attribute specifies the maximum vertical print region.

```
cn: Print-Max-Y-Extent
ldapDisplayName: printMaxYExtent
attributeId: 1.2.840.113556.1.4.278
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: ba305f70-47e3-11d0-a1a6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.138 Attribute printMediaReady

This attribute specifies a list of available media for a printer.

```
cn: Print-Media-Ready
ldapDisplayName: printMediaReady
attributeId: 1.2.840.113556.1.4.289
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 3bcbfcf5-4d3d-11d0-a1a6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute isMemberOfPartialAttributeSet is not defined.

2.139 Attribute printMediaSupported

This attribute specifies a list of media supported by a printer.

```
cn: Print-Media-Supported
```

```
ldapDisplayName: printMediaSupported
attributeId: 1.2.840.113556.1.4.299
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 244b296f-5abd-11d0-afd2-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.140 Attribute printMemory

This attribute specifies the amount of memory installed in a printer.

```
cn: Print-Memory
ldapDisplayName: printMemory
attributeId: 1.2.840.113556.1.4.282
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: ba305f74-47e3-11d0-a1a6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.141 Attribute printMinXExtent

This attribute specifies the minimum horizontal print region.

```
cn: Print-Min-X-Extent
ldapDisplayName: printMinXExtent
attributeId: 1.2.840.113556.1.4.279
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: ba305f71-47e3-11d0-a1a6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.142 Attribute printMinYExtent

This attribute specifies the minimum vertical print region.

```
cn: Print-Min-Y-Extent
ldapDisplayName: printMinYExtent
attributeId: 1.2.840.113556.1.4.280
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: ba305f72-47e3-11d0-ala6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.143 Attribute printNetworkAddress

This attribute specifies the user-supplied network address.

```
cn: Print-Network-Address
ldapDisplayName: printNetworkAddress
attributeId: 1.2.840.113556.1.4.287
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: ba305f79-47e3-11d0-ala6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.144 Attribute printNotify

This attribute specifies a user-supplied string specifying the notification contact.

```
cn: Print-Notify
ldapDisplayName: printNotify
attributeId: 1.2.840.113556.1.4.272
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: ba305f6a-47e3-11d0-ala6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.145 Attribute printNumberUp

This attribute specifies the number of page images per sheet.

```
cn: Print-Number-Up
ldapDisplayName: printNumberUp
attributeId: 1.2.840.113556.1.4.290
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 3bcbfcf4-4d3d-11d0-a1a6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.146 Attribute printOrientationsSupported

This attribute specifies the page rotation for landscape printing.

```
cn: Print-Orientations-Supported
ldapDisplayName: printOrientationsSupported
attributeId: 1.2.840.113556.1.4.240
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 281416d0-1968-11d0-a28f-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 256
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.147 Attribute printOwner

This attribute specifies a user-supplied owner string.

```
cn: Print-Owner
ldapDisplayName: printOwner
attributeId: 1.2.840.113556.1.4.271
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: ba305f69-47e3-11d0-a1a6-00c04fd930c9
```



```
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.148 Attribute printPagesPerMinute

This attribute specifies the driver-supplied print rate in pages per minute.

```
cn: Print-Pages-Per-Minute
ldapDisplayName: printPagesPerMinute
attributeId: 1.2.840.113556.1.4.631
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 19405b97-3cfa-11d1-a9c0-0000f80367c1
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.149 Attribute printRate

This attribute specifies the driver-supplied print rate.

```
cn: Print-Rate
ldapDisplayName: printRate
attributeId: 1.2.840.113556.1.4.285
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: ba305f77-47e3-11d0-ala6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.150 Attribute printRateUnit

This attribute specifies the driver-supplied print rate unit.

```
cn: Print-Rate-Unit
```

```
ldapDisplayName: printRateUnit
attributeId: 1.2.840.113556.1.4.286
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: ba305f78-47e3-11d0-a1a6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute `isMemberOfPartialAttributeSet` is not defined.

2.151 Attribute `printSeparatorFile`

This attribute specifies the file path of the printer separator page.

```
cn: Print-Separator-File
ldapDisplayName: printSeparatorFile
attributeId: 1.2.840.113556.1.4.230
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 281416c6-1968-11d0-a28f-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.152 Attribute `printShareName`

This attribute specifies the printer's share name.

```
cn: Print-Share-Name
ldapDisplayName: printShareName
attributeId: 1.2.840.113556.1.4.270
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: ba305f68-47e3-11d0-a1a6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.153 Attribute printSpooling

This attribute specifies a string representing the type of printer spooling.

```
cn: Print-Spooling
ldapDisplayName: printSpooling
attributeId: 1.2.840.113556.1.4.274
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: ba305f6c-47e3-11d0-a1a6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.154 Attribute printStaplingSupported

This attribute specifies if the printer supports stapling. It is supplied by the driver.

```
cn: Print-Stapling-Supported
ldapDisplayName: printStaplingSupported
attributeId: 1.2.840.113556.1.4.281
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: ba305f73-47e3-11d0-a1a6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.155 Attribute printStartTime

This attribute specifies the time a print queue begins servicing jobs.

```
cn: Print-Start-Time
ldapDisplayName: printStartTime
attributeId: 1.2.840.113556.1.4.233
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 281416c9-1968-11d0-a28f-00aa003049e2
systemOnly: FALSE
```

```
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.156 Attribute printStatus

This attribute specifies the status from the print spooler.

```
cn: Print-Status
ldapDisplayName: printStatus
attributeId: 1.2.840.113556.1.4.273
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: ba305f6b-47e3-11d0-a1a6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.157 Attribute priority

This attribute specifies the current priority (of a process, print job, and so on).

```
cn: Priority
ldapDisplayName: priority
attributeId: 1.2.840.113556.1.4.231
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 281416c7-1968-11d0-a28f-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.158 Attribute priorSetTime

This attribute specifies the previous time set for a secret.

```
cn: Prior-Set-Time
ldapDisplayName: priorSetTime
attributeId: 1.2.840.113556.1.4.99
attributeSyntax: 2.5.5.16
```

```
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: bf967a01-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.159 Attribute priorValue

This attribute specifies the previous value for a secret.

```
cn: Prior-Value
ldapDisplayName: priorValue
attributeId: 1.2.840.113556.1.4.100
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: bf967a02-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.160 Attribute privateKey

This attribute specifies an encrypted private key.

```
cn: Private-Key
ldapDisplayName: privateKey
attributeId: 1.2.840.113556.1.4.101
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: bf967a03-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.161 Attribute `privilegeAttributes`

This attribute specifies a bitmask of privilege attributes.

```
cn: Privilege-Attributes
ldapDisplayName: privilegeAttributes
attributeId: 1.2.840.113556.1.4.636
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 19405b9a-3cfa-11d1-a9c0-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.162 Attribute `privilegeDisplayName`

This attribute specifies a display name for a Microsoft Windows NT® operating system privilege.

```
cn: Privilege-Display-Name
ldapDisplayName: privilegeDisplayName
attributeId: 1.2.840.113556.1.4.634
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 19405b98-3cfa-11d1-a9c0-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.163 Attribute `privilegeHolder`

This attribute specifies a list of distinguished names of principals that are granted this privilege.

```
cn: Privilege-Holder
ldapDisplayName: privilegeHolder
attributeId: 1.2.840.113556.1.4.637
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
```

```
schemaIdGuid: 19405b9b-3cfa-11d1-a9c0-0000f80367c1
systemOnly: FALSE
searchFlags: 0
linkID: 70
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.164 Attribute privilegeValue

This attribute specifies a value representing a Microsoft Windows NT® operating system privilege.

```
cn: Privilege-Value
ldapDisplayName: privilegeValue
attributeId: 1.2.840.113556.1.4.635
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: 19405b99-3cfa-11d1-a9c0-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.165 Attribute productCode

This attribute specifies a unique identifier for an application for a particular product release, represented as a string GUID, for example, "{12345678-1234-1234-1234-123456789012}". Letters used in this GUID must be uppercase. This ID must vary for different versions and languages.

```
cn: Product-Code
ldapDisplayName: productCode
attributeId: 1.2.840.113556.1.4.818
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: d9e18317-8939-11d1-aebe-0000f80367c1
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 16
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.166 Attribute profilePath

This attribute specifies a path to the user's profile. This value can be a null string, a local absolute path, or a UNC path.

```
cn: Profile-Path
ldapDisplayName: profilePath
attributeId: 1.2.840.113556.1.4.139
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967a05-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fCOPY
attributeSecurityGuid: 5f202010-79a5-11d0-9020-00c04fc2d4cf
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.167 Attribute proxiedObjectName

This attribute specifies an internal tracking object used by Active Directory to help track interdomain moves.

```
cn: Proxied-Object-Name
ldapDisplayName: proxiedObjectName
attributeId: 1.2.840.113556.1.4.1249
attributeSyntax: 2.5.5.7
omSyntax: 127
omObjectClass: 1.2.840.113556.1.1.1.11
isSingleValued: TRUE
schemaIdGuid: e1aea402-cd5b-11d0-afff-0000f80367c1
systemOnly: TRUE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.168 Attribute proxyAddresses

A proxy address is the address by which an Microsoft® Exchange Server recipient object is recognized in a foreign mail system. Proxy addresses are required for all recipient objects, such as custom recipients and distribution lists.


```

cn: Proxy-Addresses
ldapDisplayName: proxyAddresses
attributeId: 1.2.840.113556.1.2.210
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: bf967a06-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fANR | fATTINDEX
rangeLower: 1
rangeUpper: 1123
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
mapID: 32783
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.169 Attribute proxyGenerationEnabled

This attribute specifies whether proxy generation is enabled.

```

cn: Proxy-Generation-Enabled
ldapDisplayName: proxyGenerationEnabled
attributeId: 1.2.840.113556.1.2.523
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 5fd424d6-1262-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
mapID: 33201

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.170 Attribute proxyLifetime

This attribute specifies the lifetime for a proxy object.

```

cn: Proxy-Lifetime
ldapDisplayName: proxyLifetime
attributeId: 1.2.840.113556.1.4.103
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: bf967a07-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT

```

```
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.171 Attribute publicKeyPolicy

This attribute specifies a reference to the public key policy for this domain.

```
cn: Public-Key-Policy
ldapDisplayName: publicKeyPolicy
attributeId: 1.2.840.113556.1.4.420
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 80a67e28-9f22-11d0-afdd-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: a29b89fd-c7e8-11d0-9bae-00c04fd92ef5
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.172 Attribute purportedSearch

This attribute specifies the search argument for an address book view.

```
cn: Purported-Search
ldapDisplayName: purportedSearch
attributeId: 1.2.840.113556.1.4.886
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: b4b54e50-943a-11d1-aebd-0000f80367c1
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 2048
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.173 Attribute pwdHistoryLength

This attribute specifies the number of old passwords to save. See [\[MS-SAMR\]](#) and [\[MS-ADTS\]](#) references for more information on how Active Directory uses this attribute.

```

cn: Pwd-History-Length
ldapDisplayName: pwdHistoryLength
attributeId: 1.2.840.113556.1.4.95
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967a09-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 65535
attributeSecurityGuid: c7407360-20bf-11d0-a768-00aa006e0529
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.174 Attribute pwdLastSet

This attribute specifies the date and time that the password for this account was last changed. This value is stored as a large integer that represents the number of 100 nanosecond intervals since January 1, 1601 (UTC). If this value is set to 0 and the [User-Account-Control](#) attribute does not contain the UF_DONT_EXPIRE_PASSWD flag, the user must set the password at the next logon. See [\[MS-SAMR\]](#) section 3.1.1.8.8 and [\[MS-ADTS\]](#) for more information on how Active Directory uses this attribute.

```

cn: Pwd-Last-Set
ldapDisplayName: pwdLastSet
attributeId: 1.2.840.113556.1.4.96
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: bf967a0a-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: 4c164200-20c0-11d0-a768-00aa006e0529
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.175 Attribute pwdProperties

This attribute specifies an unsigned long numeric that, bit by bit, is home to several true/false policies, most of which can be configured under the default domain policy Group Policy object's (GPO's) Computer Configuration\Windows Settings\Security Settings\Account Policies>Password Policy folder. For example, the DOMAIN_PASSWORD_COMPLEX setting, which can be configured

through a GPO's Passwords must meet complexity requirements policy, occupies pwdProperties' first bit. See [\[MS-SAMR\]](#) for more information on bit descriptions.

```
cn: Pwd-Properties
ldapDisplayName: pwdProperties
attributeId: 1.2.840.113556.1.4.93
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967a0b-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: c7407360-20bf-11d0-a768-00aa006e0529
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.176 Attribute qualityOfService

This attribute specifies the local/domain quality of service bits on policy objects.

```
cn: Quality-Of-Service
ldapDisplayName: qualityOfService
attributeId: 1.2.840.113556.1.4.458
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 80a67e4e-9f22-11d0-afdd-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: a29b8a01-c7e8-11d0-9bae-00c04fd92ef5
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.177 Attribute queryFilter

This attribute specifies a Query-Filter. Used by Active Directory administrative tools to store saved queries on display specifiers.

```
cn: Query-Filter
ldapDisplayName: queryFilter
attributeId: 1.2.840.113556.1.4.1355
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: cbf70a26-7e78-11d2-9921-0000f87a57d4
systemOnly: FALSE
```

```
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.178 Attribute queryPoint

This attribute specifies the URL or UNC of a query page or other front end for accessing a catalog.

```
cn: QueryPoint
ldapDisplayName: queryPoint
attributeId: 1.2.840.113556.1.4.680
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 7bfdcb86-4807-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.179 Attribute queryPolicyBL

This attribute is the back link attribute of queryPolicy and contains a list of all objects holding references to a given Query-Policy.

```
cn: Query-Policy-BL
ldapDisplayName: queryPolicyBL
attributeId: 1.2.840.113556.1.4.608
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: e1aea404-cd5b-11d0-afff-0000f80367c1
systemOnly: TRUE
searchFlags: 0
linkID: 69
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.180 Attribute queryPolicyObject

This attribute specifies the reference to the default Query-Policy in force for this server.

```
cn: Query-Policy-Object
```

```

ldapDisplayName: queryPolicyObject
attributeId: 1.2.840.113556.1.4.607
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: e1aea403-cd5b-11d0-afff-0000f80367c1
systemOnly: FALSE
searchFlags: 0
linkID: 68
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.181 Attribute rangeLower

This attribute specifies a lower range of values that are allowed for an attribute, and is optional.

For syntax Integer, LargeInteger, Enumeration, String(UTC-time), and String(Generalized-time), rangeLower equals the minimum allowed value. For syntax Object(DN-binary) and Object(DN-String), rangeLower equals the minimum length of the binary_value or string_value portion of the given value. For String(Unicode), rangeLower is the minimum length, in Unicode characters. rangeLower is not used on syntax Boolean and Object(DS-DN). For all other syntaxes, rangeLower equals the minimum length in bytes. Note that rangeLower is a 32-bit integer and cannot express the full range of LargeInteger, String(UTC-time), and String(Generalized-time).

```

cn: Range-Lower
ldapDisplayName: rangeLower
attributeId: 1.2.840.113556.1.2.34
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967a0c-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
mapiID: 33043
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.182 Attribute rangeUpper

This attribute specifies an upper range of values that are allowed for an attribute, and is optional.

For syntax Integer, LargeInteger, Enumeration, String(UTC-time), and String(Generalized-time), rangeUpper equals the maximum allowed value. For syntax Object(DN-binary) and Object(DN-String), rangeUpper equals the maximum length of the binary_value or string_value portion of the given value. For String(Unicode), rangeUpper is the maximum length, in Unicode characters. rangeUpper is not used on syntax Boolean and Object(DS-DN). For all other syntaxes, rangeUpper equals the maximum length in bytes. Note that rangeUpper is a 32-bit integer and cannot express the full range of LargeInteger, String(UTC-time), and String(Generalized-time).

```
cn: Range-Upper
ldapDisplayName: rangeUpper
attributeId: 1.2.840.113556.1.2.35
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967a0d-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
mapiID: 33044
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.183 Attribute rDNAttID

This attribute specifies the attributeId of the **RDN** attribute. If the value is not defined, it will be inherited from the superclass of the class in which this attribute appears. See [\[MS-ADTS\]](#) sections [3.1.1.2.4.8](#) and [3.1.1.3.1.2.1](#) for more information.

```
cn: RDN-Att-ID
ldapDisplayName: rDNAttID
attributeId: 1.2.840.113556.1.2.26
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: TRUE
schemaIdGuid: bf967a0f-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.184 Attribute registeredAddress

This attribute specifies a mnemonic for an address associated with an object at a particular city location. The mnemonic is registered in the country/region in which the city is located and is used in the provision of the Public Telegram Service.

```
cn: Registered-Address
ldapDisplayName: registeredAddress
attributeId: 2.5.4.26
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: bf967a10-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 4096
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapID: 33049
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.185 Attribute remoteServerName

This attribute specifies where one or more machine names must be stored.

```
cn: Remote-Server-Name
ldapDisplayName: remoteServerName
attributeId: 1.2.840.113556.1.4.105
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: bf967a12-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.186 Attribute remoteSource

This attribute specifies a back pointer to foreign objects.

```
cn: Remote-Source
ldapDisplayName: remoteSource
attributeId: 1.2.840.113556.1.4.107
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967a14-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
```



```
searchFlags: 0
rangeLower: 1
rangeUpper: 1024
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.187 Attribute remoteSourceType

This attribute specifies a type of pointer to a foreign object.

```
cn: Remote-Source-Type
ldapDisplayName: remoteSourceType
attributeId: 1.2.840.113556.1.4.108
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967a15-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.188 Attribute remoteStorageGUID

This attribute specifies the GUID for a remote storage object.

```
cn: Remote-Storage-GUID
ldapDisplayName: remoteStorageGUID
attributeId: 1.2.840.113556.1.4.809
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 2a39c5b0-8960-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.189 Attribute replicaSource

This attribute specifies the GUID of a replication source. For more information, refer to [\[MS-DRSR\]](#).

```
cn: Replica-Source
ldapDisplayName: replicaSource
```

```
attributeId: 1.2.840.113556.1.4.109
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967a18-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.190 Attribute replInterval

This attribute specifies the attribute of Site-Link objects that defines the interval, in minutes, between replication cycles among the sites in the Site-List. Must be a multiple of 15 minutes (the granularity of cross-site DS replication), a minimum of 15 minutes, and a maximum of 10,080 minutes (one week). For more information, refer to [\[MS-DRSR\]](#).

```
cn: Repl-Interval
ldapDisplayName: replInterval
attributeId: 1.2.840.113556.1.4.1336
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 45ba9d1a-56fa-11d2-90d0-00c04fd91ab1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.191 Attribute replPropertyMetaData

This attribute specifies the internal replication state information for directory service (DS) objects. Information here can be extracted in public form through the public API DsReplicaGetInfo(). Present on all DS objects. For more information, refer to [\[MS-DRSR\]](#).

```
cn: Repl-Property-Meta-Data
ldapDisplayName: replPropertyMetaData
attributeId: 1.2.840.113556.1.4.3
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 281416c0-1968-11d0-a28f-00aa003049e2
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_OPERATIONAL |
```

```
FLAG_ATTR_REQ_PARTIAL_SET_MEMBER | FLAG_ATTR_NOT_REPLICATED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, the following attributes are defined differently.

```
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
FLAG_ATTR_REQ_PARTIAL_SET_MEMBER | FLAG_ATTR_NOT_REPLICATED
```

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.192 Attribute replTopologyStayOfExecution

This attribute specifies the delay between deleting a server object and it being permanently removed from the replication topology. For more information, refer to [\[MS-DRSR\]](#).

```
cn: Repl-Topology-Stay-Of-Execution
ldapDisplayName: replTopologyStayOfExecution
attributeId: 1.2.840.113556.1.4.677
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 7bfdcb83-4807-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.193 Attribute replUpToDateVector

This attribute specifies the internal replication state information for an entire NC. Information here can be extracted in public form through the API DsReplicaGetInfo(). Present on all NC root objects. For more information, refer to [\[MS-DRSR\]](#) section [5.162](#).

```
cn: Repl-UpToDate-Vector
ldapDisplayName: replUpToDateVector
attributeId: 1.2.840.113556.1.4.4
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: bf967a16-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
```

```
FLAG_ATTR_REQ_PARTIAL_SET_MEMBER | FLAG_ATTR_NOT_REPLICATED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.194 Attribute repsFrom

This attribute specifies a list for the servers from which the directory will accept changes for the defined naming context. For more information, refer to [\[MS-DRSR\]](#) section [5.166](#).

```
cn: Reps-From
ldapDisplayName: repsFrom
attributeId: 1.2.840.113556.1.2.91
attributeSyntax: 2.5.5.10
omSyntax: 127
omObjectClass: 1.2.840.113556.1.1.1.6
isSingleValued: FALSE
schemaIdGuid: bf967a1d-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER | FLAG_ATTR_NOT_REPLICATED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.195 Attribute repsTo

This attribute specifies the list of servers that the directory will notify of changes and servers to which the directory will send changes on request for the defined naming context. For more information, refer to [\[MS-DRSR\]](#) section [5.167](#).

```
cn: Reps-To
ldapDisplayName: repsTo
attributeId: 1.2.840.113556.1.2.83
attributeSyntax: 2.5.5.10
omSyntax: 127
omObjectClass: 1.2.840.113556.1.1.1.6
isSingleValued: FALSE
schemaIdGuid: bf967a1e-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER | FLAG_ATTR_NOT_REPLICATED
```

```
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.196 Attribute requiredCategories

This attribute specifies a list of component category IDs that an object (such as an application) requires to run.

```
cn: Required-Categories
ldapDisplayName: requiredCategories
attributeId: 1.2.840.113556.1.4.321
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: 7d6c0e93-7e20-11d0-afd6-00c04fd930c9
systemOnly: FALSE
searchFlags: fATTINDEX
rangeLower: 16
rangeUpper: 16
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.197 Attribute retiredReplDSASignatures

This attribute specifies the past DS replication identities of a given DC. For more information refer to [\[MS-DRSR\]](#).

```
cn: Retired-Repl-DSA-Signatures
ldapDisplayName: retiredReplDSASignatures
attributeId: 1.2.840.113556.1.4.673
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 7bfdcb7f-4807-11d1-a9c3-0000f80367c1
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.198 Attribute revision

This attribute specifies the revision level for a security descriptor or other change. Only used in the sam-server and ds-ui-settings objects. For more information, refer to [\[MS-SAMR\]](#).

```
cn: Revision
ldapDisplayName: revision
attributeId: 1.2.840.113556.1.4.145
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967a21-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.199 Attribute rid

This attribute specifies the relative identifier (RID) of an object.

```
cn: Rid
ldapDisplayName: rid
attributeId: 1.2.840.113556.1.4.153
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967a22-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.200 Attribute rIDAllocationPool

This attribute specifies a pool that was prefetched for use by the RID manager when the [RID-Previous-Allocation-Pool](#) has been used up.

```
cn: RID-Allocation-Pool
ldapDisplayName: rIDAllocationPool
attributeId: 1.2.840.113556.1.4.371
attributeSyntax: 2.5.5.16
omSyntax: 65
```

```
isSingleValued: TRUE
schemaIdGuid: 66171889-8f3c-11d0-afda-00c04fd930c9
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.201 Attribute rIDAvailablePool

This attribute specifies the space from which RID pools are allocated.

```
cn: RID-Available-Pool
ldapDisplayName: rIDAvailablePool
attributeId: 1.2.840.113556.1.4.370
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: 66171888-8f3c-11d0-afda-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.202 Attribute rIDManagerReference

This attribute specifies the distinguished name for the RID manager of an object.

```
cn: RID-Manager-Reference
ldapDisplayName: rIDManagerReference
attributeId: 1.2.840.113556.1.4.368
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: 66171886-8f3c-11d0-afda-00c04fd930c9
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.203 Attribute rIDNextRID

This attribute specifies the next free relative identifier in the current pool.

```
cn: RID-Next-RID
ldapDisplayName: rIDNextRID
attributeId: 1.2.840.113556.1.4.374
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 6617188c-8f3c-11d0-afda-00c04fd930c9
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.204 Attribute rIDPreviousAllocationPool

The RID-Previous-Allocation-Pool attribute contains the pool of RIDs that a domain controller allocates from. This attribute is an 8-byte value that contains a pair of 4-byte integers that represent the start and end values of the RID pool. The start value is in the lower 4 bytes, and the end value is in the upper 4 bytes.

```
cn: RID-Previous-Allocation-Pool
ldapDisplayName: rIDPreviousAllocationPool
attributeId: 1.2.840.113556.1.4.372
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: 6617188a-8f3c-11d0-afda-00c04fd930c9
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.205 Attribute rIDSetReferences

This attribute specifies the list of references to RID-Set objects managing RID allocation.

```
cn: RID-Set-References
ldapDisplayName: rIDSetReferences
attributeId: 1.2.840.113556.1.4.669
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 7bfdcb7b-4807-11d1-a9c3-0000f80367c1
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.206 Attribute rIDUsedPool

This attribute specifies the RID pools that have been used by a DC.

```
cn: RID-Used-Pool
ldapDisplayName: rIDUsedPool
attributeId: 1.2.840.113556.1.4.373
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: 6617188b-8f3c-11d0-afda-00c04fd930c9
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.207 Attribute rightsGuid

This attribute specifies the GUID used to represent an extended right within an access control entry (ACE).

```
cn: Rights-Guid
ldapDisplayName: rightsGuid
attributeId: 1.2.840.113556.1.4.340
attributeSyntax: 2.5.5.12
omSyntax: 64
```

```
isSingleValued: TRUE
schemaIdGuid: 8297931c-86d3-11d0-afda-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
rangeLower: 36
rangeUpper: 36
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.208 Attribute roleOccupant

The distinguished name of an object that fulfills an organizational role.

```
cn: Role-Occupant
ldapDisplayName: roleOccupant
attributeId: 2.5.4.33
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: a8df7465-c5ea-11d1-bbcb-0080c76670c0
systemOnly: FALSE
searchFlags: 0
mapID: 33061
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.209 Attribute roomNumber

This attribute specifies the room number of an object.

```
cn: roomNumber
ldapDisplayName: roomNumber
attributeId: 0.9.2342.19200300.100.1.6
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 81d7f8c2-e327-4a0d-91c6-b42d4009115f
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: Implemented on Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.210 Attribute rootTrust

This attribute specifies the distinguished name of another [Cross-Ref](#).

```
cn: Root-Trust
ldapDisplayName: rootTrust
attributeId: 1.2.840.113556.1.4.674
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 7bfdcb80-4807-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.211 Attribute rpcNsAnnotation

This attribute specifies a string describing a given RPC profile element.

```
cn: rpc-Ns-Annotation
ldapDisplayName: rpcNsAnnotation
attributeId: 1.2.840.113556.1.4.366
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 88611bde-8cf4-11d0-afda-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.212 Attribute rpcNsBindings

This attribute specifies the list of RPC bindings for the current interface.

```
cn: rpc-Ns-Bindings
ldapDisplayName: rpcNsBindings
attributeId: 1.2.840.113556.1.4.113
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: bf967a23-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
```

```
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.213 Attribute `rpcNsCodeset`

This attribute specifies the list of character sets supported by a server.

```
cn: rpc-Ns-Codeset
ldapDisplayName: rpcNsCodeset
attributeId: 1.2.840.113556.1.4.367
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 7a0ba0e0-8e98-11d0-afda-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.214 Attribute `rpcNsEntryFlags`

This attribute specifies a flag to indicate that the RPC NS entry was explicitly created.

```
cn: rpc-Ns-Entry-Flags
ldapDisplayName: rpcNsEntryFlags
attributeId: 1.2.840.113556.1.4.754
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 80212841-4bdc-11d1-a9c4-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.215 Attribute `rpcNsGroup`

This attribute specifies a reference to an RPC server entry or another RPC group.

```
cn: rpc-Ns-Group
ldapDisplayName: rpcNsGroup
attributeId: 1.2.840.113556.1.4.114
attributeSyntax: 2.5.5.12
omSyntax: 64
```

```
isSingleValued: FALSE
schemaIdGuid: bf967a24-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.216 Attribute **rpcNsInterfaceID**

This attribute specifies an interface ID that is supported by a given server.

```
cn: rpc-Ns-Interface-ID
ldapDisplayName: rpcNsInterfaceID
attributeId: 1.2.840.113556.1.4.115
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967a25-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fATTINDEX
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.217 Attribute **rpcNsObjectID**

This attribute specifies the object IDs exported by a given server.

```
cn: rpc-Ns-Object-ID
ldapDisplayName: rpcNsObjectID
attributeId: 1.2.840.113556.1.4.312
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 29401c48-7a27-11d0-afd6-00c04fd930c9
systemOnly: FALSE
searchFlags: fATTINDEX
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.218 Attribute **rpcNsPriority**

This attribute specifies the priority of a given RPC profile entry.

```
cn: rpc-Ns-Priority
```

```
ldapDisplayName: rpcNsPriority
attributeId: 1.2.840.113556.1.4.117
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: FALSE
schemaIdGuid: bf967a27-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.219 Attribute rpcNsProfileEntry

This attribute specifies the list of entries for the current priority.

```
cn: rpc-Ns-Profile-Entry
ldapDisplayName: rpcNsProfileEntry
attributeId: 1.2.840.113556.1.4.118
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967a28-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.220 Attribute rpcNsTransferSyntax

This attribute specifies the UUID of the transfer syntax supported by the current entry.

```
cn: rpc-Ns-Transfer-Syntax
ldapDisplayName: rpcNsTransferSyntax
attributeId: 1.2.840.113556.1.4.314
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 29401c4a-7a27-11d0-afd6-00c04fd930c9
systemOnly: FALSE
searchFlags: fATTINDEX
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.221 Attribute sAMAccountName

This attribute specifies the logon name used to support clients and servers running LAN manager and older versions of the operating system, such as Microsoft Windows NT® 4.0 operating system, Microsoft Windows® 95 operating system, and Microsoft Windows® 98 operating system. This attribute must be less than 20 characters to support older clients.

```
cn: SAM-Account-Name
ldapDisplayName: sAMAccountName
attributeId: 1.2.840.113556.1.4.221
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 3e0abfd0-126a-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: fPRESERVEONDELETE| fANR | fATTINDEX
rangeLower: 0
rangeUpper: 256
attributeSecurityGuid: 59ba2f42-79a2-11d0-9020-00c04fc2d3cf
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.222 Attribute sAMAccountType

This attribute specifies the account type of the security principal objects in Active Directory.

The possible values for this attribute are defined in the following table.

Name	Value
SAM_DOMAIN_OBJECT	0x0
SAM_GROUP_OBJECT	0x10000000
SAM_NON_SECURITY_GROUP_OBJECT	0x10000001
SAM_ALIAS_OBJECT	0x20000000
SAM_NON_SECURITY_ALIAS_OBJECT	0x20000001
SAM_USER_OBJECT	0x30000000
SAM_MACHINE_ACCOUNT	0x30000001
SAM_TRUST_ACCOUNT	0x30000002
SAM_APP_BASIC_GROUP	0x40000000
SAM_APP_QUERY_GROUP	0x40000001

Name	Value
SAM_ACCOUNT_TYPE_MAX	0x7fffffff

```

cn: SAM-Account-Type
ldapDisplayName: sAMAccountType
attributeId: 1.2.840.113556.1.4.302
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 6e7b626c-64f2-11d0-afd2-00c04fd930c9
systemOnly: FALSE
searchFlags: fATTINDEX
attributeSecurityGuid: 59ba2f42-79a2-11d0-9020-00c04fc2d3cf
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
    FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.223 Attribute samDomainUpdates

Contains a bitmask of performed SAM operations on Active Directory.

```

cn: SAM-Domain-Updates
ldapDisplayName: samDomainUpdates
attributeId: 1.2.840.113556.1.4.1969
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 04d2d114-f799-4e9b-bcdc-90e8f5ba7ebe
systemOnly: FALSE
searchFlags: 0
rangeUpper: 1024
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Windows Server® 2008 operating system and Windows Server® 2008 R2 operating system.

2.224 Attribute schedule

This attribute specifies a schedule binary large object (BLOB) as defined by the NT Job Service. Used by replication. Refer to [\[MS-DRSR\]](#) for more information about this structure.

```

cn: Schedule
ldapDisplayName: schedule
attributeId: 1.2.840.113556.1.4.211
attributeSyntax: 2.5.5.10
omSyntax: 4

```



```
isSingleValued: TRUE
schemaIdGuid: dd712224-10e4-11d0-a05f-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.225 Attribute schemaFlagsEx

This attribute specifies an integer value that contains flags that define additional properties of the attribute, as shown below. See [\[MS-ADTS\]](#) for more information. This is an optional attribute.

The schemaFlagsEx attribute contains bitwise flags. The following value is relevant to schema objects:

- **FLAG_ATTR_IS_CRITICAL**: Specifies that the attribute is not a member of the filtered attribute set even if the fRODCFilteredAttribute ([\[MS-ADTS\]](#) section 3.1.1.2.3.5) is set.

```
cn: Schema-Flags-Ex
ldapDisplayName: schemaFlagsEx
attributeId: 1.2.840.113556.1.4.120
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967a2b-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

The **FLAG_ATTR_IS_CRITICAL** value was implemented in Windows Server 2008.

2.226 Attribute schemaIDGUID

This attribute specifies a unique GUID that identifies this attribute, and is used in security descriptors. It is required on an attributeSchema object. If omitted during Add, the server will auto-generate a random GUID. See [\[MS-ADTS\]](#) section 3.1.1.2.3 for more information.

```
cn: Schema-ID-GUID
ldapDisplayName: schemaIDGUID
attributeId: 1.2.840.113556.1.4.148
attributeSyntax: 2.5.5.10
omSyntax: 4
```

```
isSingleValued: TRUE
schemaIdGuid: bf967923-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
rangeLower: 16
rangeUpper: 16
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.227 Attribute schemaInfo

This attribute specifies an internal binary value used to detect schema changes between DCs, and force a schema NC replication cycle before replicating any other NC. It is used to resolve ties when the schema FSMO is seized and a change is made on more than one DC.

```
cn: Schema-Info
ldapDisplayName: schemaInfo
attributeId: 1.2.840.113556.1.4.1358
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: f9fb64ae-93b4-11d2-9945-0000f87a57d4
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.228 Attribute schemaUpdate

This attribute is not necessary for Active Directory to function. The protocol does not define a format beyond that required by the schema.

```
cn: Schema-Update
ldapDisplayName: schemaUpdate
attributeId: 1.2.840.113556.1.4.481
attributeSyntax: 2.5.5.11
omSyntax: 24
isSingleValued: TRUE
schemaIdGuid: 1e2d06b4-ac8f-11d0-afe3-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.229 Attribute schemaVersion

This attribute specifies the version number for the schema.

```
cn: Schema-Version
ldapDisplayName: schemaVersion
attributeId: 1.2.840.113556.1.2.471
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: FALSE
schemaIdGuid: bf967a2c-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
mapIID: 33148
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.230 Attribute scopeFlags

```
cn: Scope-Flags
ldapDisplayName: scopeFlags
attributeId: 1.2.840.113556.1.4.1354
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 16f3a4c2-7e79-11d2-9921-0000f87a57d4
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.231 Attribute scriptPath

This attribute specifies the path for the user's logon script. The string can be null.

```
cn: Script-Path
ldapDisplayName: scriptPath
attributeId: 1.2.840.113556.1.4.62
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf9679a8-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fCOPY
attributeSecurityGuid: 5f202010-79a5-11d0-9020-00c04fc2d4cf
```

```
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute `attributeSecurityGuid` is not defined.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.232 Attribute `sDRightsEffective`

This attribute specifies a constructed attribute that returns a single DWORD value that can have up to three bits set: `OWNER_SECURITY_INFORMATION`, `DACL_SECURITY_INFORMATION`, and `SACL_SECURITY_INFORMATION`. If a bit is set, then the user has write access to the corresponding part of the security descriptor. Owner means both owner and group.

```
cn: SD-Rights-Effective
ldapDisplayName: sDRightsEffective
attributeId: 1.2.840.113556.1.4.1304
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: c3dbafa6-33df-11d2-98b2-0000f87a57d4
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: 59ba2f42-79a2-11d0-9020-00c04fc2d3cf
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
  FLAG_DOMAIN_DISALLOW_RENAME
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.233 Attribute `searchFlags`

This attribute specifies whether an attribute is indexed among other things. Optional. It contains the following bitwise flags (further defined in [\[MS-ADTS\]](#) section 2.2.9):

- `fATTINDEX`: *
- `fPDNTATTINDEX`: *
- `fANR`: Add this attribute to the ambiguous name resolution (ANR) set (if set, then `fATTINDEX` must be set). See [\[MS-ADTS\]](#) for ANR search.
- `fPRESERVEONDELETE`: Preserve this attribute on logical deletion. This flag is ignored on link attributes.
- `fCOPY`: Interpreted by LDAP clients, not by the server. If set, the attribute is copied on object copy.

- **fTUPLEINDEX:** *
- **fSUBTREEATTINDEX:** *
- **fCONFIDENTIAL:** This attribute is confidential; special access check is needed. For more information, see [\[MS-ADTS\]](#) section 3.1.1.4.3.
- **fNEVERVALUEAUDIT:** *
- **fRODCFilteredAttribute:** If set, this attribute is in the RODC filtered attribute set.

The searchFlags marked * have an implementation-dependent interpretation defined by Windows. They may be ignored by other implementations, but must not be used in a conflicting way that would affect the performance of Windows DCs.

```
cn: Search-Flags
ldapDisplayName: searchFlags
attributeId: 1.2.840.113556.1.2.334
attributeSyntax: 2.5.5.9
omSyntax: 10
isSingleValued: TRUE
schemaIdGuid: bf967a2d-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
mapID: 33069
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.234 Attribute searchGuide

This attribute specifies information about suggested search criteria that may be included in some entries that are expected to be a convenient base-object for the search operation; for example, country/region or organization.

```
cn: Search-Guide
ldapDisplayName: searchGuide
attributeId: 2.5.4.14
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: bf967a2e-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
mapID: 33070
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.235 Attribute secretary

This attribute specifies the distinguished name of the secretary for an account.

```
cn: secretary
ldapDisplayName: secretary
attributeId: 0.9.2342.19200300.100.1.21
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 01072d9a-98ad-4a53-9744-e83e287278fb
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: Implemented on Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.236 Attribute securityIdentifier

This attribute specifies a unique value of variable length used to identify a user account, group account, or logon session to which an ACE applies.

```
cn: Security-Identifier
ldapDisplayName: securityIdentifier
attributeId: 1.2.840.113556.1.4.121
attributeSyntax: 2.5.5.17
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: bf967a2f-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute `isMemberOfPartialAttributeSet` is not defined.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.237 Attribute seeAlso

This attribute specifies a list of distinguished names that are related to an object.

```
cn: See-Also
ldapDisplayName: seeAlso
attributeId: 2.5.4.34
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
```

```
isSingleValued: FALSE
schemaIdGuid: bf967a31-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
mapID: 33071
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.238 Attribute seqNotification

This attribute specifies a counter that is incremented daily. This counter value is given to the link tracking service that adds the value to its volumes and link source files when they are refreshed. The domain controller maintains this value.

```
cn: Seq-Notification
ldapDisplayName: seqNotification
attributeId: 1.2.840.113556.1.4.504
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: ddac0cf2-af8f-11d0-afeb-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.239 Attribute serialNumber

This attribute specifies a part of the X.500 specification [\[X500\]](#).

```
cn: Serial-Number
ldapDisplayName: serialNumber
attributeId: 2.5.4.5
attributeSyntax: 2.5.5.5
omSyntax: 19
isSingleValued: FALSE
schemaIdGuid: bf967a32-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 64
mapID: 33072
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.240 Attribute serverName

This attribute specifies the name of a server.

```
cn: Server-Name
ldapDisplayName: serverName
attributeId: 1.2.840.113556.1.4.223
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 09dcb7a0-165f-11d0-a064-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 1024
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.241 Attribute serverReference

This attribute specifies a site computer object. Contains the distinguished name of the domain controller in the domain naming context. Refer to [\[MS-DRSR\]](#) and [\[MS-ADTS\]](#) for more information on how Active Directory uses this attribute.

```
cn: Server-Reference
ldapDisplayName: serverReference
attributeId: 1.2.840.113556.1.4.515
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: 26d9736d-6070-11d1-a9c6-0000f80367c1
systemOnly: FALSE
searchFlags: 0
linkID: 94
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.242 Attribute serverReferenceBL

This attribute is the back link attribute of serverReference and contains an object found in the domain naming context. The distinguished name of a computer under the sites folder. Refer to [\[MS-DRSR\]](#) and [\[MS-ADTS\]](#) for more information on how Active Directory uses this attribute.

```
cn: Server-Reference-BL
ldapDisplayName: serverReferenceBL
attributeId: 1.2.840.113556.1.4.516
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 26d9736e-6070-11d1-a9c6-0000f80367c1
systemOnly: TRUE
searchFlags: 0
linkID: 95
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, the following attributes are defined differently.

```
isSingleValued: TRUE
```

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.243 Attribute serverRole

This attribute specifies compatibility with servers that preceded Microsoft Windows® 2000 operating system servers. A computer running Microsoft Windows NT® Server operating system can be a stand-alone server, a primary domain controller (PDC), or a backup domain controller (BDC).

```
cn: Server-Role
ldapDisplayName: serverRole
attributeId: 1.2.840.113556.1.4.157
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967a33-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: b8119fd0-04f6-4762-ab7a-4986c76b3f9a
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute attributeSecurityGuid is not defined.

2.244 Attribute serverState

This attribute specifies whether the server is enabled or disabled. A value of 1 indicates that the server is enabled. A value of 2 indicates that the server is disabled. All other values are invalid.

```
cn: Server-State
ldapDisplayName: serverState
attributeId: 1.2.840.113556.1.4.154
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967a34-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: b8119fd0-04f6-4762-ab7a-4986c76b3f9a
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute attributeSecurityGuid is not defined.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.245 Attribute serviceBindingInformation

This attribute specifies service-specific binding information in string format.

```
cn: Service-Binding-Information
ldapDisplayName: serviceBindingInformation
attributeId: 1.2.840.113556.1.4.510
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: b7b1311c-b82e-11d0-afee-0000f80367c1
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.246 Attribute serviceClassID

This attribute specifies the GUID for the Service Class.

```
cn: Service-Class-ID
ldapDisplayName: serviceClassID
attributeId: 1.2.840.113556.1.4.122
attributeSyntax: 2.5.5.10
omSyntax: 4
```

```
isSingleValued: TRUE
schemaIdGuid: bf967a35-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.247 Attribute serviceClassInfo

This attribute specifies general Service Class information.

```
cn: Service-Class-Info
ldapDisplayName: serviceClassInfo
attributeId: 1.2.840.113556.1.4.123
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: bf967a36-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.248 Attribute serviceClassName

This attribute specifies the string name of the service that an administration point represents.

```
cn: Service-Class-Name
ldapDisplayName: serviceClassName
attributeId: 1.2.840.113556.1.4.509
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: b7b1311d-b82e-11d0-afee-0000f80367c1
systemOnly: FALSE
searchFlags: fATTINDEX
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.249 Attribute serviceDNSName

This attribute specifies the fully qualified domain name (FQDN) (1) ([\[MS-ADTS\]](#) section 1.1) to look up to find a server running this service.

```
cn: Service-DNS-Name
ldapDisplayName: serviceDNSName
attributeId: 1.2.840.113556.1.4.657
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 28630eb8-41d5-11d1-a9c1-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.250 Attribute serviceDNSNameType

This attribute specifies the type of DNS record to look up for this service. For example, A or SRV.

```
cn: Service-DNS-Name-Type
ldapDisplayName: serviceDNSNameType
attributeId: 1.2.840.113556.1.4.659
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 28630eba-41d5-11d1-a9c1-0000f80367c1
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 256
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.251 Attribute serviceInstanceVersion

This attribute specifies the version of a Winsock service.

```
cn: Service-Instance-Version
ldapDisplayName: serviceInstanceVersion
attributeId: 1.2.840.113556.1.4.199
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: bf967a37-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 8
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.252 Attribute servicePrincipalName

This attribute specifies the principal names used for mutual authentication with an instance of a service on this machine. For more information, refer to [\[MS-DRSR\]](#) section 2.2.2.

```
cn: Service-Principal-Name
ldapDisplayName: servicePrincipalName
attributeId: 1.2.840.113556.1.4.771
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: f3a64788-5306-11d1-a9c5-0000f80367c1
systemOnly: FALSE
searchFlags: fATTINDEX
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.253 Attribute setupCommand

This attribute specifies whether or not a setup command is required to set up this application.

```
cn: Setup-Command
ldapDisplayName: setupCommand
attributeId: 1.2.840.113556.1.4.325
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 7d6c0e97-7e20-11d0-afd6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.254 Attribute shadowExpire

This attribute specifies an absolute date to expire an account.

```
cn: ShadowExpire
ldapDisplayName: shadowExpire
```

```
attributeId: 1.3.6.1.1.1.1.10
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 75159a00-1fff-4cf4-8bff-4ef2695cf643
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: Implemented on Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.255 Attribute shadowFlag

This attribute specifies a part of the shadow map used to store the flag value.

```
cn: ShadowFlag
ldapDisplayName: shadowFlag
attributeId: 1.3.6.1.1.1.1.11
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 8dfef70d-c5db-46b6-b15e-a4389e6cee9b
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: Implemented on Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.256 Attribute shadowInactive

This attribute specifies the number of days before password expiry to warn the user.

```
cn: ShadowInactive
ldapDisplayName: shadowInactive
attributeId: 1.3.6.1.1.1.1.9
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 86871d1f-3310-4312-8efd-af49dcfb2671
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: Implemented on Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.257 Attribute shadowLastChange

This attribute specifies the last change of shadow information.

```
cn: ShadowLastChange
ldapDisplayName: shadowLastChange
attributeId: 1.3.6.1.1.1.1.5
attributeSyntax: 2.5.5.9
omSyntax: 2
```

```
isSingleValued: TRUE
schemaIdGuid: f8f2689c-29e8-4843-8177-e8b98e15eeac
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: Implemented on Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.258 Attribute shadowMax

This attribute specifies the maximum number of days that a password is valid.

```
cn: ShadowMax
ldapDisplayName: shadowMax
attributeId: 1.3.6.1.1.1.1.7
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: f285c952-50dd-449e-9160-3b880d99988d
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: Implemented on Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.259 Attribute shadowMin

This attribute specifies the minimum number of days between shadow changes.

```
cn: ShadowMin
ldapDisplayName: shadowMin
attributeId: 1.3.6.1.1.1.1.6
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: a76b8737-e5a1-4568-b057-dc12e04be4b2
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: Implemented on Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.260 Attribute shadowWarning

This attribute specifies the number of days before password expiry to warn the user.

```
cn: ShadowWarning
ldapDisplayName: shadowWarning
attributeId: 1.3.6.1.1.1.1.8
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 7ae89c9c-2976-4a46-bb8a-340f88560117
systemOnly: FALSE
```

```
searchFlags: 0
```

Version-Specific Behavior: Implemented on Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.261 Attribute shellContextMenu

This attribute specifies the order number and GUID of the context menu for this object.

```
cn: Shell-Context-Menu
ldapDisplayName: shellContextMenu
attributeId: 1.2.840.113556.1.4.615
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 553fd039-f32e-11d0-b0bc-00c04fd8dca6
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.262 Attribute shellPropertyPages

This attribute specifies the order number and GUID of property pages for managing Active Directory objects. These property pages can be accessed from the Windows shell. For more information, see the document "Extending the User Interface for Directory Objects" [\[MSDN-ExtUserIntDirObj\]](#).

```
cn: Shell-Property-Pages
ldapDisplayName: shellPropertyPages
attributeId: 1.2.840.113556.1.4.563
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 52458039-ca6a-11d0-afff-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.263 Attribute shortServerName

This attribute specifies a compatible server name for print servers that preceded Microsoft Windows® 2000 operating system.

```
cn: Short-Server-Name
ldapDisplayName: shortServerName
attributeId: 1.2.840.113556.1.4.1209
```



```
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 45b01501-c419-11d1-bbc9-0080c76670c0
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.264 Attribute showInAddressBook

This attribute specifies in which MAPI address books an object will appear. It is usually maintained by the Exchange Recipient Update Service.

```
cn: Show-In-Address-Book
ldapDisplayName: showInAddressBook
attributeId: 1.2.840.113556.1.4.644
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 3e74f60e-3e73-11d1-a9c0-0000f80367c1
systemOnly: FALSE
searchFlags: fCOPY
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.265 Attribute showInAdvancedViewOnly

This attribute specifies whether the attribute is to be visible in the Advanced mode of user interfaces (UIs). Active Directory snap-ins read this attribute.

```
cn: Show-In-Advanced-View-Only
ldapDisplayName: showInAdvancedViewOnly
attributeId: 1.2.840.113556.1.2.169
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: bf967984-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fCOPY| fATTINDEX
attributeSecurityGuid: 59ba2f42-79a2-11d0-9020-00c04fc2d3cf
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

```
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.266 Attribute sIDHistory

This attribute specifies previous SIDs used for the object if the object was moved from another domain. Whenever an object is moved from one domain to another, a new SID is created and that new SID becomes the objectSID. The previous SID is added to the sIDHistory property. For more information, refer to [\[MS-DRSR\]](#) section [4.1.2](#).

```
cn: SID-History
ldapDisplayName: sIDHistory
attributeId: 1.2.840.113556.1.4.609
attributeSyntax: 2.5.5.17
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: 17eb4278-d167-11d0-b002-0000f80367c1
systemOnly: FALSE
searchFlags: fATTINDEX
attributeSecurityGuid: 59ba2f42-79a2-11d0-9020-00c04fc2d3cf
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, the following attributes are defined differently.

```
systemOnly: TRUE
```

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.267 Attribute signatureAlgorithms

This attribute specifies the type of algorithm that must be used to decode a digital signature during the authentication process.

```
cn: Signature-Algorithms
ldapDisplayName: signatureAlgorithms
attributeId: 1.2.840.113556.1.4.824
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 2a39c5b2-8960-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
```

```
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.268 Attribute siteGUID

This attribute specifies the unique identifier for a site.

```
cn: Site-GUID
ldapDisplayName: siteGUID
attributeId: 1.2.840.113556.1.4.362
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 3e978924-8c01-11d0-afda-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
rangeLower: 16
rangeUpper: 16
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.269 Attribute siteLinkList

This attribute specifies the list of site links that are associated with this bridge.

```
cn: Site-Link-List
ldapDisplayName: siteLinkList
attributeId: 1.2.840.113556.1.4.822
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: d50c2cdd-8951-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
linkID: 142
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.270 Attribute siteList

This attribute specifies the list of sites connected to this link object.

```
cn: Site-List
ldapDisplayName: siteList
attributeId: 1.2.840.113556.1.4.821
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: d50c2cdc-8951-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
linkID: 144
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.271 Attribute siteObject

This attribute specifies the distinguished name for the site to which this subnet belongs.

```
cn: Site-Object
ldapDisplayName: siteObject
attributeId: 1.2.840.113556.1.4.512
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: 3e10944c-c354-11d0-aff8-0000f80367c1
systemOnly: FALSE
searchFlags: 0
linkID: 46
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.272 Attribute siteObjectBL

This attribute is the back link attribute of siteObject and contains the list of subnet objects that belong to a site.

```
cn: Site-Object-BL
ldapDisplayName: siteObjectBL
```

```
attributeId: 1.2.840.113556.1.4.513
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 3e10944d-c354-11d0-aff8-0000f80367c1
systemOnly: TRUE
searchFlags: 0
linkID: 47
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.273 Attribute siteServer

This attribute specifies the licensing master server for a given site.

```
cn: Site-Server
ldapDisplayName: siteServer
attributeId: 1.2.840.113556.1.4.494
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 1be8f17c-a9ff-11d0-afe2-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.274 Attribute sn

This attribute specifies the family or last name for a user.

```
cn: Surname
ldapDisplayName: sn
attributeId: 2.5.4.4
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967a41-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fANR | fATTINDEX
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
mapiID: 14865
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

```
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.275 Attribute sPNMappings

This multivalued attribute contains a list of service principal names (SPNs) to show the equivalence of SPN types. The SPN is the name a client uses to uniquely identify an instance of a service. If an implementer installs multiple instances of a service on computers throughout a forest, each instance must have its own SPN. A given service instance can have multiple SPNs if there are multiple names that clients might use for authentication. For example, "ldap/..." SPNs could be mapped so that they are equivalent to "host/..." SPNs. For more information on Active Directory usage, refer to [\[MS-DRSR\]](#) section [4.1.4.2.19](#).

```
cn: SPN-Mappings
ldapDisplayName: sPNMappings
attributeId: 1.2.840.113556.1.4.1347
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 2ab0e76c-7041-11d2-9905-0000f87a57d4
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.276 Attribute st

This attribute specifies the name of a user's state or province.

```
cn: State-Or-Province-Name
ldapDisplayName: st
attributeId: 2.5.4.8
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967a39-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fCOPY
rangeLower: 1
rangeUpper: 128
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapID: 14888
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
```

```
FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.277 Attribute street

This attribute specifies the street address.

```
cn: Street-Address
ldapDisplayName: street
attributeId: 2.5.4.9
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967a3a-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fCOPY
rangeLower: 1
rangeUpper: 1024
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapiID: 33082
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.278 Attribute streetAddress

This attribute specifies the user's address.

```
cn: Address
ldapDisplayName: streetAddress
attributeId: 1.2.840.113556.1.2.256
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: f0f8ff84-1191-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 1024
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapiID: 14889
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

```
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.279 Attribute structuralObjectClass

This attribute specifies a constructed attribute that stores a list of classes contained in a class hierarchy, including abstract classes. This list does contain dynamically linked auxiliary classes.

```
cn: Structural-Object-Class
ldapDisplayName: structuralObjectClass
attributeId: 2.5.21.9
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: FALSE
schemaIdGuid: 3860949f-f6a8-4b38-9950-81ecb6bc2982
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.280 Attribute subClassOf

This attribute specifies the parent class of a class.

```
cn: Sub-Class-Of
ldapDisplayName: subClassOf
attributeId: 1.2.840.113556.1.2.21
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: TRUE
schemaIdGuid: bf967a3b-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.281 Attribute subRefs

This attribute specifies a list of subordinate references of a naming context. For more information on subRefs, refer to [\[MS-ADTS\]](#).

```
cn: Sub-Refs
ldapDisplayName: subRefs
attributeId: 1.2.840.113556.1.2.7
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: bf967a3c-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
mapiID: 33083
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER | FLAG_ATTR_NOT_REPLICATED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.282 Attribute subSchemaSubEntry

This attribute specifies the distinguished name for the location of the subschema object where a class or attribute is defined.

```
cn: SubSchemaSubEntry
ldapDisplayName: subSchemaSubEntry
attributeId: 2.5.18.10
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 9a7ad94d-ca53-11d1-bbd0-0080c76670c0
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
  FLAG_DOMAIN_DISALLOW_RENAME
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.283 Attribute superiorDNSRoot

This attribute specifies a system attribute that is used for referrals generation.

```
cn: Superior-DNS-Root
ldapDisplayName: superiorDNSRoot
attributeId: 1.2.840.113556.1.4.532
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 5245801d-ca6a-11d0-afff-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.284 Attribute superScopeDescription

This attribute specifies a description for a superscope.

```
cn: Super-Scope-Description
ldapDisplayName: superScopeDescription
attributeId: 1.2.840.113556.1.4.711
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 963d274c-48be-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.285 Attribute superScopes

This attribute groups together all the different scopes used in the DHCP class into a single entity.

```
cn: Super-Scopes
ldapDisplayName: superScopes
attributeId: 1.2.840.113556.1.4.710
attributeSyntax: 2.5.5.5
omSyntax: 19
isSingleValued: FALSE
schemaIdGuid: 963d274b-48be-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.286 Attribute supplementalCredentials

This attribute specifies stored credentials for use in authenticating; the encrypted version of the user's password. This attribute is neither readable nor writable.

For more information about usage, refer to [\[MS-SAMR\]](#) section 2.2.10.

```
cn: Supplemental-Credentials
ldapDisplayName: supplementalCredentials
attributeId: 1.2.840.113556.1.4.125
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: bf967a3f-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.287 Attribute supportedApplicationContext

This attribute specifies the object identifier(s) of application context(s) that an OSI application supports.

```
cn: Supported-Application-Context
ldapDisplayName: supportedApplicationContext
attributeId: 2.5.4.30
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: 1677588f-47f3-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
mapiID: 33085
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.288 Attribute syncAttributes

This attribute specifies information on the sync objects.

```
cn: Sync-Attributes
```

```
ldapDisplayName: syncAttributes
attributeId: 1.2.840.113556.1.4.666
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 037651e4-441d-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.289 Attribute syncMembership

This attribute specifies a list of members contained in a SAM built-in group for synchronization.

```
cn: Sync-Membership
ldapDisplayName: syncMembership
attributeId: 1.2.840.113556.1.4.665
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 037651e3-441d-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
linkID: 78
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.290 Attribute syncWithObject

This attribute specifies the distinguished name of the object being synchronized for the SAM built-in group/local policy synchronization.

```
cn: Sync-With-Object
ldapDisplayName: syncWithObject
attributeId: 1.2.840.113556.1.4.664
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: 037651e2-441d-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.291 Attribute **syncWithSID**

This attribute specifies the SAM built-in group object/local policy synchronization; this is the local group to which an object corresponds.

```
cn: Sync-With-SID
ldapDisplayName: syncWithSID
attributeId: 1.2.840.113556.1.4.667
attributeSyntax: 2.5.5.17
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 037651e5-441d-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.292 Attribute **systemAuxiliaryClass**

This attribute specifies the governsIds of some of the Auxiliary classes that are linked to this class. These classes contain attributes required for system operation. Optional. Can be modified only by the Active Directory system (see [\[MS-ADSO\]](#) section 2.1). See [\[MS-ADTS\]](#) section 3.1.1.3.1.1.5 for more information.

```
cn: System-Auxiliary-Class
ldapDisplayName: systemAuxiliaryClass
attributeId: 1.2.840.113556.1.4.198
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: FALSE
schemaIdGuid: bf967a43-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.293 Attribute **systemFlags**

This attribute specifies an integer value that contains flags that define additional properties of the class. See [\[MS-ADTS\]](#) for more information. Flags that determine specific system operations. Optional.

The systemFlags attribute contains bitwise flags. The values relevant to the schema objects are the following (further defined in [\[MS-ADTS\]](#) section 2.2.10):

- FLAG_ATTR_NOT_REPLICATED: This attribute is non-replicated.
- FLAG_ATTR_REQ_PARTIAL_SET_MEMBER: If set, this attribute is a member of partial attribute set (PAS) regardless of the value of attribute [isMemberofPartialAttributeSet](#).
- FLAG_ATTR_IS_CONSTRUCTED: This attribute is a constructed attribute.
- FLAG_ATTR_IS_OPERATIONAL: This attribute is an operational attribute, as defined in [\[RFC2251\]](#) section 3.2.1.
- FLAG_SCHEMA_BASE_OBJECT: This attribute is a Category 1 schema attribute.
- FLAG_ATTR_IS_RDN: This attribute can be used as an RDN attribute of a class.

```
cn: System-Flags
ldapDisplayName: systemFlags
attributeId: 1.2.840.113556.1.4.375
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: e0fa1e62-9b45-11d0-afdd-00c04fd930c9
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.294 Attribute systemMayContain

This attribute specifies the list of optional attributes for a class. The list of attributes can only be modified by the Active Directory system (see [\[MS-ADSO\]](#) section 2.1).

```
cn: System-May-Contain
ldapDisplayName: systemMayContain
attributeId: 1.2.840.113556.1.4.196
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: FALSE
schemaIdGuid: bf967a44-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.295 Attribute systemMustContain

This attribute specifies the attributeIds of some of the mandatory attributes of this class. It contains attributes required for system operation. Optional. It can be modified only by the Active Directory system (see [\[MS-ADSO\]](#) section 2.1).

```
cn: System-Must-Contain
ldapDisplayName: systemMustContain
attributeId: 1.2.840.113556.1.4.197
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: FALSE
schemaIdGuid: bf967a45-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.296 Attribute systemOnly

This attribute specifies a Boolean value that specifies whether only Active Directory can modify the class. System-Only classes can be created or deleted only by the directory system agent.

```
cn: System-Only
ldapDisplayName: systemOnly
attributeId: 1.2.840.113556.1.4.170
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: bf967a46-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.297 Attribute systemPossSuperiors

This attribute specifies the governsIds of some of the classes that can be parents of this class within an NC tree. It describes relationships required for system operation. Optional. Can be modified only by the Active Directory system (see [\[MS-ADSO\]](#) section 2.1). See [\[MS-ADTS\]](#) for more information.

```

cn: System-Poss-Superiors
ldapDisplayName: systemPossSuperiors
attributeId: 1.2.840.113556.1.4.195
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: FALSE
schemaIdGuid: bf967a47-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute `isMemberOfPartialAttributeSet` is not defined.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.298 Attribute `telephoneNumber`

This attribute specifies the primary telephone number.

```

cn: Telephone-Number
ldapDisplayName: telephoneNumber
attributeId: 2.5.4.20
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967a49-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapiID: 14856
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.299 Attribute `teletexTerminalIdentifier`

This attribute specifies the Teletex terminal identifier (and optionally, parameters) for a teletex terminal associated with an object.

```

cn: Teletex-Terminal-Identifier
ldapDisplayName: teletexTerminalIdentifier
attributeId: 2.5.4.22
attributeSyntax: 2.5.5.10

```



```

omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: bf967a4a-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapID: 33091
systemFlags: FLAG_SCHEMA_BASE_OBJECT

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.300 Attribute telexNumber

This attribute specifies a list of alternate telex numbers.

```

cn: Telex-Number
ldapDisplayName: telexNumber
attributeId: 2.5.4.21
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: bf967a4b-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 32
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapID: 14892
systemFlags: FLAG_SCHEMA_BASE_OBJECT

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.301 Attribute templateRoots

This attribute specifies an attribute used on the Microsoft® Exchange Server configuration container to indicate where the template containers are stored. This information is used by the Active Directory MAPI provider.

```

cn: Template-Roots
ldapDisplayName: templateRoots
attributeId: 1.2.840.113556.1.4.1346
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: ed9de9a0-7041-11d2-9905-0000f87a57d4
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.302 Attribute **templateRoots2**

This attribute specifies an attribute used on the Microsoft® Exchange Server configuration container to indicate where the template containers are stored. This information is used by the Active Directory MAPI provider. Similar to [templateRoots](#), it differs by being a linked attribute.

```
cn: Template-Roots2
ldapDisplayName: templateRoots2
attributeId: 1.2.840.113556.1.4.2048
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
linkId: 2126
schemaIdGuid: b1cba91a-0682-4362-a659-153e201ef069
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Windows Server® 2008 operating system and Windows Server® 2008 R2 operating system.

2.303 Attribute **terminalServer**

This attribute specifies opaque data used by Microsoft Windows NT® operating system Terminal Server.

```
cn: Terminal-Server
ldapDisplayName: terminalServer
attributeId: 1.2.840.113556.1.4.885
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 6db69a1c-9422-11d1-aebd-0000f80367c1
systemOnly: FALSE
searchFlags: fATTINDEX
rangeUpper: 20480
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute rangeUpper is not defined.

2.304 Attribute **textEncodedORAddress**

This attribute is used to support X.400 [\[X400\]](#) addresses in a text format.

```
cn: Text-Encoded-OR-Address
ldapDisplayName: textEncodedORAddress
attributeId: 0.9.2342.19200300.100.1.2
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: a8df7489-c5ea-11d1-bbcb-0080c76670c0
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 1024
mapID: 35969
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.305 Attribute thumbnailLogo

This attribute specifies a BLOB containing a logo for this object.

```
cn: Logo
ldapDisplayName: thumbnailLogo
attributeId: 2.16.840.1.113730.3.1.36
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: bf9679a9-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 32767
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.306 Attribute thumbnailPhoto

This attribute specifies a picture.

```
cn: Picture
ldapDisplayName: thumbnailPhoto
attributeId: 2.16.840.1.113730.3.1.35
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 8d3bca50-1d7e-11d0-a081-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
```

```
rangeUpper: 102400
mapId: 35998
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.307 Attribute timeRefresh

This attribute specifies the interval during which a resource record that is contained in an Active Directory integrated zone should be refreshed for the DNS server. The default interval is seven days.

```
cn: Time-Refresh
ldapDisplayName: timeRefresh
attributeId: 1.2.840.113556.1.4.503
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: ddac0cf1-af8f-11d0-afeb-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.308 Attribute timeVolChange

This attribute specifies the last time that a file in the remote storage volume was changed.

```
cn: Time-Vol-Change
ldapDisplayName: timeVolChange
attributeId: 1.2.840.113556.1.4.502
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: ddac0cf0-af8f-11d0-afeb-00c04fd930c9
systemOnly: FALSE
searchFlags: fATTINDEX
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.309 Attribute title

This attribute specifies the user's job title. This property is commonly used to indicate the formal job title, such as Senior Programmer, rather than occupational class, such as programmer. It is not typically used for suffix titles such as Esq. or DDS.

```

cn: Title
ldapDisplayName: title
attributeId: 2.5.4.12
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967a55-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 128
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
mapID: 14871
systemFlags: FLAG_SCHEMA_BASE_OBJECT

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.310 Attribute tokenGroups

This attribute specifies a computed attribute that contains the list of SIDs due to a transitive group membership expansion operation on a given user or computer. Token groups cannot be retrieved if no global catalog is present to retrieve the transitive reverse memberships.

```

cn: Token-Groups
ldapDisplayName: tokenGroups
attributeId: 1.2.840.113556.1.4.1301
attributeSyntax: 2.5.5.17
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: b7c69e6d-2cc7-11d2-854e-00a0c983f608
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: 037088f8-0ae1-11d2-b422-00a0c968f939
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
  FLAG_DOMAIN_DISALLOW_RENAME
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.311 Attribute tokenGroupsGlobalAndUniversal

This attribute specifies the token groups for Microsoft® Exchange Server.

```

cn: Token-Groups-Global-And-Universal
ldapDisplayName: tokenGroupsGlobalAndUniversal
attributeId: 1.2.840.113556.1.4.1418
attributeSyntax: 2.5.5.17
omSyntax: 4
isSingleValued: FALSE

```

```

schemaIdGuid: 46a9b11d-60ae-405a-b7e8-ff8a58d456d2
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: 037088f8-0ae1-11d2-b422-00a0c968f939
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
  FLAG_DOMAIN_DISALLOW_RENAME
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.312 Attribute tokenGroupsNoGCAcceptable

This attribute specifies the list of SIDs due to a transitive group membership expansion operation on a given user or computer. Token groups cannot be retrieved if a global catalog is not present to retrieve the transitive reverse memberships.

```

cn: Token-Groups-No-GC-Acceptable
ldapDisplayName: tokenGroupsNoGCAcceptable
attributeId: 1.2.840.113556.1.4.1303
attributeSyntax: 2.5.5.17
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: 040fc392-33df-11d2-98b2-0000f87a57d4
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: 037088f8-0ae1-11d2-b422-00a0c968f939
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
  FLAG_DOMAIN_DISALLOW_RENAME
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.313 Attribute tombstoneLifetime

If the Recycle Bin optional feature is not enabled, this attribute specifies the number of days before a deleted object is removed from the directory services. If the Recycle Bin optional feature is enabled, this attribute specifies the number of days before a recycled object is removed from the directory services. For more information refer to [\[MS-ADTS\]](#) section 3.1.1.1.15 and [\[MS-DRSR\]](#).

```

cn: Tombstone-Lifetime
ldapDisplayName: tombstoneLifetime
attributeId: 1.2.840.113556.1.2.54
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 16c3a860-1273-11d0-a060-00aa006c33ed
systemOnly: FALSE

```

```
searchFlags: 0
mapID: 33093
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.314 Attribute transportAddressAttribute

This attribute specifies the name of the address type for the transport.

```
cn: Transport-Address-Attribute
ldapDisplayName: transportAddressAttribute
attributeId: 1.2.840.113556.1.4.895
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: TRUE
schemaIdGuid: c1dc867c-a261-11d1-b606-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.315 Attribute transportDLLName

This attribute specifies the name of the DLL that will manage a transport.

```
cn: Transport-DLL-Name
ldapDisplayName: transportDLLName
attributeId: 1.2.840.113556.1.4.789
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 26d97372-6070-11d1-a9c6-0000f80367c1
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 1024
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.316 Attribute transportType

This attribute specifies the distinguished name for a type of transport being used to connect sites together. This value can point to an IP or Simple Mail Transfer Protocol (SMTP) transport.

```
cn: Transport-Type
ldapDisplayName: transportType
attributeId: 1.2.840.113556.1.4.791
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: 26d97374-6070-11d1-a9c6-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.317 Attribute treatAsLeaf

This attribute defines a flag for display specifiers (see the [displaySpecifier](#) class in [\[MS-ADSC\]](#)). Display specifiers that have this attribute set to True force the related class to be displayed as a leaf class even if it has children.

```
cn: Treat-As-Leaf
ldapDisplayName: treatAsLeaf
attributeId: 1.2.840.113556.1.4.806
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 8fd044e3-771f-11d1-aeae-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.318 Attribute treeName

This attribute specifies the fully qualified domain name (FQDN) (2) ([\[MS-ADTS\]](#) section 1.1) of the domain at the root of a tree.

```
cn: Tree-Name
ldapDisplayName: treeName
```



```

attributeId: 1.2.840.113556.1.4.660
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 28630ebd-41d5-11d1-a9c1-0000f80367c1
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.319 Attribute trustAttributes

This attribute specifies the trust attributes for a trusted domain. Possible attribute values are as follows: TRUST_ATTRIBUTE_NON_TRANSITIVE Disable transitivity.

TRUST_ATTRIBUTE_TREE_PARENT Trust is set to the organization tree parent.

TRUST_ATTRIBUTE_TREE_ROOT Trust set to another tree root in the forest.

TRUST_ATTRIBUTE_UPLEVEL_ONLY Trusted link valid only for up-level client. For more information, refer to [\[MS-ADTS\]](#) section 7.1.6.7.9.

```

cn: Trust-Attributes
ldapDisplayName: trustAttributes
attributeId: 1.2.840.113556.1.4.470
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 80a67e5a-9f22-11d0-afdd-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute isMemberOfPartialAttributeSet is not defined.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.320 Attribute trustAuthIncoming

This attribute specifies authentication information for the incoming portion of a trust. For more information, refer to [\[MS-ADTS\]](#) sections [7.1.6.7.10](#) and [7.1.6.9.1](#).

```

cn: Trust-Auth-Incoming
ldapDisplayName: trustAuthIncoming
attributeId: 1.2.840.113556.1.4.129
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: bf967a59-0de6-11d0-a285-00aa003049e2

```

```
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 32767
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.321 Attribute trustAuthOutgoing

This attribute specifies authentication information for the outgoing portion of a trust. For more information, refer to [\[MS-ADTS\]](#) sections [7.1.6.7.11](#) and [7.1.6.9.1](#).

```
cn: Trust-Auth-Outgoing
ldapDisplayName: trustAuthOutgoing
attributeId: 1.2.840.113556.1.4.135
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: bf967a5f-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 32767
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.322 Attribute trustDirection

This attribute specifies the direction of a trust. For more information refer to [\[MS-ADTS\]](#) section 7.1.6.7.12.

```
cn: Trust-Direction
ldapDisplayName: trustDirection
attributeId: 1.2.840.113556.1.4.132
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967a5c-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

```
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute `isMemberOfPartialAttributeSet` is not defined.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.323 Attribute `trustParent`

This attribute specifies the distinguished name of a related Cross-Ref. See [\[MS-ADTS\]](#) section 7.1.1.2.1.1.4.

```
cn: Trust-Parent
ldapDisplayName: trustParent
attributeId: 1.2.840.113556.1.4.471
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: b000ea7a-a086-11d0-afdd-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.324 Attribute `trustPartner`

This attribute specifies the name of the domain with which a trust exists. For more information refer to [\[MS-ADTS\]](#) section 7.1.6.7.13.

```
cn: Trust-Partner
ldapDisplayName: trustPartner
attributeId: 1.2.840.113556.1.4.133
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967a5d-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fATTINDEX
rangeLower: 1
rangeUpper: 1024
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute `isMemberOfPartialAttributeSet` is not defined.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.325 Attribute `trustPosixOffset`

This attribute specifies the Portable Operating System Interface (POSIX) offset for the trusted domain.

```
cn: Trust-Posix-Offset
ldapDisplayName: trustPosixOffset
attributeId: 1.2.840.113556.1.4.134
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967a5e-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.326 Attribute `trustType`

This attribute specifies the type of trust, for example, NT or MIT.

```
cn: Trust-Type
ldapDisplayName: trustType
attributeId: 1.2.840.113556.1.4.136
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967a60-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute `isMemberOfPartialAttributeSet` is not defined.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.327 Attribute uASCompat

This attribute specifies whether the security account manager will enforce data sizes to make Active Directory compatible with the LAN Manager User Account System (UAS). If this value is 0, no limits are enforced. If this value is 1, the following limits are enforced.

Value	Length
Password	0 to 14 characters
Account Name	0 to 20 characters
Domain Name	0 to 15 characters
Computer Name	0 to 15 characters
Comments	0 to 48 characters
Home Directory	0 to 256 characters
Script Path	0 to 256 characters
Time Units Per Week	168 bits (21 bytes)

```
cn: UAS-Compat
ldapDisplayName: uASCompat
attributeId: 1.2.840.113556.1.4.155
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967a61-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: b8119fd0-04f6-4762-ab7a-4986c76b3f9a
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute attributeSecurityGuid is not defined.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.328 Attribute uid

This attribute specifies a user ID.

```
cn: uid
ldapDisplayName: uid
attributeId: 0.9.2342.19200300.100.1.1
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 0bb0fca0-1e89-429f-901a-1413894d9f59
systemOnly: FALSE
```

```
searchFlags: fPRESERVEONDELETE
attributeSecurityGuid: 59ba2f42-79a2-11d0-9020-00c04fc2d3cf
```

Version-Specific Behavior: Implemented on Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.329 Attribute uidNumber

This attribute specifies an integer that uniquely identifies a user in an administrative domain, as specified in [\[RFC2307\]](#).

```
cn: UidNumber
ldapDisplayName: uidNumber
attributeId: 1.3.6.1.1.1.0
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 850fcc8f-9c6b-47e1-b671-7c654be4d5b3
systemOnly: FALSE
searchFlags: fATTINDEX
```

Version-Specific Behavior: Implemented on Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.330 Attribute uNCName

This attribute specifies the universal naming convention name for shared volumes and printers.

```
cn: UNC-Name
ldapDisplayName: uNCName
attributeId: 1.2.840.113556.1.4.137
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967a64-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fATTINDEX
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.331 Attribute unicodePwd

This attribute specifies the password of the user in Microsoft Windows NT® operating system one-way format (OWF). Microsoft Windows® 2000 operating system uses the Windows NT OWF. This property is used only by the operating system. Note that the clear password cannot be derived back from the OWF form of the password. For more information, refer to [\[MS-ADTS\]](#) section 3.1.1.3.1.5.1 and [\[MS-SAMR\]](#) section 3.1.1.8.7.

```
cn: Unicode-Pwd
ldapDisplayName: unicodePwd
attributeId: 1.2.840.113556.1.4.90
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: bf9679e1-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.332 Attribute uniqueIdentifier

This attribute specifies a "unique identifier" for an object represented in the directory. For more information refer to [\[MS-ADTS\]](#).

```
cn: uniqueIdentifier
ldapDisplayName: uniqueIdentifier
attributeId: 0.9.2342.19200300.100.1.44
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: ba0184c7-38c5-4bed-a526-75421470580c
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 256
```

Version-Specific Behavior: Implemented on Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.333 Attribute uniqueMember

This attribute specifies the distinguished name for the member of a group. Used by groupOfUniqueNames.

```
cn: uniqueMember
ldapDisplayName: uniqueMember
attributeId: 2.5.4.50
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 8f888726-f80a-44d7-b1ee-cb9df21392c8
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: Implemented on Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.334 Attribute unixHomeDirectory

This attribute specifies the absolute path to the home directory [\[RFC2307\]](#).

```
cn: UnixHomeDirectory
ldapDisplayName: unixHomeDirectory
attributeId: 1.3.6.1.1.1.1.3
attributeSyntax: 2.5.5.5
omSyntax: 22
isSingleValued: TRUE
schemaIdGuid: bc2dba12-000f-464d-bf1d-0808465d8843
systemOnly: FALSE
searchFlags: 0
rangeUpper: 2048
```

Version-Specific Behavior: Implemented on Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.335 Attribute unixUserPassword

This attribute specifies a userPassword compatible with UNIX systems.

```
cn: UnixUserPassword
ldapDisplayName: unixUserPassword
attributeId: 1.2.840.113556.1.4.1910
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: 612cb747-c0e8-4f92-9221-fdd5f15b550d
systemOnly: FALSE
searchFlags: fCONFIDENTIAL
rangeLower: 1
rangeUpper: 128
```

Version-Specific Behavior: Implemented on Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.336 Attribute unstructuredAddress

This attribute specifies the IP address of the router. For example, 100.11.22.33. PKCS #9.

```
cn: unstructuredAddress
ldapDisplayName: unstructuredAddress
attributeId: 1.2.840.113549.1.9.8
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 50950839-cc4c-4491-863a-fcf942d684b7
systemOnly: FALSE
searchFlags: 0
```


rangeUpper: 256

Version-Specific Behavior: Implemented on Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.337 Attribute unstructuredName

This attribute specifies the fully qualified domain name (FQDN) (1) ([\[MS-ADTS\]](#) section 1.1) of the router, for example, router1.microsoft.com. PKCS #9.

```
cn: unstructuredName
ldapDisplayName: unstructuredName
attributeId: 1.2.840.113549.1.9.2
attributeSyntax: 2.5.5.5
omSyntax: 22
isSingleValued: FALSE
schemaIdGuid: 9c8ef177-41cf-45c9-9673-7716c0c8901b
systemOnly: FALSE
searchFlags: 0
rangeUpper: 256
```

Version-Specific Behavior: Implemented on Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.338 Attribute upgradeProductCode

This attribute contains the product code of other packages, such as applications, that can be upgraded by this package, or that can upgrade this package.

```
cn: Upgrade-Product-Code
ldapDisplayName: upgradeProductCode
attributeId: 1.2.840.113556.1.4.813
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: d9e18312-8939-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 16
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.339 Attribute uPNSuffixes

This attribute specifies the list of User-Principal-Name suffixes for a forest.

```
cn: UPN-Suffixes
```

```
ldapDisplayName: uPNSuffixes
attributeId: 1.2.840.113556.1.4.890
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 032160bf-9824-11d1-aec0-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.340 Attribute url

This attribute specifies a list of alternate Web pages.

```
cn: WWW-Page-Other
ldapDisplayName: url
attributeId: 1.2.840.113556.1.4.749
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 9a9a0221-4a5b-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: e45795b3-9455-11d1-aebd-0000f80367c1
mapiID: 33141
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.341 Attribute userAccountControl

This attribute specifies flags that control the behavior of the user account.

```
cn: User-Account-Control
ldapDisplayName: userAccountControl
attributeId: 1.2.840.113556.1.4.8
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967a68-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fCOPY| fPRESERVEONDELETE | fATTINDEX
attributeSecurityGuid: 4c164200-20c0-11d0-a768-00aa006e0529
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.342 Attribute userCert

This attribute specifies Nortel v1 or DMS certificates.

```
cn: User-Cert
ldapDisplayName: userCert
attributeId: 1.2.840.113556.1.4.645
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: bf967a69-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 32767
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapiID: 14882
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.343 Attribute userCertificate

This attribute specifies the DER-encoded X509v3 certificates issued to the user ([\[RFC3280\]](#)). Note that this property contains the public key certificates issued to this user by Microsoft Certificate Service.

```
cn: X509-Cert
ldapDisplayName: userCertificate
attributeId: 2.5.4.36
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: bf967a7f-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeUpper: 32768
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapiID: 35946
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute rangeUpper is not defined.

2.344 Attribute userClass

This attribute specifies a category of computer user.

```
cn: userClass
ldapDisplayName: userClass
attributeId: 0.9.2342.19200300.100.1.8
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 11732a8a-e14d-4cc5-b92f-d93f51c6d8e4
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 256
```

Version-Specific Behavior: Implemented on Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.345 Attribute userParameters

This attribute specifies parameters of the user. Points to a Unicode string that is set aside for use by applications. This string can be a null string, or it can have any number of characters before the terminating null character. Terminal servers use this attribute to store session configuration data for the user.

```
cn: User-Parameters
ldapDisplayName: userParameters
attributeId: 1.2.840.113556.1.4.138
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967a6d-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 32767
attributeSecurityGuid: 4c164200-20c0-11d0-a768-00aa006e0529
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.346 Attribute userPassword

This attribute specifies the user's password in UTF-8 format. This is a write-only attribute.

```
cn: User-Password
ldapDisplayName: userPassword
attributeId: 2.5.4.35
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: bf967a6e-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 128
mapID: 33107
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.347 Attribute userPKCS12

This attribute specifies the PKCS #12 PFX Protocol Data Unit (PDU) for exchange of personal identity information.

```
cn: userPKCS12
ldapDisplayName: userPKCS12
attributeId: 2.16.840.1.113730.3.1.216
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: 23998ab5-70f8-4007-a4c1-a84a38311f9a
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: Implemented on Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.348 Attribute userPrincipalName

This attribute specifies the user principal name (UPN) that is an Internet-style logon name for a user, as specified in the Internet standard [RFC822](#). The UPN is shorter than the distinguished name and easier to remember. By convention, the UPN should map to the user e-mail name. For more information about this attribute, see [MS-ADTS](#).

```
cn: User-Principal-Name
ldapDisplayName: userPrincipalName
attributeId: 1.2.840.113556.1.4.656
attributeSyntax: 2.5.5.12
```

```

omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 28630ebb-41d5-11d1-a9c1-0000f80367c1
systemOnly: FALSE
searchFlags: fATTINDEX
rangeUpper: 1024
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
    FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute rangeUpper is not defined.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.349 Attribute userSharedFolder

This attribute specifies a UNC path to the user's shared documents folder. The path must be a network UNC path of the form \\server\share\directory. This value can be a null string.

```

cn: User-Shared-Folder
ldapDisplayName: userSharedFolder
attributeId: 1.2.840.113556.1.4.751
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 9a9a021f-4a5b-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
systemFlags: FLAG_SCHEMA_BASE_OBJECT

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.350 Attribute userSharedFolderOther

This attribute specifies a UNC path to the user's additional shared documents folder. The path must be a network UNC path of the form \\server\share\directory. This value can be a null string.

```

cn: User-Shared-Folder-Other
ldapDisplayName: userSharedFolderOther
attributeId: 1.2.840.113556.1.4.752
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 9a9a0220-4a5b-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0

```

```
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.351 Attribute userSMIMECertificate

This attribute specifies a certificate distribution object or tagged certificates.

```
cn: User-SMIME-Certificate
ldapDisplayName: userSMIMECertificate
attributeId: 2.16.840.1.113730.3.140
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: e16a9db2-403c-11d1-a9c0-0000f80367c1
systemOnly: FALSE
searchFlags: 0
rangeUpper: 32768
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapiID: 14960
isMemberOfPartialAttributeSet: TRUE
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute rangeUpper is not defined, and the following attributes are defined differently.

```
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

2.352 Attribute userWorkstations

This attribute specifies the NetBIOS or fully qualified domain names (FQDNs) (1) ([\[MS-ADTS\]](#) section 1.1) of the computers running Microsoft Windows NT® Workstation operating system or Microsoft Windows® 2000 Professional operating system from which the user can log on. Each NetBIOS name is separated by a comma. The NetBIOS name of a computer is the saAccountName property of a computer object. Multiple names should be separated by commas.

```
cn: User-Workstations
ldapDisplayName: userWorkstations
attributeId: 1.2.840.113556.1.4.86
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf9679d7-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fCOPY
rangeLower: 0
rangeUpper: 1024
```

```
attributeSecurityGuid: 5f202010-79a5-11d0-9020-00c04fc2d4cf
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute attributeSecurityGuid is not defined.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.353 Attribute uSNChanged

This attribute specifies the Update Sequence Number (USN) value assigned by the local directory for the latest change, including creation. For more information refer to [\[MS-DRSR\]](#).

```
cn: USN-Changed
ldapDisplayName: uSNChanged
attributeId: 1.2.840.113556.1.2.120
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: bf967a6f-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE | fATTINDEX
mapID: 32809
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER | FLAG_ATTR_NOT_REPLICATED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.354 Attribute uSNCreated

This attribute specifies the USN-Changed value assigned at object creation. For more information, refer to [\[MS-DRSR\]](#).

```
cn: USN-Created
ldapDisplayName: uSNCreated
attributeId: 1.2.840.113556.1.2.19
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: bf967a70-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE | fATTINDEX
mapID: 33108
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
```



```
FLAG_ATTR_REQ_PARTIAL_SET_MEMBER | FLAG_ATTR_NOT_REPLICATED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.355 Attribute uSNDALastObjRemoved

This attribute specifies the USN for the last system object that was removed from a server. For more information, refer to [\[MS-DRSR\]](#).

```
cn: USN-DSA-Last-Obj-Removed
ldapDisplayName: uSNDALastObjRemoved
attributeId: 1.2.840.113556.1.2.267
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: bf967a71-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
mapiID: 33109
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.356 Attribute USNIntersite

This attribute specifies the USN for inter-site replication. For more information refer to [\[MS-DRSR\]](#).

```
cn: USN-Intersite
ldapDisplayName: USNIntersite
attributeId: 1.2.840.113556.1.2.469
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: a8df7498-c5ea-11d1-bbcb-0080c76670c0
systemOnly: FALSE
searchFlags: fATTINDEX
mapiID: 33146
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.357 Attribute uSNLastObjRem

This attribute specifies the USN for the last non-system object that was removed from a server. For more information, refer to [\[MS-DRSR\]](#).

```
cn: USN-Last-Obj-Rem
ldapDisplayName: uSNLastObjRem
attributeId: 1.2.840.113556.1.2.121
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: bf967a73-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
mapID: 33110
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER | FLAG_ATTR_NOT_REPLICATED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.358 Attribute uSNSource

This attribute specifies the value of the [USN-Changed](#) attribute of the object from the remote directory that replicated the change to the local server. For more information refer to [\[MS-DRSR\]](#).

```
cn: USN-Source
ldapDisplayName: uSNSource
attributeId: 1.2.840.113556.1.4.896
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: 167758ad-47f3-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
mapID: 33111
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.359 Attribute validAccesses

This attribute specifies the type of access that is permitted with an extended right.

```
cn: Valid-Accesses
ldapDisplayName: validAccesses
attributeId: 1.2.840.113556.1.4.1356
attributeSyntax: 2.5.5.9
```

```
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 4d2fa380-7f54-11d2-992a-0000f87a57d4
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.360 Attribute vendor

This attribute specifies the vendor for an application.

```
cn: Vendor
ldapDisplayName: vendor
attributeId: 1.2.840.113556.1.4.255
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 281416df-1968-11d0-a28f-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 512
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.361 Attribute versionNumber

This attribute specifies a general purpose version number.

```
cn: Version-Number
ldapDisplayName: versionNumber
attributeId: 1.2.840.113556.1.4.141
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967a76-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.362 Attribute versionNumberHi

This attribute specifies a general purpose major version number.

```
cn: Version-Number-Hi
ldapDisplayName: versionNumberHi
attributeId: 1.2.840.113556.1.4.328
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 7d6c0e9a-7e20-11d0-afd6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.363 Attribute versionNumberLo

This attribute specifies a general purpose minor version number.

```
cn: Version-Number-Lo
ldapDisplayName: versionNumberLo
attributeId: 1.2.840.113556.1.4.329
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 7d6c0e9b-7e20-11d0-afd6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.364 Attribute volTableGUID

This attribute specifies a unique identifier for a Link-Track-Volume table entry.

```
cn: Vol-Table-GUID
ldapDisplayName: volTableGUID
attributeId: 1.2.840.113556.1.4.336
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 1f0075fd-7e40-11d0-afd6-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 16
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.365 Attribute volTableIdxGUID

This attribute specifies the index identifier for a Link-Track-Volume table entry.

```
cn: Vol-Table-Idx-GUID
ldapDisplayName: volTableIdxGUID
attributeId: 1.2.840.113556.1.4.334
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 1f0075fb-7e40-11d0-afd6-00c04fd930c9
systemOnly: FALSE
searchFlags: fATTINDEX
rangeLower: 0
rangeUpper: 16
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.366 Attribute volumeCount

This attribute specifies the tracked volume quota for a given computer.

```
cn: Volume-Count
ldapDisplayName: volumeCount
attributeId: 1.2.840.113556.1.4.507
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 34aaa217-b699-11d0-afee-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.367 Attribute wbemPath

This attribute specifies references to objects in other Active Directory Service Interface (ADSI) namespaces.

```
cn: Wbem-Path
ldapDisplayName: wbemPath
attributeId: 1.2.840.113556.1.4.301
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
```

```
schemaIdGuid: 244b2970-5abd-11d0-afd2-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.368 Attribute wellKnownObjects

This attribute specifies a list of well-known object containers by GUID and distinguished name. The well-known objects are system containers. This information is used to retrieve an object after it has been moved by using just the GUID and the domain name. Whenever the object is moved, the Active Directory system (see [\[MS-ADSO\]](#) section 2.1) will automatically update the distinguished name portion of the Well-Known-Objects values that referred to the object. For information on well-known objects, well-known GUIDs, and their symbolic names, see [\[MS-ADTS\]](#) section 7.1.1.4.

```
cn: Well-Known-Objects
ldapDisplayName: wellKnownObjects
attributeId: 1.2.840.113556.1.4.618
attributeSyntax: 2.5.5.7
omSyntax: 127
omObjectClass: 1.2.840.113556.1.1.1.11
isSingleValued: FALSE
schemaIdGuid: 05308983-7688-11d1-aded-00c04fd8d5cd
systemOnly: TRUE
searchFlags: 0
rangeLower: 16
rangeUpper: 16
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, attribute rangeLower and rangeUpper is not defined.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.369 Attribute whenChanged

This attribute specifies the date when this object was last changed. This value is not replicated and exists in the global catalog. For more information refer to [\[MS-ADTS\]](#).

```
cn: When-Changed
ldapDisplayName: whenChanged
attributeId: 1.2.840.113556.1.2.3
attributeSyntax: 2.5.5.11
omSyntax: 24
isSingleValued: TRUE
schemaIdGuid: bf967a77-0de6-11d0-a285-00aa003049e2
```

```

systemOnly: TRUE
searchFlags: 0
mapiID: 12296
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER | FLAG_ATTR_NOT_REPLICATED
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.370 Attribute whenCreated

This attribute specifies the date and time when this object was created. This value is replicated and is in the global catalog. For more information refer to [\[MS-ADTS\]](#).

```

cn: When-Created
ldapDisplayName: whenCreated
attributeId: 1.2.840.113556.1.2.2
attributeSyntax: 2.5.5.11
omSyntax: 24
isSingleValued: TRUE
schemaIdGuid: bf967a78-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
mapiID: 12295
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL

```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

In Windows 2000 Server, the following attributes are defined differently.

```

systemFlags: FLAG_SCHEMA_BASE_OBJECT

```

The [schemaFlagsEx](#) attribute was added to this attribute definition in Windows Server 2008.

2.371 Attribute winsockAddresses

This attribute specifies a Winsock service address.

```

cn: Winsock-Addresses
ldapDisplayName: winsockAddresses
attributeId: 1.2.840.113556.1.4.142
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE

```

```
schemaIdGuid: bf967a79-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.372 Attribute **wWWHomePage**

This attribute specifies the primary Web page.

```
cn: WWW-Home-Page
ldapDisplayName: wWWHomePage
attributeId: 1.2.840.113556.1.2.464
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967a7a-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 2048
attributeSecurityGuid: e45795b3-9455-11d1-aebd-0000f80367c1
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.373 Attribute **x121Address**

This attribute specifies the X.121 address for an object, as specified in [\[X121\]](#).

```
cn: X121-Address
ldapDisplayName: x121Address
attributeId: 2.5.4.24
attributeSyntax: 2.5.5.6
omSyntax: 18
isSingleValued: FALSE
schemaIdGuid: bf967a7b-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 15
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
mapID: 33112
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: Implemented on Microsoft Windows® 2000 Server operating system, Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

2.374 Attribute x500uniqueIdentifier

This attribute specifies when a distinguished name has been reused. This is a different attribute type from both the "uid" and "uniqueIdentifier" types.

```
cn: x500uniqueIdentifier
ldapDisplayName: x500uniqueIdentifier
attributeId: 2.5.4.45
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: d07da11f-8a3d-42b6-b0aa-76c962be719a
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: Implemented on Windows Server® 2003 operating system, Windows Server® 2003 R2 operating system, Windows Server® 2008 operating system, and Windows Server® 2008 R2 operating system.

3 Change Tracking

This section identifies changes that were made to the [MS-ADA3] protocol document between the May 2011 and June 2011 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.
- An extensive rewrite, addition, or deletion of major portions of content.
- The removal of a document from the documentation set.
- Changes made for template compliance.

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 language and 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 or language changes were introduced. The technical content of the document is identical to the last released version, but minor editorial and formatting changes, as well as updates to the header and footer information, and to the revision summary, may have been made.

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.
- New content added for template compliance.
- Content updated for template compliance.
- Content removed for template compliance.
- 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 protocol@microsoft.com.

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
1 References	Added explanatory statement regarding the removal of the publishing year from Microsoft Open Specification document references.	N	Content updated.

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