[MS-ADLS-Diff]:

Active Directory Lightweight Directory Services Schema

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Revision Summary

Date	Revision History	Revision Class	Comments
2/22/2007	0.01	New	Version 0.01 release
6/1/2007	1.0	Major	Updated and revised the technical content.
7/3/2007	1.0.1	Editorial	Added missing description.
7/20/2007	1.0.2	Editorial	Changed language and formatting in the technical content.
8/10/2007	1.0.3	Editorial	Changed language and formatting in the technical content.
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11/30/2007	1.0.6	Editorial	Changed language and formatting in the technical content.
1/25/2008	1.0.7	Editorial	Changed language and formatting in the technical content.
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10/24/2008	3.0	Major	Updated and revised the technical content.
12/5/2008	4.0	Major	Updated and revised the technical content.
1/16/2009	4.0.1	Editorial	Changed language and formatting in the technical content.
2/27/2009	4.0.2	Editorial	Changed language and formatting in the technical content.
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Date	Revision History	Revision Class	Comments
			technical content.
8/27/2010	13.0	Major	Updated and revised the technical content.
10/8/2010	14.0	Major	Updated and revised the technical content.
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2/11/2011	15.0	None	No changes to the meaning, language, or formatting of the technical content.
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5/6/2011	15.1	Minor	Clarified the meaning of the technical content.
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3/30/2012	16.0	None	No changes to the meaning, language, or formatting of the technical content.
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6/30/2015	19.1	Minor	Clarified the meaning of the technical content.
10/16/2015	19.1	None	No changes to the meaning, language, or formatting of the technical content.
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6/1/2017	20.0	Major	Significantly changed the technical content.
9/15/2017	21.0	Major	Significantly changed the technical content.
9/12/2018	21.1	Minor	Clarified the meaning of the technical content.

Table of Contents

1 (Updated Section) Introduction

Active Directory Lightweight Directory Services Schema contains a list of the objects that exist in the **Active Directory Lightweight Directory Services (AD LDS)** schema. Active Directory and all associated terms and concepts are described in [MS-ADTS].

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. For details about the AD LDS schema, see [MS-ADTS] section 3.1.1.2 (Active Directory Schema).

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

Note: The object definitions in this document contain information about the product in which the objects were first implemented in the AD LDS schema. Unless otherwise specified, objects continue to be available in the AD LDS schema in all subsequent versions of the product according to the list of products in [MS-ADTS] section 1 and according to the information about AD LDS for Windows Client operating systems in [MS-ADTS] section 1.

1.1 References

[JFIF] Hamilton, E., "JPEG File Interchange Format, Version 1.02", September 1992, http://www.w3.org/Graphics/JPEG/jfif.txt

[MS-ADOD] Microsoft Corporation, "Active Directory Protocols Overview".

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

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

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

[MSDN-GroupType] Microsoft Corporation, "Group-Type", http://msdn.microsoft.com/en-us/library/ms675935.aspx

[MSFT-ADSCHEMA] Microsoft Corporation, "Combined Active Directory Schema Classes and Attributes for Windows Server", December 2013, http://www.microsoft.com/downloads/en/details.aspx?displaylang=en&FamilyID=da2fc73a-3d35-484c-9bea-f023dcba7275

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

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

[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-S/en

Note There is a charge to download the specification.

2   Attributes

The following sections specify the attributes in the Active Directory Lightweight Directory Services schema.

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 accountExpires

This attribute specifies the date when an account expires. This value represents the number of 100-nanosecond intervals since January 1, 1601, Coordinated Universal Time (Greenwich Mean Time). A value of 0 or 0x7FFFFFFFFFFFFFFF (9223372036854775807) indicates that the account never expires.

```
cn: Account-Expires
ldapDisplayName: accountExpires
attributeId: 1.2.840.113556.1.4.159
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: bf967915-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fCOPY
attributeSecurityGuid: 4c164200-20c0-11d0-a768-00aa006e0529
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on Active Directory Application Mode (ADAM) and Windows Server 2008 operating system.

2.2   Attribute adminContextMenu

This attribute specifies the order number and globally unique identifier (GUID) of the context menu to be used on administration screens. GUID is defined in [MS-DTYP] section 2.3.4.

```
cn: Admin-Context-Menu
ldapDisplayName: adminContextMenu
attributeId: 1.2.840.113556.1.4.614
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 553fd038-f32e-11d0-b0bc-00c04fd8dca6
systemOnly: FALSE
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.3   Attribute adminDescription

This attribute specifies the description displayed on administration screens.

```
cn: Admin-Description
ldapDisplayName: adminDescription
attributeId: 1.2.840.113556.1.2.226
```

```
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967919-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 1024
attributeSecurityGuid: 59ba2f42-79a2-11d0-9020-00c04fc2d3cf
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.4   Attribute adminDisplayName

This attribute specifies the name displayed on administration screens.

```
cn: Admin-Display-Name
ldapDisplayName: adminDisplayName
attributeId: 1.2.840.113556.1.2.194
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf96791a-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 256
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.5   Attribute adminMultiselectPropertyPages

A multivalued attribute whose values are a number representing the order in which the pages are added and a GUID of a component object model (COM) object that implements multiselect property pages for the Active Directory Users and Computers snap-in.

```
cn: Admin-Multiselect-Property-Pages
ldapDisplayName: adminMultiselectPropertyPages
attributeId: 1.2.840.113556.1.4.1690
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 18f9b67d-5ac6-4b3b-97db-d0a406afb7ba
systemOnly: FALSE
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.6   Attribute adminPropertyPages

This attribute specifies the order number and GUID of the property pages for an object to be displayed on Active Directory administration screens. For more information, see the document "Extending the User Interface for Directory Objects" [MSDN-ExtUserIntDirObj].

```
cn: Admin-Property-Pages
ldapDisplayName: adminPropertyPages
attributeId: 1.2.840.113556.1.4.562
attributeSyntax: 2.5.5.12
```

```
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 52458038-ca6a-11d0-afff-0000f80367c1
systemOnly: FALSE
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.7   Attribute allowedAttributes

This attribute specifies attributes that are permitted to be assigned to a class.

```
cn: Allowed-Attributes
ldapDisplayName: allowedAttributes
attributeId: 1.2.840.113556.1.4.913
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: FALSE
schemaIdGuid: 9a7ad940-ca53-11d1-bbd0-0080c76670c0
systemOnly: TRUE
searchFlags: 0
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
 FLAG_DOMAIN_DISALLOW_RENAME
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.8   Attribute allowedAttributesEffective

This attribute specifies a list of attributes that can be modified on the object.

```
cn: Allowed-Attributes-Effective
ldapDisplayName: allowedAttributesEffective
attributeId: 1.2.840.113556.1.4.914
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: FALSE
schemaIdGuid: 9a7ad941-ca53-11d1-bbd0-0080c76670c0
systemOnly: TRUE
searchFlags: 0
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
 FLAG_DOMAIN_DISALLOW_RENAME
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.9   Attribute allowedChildClasses

This attribute specifies classes that can be contained by a class.

```
cn: Allowed-Child-Classes
ldapDisplayName: allowedChildClasses
attributeId: 1.2.840.113556.1.4.911
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: FALSE
schemaIdGuid: 9a7ad942-ca53-11d1-bbd0-0080c76670c0
systemOnly: TRUE
searchFlags: 0
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
```

```
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
  FLAG_DOMAIN_DISALLOW_RENAME
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.10 Attribute allowedChildClassesEffective

This attribute specifies a list of classes that can be modified.

```
cn: Allowed-Child-Classes-Effective
ldapDisplayName: allowedChildClassesEffective
attributeId: 1.2.840.113556.1.4.912
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: FALSE
schemaIdGuid: 9a7ad943-ca53-11d1-bbd0-0080c76670c0
systemOnly: TRUE
searchFlags: 0
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
  FLAG_DOMAIN_DISALLOW_RENAME
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.11 Attribute aNR

This attribute specifies whether ambiguous name resolution is to be used when choosing between objects.

```
cn: ANR
ldapDisplayName: aNR
attributeId: 1.2.840.113556.1.4.1208
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 45b01500-c419-11d1-bbc9-0080c76670c0
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
  FLAG_DOMAIN_DISALLOW_RENAME
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.12 Attribute appliesTo

This attribute contains the list of object classes that the extended right applies to. In the list, an object class is represented by the schemaIDGUID property for its schemaClass object.

```
cn: Applies-To
ldapDisplayName: appliesTo
attributeId: 1.2.840.113556.1.4.341
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 8297931d-86d3-11d0-afda-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
rangeLower: 36
rangeUpper: 36
```

```
      systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.13 Attribute assistant

This attribute specifies the distinguished name (DN) of a user's administrative assistant.

```
      cn: Assistant
      ldapDisplayName: assistant
      attributeId: 1.2.840.113556.1.4.652
      attributeSyntax: 2.5.5.1
      omSyntax: 127
      omObjectClass: 1.3.12.2.1011.28.0.714
      isSingleValued: TRUE
      schemaIdGuid: 0296c11c-40da-11d1-a9c0-0000f80367c1
      systemOnly: FALSE
      searchFlags: fCOPY
      attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.14 Attribute attributeCertificateAttribute

This attribute specifies a digitally signed or certified identity and set of attributes. It is used to bind authorization information to an identity.

```
      cn: attributeCertificateAttribute
      ldapDisplayName: attributeCertificateAttribute
      attributeId: 2.5.4.58
      attributeSyntax: 2.5.5.10
      omSyntax: 4
      isSingleValued: FALSE
      schemaIdGuid: fa4693bb-7bc2-4cb9-81a8-c99c43b7905e
      systemOnly: FALSE
      searchFlags: 0
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.15 Attribute attributeDisplayNames

This attribute specifies the name to be displayed for this object.

```
      cn: Attribute-Display-Names
      ldapDisplayName: attributeDisplayNames
      attributeId: 1.2.840.113556.1.4.748
      attributeSyntax: 2.5.5.12
      omSyntax: 64
      isSingleValued: FALSE
      schemaIdGuid: cb843f80-48d9-11d1-a9c3-0000f80367c1
      systemOnly: FALSE
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.16 Attribute attributeID

This attribute specifies the unique X.500 object identifier (OID) that identifies an attribute. For more information, see [X500].

```
cn: Attribute-ID
ldapDisplayName: attributeID
attributeId: 1.2.840.113556.1.2.30
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: TRUE
schemaIdGuid: bf967922-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.17 Attribute attributeSecurityGUID

This attribute specifies the GUID to be used to apply security credentials to a set of objects.

```
cn: Attribute-Security-GUID
ldapDisplayName: attributeSecurityGUID
attributeId: 1.2.840.113556.1.4.149
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: bf967924-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 16
rangeUpper: 16
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.18 Attribute attributeSyntax

This attribute specifies the OID for the syntax for this attribute.

```
cn: Attribute-Syntax
ldapDisplayName: attributeSyntax
attributeId: 1.2.840.113556.1.2.32
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: TRUE
schemaIdGuid: bf967925-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.19 Attribute attributeTypes

This attribute specifies a multivalued property containing strings that represent each attribute in the schema.

```
cn: Attribute-Types
ldapDisplayName: attributeTypes
attributeId: 2.5.21.5
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 9a7ad944-ca53-11d1-bbd0-0080c76670c0
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
 FLAG_DOMAIN_DISALLOW_RENAME
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.20 Attribute audio

This attribute allows the storing of sounds in Active Directory.

```
cn: audio
ldapDisplayName: audio
attributeId: 0.9.2342.19200300.100.1.55
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: d0e1d224-e1a0-42ce-a2da-793ba5244f35
systemOnly: FALSE
searchFlags: 0
rangeUpper: 250000
showInAdvancedViewOnly: FALSE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.21 Attribute auxiliaryClass

This attribute specifies the list of auxiliary classes to be associated with this class.

```
cn: Auxiliary-Class
ldapDisplayName: auxiliaryClass
attributeId: 1.2.840.113556.1.2.351
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: FALSE
schemaIdGuid: bf96792c-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.22 Attribute badPasswordTime

This attribute specifies the last time and date that an attempt to log on to this account was made using an invalid password. This value is stored as a large integer that represents the number of 100-nanosecond intervals since January 1, 1601 (UTC). A value of zero means that the last "bad password time" is unknown.

```
cn: Bad-Password-Time
ldapDisplayName: badPasswordTime
```

```
attributeId: 1.2.840.113556.1.4.49
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: bf96792d-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.23 Attribute badPwdCount

This attribute specifies the number of times the user tried to log on to the account by using an incorrect password. A value of 0 indicates that the value is unknown.

```
cn: Bad-Pwd-Count
ldapDisplayName: badPwdCount
attributeId: 1.2.840.113556.1.4.12
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf96792e-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
attributeSecurityGuid: 5f202010-79a5-11d0-9020-00c04fc2d4cf
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.24 Attribute bridgeheadServerListBL

This attribute is the back link attribute of bridgeheadServerList and contains the list of servers that are bridgeheads for replication.

```
cn: Bridgehead-Server-List-BL
ldapDisplayName: bridgeheadServerListBL
attributeId: 1.2.840.113556.1.4.820
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: d50c2cdb-8951-11d1-aebc-0000f80367c1
systemOnly: TRUE
searchFlags: 0
linkID: 99
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.25 Attribute bridgeheadTransportList

This attribute specifies transports for which this server is a bridgehead.

```
cn: Bridgehead-Transport-List
ldapDisplayName: bridgeheadTransportList
attributeId: 1.2.840.113556.1.4.819
attributeSyntax: 2.5.5.1
omSyntax: 127
```

```
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: d50c2cda-8951-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
linkID: 98
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.26 Attribute businessCategory

This attribute specifies descriptive text on an organizational unit.

```
cn: Business-Category
ldapDisplayName: businessCategory
attributeId: 2.5.4.15
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: bf967931-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 128
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.27 Attribute c

This attribute specifies the country/region in the address of the user. The country/region is represented as the two-character country code based on ISO-3166.

```
cn: Country-Name
ldapDisplayName: c
attributeId: 2.5.4.6
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967945-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fCOPY
rangeLower: 1
rangeUpper: 3
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
 FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.28 Attribute canonicalName

This attribute specifies the name of the object in canonical format.
"myserver2.fabrikam.com/users/jeffsmith" is an example of a DN in canonical format.

This is a constructed attribute. The results returned are identical to those returned by the following Active Directory function: DsCrackNames(NULL, DS_NAME_FLAG_SYNTACTICAL_ONLY, DS_FQDN_1779_NAME, DS_CANONICAL_NAME, …).

```
cn: Canonical-Name
ldapDisplayName: canonicalName
attributeId: 1.2.840.113556.1.4.916
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 9a7ad945-ca53-11d1-bbd0-0080c76670c0
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
 FLAG_DOMAIN_DISALLOW_RENAME
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.29 Attribute carLicense

This attribute specifies the vehicle license or registration plate.

```
cn: carLicense
ldapDisplayName: carLicense
attributeId: 2.16.840.1.113730.3.1.1
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: d4159c92-957d-4a87-8a67-8d2934e01649
systemOnly: FALSE
searchFlags: 0
showInAdvancedViewOnly: FALSE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.30 Attribute classDisplayName

This attribute specifies the object name to be displayed on dialogs.

```
cn: Class-Display-Name
ldapDisplayName: classDisplayName
attributeId: 1.2.840.113556.1.4.610
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 548e1c22-dea6-11d0-b010-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.31 Attribute cn

This attribute specifies the name that represents an object. This attribute is used to perform searches.

```
cn: Common-Name
ldapDisplayName: cn
```

```
attributeId: 2.5.4.3
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf96793f-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fATTINDEX
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
 FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.32 Attribute co

This attribute specifies the country/region in which the user is located.

```
cn: Text-Country
ldapDisplayName: co
attributeId: 1.2.840.113556.1.2.131
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: f0f8ffa7-1191-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: fCOPY
rangeLower: 1
rangeUpper: 128
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.33 Attribute comment

This attribute specifies the user's comments.

```
cn: User-Comment
ldapDisplayName: comment
attributeId: 1.2.840.113556.1.4.156
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967a6a-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: 59ba2f42-79a2-11d0-9020-00c04fc2d3cf
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.34 Attribute company

This attribute specifies the user's company name.

```
cn: Company
ldapDisplayName: company
```

```
attributeId: 1.2.840.113556.1.2.146
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: f0f8ff88-1191-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: fCOPY
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.35 Attribute configurationFile

ms-DS-Configuration-File

```
cn: ms-DS-Configuration-File
ldapDisplayName: configurationFile
attributeId: 1.2.840.113556.1.4.1889
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
searchFlags: fATTINDEX
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.36 Attribute configurationFileGuid

ms-DS-Configuration-File-Guid

```
cn: ms-DS-Configuration-File-Guid
ldapDisplayName: configurationFileGuid
attributeId: 1.2.840.113556.1.4.1886
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
searchFlags: fATTINDEX
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.37 Attribute contextMenu

This attribute specifies the order number and GUID of the context menu to be used for an object.

```
cn: Context-Menu
ldapDisplayName: contextMenu
attributeId: 1.2.840.113556.1.4.499
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 4d8601ee-ac85-11d0-afe3-00c04fd930c9
systemOnly: FALSE
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.38 Attribute cost

This attribute contains the relative cost for routing messages through a particular site connector.

```
cn: Cost
ldapDisplayName: cost
attributeId: 1.2.840.113556.1.2.135
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf967944-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.39 Attribute countryCode

This attribute specifies the country code for the user's language of choice.

```
cn: Country-Code
ldapDisplayName: countryCode
attributeId: 1.2.840.113556.1.4.25
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 5fd42471-1262-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: fCOPY
rangeLower: 0
rangeUpper: 65535
attributeSecurityGuid: 59ba2f42-79a2-11d0-9020-00c04fc2d3cf
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.40 Attribute createDialog

This attribute specifies the GUID of a dialog that is used for creating an associated object.

```
cn: Create-Dialog
ldapDisplayName: createDialog
attributeId: 1.2.840.113556.1.4.810
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 2b09958a-8931-11d1-aebc-0000f80367c1
systemOnly: FALSE
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.41 Attribute createTimeStamp

This attribute specifies the date when this object was created. This value is replicated.

```
cn: Create-Time-Stamp
ldapDisplayName: createTimeStamp
attributeId: 2.5.18.1
```

```
attributeSyntax: 2.5.5.11
omSyntax: 24
isSingleValued: TRUE
schemaIdGuid: 2df90d73-009f-11d2-aa4c-00c04fd7d83a
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
  FLAG_DOMAIN_DISALLOW_RENAME
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.42 Attribute createWizardExt

This attribute specifies the GUID of the wizard extensions for creating an associated object.

```
cn: Create-Wizard-Ext
ldapDisplayName: createWizardExt
attributeId: 1.2.840.113556.1.4.812
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 2b09958b-8931-11d1-aebc-0000f80367c1
systemOnly: FALSE
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.43 Attribute creationWizard

This attribute specifies the wizard to activate when creating objects of this class.

```
cn: Creation-Wizard
ldapDisplayName: creationWizard
attributeId: 1.2.840.113556.1.4.498
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 4d8601ed-ac85-11d0-afe3-00c04fd930c9
systemOnly: FALSE
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.44 Attribute dc

This attribute specifies the naming attribute for domain and DNS objects. This attribute is usually displayed as dc=DomainName.

```
cn: Domain-Component
ldapDisplayName: dc
attributeId: 0.9.2342.19200300.100.1.25
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 19195a55-6da0-11d0-afd3-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 255
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
```

```
FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.45 Attribute defaultClassStore

This attribute specifies the default class store for a given user.

```
cn: Default-Class-Store
ldapDisplayName: defaultClassStore
attributeId: 1.2.840.113556.1.4.213
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: bf967948-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.46 Attribute defaultGroup

This attribute specifies the group to which this object is assigned when it is created.

```
cn: Default-Group
ldapDisplayName: defaultGroup
attributeId: 1.2.840.113556.1.4.480
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: 720bc4e2-a54a-11d0-afdf-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.47 Attribute defaultHidingValue

This attribute specifies a Boolean value that specifies the default setting of the showInAdvancedViewOnly property of new instances of this class.

```
cn: Default-Hiding-Value
ldapDisplayName: defaultHidingValue
attributeId: 1.2.840.113556.1.4.518
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: b7b13116-b82e-11d0-afee-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.48 Attribute defaultObjectCategory

This attribute specifies the object category to use for an object if one is not specified.

```
cn: Default-Object-Category
ldapDisplayName: defaultObjectCategory
attributeId: 1.2.840.113556.1.4.783
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: 26d97367-6070-11d1-a9c6-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.49 Attribute defaultSecurityDescriptor

This attribute specifies the security descriptor to be assigned to the object when it is first created.

```
cn: Default-Security-Descriptor
ldapDisplayName: defaultSecurityDescriptor
attributeId: 1.2.840.113556.1.4.224
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 807a6d30-1669-11d0-a064-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 32767
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.50 Attribute department

This attribute contains the name for the department in which the user works.

```
cn: Department
ldapDisplayName: department
attributeId: 1.2.840.113556.1.2.141
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf96794f-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fCOPY
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.51 Attribute departmentNumber

This attribute identifies a department within an organization.

```
cn: departmentNumber
ldapDisplayName: departmentNumber
attributeId: 2.16.840.1.113730.3.1.2
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: be9ef6ee-cbc7-4f22-b27b-96967e7ee585
systemOnly: FALSE
searchFlags: 0
showInAdvancedViewOnly: FALSE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.52 Attribute description

This attribute contains the description to display for an object. This value is treated as single-valued by the Active Directory system.

```
cn: Description
ldapDisplayName: description
attributeId: 2.5.4.13
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: bf967950-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 1024
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.53 Attribute desktopProfile

This attribute specifies the location of the desktop profile for a user or group of users.

```
cn: Desktop-Profile
ldapDisplayName: desktopProfile
attributeId: 1.2.840.113556.1.4.346
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: eea65906-8ac6-11d0-afda-00c04fd930c9
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.54 Attribute destinationIndicator

This attribute is part of the X.500 specification [X500].

```
cn: Destination-Indicator
ldapDisplayName: destinationIndicator
```

```
attributeId: 2.5.4.27
attributeSyntax: 2.5.5.5
omSyntax: 19
isSingleValued: FALSE
schemaIdGuid: bf967951-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 128
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.55 Attribute directReports

This attribute contains the list of users that directly report to the user. The users that are listed as reports are those that have the property manager property set to this user. Each item in the list is a linked reference to the object that represents the user.

```
cn: Reports
ldapDisplayName: directReports
attributeId: 1.2.840.113556.1.2.436
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: bf967a1c-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
linkID: 43
systemFlags: FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.56 Attribute displayName

This attribute specifies the display name for an object. This attribute is usually the combination of the user's first name, middle initial, and last name.

```
cn: Display-Name
ldapDisplayName: displayName
attributeId: 1.2.840.113556.1.2.13
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967953-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fANR | fATTINDEX
rangeLower: 0
rangeUpper: 256
attributeSecurityGuid: 59ba2f42-79a2-11d0-9020-00c04fc2d3cf
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.57 Attribute displayNamePrintable

This attribute specifies the printable display name for an object. The printable display name is usually the combination of the user's first name, middle initial, and last name.

```
cn: Display-Name-Printable
ldapDisplayName: displayNamePrintable
attributeId: 1.2.840.113556.1.2.353
attributeSyntax: 2.5.5.5
omSyntax: 19
isSingleValued: TRUE
schemaIdGuid: bf967954-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
rangeLower: 1
rangeUpper: 256
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
isMemberOfPartialAttributeSet: TRUE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.58 Attribute distinguishedName

This attribute is the same as the DN for an object.

```
cn: Obj-Dist-Name
ldapDisplayName: distinguishedName
attributeId: 2.5.4.49
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: bf9679e4-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.59 Attribute dITContentRules

This attribute specifies the permissible content of entries of a particular structural object class via the identification of an optional set of auxiliary object classes, mandatory, optional, and precluded attributes. Collective attributes are included in DIT-Content-Rules, as specified in [RFC2251] section 3.2.1.

```
cn: DIT-Content-Rules
ldapDisplayName: dITContentRules
attributeId: 2.5.21.2
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 9a7ad946-ca53-11d1-bbd0-0080c76670c0
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
  FLAG_DOMAIN_DISALLOW_RENAME
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.60 Attribute division

This attribute specifies the user's division.

```
cn: Division
ldapDisplayName: division
attributeId: 1.2.840.113556.1.4.261
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: fe6136a0-2073-11d0-a9c2-00aa006c33ed
systemOnly: FALSE
searchFlags: fCOPY
rangeLower: 0
rangeUpper: 256
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.61 Attribute dMDLocation

This attribute specifies the DN that identifies the schema partition.

```
cn: DMD-Location
ldapDisplayName: dMDLocation
attributeId: 1.2.840.113556.1.2.36
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: f0f8ff8b-1191-11d0-a060-00aa006c33ed
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.62 Attribute dmdName

This attribute specifies a name that is used to identify the schema partition.

```
cn: DMD-Name
ldapDisplayName: dmdName
attributeId: 1.2.840.113556.1.2.598
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 167757b9-47f3-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 1024
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.63 Attribute dNSHostName

This attribute specifies the name of the computer as it is registered in DNS.

```
cn: DNS-Host-Name
ldapDisplayName: dNSHostName
attributeId: 1.2.840.113556.1.4.619
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 72e39547-7b18-11d1-adef-00c04fd8d5cd
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 2048
attributeSecurityGuid: 72e39547-7b18-11d1-adef-00c04fd8d5cd
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.64 Attribute dnsRoot

This attribute specifies the FQDN (1) ([MS-ADTS] section 1.1) that is associated with a naming context. This attribute is set on a crossRef object and is used for referral generation.

When a search is made through an entire domain tree, the search has to be initiated at the Dns-Root object. This attribute can be multivalued, in which case multiple referrals are generated.

```
cn: Dns-Root
ldapDisplayName: dnsRoot
attributeId: 1.2.840.113556.1.4.28
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: bf967959-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fATTINDEX
rangeLower: 1
rangeUpper: 255
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.65 Attribute dSASignature

This attribute specifies the DSA-Signature of an object, which is the Invocation-ID of the last directory to modify the object.

```
cn: DSA-Signature
ldapDisplayName: dSASignature
attributeId: 1.2.840.113556.1.2.74
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 167757bc-47f3-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.66 Attribute dSCorePropagationData

This attribute is for internal use only.

```
cn: DS-Core-Propagation-Data
ldapDisplayName: dSCorePropagationData
attributeId: 1.2.840.113556.1.4.1357
attributeSyntax: 2.5.5.11
omSyntax: 24
isSingleValued: FALSE
schemaIdGuid: d167aa4b-8b08-11d2-9939-0000f87a57d4
systemOnly: TRUE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.67 Attribute dSHeuristics

This attribute contains global settings for the entire forest.

```
cn: DS-Heuristics
ldapDisplayName: dSHeuristics
attributeId: 1.2.840.113556.1.2.212
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: f0f8ff86-1191-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.68 Attribute dSUIAdminMaximum

This attribute specifies the default maximum number of objects that are shown in a container by the admin UI.

```
cn: DS-UI-Admin-Maximum
ldapDisplayName: dSUIAdminMaximum
attributeId: 1.2.840.113556.1.4.1344
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: ee8d0ae0-6f91-11d2-9905-0000f87a57d4
systemOnly: FALSE
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.69 Attribute dSUIAdminNotification

This attribute specifies a list of the GUIDs of COM objects that support a callback interface that DSAdmin calls when an action has occurred on an object through the UI.

```
cn: DS-UI-Admin-Notification
ldapDisplayName: dSUIAdminNotification
attributeId: 1.2.840.113556.1.4.1343
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: f6ea0a94-6f91-11d2-9905-0000f87a57d4
systemOnly: FALSE
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.70 Attribute dSUIShellMaximum

This attribute specifies the default maximum number of objects that are shown in a container by the shell UI.

```
cn: DS-UI-Shell-Maximum
ldapDisplayName: dSUIShellMaximum
attributeId: 1.2.840.113556.1.4.1345
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: fcca766a-6f91-11d2-9905-0000f87a57d4
systemOnly: FALSE
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.71 Attribute dynamicLDAPServer

This attribute specifies the fully qualified domain name (FQDN) (1) ([MS-ADTS] section 1.1) of the server handling dynamic properties for this account.

```
cn: Dynamic-LDAP-Server
ldapDisplayName: dynamicLDAPServer
attributeId: 1.2.840.113556.1.4.537
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: 52458021-ca6a-11d0-afff-0000f80367c1
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.72 Attribute employeeID

This attribute specifies the ID of an employee.

```
cn: Employee-ID
ldapDisplayName: employeeID
attributeId: 1.2.840.113556.1.4.35
```

```
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967962-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 16
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.73 Attribute employeeNumber

This attribute specifies the number assigned to an employee other than the employee ID.

```
cn: Employee-Number
ldapDisplayName: employeeNumber
attributeId: 1.2.840.113556.1.2.610
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: a8df73ef-c5ea-11d1-bbcb-0080c76670c0
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 512
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.74 Attribute employeeType

This attribute specifies the job category for an employee.

```
cn: Employee-Type
ldapDisplayName: employeeType
attributeId: 1.2.840.113556.1.2.613
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: a8df73f0-c5ea-11d1-bbcb-0080c76670c0
systemOnly: FALSE
searchFlags: fCOPY
rangeLower: 1
rangeUpper: 256
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.75 Attribute Enabled

This attribute is used to signify whether or not a given crossRef is enabled.

```
cn: Enabled
ldapDisplayName: Enabled
attributeId: 1.2.840.113556.1.2.557
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: a8df73f2-c5ea-11d1-bbcb-0080c76670c0
systemOnly: FALSE
```

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

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.76 Attribute enabledConnection

This attribute indicates whether a connection is available for use.

```
cn: Enabled-Connection
ldapDisplayName: enabledConnection
attributeId: 1.2.840.113556.1.4.36
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: bf967963-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.77 Attribute entryTTL

This operational attribute is maintained by the server and appears to be present in every dynamic entry. The attribute is not present when the entry does not contain the dynamicObject object class.

The value of this attribute is the time, in seconds, that the entry continues to exist before disappearing from the directory. In the absence of intervening "refresh" operations, the values returned by reading the attribute in two successive searches are guaranteed to be nonincreasing. The smallest permissible value is 0, indicating that the entry can disappear without warning. The attribute is marked NO-USER-MODIFICATION because it can only be changed by using the refresh operation.

```
cn: Entry-TTL
ldapDisplayName: entryTTL
attributeId: 1.3.6.1.4.1.1466.101.119.3
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: d213decc-d81a-4384-aac2-dcfcfd631cf8
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 31557600
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.78 Attribute extendedAttributeInfo

This attribute specifies a multivalued property containing strings that represent additional information for each attribute.

```
cn: Extended-Attribute-Info
ldapDisplayName: extendedAttributeInfo
attributeId: 1.2.840.113556.1.4.909
attributeSyntax: 2.5.5.12
omSyntax: 64
```

```
isSingleValued: FALSE
schemaIdGuid: 9a7ad947-ca53-11d1-bbd0-0080c76670c0
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
  FLAG_DOMAIN_DISALLOW_RENAME
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.79 Attribute extendedCharsAllowed

This attribute indicates whether extended characters are allowed in the value of this attribute. Applies only to IA5, Numeric, Printable, and Teletex string attributes.

```
cn: Extended-Chars-Allowed
ldapDisplayName: extendedCharsAllowed
attributeId: 1.2.840.113556.1.2.380
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: bf967966-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.80 Attribute extendedClassInfo

This attribute specifies a multivalued property containing strings that represent additional information for each class. Each value contains the governsID, lDAPDisplayName, and schemaIDGUID of the class.

```
cn: Extended-Class-Info
ldapDisplayName: extendedClassInfo
attributeId: 1.2.840.113556.1.4.908
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 9a7ad948-ca53-11d1-bbd0-0080c76670c0
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
  FLAG_DOMAIN_DISALLOW_RENAME
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.81 Attribute extensionName

This attribute specifies the name of a property page that is used to extend the UI of a directory object.

```
cn: Extension-Name
ldapDisplayName: extensionName
attributeId: 1.2.840.113556.1.2.227
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: bf967972-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
rangeLower: 1
```

```
    rangeUpper: 255
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.82 Attribute extraColumns

This is a multivalued attribute whose values consist of a 5 tuple: (attribute name), (column title), (default visibility (0,1)), (column width (-1 for auto width)), 0 (reserved for future use; has to be zero). This value is used by the Active Directory Users and Computers console.

```
    cn: Extra-Columns
    ldapDisplayName: extraColumns
    attributeId: 1.2.840.113556.1.4.1687
    attributeSyntax: 2.5.5.12
    omSyntax: 64
    isSingleValued: FALSE
    schemaIdGuid: d24e2846-1dd9-4bcf-99d7-a6227cc86da7
    systemOnly: FALSE
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.83 Attribute facsimileTelephoneNumber

This attribute contains the telephone number of the user's business fax machine.

```
    cn: Facsimile-Telephone-Number
    ldapDisplayName: facsimileTelephoneNumber
    attributeId: 2.5.4.23
    attributeSyntax: 2.5.5.12
    omSyntax: 64
    isSingleValued: TRUE
    schemaIdGuid: bf967974-0de6-11d0-a285-00aa003049e2
    systemOnly: FALSE
    searchFlags: 0
    rangeLower: 1
    rangeUpper: 64
    attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
    systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.84 Attribute fromEntry

This is a constructed attribute that is TRUE if the object is writable and FALSE if it is read-only; for example, a global catalog (GC) replica instance.

```
    cn: From-Entry
    ldapDisplayName: fromEntry
    attributeId: 1.2.840.113556.1.4.910
    attributeSyntax: 2.5.5.8
    omSyntax: 1
    isSingleValued: FALSE
    schemaIdGuid: 9a7ad949-ca53-11d1-bbd0-0080c76670c0
    systemOnly: TRUE
    searchFlags: 0
    systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
     FLAG_DOMAIN_DISALLOW_RENAME
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.85 Attribute fromServer

This attribute specifies the distinguished name of the replication source server.

```
cn: From-Server
ldapDisplayName: fromServer
attributeId: 1.2.840.113556.1.4.40
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: bf967979-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.86 Attribute fSMORoleOwner

The fSMORoleOwner attribute stores the distinguished name of a DSA object as described in [MS-ADTS] section 3.1.1.1.11 (FSMO Roles).

```
cn: FSMO-Role-Owner
ldapDisplayName: fSMORoleOwner
attributeId: 1.2.840.113556.1.4.369
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: 66171887-8f3c-11d0-afda-00c04fd930c9
systemOnly: FALSE
searchFlags: fATTINDEX
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.87 Attribute garbageCollPeriod

This attribute is located on the CN=Directory Service,CN=Windows NT,CN=Services,CN=Configuration,... object. It represents the period of time, in hours, between directory service (DS) garbage collection runs.

```
cn: Garbage-Coll-Period
ldapDisplayName: garbageCollPeriod
attributeId: 1.2.840.113556.1.2.301
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 5fd424a1-1262-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.88 Attribute generatedConnection

This attribute is TRUE if this connection was created by auto-topology generation.

```
cn: Generated-Connection
ldapDisplayName: generatedConnection
attributeId: 1.2.840.113556.1.4.41
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: bf96797a-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.89 Attribute generationQualifier

This attribute indicates a person's generation; for example, "Jr." or "II".

```
cn: Generation-Qualifier
ldapDisplayName: generationQualifier
attributeId: 2.5.4.44
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 16775804-47f3-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 64
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.90 Attribute givenName

This attribute contains the given name (first name) of the user.

```
cn: Given-Name
ldapDisplayName: givenName
attributeId: 2.5.4.42
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: f0f8ff8e-1191-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: fANR | fATTINDEX
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
isMemberOfPartialAttributeSet: TRUE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.91 Attribute governsID

This attribute specifies the unique object ID of the class defined by this Class-Schema object.

```
cn: Governs-ID
ldapDisplayName: governsID
attributeId: 1.2.840.113556.1.2.22
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: TRUE
schemaIdGuid: bf96797d-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.92 Attribute groupType

This attribute contains a set of flags that define the type and scope of a group object. For more information about the possible values for this attribute, see the Remarks section of [MSDN-GroupType].

```
cn: Group-Type
ldapDisplayName: groupType
attributeId: 1.2.840.113556.1.4.750
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 9a9a021e-4a5b-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: fPRESERVEONDELETE | fATTINDEX
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
 FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.93 Attribute hasMasterNCs

This attribute specifies the DN for the naming contexts for the DC. It is a forward link for the Mastered-By attribute. This attribute is maintained for backward compatibility; msDS-hasMasterNCs is used instead.

```
cn: Has-Master-NCs
ldapDisplayName: hasMasterNCs
attributeId: 1.2.840.113556.1.2.14
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: bf967982-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
linkID: 76
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.94 Attribute hasPartialReplicaNCs

This attribute specifies the sibling to Has-Master-NCs. Reflects the DN for all other-domain NCs that have been replicated into a global catalog.

```
cn: Has-Partial-Replica-NCs
ldapDisplayName: hasPartialReplicaNCs
attributeId: 1.2.840.113556.1.2.15
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: bf967981-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
linkID: 74
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.95 Attribute homePhone

This attribute specifies the user's main home phone number.

```
cn: Phone-Home-Primary
ldapDisplayName: homePhone
attributeId: 0.9.2342.19200300.100.1.20
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: f0f8ffa1-1191-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
isMemberOfPartialAttributeSet: TRUE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.96 Attribute homePostalAddress

This attribute specifies the user's home address.

```
cn: Address-Home
ldapDisplayName: homePostalAddress
attributeId: 1.2.840.113556.1.2.617
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 16775781-47f3-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 4096
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.97 Attribute houseIdentifier

This attribute specifies a linguistic construct used to identify a particular building; for example, a house number or house name relative to a street, avenue, town, or city.

```
cn: houseIdentifier
ldapDisplayName: houseIdentifier
attributeId: 2.5.4.51
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: a45398b7-c44a-4eb6-82d3-13c10946dbfe
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 32768
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.98 Attribute iconPath

This attribute specifies the source for loading an icon.

```
cn: Icon-Path
ldapDisplayName: iconPath
attributeId: 1.2.840.113556.1.4.219
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: f0f8ff83-1191-11d0-a060-00aa006c33ed
systemOnly: FALSE
rangeLower: 0
rangeUpper: 2048
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.99 Attribute initials

This attribute contains the initials for parts of the user's full name. It can be used as the middle initial in the Windows Address Book.

```
cn: Initials
ldapDisplayName: initials
attributeId: 2.5.4.43
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: f0f8ff90-1191-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 6
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.100 Attribute instanceType

This attribute specifies a bit field that dictates how the object is instantiated on a particular server. The value of this attribute can differ on different replicas, even if the replicas are in sync.

```
cn: Instance-Type
ldapDisplayName: instanceType
attributeId: 1.2.840.113556.1.2.1
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bf96798c-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
 FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.101 Attribute internationalISDNNumber

This attribute specifies an international ISDN number associated with an object.

```
cn: International-ISDN-Number
ldapDisplayName: internationalISDNNumber
attributeId: 2.5.4.25
attributeSyntax: 2.5.5.6
omSyntax: 18
isSingleValued: FALSE
schemaIdGuid: bf96798d-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 16
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.102 Attribute interSiteTopologyFailover

This attribute indicates how much time has to transpire since the last keep-alive in order for the intersite topology generator to be considered dead.

```
cn: Inter-Site-Topology-Failover
ldapDisplayName: interSiteTopologyFailover
attributeId: 1.2.840.113556.1.4.1248
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: b7c69e60-2cc7-11d2-854e-00a0c983f608
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.103 Attribute interSiteTopologyGenerator

This attribute is used to support failover for the machine designated as the one that runs Knowledge Consistency Checker intersite topology generation in a given site.

```
cn: Inter-Site-Topology-Generator
ldapDisplayName: interSiteTopologyGenerator
attributeId: 1.2.840.113556.1.4.1246
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: b7c69e5e-2cc7-11d2-854e-00a0c983f608
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.104 Attribute interSiteTopologyRenew

This attribute indicates how often the intersite topology generator updates the keep-alive message that is sent to DCs contained in the same site.

```
cn: Inter-Site-Topology-Renew
ldapDisplayName: interSiteTopologyRenew
attributeId: 1.2.840.113556.1.4.1247
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: b7c69e5f-2cc7-11d2-854e-00a0c983f608
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.105 Attribute invocationId

This attribute is used to uniquely identify the specific version of the directory database associated with an AD-LDS instance.

```
cn: Invocation-Id
ldapDisplayName: invocationId
attributeId: 1.2.840.113556.1.2.115
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: bf96798e-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: fATTINDEX
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.106 Attribute ipPhone

This attribute specifies the TCP/IP address for the phone. Used by telephony.

```
cn: Phone-Ip-Primary
ldapDisplayName: ipPhone
attributeId: 1.2.840.113556.1.4.721
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 4d146e4a-48d4-11d1-a9c3-0000f80367c1
systemOnly: FALSE
searchFlags: 0
rangeUpper: 64
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
isMemberOfPartialAttributeSet: TRUE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.107 Attribute isCriticalSystemObject

If TRUE, the object hosting this attribute has to be replicated during installation of a new replica.

```
cn: Is-Critical-System-Object
ldapDisplayName: isCriticalSystemObject
attributeId: 1.2.840.113556.1.4.868
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 00fbf30d-91fe-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.108 Attribute isDefunct

If TRUE, the class or attribute is no longer usable. Old versions of this object can exist, but new ones cannot be created.

```
cn: Is-Defunct
ldapDisplayName: isDefunct
attributeId: 1.2.840.113556.1.4.661
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 28630ebe-41d5-11d1-a9c1-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.109 Attribute isDeleted

If TRUE, this object has been marked for deletion and will be removed from the Active Directory system.

```
cn: Is-Deleted
ldapDisplayName: isDeleted
attributeId: 1.2.840.113556.1.2.48
```

```
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: bf96798f-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
 FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.110 Attribute isEphemeral

```
cn: Is-Ephemeral
ldapDisplayName: isEphemeral
attributeId: 1.2.840.113556.1.4.1212
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: f4c453f0-c5f1-11d1-bbcb-0080c76670c0
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.111 Attribute isMemberOfPartialAttributeSet

If TRUE, this attribute is replicated to the global catalog.

```
cn: Is-Member-Of-Partial-Attribute-Set
ldapDisplayName: isMemberOfPartialAttributeSet
attributeId: 1.2.840.113556.1.4.639
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 19405b9d-3cfa-11d1-a9c0-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.112 Attribute isRecycled

If TRUE, this object has been marked for permanent deletion. Additionally, if the Recycle Bin optional feature is enabled, the value TRUE marks an object that cannot be undeleted. It will be removed from the Active Directory system.

```
cn: Is-Recycled
ldapDisplayName: isRecycled
attributeId: 1.2.840.113556.1.4.2058
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 8fb59256-55f1-444b-aacb-f5b482fe3459
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

```
isMemberOfPartialAttributeSet: TRUE
```

Version-Specific Behavior: First implemented on Windows Server 2008 R2 operating system.

2.113 Attribute isSingleValued

If TRUE, this attribute can only store one value.

```
cn: Is-Single-Valued
ldapDisplayName: isSingleValued
attributeId: 1.2.840.113556.1.2.33
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: bf967992-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.114 Attribute jpegPhoto

This attribute is used to store one or more images of a person using the JPEG File Interchange Format [JFIF].

```
cn: jpegPhoto
ldapDisplayName: jpegPhoto
attributeId: 0.9.2342.19200300.100.1.60
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: bac80572-09c4-4fa9-9ae6-7628d7adbe0e
systemOnly: FALSE
searchFlags: 0
showInAdvancedViewOnly: FALSE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.115 Attribute keywords

This attribute specifies a list of keywords that can be used to locate a given connection point.

```
cn: Keywords
ldapDisplayName: keywords
attributeId: 1.2.840.113556.1.4.48
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: bf967993-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fATTINDEX
rangeLower: 1
rangeUpper: 256
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.116 Attribute l

This attribute represents the name of a locality, such as a town or city.

```
cn: Locality-Name
ldapDisplayName: l
attributeId: 2.5.4.7
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf9679a2-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fCOPY | fATTINDEX
rangeLower: 1
rangeUpper: 128
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
 FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.117 Attribute labeledURI

This attribute specifies a Uniform Resource Identifier (URI) followed by a label. The label is used to describe the resource to which the URI points and is intended as a friendly name fit for human readers.

```
cn: labeledURI
ldapDisplayName: labeledURI
attributeId: 1.3.6.1.4.1.250.1.57
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: c569bb46-c680-44bc-a273-e6c227d71b45
systemOnly: FALSE
searchFlags: 0
showInAdvancedViewOnly: FALSE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.118 Attribute lastAgedChange

ms-DS-Last-Aged-Change

```
cn: ms-DS-Last-Aged-Change
ldapDisplayName: lastAgedChange
attributeId: 1.2.840.113556.1.4.1888
attributeSyntax: 2.5.5.11
omSyntax: 24
isSingleValued: FALSE
searchFlags: fATTINDEX
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.119 Attribute lastBackupRestorationTime

This attribute specifies the time when the last system restore operation occurred.

```
cn: Last-Backup-Restoration-Time
ldapDisplayName: lastBackupRestorationTime
attributeId: 1.2.840.113556.1.4.519
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: 1fbb0be8-ba63-11d0-afef-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.120 Attribute lastKnownParent

This attribute specifies the DN of the last known parent of an orphaned or deleted object.

```
cn: Last-Known-Parent
ldapDisplayName: lastKnownParent
attributeId: 1.2.840.113556.1.4.781
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: 52ab8670-5709-11d1-a9c6-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.121 Attribute lastLogonTimestamp

This attribute specifies the time at which the user last logged on to the domain. This value is only updated if the user logs on after a week has passed since the last update. This value is replicated.

```
cn: Last-Logon-Timestamp
ldapDisplayName: lastLogonTimestamp
attributeId: 1.2.840.113556.1.4.1696
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: c0e20a04-0e5a-4ff3-9482-5efeaecd7060
systemOnly: TRUE
searchFlags: 0
attributeSecurityGuid: 5f202010-79a5-11d0-9020-00c04fc2d4cf
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.122 Attribute lDAPAdminLimits

This attribute contains a set of attribute/value pairs that define Lightweight Directory Access Protocol (LDAP) server administrative limits.

```
cn: LDAP-Admin-Limits
ldapDisplayName: lDAPAdminLimits
attributeId: 1.2.840.113556.1.4.843
```

```
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 7359a352-90f7-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.123 Attribute lDAPDisplayName

This attribute specifies the name used by LDAP clients, such as the ADSI LDAP provider, to read and write the attribute by using the LDAP protocol.

```
cn: LDAP-Display-Name
ldapDisplayName: lDAPDisplayName
attributeId: 1.2.840.113556.1.2.460
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf96799a-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fPRESERVEONDELETE | fATTINDEX
rangeLower: 1
rangeUpper: 256
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.124 Attribute lDAPIPDenyList

This attribute holds a list of binary IP addresses that are denied access to an LDAP server.

```
cn: LDAP-IPDeny-List
ldapDisplayName: lDAPIPDenyList
attributeId: 1.2.840.113556.1.4.844
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: 7359a353-90f7-11d1-aebc-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.125 Attribute linkID

This attribute specifies an integer that indicates that the attribute is a linked attribute. An even integer is a forward link, and an odd integer is a back link.

```
cn: Link-ID
ldapDisplayName: linkID
attributeId: 1.2.840.113556.1.2.50
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
```

```
schemaIdGuid: bf96799b-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.126 Attribute localizationDisplayId

This attribute is used to index into the Extrts.mc file to get the localized displayName of the objects for UI purposes.

```
cn: Localization-Display-Id
ldapDisplayName: localizationDisplayId
attributeId: 1.2.840.113556.1.4.1353
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: a746f0d1-78d0-11d2-9916-0000f87a57d4
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.127 Attribute location

This attribute specifies the user's location, such as an office number.

```
cn: Location
ldapDisplayName: location
attributeId: 1.2.840.113556.1.4.222
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 09dcb79f-165f-11d0-a064-00aa006c33ed
systemOnly: FALSE
searchFlags: fATTINDEX
rangeLower: 0
rangeUpper: 1024
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.128 Attribute lockoutTime

This attribute specifies the date and time (in UTC) that this account was locked out. This value is stored as a large integer that represents the number of 100-nanosecond intervals since January 1, 1601 (UTC). A value of zero means that the account is not currently locked out.

```
cn: Lockout-Time
ldapDisplayName: lockoutTime
attributeId: 1.2.840.113556.1.4.662
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: 28630ebf-41d5-11d1-a9c1-0000f80367c1
systemOnly: FALSE
```

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

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.129 Attribute mail

This attribute specifies the list of email addresses for a contact.

```
cn: E-mail-Addresses
ldapDisplayName: mail
attributeId: 0.9.2342.19200300.100.1.3
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf967961-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: fATTINDEX
rangeLower: 0
rangeUpper: 256
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
isMemberOfPartialAttributeSet: TRUE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.130 Attribute mailAddress

This attribute specifies the generic mail address attribute. It is used "in the box" as an optional attribute of server objects, where it is consumed by mail-based DS replication (if the machines are so configured).

```
cn: SMTP-Mail-Address
ldapDisplayName: mailAddress
attributeId: 1.2.840.113556.1.4.786
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 26d9736f-6070-11d1-a9c6-0000f80367c1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.131 Attribute managedBy

This attribute specifies the DN of the object that is assigned to manage this object.

```
cn: Managed-By
ldapDisplayName: managedBy
attributeId: 1.2.840.113556.1.4.653
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: 0296c120-40da-11d1-a9c0-0000f80367c1
systemOnly: FALSE
searchFlags: 0
linkID: 72
```

```
        systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.132 Attribute managedObjects

This attribute contains the list of objects that are managed by the user. The objects listed are those that have the managedBy property set to this user. Each item in the list is a linked reference to the managed object.

```
        cn: Managed-Objects
        ldapDisplayName: managedObjects
        attributeId: 1.2.840.113556.1.4.654
        attributeSyntax: 2.5.5.1
        omSyntax: 127
        omObjectClass: 1.3.12.2.1011.28.0.714
        isSingleValued: FALSE
        schemaIdGuid: 0296c124-40da-11d1-a9c0-0000f80367c1
        systemOnly: TRUE
        searchFlags: 0
        linkID: 73
        systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.133 Attribute manager

This attribute contains the DN of the user who is the user's manager. The manager's user object contains a directReports property that contains references to all user objects that have their manager properties set to this DN.

```
        cn: Manager
        ldapDisplayName: manager
        attributeId: 0.9.2342.19200300.100.1.10
        attributeSyntax: 2.5.5.1
        omSyntax: 127
        omObjectClass: 1.3.12.2.1011.28.0.714
        isSingleValued: TRUE
        schemaIdGuid: bf9679b5-0de6-11d0-a285-00aa003049e2
        systemOnly: FALSE
        searchFlags: fCOPY
        attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
        linkID: 42
        isMemberOfPartialAttributeSet: TRUE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.134 Attribute masteredBy

This attribute specifies the back link for the Has-Master-NCs attribute. The DN for its NTDS Settings objects.

```
        cn: Mastered-By
        ldapDisplayName: masteredBy
        attributeId: 1.2.840.113556.1.4.1409
        attributeSyntax: 2.5.5.1
        omSyntax: 127
        omObjectClass: 1.3.12.2.1011.28.0.714
```

```
isSingleValued: FALSE
schemaIdGuid: e48e64e0-12c9-11d3-9102-00c04fd91ab1
systemOnly: TRUE
searchFlags: 0
linkID: 77
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.135 Attribute mayContain

This attribute specifies the list of optional attributes for a class.

```
cn: May-Contain
ldapDisplayName: mayContain
attributeId: 1.2.840.113556.1.2.25
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: FALSE
schemaIdGuid: bf9679bf-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.136 Attribute member

This attribute specifies the list of users that belong to the group.

```
cn: Member
ldapDisplayName: member
attributeId: 2.5.4.31
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: bf9679c0-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: bc0ac240-79a9-11d0-9020-00c04fc2d4cf
linkID: 2
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
 FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.137 Attribute memberOf

This attribute specifies the DN of the groups to which this object belongs.

```
cn: Is-Member-Of-DL
ldapDisplayName: memberOf
attributeId: 1.2.840.113556.1.2.102
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
```

```
schemaIdGuid: bf967991-0de6-11d0-a285-00aa003049e2
systemOnly: TRUE
searchFlags: fCOPY
attributeSecurityGuid: bc0ac240-79a9-11d0-9020-00c04fc2d4cf
linkID: 3
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.138 Attribute middleName

This attribute specifies additional names for a user; for example, middle name, patronymic, matronymic, or others.

```
cn: Other-Name
ldapDisplayName: middleName
attributeId: 2.16.840.1.113730.3.1.34
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: bf9679f2-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 64
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.139 Attribute mobile

This attribute specifies the primary cellular phone number for a user.

```
cn: Phone-Mobile-Primary
ldapDisplayName: mobile
attributeId: 0.9.2342.19200300.100.1.41
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: f0f8ffa3-1191-11d0-a060-00aa006c33ed
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
rangeUpper: 64
attributeSecurityGuid: 77b5b886-944a-11d1-aebd-0000f80367c1
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.140 Attribute modifyTimeStamp

This attribute specifies the date when this object was last changed. This value is replicated.

```
cn: Modify-Time-Stamp
ldapDisplayName: modifyTimeStamp
attributeId: 2.5.18.2
attributeSyntax: 2.5.5.11
omSyntax: 24
isSingleValued: TRUE
schemaIdGuid: 9a7ad94a-ca53-11d1-bbd0-0080c76670c0
systemOnly: TRUE
```

```
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED |
 FLAG_DOMAIN_DISALLOW_RENAME
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.141 Attribute moveTreeState

This attribute is not necessary for Active Directory Lightweight Directory Services (AD LDS) to function. The protocol does not define a format beyond that required by the schema.

```
cn: Move-Tree-State
ldapDisplayName: moveTreeState
attributeId: 1.2.840.113556.1.4.1305
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: 1f2ac2c8-3b71-11d2-90cc-00c04fd91ab1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.142 Attribute mS-DS-ConsistencyChildCount

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

```
cn: MS-DS-Consistency-Child-Count
ldapDisplayName: mS-DS-ConsistencyChildCount
attributeId: 1.2.840.113556.1.4.1361
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 178b7bc2-b63a-11d2-90e1-00c04fd91ab1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.143 Attribute mS-DS-ConsistencyGuid

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

```
cn: MS-DS-Consistency-Guid
ldapDisplayName: mS-DS-ConsistencyGuid
attributeId: 1.2.840.113556.1.4.1360
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 23773dc2-b63a-11d2-90e1-00c04fd91ab1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.144 Attribute mS-DS-ReplicatesNCReason

This is an attribute of an nTDSConnection object that indicates why (or whether) the Knowledge Consistency Checker (KCC) concludes that the connection is useful in the replication topology. This attribute is multivalued and has DistName+Binary syntax, where the binary part is an int-size bit field.

```
cn: MS-DS-Replicates-NC-Reason
ldapDisplayName: mS-DS-ReplicatesNCReason
attributeId: 1.2.840.113556.1.4.1408
attributeSyntax: 2.5.5.7
omSyntax: 127
omObjectClass: 1.2.840.113556.1.1.1.11
isSingleValued: FALSE
schemaIdGuid: 0ea12b84-08b3-11d3-91bc-0000f87a57d4
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.145 Attribute ms-DS-UserAccountAutoLocked

This attribute specifies a Boolean flag that indicates whether the account that this attribute references has been locked out. (TRUE means locked out.)

```
cn: ms-DS-User-Account-Auto-Locked
ldapDisplayName: ms-DS-UserAccountAutoLocked
attributeId: 1.2.840.113556.1.4.1857
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: f2dd7bab-1f3b-47cf-89fa-143b56ad0a3d
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.146 Attribute ms-DS-UserEncryptedTextPasswordAllowed

This attribute specifies a Boolean flag that controls whether Active Directory stores the password in reversible encryption format.

```
cn: ms-DS-User-Encrypted-Text-Password-Allowed
ldapDisplayName: ms-DS-UserEncryptedTextPasswordAllowed
attributeId: 1.2.840.113556.1.4.1856
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 5a87c7f2-93c5-454c-a8c5-8cb09613292e
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.147 Attribute ms-DS-UserPasswordNotRequired

This attribute specifies a Boolean flag that controls whether a password is required for the account that this attribute references.

```
cn: ms-DS-User-Password-Not-Required
ldapDisplayName: ms-DS-UserPasswordNotRequired
attributeId: 1.2.840.113556.1.4.1854
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 8f066172-a25e-4f53-8dcd-0a67d5fb883d
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.148 Attribute msDS-AllowedDNSSuffixes

This attribute specifies the list of allowed suffixes for the dNSHostName attribute in computer objects.

```
cn: ms-DS-Allowed-DNS-Suffixes
ldapDisplayName: msDS-AllowedDNSSuffixes
attributeId: 1.2.840.113556.1.4.1710
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 8469441b-9ac4-4e45-8205-bd219dbf672d
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 2048
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.149 Attribute msDS-Approx-Immed-Subordinates

The value returned by this attribute is based on index sizes. This value can be off by +/-10 percent on large containers, and the error is theoretically unbounded, but the use of this attribute is to assist the UI with determining how to display the contents of a container.

```
cn: ms-DS-Approx-Immed-Subordinates
ldapDisplayName: msDS-Approx-Immed-Subordinates
attributeId: 1.2.840.113556.1.4.1669
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: e185d243-f6ce-4adb-b496-b0c005d7823c
systemOnly: TRUE
searchFlags: 0
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.150 Attribute msDS-Auxiliary-Classes

This attribute lists the auxiliary classes that have been dynamically attached to an object. This attribute is not associated with a class. It is automatically populated by the Active Directory system.

```
cn: ms-DS-Auxiliary-Classes
ldapDisplayName: msDS-Auxiliary-Classes
attributeId: 1.2.840.113556.1.4.1458
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: FALSE
schemaIdGuid: c4af1073-ee50-4be0-b8c0-89a41fe99abe
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.151 Attribute msDS-AzApplicationData

This attribute specifies a string that is used by individual applications to store needed information.

```
cn: ms-DS-Az-Application-Data
ldapDisplayName: msDS-AzApplicationData
attributeId: 1.2.840.113556.1.4.1819
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 503fc3e8-1cc6-461a-99a3-9eee04f402a7
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.152 Attribute msDS-AzApplicationName

This attribute specifies a string that uniquely identifies an application object.

```
cn: ms-DS-Az-Application-Name
ldapDisplayName: msDS-AzApplicationName
attributeId: 1.2.840.113556.1.4.1798
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: db5b0728-6208-4876-83b7-95d3e5695275
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 512
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.153 Attribute msDS-AzApplicationVersion

This attribute specifies a version number to indicate that the AzApplication is updated.

```
cn: ms-DS-Az-Application-Version
ldapDisplayName: msDS-AzApplicationVersion
attributeId: 1.2.840.113556.1.4.1817
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 7184a120-3ac4-47ae-848f-fe0ab20784d4
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.154 Attribute msDS-AzBizRule

This attribute specifies the text of the script implementing the business rule.

```
cn: ms-DS-Az-Biz-Rule
ldapDisplayName: msDS-AzBizRule
attributeId: 1.2.840.113556.1.4.1801
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 33d41ea8-c0c9-4c92-9494-f104878413fd
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 65536
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.155 Attribute msDS-AzBizRuleLanguage

This attribute specifies the language that the business rule script is in (for example, JScript or Visual Basic Scripting Edition).

```
cn: ms-DS-Az-Biz-Rule-Language
ldapDisplayName: msDS-AzBizRuleLanguage
attributeId: 1.2.840.113556.1.4.1802
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 52994b56-0e6c-4e07-aa5c-ef9d7f5a0e25
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 64
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.156 Attribute msDS-AzClassId

This attribute specifies a class ID that is required by the AzRoles UI on the AzApplication object.

```
cn: ms-DS-Az-Class-ID
ldapDisplayName: msDS-AzClassId
attributeId: 1.2.840.113556.1.4.1816
attributeSyntax: 2.5.5.12
```

```
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 013a7277-5c2d-49ef-a7de-b765b36a3f6f
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 40
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.157 Attribute msDS-AzDomainTimeout

This attribute specifies the time (in milliseconds) after a domain is detected to be unreachable and before the DC is tried again.

```
cn: ms-DS-Az-Domain-Timeout
ldapDisplayName: msDS-AzDomainTimeout
attributeId: 1.2.840.113556.1.4.1795
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 6448f56a-ca70-4e2e-b0af-d20e4ce653d0
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.158 Attribute msDS-AzGenerateAudits

This attribute specifies a Boolean field indicating whether runtime audits need to be turned on (for example, audits for access checks).

```
cn: ms-DS-Az-Generate-Audits
ldapDisplayName: msDS-AzGenerateAudits
attributeId: 1.2.840.113556.1.4.1805
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: f90abab0-186c-4418-bb85-88447c87222a
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.159 Attribute msDS-AzGenericData

This attribute specifies AzMan-specific generic data.

```
cn: ms-DS-Az-Generic-Data
ldapDisplayName: msDS-AzGenericData
attributeId: 1.2.840.113556.1.4.1950
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: a283ad81-eaac-448b-af22-6c7099a946e0
systemOnly: FALSE
searchFlags: 0
```

```
rangeUpper: 65536
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.160 Attribute msDS-AzLastImportedBizRulePath

This attribute specifies the last imported business rule path.

```
cn: ms-DS-Az-Last-Imported-Biz-Rule-Path
ldapDisplayName: msDS-AzLastImportedBizRulePath
attributeId: 1.2.840.113556.1.4.1803
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 665acb5c-bb92-4dbc-8c59-b3638eab09b3
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 65536
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.161 Attribute msDS-AzLDAPQuery

This attribute specifies a string that defines the LDAP query (max length 4096) that determines the membership of a user object to the group.

```
cn: ms-DS-Az-LDAP-Query
ldapDisplayName: msDS-AzLDAPQuery
attributeId: 1.2.840.113556.1.4.1792
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 5e53368b-fc94-45c8-9d7d-daf31ee7112d
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 4096
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.162 Attribute msDS-AzMajorVersion

This attribute specifies the major version number for AzRoles.

```
cn: ms-DS-Az-Major-Version
ldapDisplayName: msDS-AzMajorVersion
attributeId: 1.2.840.113556.1.4.1824
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: cfb9adb7-c4b7-4059-9568-1ed9db6b7248
systemOnly: FALSE
searchFlags: 0
rangeLower: 1
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.163 Attribute msDS-AzMinorVersion

This attribute specifies the minor version number for AzRoles.

```
cn: ms-DS-Az-Minor-Version
ldapDisplayName: msDS-AzMinorVersion
attributeId: 1.2.840.113556.1.4.1825
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: ee85ed93-b209-4788-8165-e702f51bfbf3
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.164 Attribute msDS-AzObjectGuid

This attribute specifies the unique and portable identifier of AzMan objects.

```
cn: ms-DS-Az-Object-Guid
ldapDisplayName: msDS-AzObjectGuid
attributeId: 1.2.840.113556.1.4.1949
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 8867b29c-9ccf-4ce2-be30-b67c0d2432c6
systemOnly: TRUE
searchFlags: fATTINDEX
rangeLower: 16
rangeUpper: 16
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.165 Attribute msDS-AzOperationID

This attribute specifies the application-specific ID that makes the operation unique to the application.

```
cn: ms-DS-Az-Operation-ID
ldapDisplayName: msDS-AzOperationID
attributeId: 1.2.840.113556.1.4.1800
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: a5f3b553-5d76-4cbe-ba3f-4312152cab18
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.166 Attribute msDS-AzScopeName

This attribute specifies a string that uniquely identifies a scope object.

```
cn: ms-DS-Az-Scope-Name
ldapDisplayName: msDS-AzScopeName
```

```
attributeId: 1.2.840.113556.1.4.1799
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 515a6b06-2617-4173-8099-d5605df043c6
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 65536
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.167 Attribute msDS-AzScriptEngineCacheMax

This attribute specifies the maximum number of scripts that are cached by the application.

```
cn: ms-DS-Az-Script-Engine-Cache-Max
ldapDisplayName: msDS-AzScriptEngineCacheMax
attributeId: 1.2.840.113556.1.4.1796
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 2629f66a-1f95-4bf3-a296-8e9d7b9e30c8
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.168 Attribute msDS-AzScriptTimeout

This attribute specifies the maximum time (in milliseconds) to wait for a script to finish auditing a specific policy.

```
cn: ms-DS-Az-Script-Timeout
ldapDisplayName: msDS-AzScriptTimeout
attributeId: 1.2.840.113556.1.4.1797
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 87d0fb41-2c8b-41f6-b972-11fdfd50d6b0
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.169 Attribute msDS-AzTaskIsRoleDefinition

This attribute specifies a Boolean field that indicates whether AzTask is a classic task or a role definition.

```
cn: ms-DS-Az-Task-Is-Role-Definition
ldapDisplayName: msDS-AzTaskIsRoleDefinition
attributeId: 1.2.840.113556.1.4.1818
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 7b078544-6c82-4fe9-872f-ff48ad2b2e26
```

```
systemOnly: FALSE
searchFlags: 0
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.170 Attribute msDS-Behavior-Version

This attribute is used to track the domain or forest behavior version. It is a monotonically increasing number that is used to enable certain Active Directory features.

```
cn: ms-DS-Behavior-Version
ldapDisplayName: msDS-Behavior-Version
attributeId: 1.2.840.113556.1.4.1459
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: d31a8757-2447-4545-8081-3bb610cacbf2
systemOnly: TRUE
searchFlags: 0
rangeLower: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.171 Attribute msDS-BridgeHeadServersUsed

This attribute specifies a list of bridgehead servers used by the KCC in the previous run.

```
cn: ms-DS-BridgeHead-Servers-Used
ldapDisplayName: msDS-BridgeHeadServersUsed
attributeId: 1.2.840.113556.1.4.2049
attributeSyntax: 2.5.5.7
omSyntax: 127
omObjectClass: 1.2.840.113556.1.1.1.11
linkID: 2160
isSingleValued: FALSE
showInAdvancedViewOnly: TRUE
schemaIdGuid: 3ced1465-7b71-2541-8780-1e1ea6243a82
searchFlags: 0
systemFlags: FLAG_ATTR_NOT_REPLICATED | FLAG_ATTR_IS_OPERATIONAL |
 FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: First implemented on Windows Server 2008 R2.

2.172 Attribute msDS-DefaultNamingContext

This attribute specifies the default naming context (partition) for this AD LDS instance.

```
cn: ms-DS-Default-Naming-Context
ldapDisplayName: msDS-DefaultNamingContext
attributeId: 1.2.840.113556.1.4.1873
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: 09278375-bc53-e342-8a03-943043a1b573
systemOnly: FALSE
searchFlags: 0
```

```
linkID: 2044
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.173 Attribute msDS-DefaultNamingContextBL

This attribute specifies a backlink reference for the msDS-DefaultNamingContext attribute.

```
cn: ms-DS-Default-Naming-Context-BL
ldapDisplayName: msDS-DefaultNamingContextBL
attributeId: 1.2.840.113556.1.4.1874
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 2a4e57c2-60bc-5040-b463-51e1d82df9a5
systemOnly: TRUE
searchFlags: 0
linkID: 2045
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.174 Attribute msDS-DefaultQuota

This attribute specifies the default quota that will apply to a security principal that creates an object in the NC if no quota specification exists that covers the security principal.

```
cn: ms-DS-Default-Quota
ldapDisplayName: msDS-DefaultQuota
attributeId: 1.2.840.113556.1.4.1846
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 6818f726-674b-441b-8a3a-f40596374cea
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.175 Attribute msDS-DeletedObjectLifetime

If the Recycle Bin optional feature is enabled, this attribute specifies the number of days before a deleted object is converted to a recycled object. If the Recycle Bin optional feature is not enabled, values of this attribute have no meaning or effect.

```
cn: ms-DS-Deleted-Object-Lifetime
ldapDisplayName: msDS-DeletedObjectLifetime
attributeId: 1.2.840.113556.1.4.2068
attributeSyntax: 2.5.5.9
omSyntax: 10
isSingleValued: TRUE
schemaIdGuid: a9b38cb6-189a-4def-8a70-0fcfa158148e
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on Windows Server 2008 R2.

2.176 Attribute msDS-DisableForInstances

This attribute specifies the set of DSA objects, representing AD LDS instances, for which Service Connection Point publication is disabled.

```
cn: ms-DS-Disable-For-Instances
ldapDisplayName: msDS-DisableForInstances
attributeId: 1.2.840.113556.1.4.1870
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 5f8f45cb-0fb7-fc4f-b44f-66f781aa66dd
systemOnly: FALSE
searchFlags: 0
linkID: 2042
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.177 Attribute msDS-DisableForInstancesBL

This attribute specifies the backlink reference to the ms-DS-Service-Connection-Point-Publication-Service object.

```
cn: ms-DS-Disable-For-Instances-BL
ldapDisplayName: msDS-DisableForInstancesBL
attributeId: 1.2.840.113556.1.4.1871
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 8f9d31dd-67ea-cd42-9b88-7cddb36c21f4
systemOnly: TRUE
searchFlags: 0
linkID: 2043
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.178 Attribute msDS-DnsRootAlias

This attribute is used to store the domain alias.

```
cn: ms-DS-DnsRootAlias
ldapDisplayName: msDS-DnsRootAlias
attributeId: 1.2.840.113556.1.4.1719
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 2143acca-eead-4d29-b591-85fa49ce9173
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 255
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.179 Attribute msDS-EnabledFeature

This attribute lists the enabled optional features.

```
cn: ms-DS-Enabled-Feature
ldapDisplayName: msDS-EnabledFeature
attributeId: 1.2.840.113556.1.4.2061
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
linkId: 2168
isSingleValued: FALSE
schemaIdGuid: 5706aeaf-b940-4fb2-bcfc-5268683ad9fe
isMemberOfPartialAttributeSet: TRUE
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on Windows Server 2008 R2.

2.180 Attribute msDS-EnabledFeatureBL

This attribute is the backlink attribute of msDS-EnabledFeature, and it lists the scopes where an optional feature is enabled.

```
cn: ms-DS-Enabled-Feature-BL
ldapDisplayName: msDS-EnabledFeatureBL
attributeId: 1.2.840.113556.1.4.2069
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
linkId: 2169
isSingleValued: FALSE
schemaIdGuid: ce5b01bc-17c6-44b8-9dc1-a9668b00901b
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT|FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on Windows Server 2008 R2.

2.181 Attribute msDS-Entry-Time-To-Die

This attribute holds the absolute expiration time of a dynamic object in the directory.

```
cn: ms-DS-Entry-Time-To-Die
ldapDisplayName: msDS-Entry-Time-To-Die
attributeId: 1.2.840.113556.1.4.1622
attributeSyntax: 2.5.5.11
omSyntax: 24
isSingleValued: TRUE
schemaIdGuid: e1e9bad7-c6dd-4101-a843-794cec85b038
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE | fATTINDEX
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_OPERATIONAL
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.182 Attribute msDS-ExecuteScriptPassword

This attribute is used during domain rename operation. This value cannot be written to or read from with LDAP.

```
cn: ms-DS-ExecuteScriptPassword
ldapDisplayName: msDS-ExecuteScriptPassword
attributeId: 1.2.840.113556.1.4.1783
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 9d054a5a-d187-46c1-9d85-42dfc44a56dd
systemOnly: TRUE
searchFlags: 0
rangeLower: 0
rangeUpper: 64
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.183 Attribute msDS-FilterContainers

A multivalued string attribute containing the names of classes that are used to determine which container types are shown by the Active Directory Users and Computers snap-in when filtering.

```
cn: ms-DS-Filter-Containers
ldapDisplayName: msDS-FilterContainers
attributeId: 1.2.840.113556.1.4.1703
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: fb00dcdf-ac37-483a-9c12-ac53a6603033
systemOnly: FALSE
rangeLower: 1
rangeUpper: 64
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.184 Attribute msDS-HasDomainNCs

This attribute specifies DS replication information that details the domain NCs that are present on a particular server.

```
cn: ms-DS-Has-Domain-NCs
ldapDisplayName: msDS-HasDomainNCs
attributeId: 1.2.840.113556.1.4.1820
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 6f17e347-a842-4498-b8b3-15e007da4fed
systemOnly: TRUE
searchFlags: 0
rangeLower: 4
rangeUpper: 4
linkID: 2026
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.185 Attribute msDS-HasInstantiatedNCs

This attribute specifies DS replication information that details the state of the NCs that are present on a particular server.

```
cn: ms-DS-Has-Instantiated-NCs
ldapDisplayName: msDS-HasInstantiatedNCs
attributeId: 1.2.840.113556.1.4.1709
attributeSyntax: 2.5.5.7
omSyntax: 127
omObjectClass: 1.2.840.113556.1.1.1.11
isSingleValued: FALSE
schemaIdGuid: 11e9a5bc-4517-4049-af9c-51554fb0fc09
systemOnly: TRUE
searchFlags: 0
rangeLower: 4
rangeUpper: 4
linkID: 2002
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.186 Attribute msDS-hasMasterNCs

This attribute specifies a list of the naming contexts contained by a DC.

```
cn: ms-DS-Has-Master-NCs
ldapDisplayName: msDS-hasMasterNCs
attributeId: 1.2.840.113556.1.4.1836
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: ae2de0e2-59d7-4d47-8d47-ed4dfe4357ad
systemOnly: TRUE
searchFlags: 0
linkID: 2036
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.187 Attribute msDS-IntId

The ms-DS-IntId attribute is for internal use only.

```
cn: ms-DS-IntId
ldapDisplayName: msDS-IntId
attributeId: 1.2.840.113556.1.4.1716
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: bc60096a-1b47-4b30-8877-602c93f56532
systemOnly: TRUE
searchFlags: fPRESERVEONDELETE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.188 Attribute msds-memberOfTransitive

This attribute specifies the set of distinguished names (DNs) in the memberOf attribute on the current object and the DNs from the memberOf attributes of each of the objects specified in the memberOf attribute on the current object.

```
cn: ms-DS-Is-Member-Of-DL-Transitive
lDAPDisplayName: msds-memberOfTransitive
attributeID: 1.2.840.113556.1.4.2236
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
systemOnly: TRUE
searchFlags: fBASEONLY
systemFlags: FLAG_ATTR_NOT_REPLICATED | FLAG_ATTR_IS_CONSTRUCTED |
 FLAG_ATTR_IS_OPERATIONAL | FLAG_SCHEMA_BASE_OBJECT
showInAdvancedViewOnly: TRUE
```

Version-Specific Behavior: First implemented on Windows Server 2012 R2 operating system.

2.189 Attribute msds-memberTransitive

This attribute specifies the set of distinguished names (DNs) in the member attribute on the current object and the DNs from the member attribute of each of the objects specified in the member attribute on the current object.

```
cn: ms-DS-Member-Transitive
lDAPDisplayName: msds-memberTransitive
attributeID: 1.2.840.113556.1.4.2238
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
systemOnly: TRUE
searchFlags: fBASEONLY
systemFlags: FLAG_ATTR_NOT_REPLICATED | FLAG_ATTR_IS_CONSTRUCTED |
 FLAG_ATTR_IS_OPERATIONAL | FLAG_SCHEMA_BASE_OBJECT
showInAdvancedViewOnly: TRUE
```

Version-Specific Behavior: First implemented on Windows Server 2012 R2.

2.190 Attribute msDS-LastKnownRDN

This attribute holds the original RDN of a deleted object.

```
cn: ms-DS-Last-Known-RDN
ldapDisplayName: msDS-LastKnownRDN
attributeId: 1.2.840.113556.1.4.2067
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 8ab15858-683e-466d-877f-d640e1f9a611
systemOnly: TRUE
searchFlags: 0
rangeLower: 1
rangeUpper: 255
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on Windows Server 2008 R2.

2.191 Attribute msDS-LocalEffectiveDeletionTime

This attribute stores the deletion time of the object in the local domain controller.

```
cn: ms-DS-Local-Effective-Deletion-Time
ldapDisplayName: msDS-LocalEffectiveDeletionTime
attributeId: 1.2.840.113556.1.4.2059
attributeSyntax: 2.5.5.11
omSyntax: 24
isSingleValued: TRUE
schemaIdGuid: 94f2800c-531f-4aeb-975d-48ac39fd8ca4
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT|FLAG_ATTR_IS_CONSTRUCTED
```

Version-Specific Behavior: First implemented on Windows Server 2008 R2.

2.192 Attribute msDS-LocalEffectiveRecycleTime

This attribute stores the recycle time of the object in the local domain controller.

```
cn: ms-DS-Local-Effective-Recycle-Time
ldapDisplayName: msDS-LocalEffectiveRecycleTime
attributeId: 1.2.840.113556.1.4.2060
attributeSyntax: 2.5.5.11
omSyntax: 24
isSingleValued: TRUE
schemaIdGuid: 4ad6016b-b0d2-4c9b-93b6-5964b17b968c
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT|FLAG_ATTR_IS_CONSTRUCTED
```

Version-Specific Behavior: First implemented on Windows Server 2008 R2.

2.193 Attribute msDs-masteredBy

This attribute specifies the backlink for msDS-hasMasterNCs.

```
cn: ms-DS-Mastered-By
ldapDisplayName: msDs-masteredBy
attributeId: 1.2.840.113556.1.4.1837
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 60234769-4819-4615-a1b2-49d2f119acb5
systemOnly: TRUE
searchFlags: 0
linkID: 2037
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.194 Attribute msDS-MembersForAzRole

This attribute specifies the list of member application groups or users linked to Az-Role.

```
cn: ms-DS-Members-For-Az-Role
ldapDisplayName: msDS-MembersForAzRole
attributeId: 1.2.840.113556.1.4.1806
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: cbf7e6cd-85a4-4314-8939-8bfe80597835
systemOnly: FALSE
searchFlags: 0
linkID: 2016
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.195 Attribute msDS-MembersForAzRoleBL

This attribute specifies the backlink from a member application group or user to the Az-Role objects that link to it.

```
cn: ms-DS-Members-For-Az-Role-BL
ldapDisplayName: msDS-MembersForAzRoleBL
attributeId: 1.2.840.113556.1.4.1807
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: ececcd20-a7e0-4688-9ccf-02ece5e287f5
systemOnly: TRUE
searchFlags: 0
linkID: 2017
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.196 Attribute msDS-NC-Replica-Locations

This attribute specifies a list of servers that are the replica set for the corresponding non-domain naming context.

```
cn: ms-DS-NC-Replica-Locations
ldapDisplayName: msDS-NC-Replica-Locations
attributeId: 1.2.840.113556.1.4.1661
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 97de9615-b537-46bc-ac0f-10720f3909f3
systemOnly: FALSE
searchFlags: 0
linkID: 1044
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.197 Attribute msDS-NCReplCursors

This attribute specifies a list of past and present replication partners for a particular machine, and how up-to-date that machine is with each of them.

```
cn: ms-DS-NC-Repl-Cursors
ldapDisplayName: msDS-NCReplCursors
attributeId: 1.2.840.113556.1.4.1704
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 8a167ce4-f9e8-47eb-8d78-f7fe80abb2cc
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.198 Attribute msDS-NCReplInboundNeighbors

This attribute specifies replication partners for this partition. This server obtains replication data from these other servers, which act as sources.

```
cn: ms-DS-NC-Repl-Inbound-Neighbors
ldapDisplayName: msDS-NCReplInboundNeighbors
attributeId: 1.2.840.113556.1.4.1705
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 9edba85a-3e9e-431b-9b1a-a5b6e9eda796
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.199 Attribute msDS-NCReplOutboundNeighbors

This attribute specifies replication partners for this partition. This server sends replication data to these other servers, which act as destinations. This server will notify these other servers when new data is available.

```
cn: ms-DS-NC-Repl-Outbound-Neighbors
ldapDisplayName: msDS-NCReplOutboundNeighbors
attributeId: 1.2.840.113556.1.4.1706
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 855f2ef5-a1c5-4cc4-ba6d-32522848b61f
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.200 Attribute msDS-Non-Security-Group-Extra-Classes

This attribute specifies the common names of the nonstandard classes that can be added to a non-security group through the Active Directory Users and Computers snap-in.

```
cn: ms-DS-Non-Security-Group-Extra-Classes
ldapDisplayName: msDS-Non-Security-Group-Extra-Classes
attributeId: 1.2.840.113556.1.4.1689
```

```
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 2de144fc-1f52-486f-bdf4-16fcc3084e54
systemOnly: FALSE
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.201 Attribute msDS-NonMembers

This attribute serves the same purpose as the **Non-Security-Member** attribute but with scoping rules applied.

```
cn: ms-DS-Non-Members
ldapDisplayName: msDS-NonMembers
attributeId: 1.2.840.113556.1.4.1793
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: cafcb1de-f23c-46b5-adf7-1e64957bd5db
systemOnly: FALSE
searchFlags: 0
linkID: 2014
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.202 Attribute msDS-NonMembersBL

This attribute specifies the backlink from a non-member group or user to the Az groups that link to it (has the same functionality as Non-Security-Member-BL).

```
cn: ms-DS-Non-Members-BL
ldapDisplayName: msDS-NonMembersBL
attributeId: 1.2.840.113556.1.4.1794
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 2a8c68fc-3a7a-4e87-8720-fe77c51cbe74
systemOnly: TRUE
searchFlags: 0
linkID: 2015
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.203 Attribute msDS-OperationsForAzRole

This attribute specifies a list of operations linked to Az-Role.

```
cn: ms-DS-Operations-For-Az-Role
ldapDisplayName: msDS-OperationsForAzRole
attributeId: 1.2.840.113556.1.4.1812
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
```

```
schemaIdGuid: 93f701be-fa4c-43b6-bc2f-4dbea718ffab
systemOnly: FALSE
searchFlags: 0
linkID: 2022
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.204 Attribute msDS-OperationsForAzRoleBL

This attribute specifies the backlink from Az-Operation to the Az-Role objects that link to it.

```
cn: ms-DS-Operations-For-Az-Role-BL
ldapDisplayName: msDS-OperationsForAzRoleBL
attributeId: 1.2.840.113556.1.4.1813
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: f85b6228-3734-4525-b6b7-3f3bb220902c
systemOnly: TRUE
searchFlags: 0
linkID: 2023
systemFlags: FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.205 Attribute msDS-OperationsForAzTask

This attribute specifies a list of operations linked to Az-Task.

```
cn: ms-DS-Operations-For-Az-Task
ldapDisplayName: msDS-OperationsForAzTask
attributeId: 1.2.840.113556.1.4.1808
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 1aacb436-2e9d-44a9-9298-ce4debeb6ebf
systemOnly: FALSE
searchFlags: 0
linkID: 2018
showInAdvancedViewOnly: TRUE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.206 Attribute msDS-OperationsForAzTaskBL

This attribute specifies the backlink from Az-Operation to the Az-Task objects that link to it.

```
cn: ms-DS-Operations-For-Az-Task-BL
ldapDisplayName: msDS-OperationsForAzTaskBL
attributeId: 1.2.840.113556.1.4.1809
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: a637d211-5739-4ed1-89b2-88974548bc59
systemOnly: TRUE
searchFlags: 0
```

```
linkID: 2019
systemFlags: FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.207 Attribute msDS-OptionalFeatureFlags

This attribute stores an integer value that contains flags that define behavior of an optional feature in Active Directory.

```
cn: ms-DS-Optional-Feature-Flags
ldapDisplayName: msDS-OptionalFeatureFlags
attributeId: 1.2.840.113556.1.4.2063
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 8a0560c1-97b9-4811-9db7-dc061598965b
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: First implemented on Windows Server 2008 R2.

2.208 Attribute msDS-OptionalFeatureGUID

This attribute stores the GUID of an optional feature.

```
cn: ms-DS-Optional-Feature-GUID
ldapDisplayName: msDS-OptionalFeatureGUID
attributeId: 1.2.840.113556.1.4.2062
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 9b88bda8-dd82-4998-a91d-5f2d2baf1927
systemOnly: TRUE
searchFlags: 0
rangeLower: 16
rangeUpper: 16
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on Windows Server 2008 R2.

2.209 Attribute msDS-Other-Settings

This multivalued attribute is used to store any configurable setting for the DS stored in the NAME=VALUE format.

```
cn: ms-DS-Other-Settings
ldapDisplayName: msDS-Other-Settings
attributeId: 1.2.840.113556.1.4.1621
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 79d2f34c-9d7d-42bb-838f-866b3e4400e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.210 Attribute msDS-parentdistname

This attribute specifies the distinguished name (DN) of the parent object of the current object.

```
cn: ms-DS-Parent-Dist-Name
lDAPDisplayName: msDS-parentdistname
attributeID: 1.2.840.113556.1.4.2203
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: b918fe7d-971a-f404-9e21-9261abec970b
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_ATTR_NOT_REPLICATED | FLAG_ATTR_IS_CONSTRUCTED |
 FLAG_ATTR_IS_OPERATIONAL | FLAG_SCHEMA_BASE_OBJECT
showInAdvancedViewOnly: TRUE
```

Version-Specific Behavior: First implemented on Windows Server 2012 R2.

2.211 Attribute msDS-PortLDAP

This attribute is used to specify which port is used by the Directory Service to listen for LDAP requests. Currently, this attribute is only used for AD LDS.

```
cn: ms-DS-Port-LDAP
ldapDisplayName: msDS-PortLDAP
attributeId: 1.2.840.113556.1.4.1859
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 977225c1-5bdf-42b7-b6db-c3af077f558f
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 65535
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.212 Attribute msDS-PortSSL

ms-Ds-Port-SSL is used to specify which port is used by the Directory Service to listen for SSL-protected LDAP requests. Currently, this attribute is used only for AD LDS.

```
cn: ms-DS-Port-SSL
ldapDisplayName: msDS-PortSSL
attributeId: 1.2.840.113556.1.4.1860
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 2c85cfc2-2061-468c-a0ea-c8e0910f7374
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 65535
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.213 Attribute msDS-Preferred-GC-Site

The ms-DS-Preferred-GC-Site attribute is used by the security accounts manager for group expansion during token evaluation.

```
cn: ms-DS-Preferred-GC-Site
ldapDisplayName: msDS-Preferred-GC-Site
attributeId: 1.2.840.113556.1.4.1444
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
schemaIdGuid: d921b50a-0ab2-42cd-87f6-09cf83a91854
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.214 Attribute msDS-PrincipalName

This attribute specifies the account name for the security principal (constructed).

```
cn: ms-DS-Principal-Name
ldapDisplayName: msDS-PrincipalName
attributeId: 1.2.840.113556.1.4.1865
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 564e9325-d057-c143-9e3b-4f9e5ef46f93
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.215 Attribute msDS-QuotaAmount

This attribute specifies the assigned quota in terms of number of objects owned in the database.

```
cn: ms-DS-Quota-Amount
ldapDisplayName: msDS-QuotaAmount
attributeId: 1.2.840.113556.1.4.1845
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: fbb9a00d-3a8c-4233-9cf9-7189264903a1
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.216 Attribute msDS-QuotaEffective

This attribute specifies the effective quota for a security principal computed from the assigned quotas for a naming context.

```
cn: ms-DS-Quota-Effective
ldapDisplayName: msDS-QuotaEffective
attributeId: 1.2.840.113556.1.4.1848
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 6655b152-101c-48b4-b347-e1fcebc60157
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.217 Attribute msDS-QuotaTrustee

This attribute specifies the SID, as defined in [MS-DTYP] section 2.4.2, of the security principal for which a quota is being assigned.

```
cn: ms-DS-Quota-Trustee
ldapDisplayName: msDS-QuotaTrustee
attributeId: 1.2.840.113556.1.4.1844
attributeSyntax: 2.5.5.17
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: 16378906-4ea5-49be-a8d1-bfd41dff4f65
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 28
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.218 Attribute msDS-QuotaUsed

This attribute specifies the current quota being consumed by a security principal in the directory database.

```
cn: ms-DS-Quota-Used
ldapDisplayName: msDS-QuotaUsed
attributeId: 1.2.840.113556.1.4.1849
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: b5a84308-615d-4bb7-b05f-2f1746aa439f
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.219 Attribute msDS-ReplAttributeMetaData

This attribute specifies a list of metadata for each replicated attribute. The metadata indicates who changed the attribute last.

```
cn: ms-DS-Repl-Attribute-Meta-Data
ldapDisplayName: msDS-ReplAttributeMetaData
attributeId: 1.2.840.113556.1.4.1707
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: d7c53242-724e-4c39-9d4c-2df8c9d66c7a
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.220 Attribute msDS-ReplAuthenticationMode

The **ms-DS-Repl-Authentication-Mode** attribute is used to specify which authentication method is used to authenticate replication partners. This attribute applies to the configuration partition of an AD LDS instance.

```
cn: ms-DS-Repl-Authentication-Mode
ldapDisplayName: msDS-ReplAuthenticationMode
attributeId: 1.2.840.113556.1.4.1861
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 6e124d4f-1a3f-4cc6-8e09-4a54c81b1d50
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.221 Attribute msDS-Replication-Notify-First-DSA-Delay

This attribute controls the delay between changes to the DS and notification of the first replica partner for an NC.

```
cn: ms-DS-Replication-Notify-First-DSA-Delay
ldapDisplayName: msDS-Replication-Notify-First-DSA-Delay
attributeId: 1.2.840.113556.1.4.1663
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 85abd4f4-0a89-4e49-bdec-6f35bb2562ba
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.222 Attribute msDS-Replication-Notify-Subsequent-DSA-Delay

This attribute controls the delay between notification of each subsequent replica partner for an NC.

```
cn: ms-DS-Replication-Notify-Subsequent-DSA-Delay
ldapDisplayName: msDS-Replication-Notify-Subsequent-DSA-Delay
attributeId: 1.2.840.113556.1.4.1664
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: d63db385-dd92-4b52-b1d8-0d3ecc0e86b6
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.223 Attribute msDS-ReplicationEpoch

This attribute is used to hold the epoch under which all of the DCs are replicating. An epoch is the period in which a domain has a specific name. A new epoch starts when a domain name change occurs.

```
cn: ms-DS-ReplicationEpoch
ldapDisplayName: msDS-ReplicationEpoch
attributeId: 1.2.840.113556.1.4.1720
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 08e3aa79-eb1c-45b5-af7b-8f94246c8e41
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.224 Attribute msDS-ReplValueMetaData

This attribute specifies a list of metadata for each value of an attribute. The metadata indicates who changed the value last.

```
cn: ms-DS-Repl-Value-Meta-Data
ldapDisplayName: msDS-ReplValueMetaData
attributeId: 1.2.840.113556.1.4.1708
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 2f5c8145-e1bd-410b-8957-8bfa81d5acfd
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.225 Attribute msDS-ReplValueMetaDataExt

This attribute contains no values on any object.

```
cn: ms-DS-Repl-Value-Meta-Data-Ext
ldapDisplayName: msDS-ReplValueMetaDataExt
attributeId: 1.2.840.113556.1.4.2235
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 1e02d2ef-44ad-46b2-a67d-9fd18d780bca
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_ATTR_IS_CONSTRUCTED | FLAG_SCHEMA_BASE_OBJECT
showInAdvancedViewOnly: TRUE
```

Version-Specific Behavior: First implemented on Windows Server 2012 R2.

2.226 Attribute msDS-RequiredDomainBehaviorVersion

This attribute specifies the required domain functional level for an optional feature enabled in a domain-wide scope.

```
cn: ms-DS-Required-Domain-Behavior-Version
ldapDisplayName: msDS-RequiredDomainBehaviorVersion
attributeId: 1.2.840.113556.1.4.2066
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: eadd3dfe-ae0e-4cc2-b9b9-5fe5b6ed2dd2
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on Windows Server 2008 R2.

2.227 Attribute msDS-RequiredForestBehaviorVersion

This attribute specifies the required forest functional level for an optional feature.

```
cn: ms-DS-Required-Forest-Behavior-Version
ldapDisplayName: msDS-RequiredForestBehaviorVersion
attributeId: 1.2.840.113556.1.4.2079
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 4beca2e8-a653-41b2-8fee-721575474bec
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on Windows Server 2008 R2.

2.228 Attribute msDS-RetiredReplNCSignatures

This attribute specifies information about naming contexts that are no longer held on this computer.

```
cn: ms-DS-Retired-Repl-NC-Signatures
ldapDisplayName: msDS-RetiredReplNCSignatures
attributeId: 1.2.840.113556.1.4.1826
```

```
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: TRUE
schemaIdGuid: d5b35506-19d6-4d26-9afb-11357ac99b5e
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.229 Attribute msDs-Schema-Extensions

This attribute specifies a binary BLOB used to store information about extensions to schema objects.

```
cn: ms-ds-Schema-Extensions
ldapDisplayName: msDs-Schema-Extensions
attributeId: 1.2.840.113556.1.4.1440
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
schemaIdGuid: b39a61be-ed07-4cab-9a4a-4963ed0141e1
systemOnly: TRUE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.230 Attribute msDS-SCPContainer

This attribute specifies the custom location to place SCP objects. This attribute contains a DN value (either FQDN or GUID–based) for the container in Active Directory.

```
cn: ms-DS-SCP-Container
ldapDisplayName: msDS-SCPContainer
attributeId: 1.2.840.113556.1.4.1872
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 454588e6-0b4e-b642-a6b8-ec03f6e1d9c5
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 4096
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.231 Attribute msDS-SDReferenceDomain

This attribute specifies the domain to be used for default security descriptor translation for a non-domain naming context.

```
cn: ms-DS-SD-Reference-Domain
ldapDisplayName: msDS-SDReferenceDomain
attributeId: 1.2.840.113556.1.4.1711
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: TRUE
```

```
schemaIdGuid: 4c51e316-f628-43a5-b06b-ffb695fcb4f3
systemOnly: FALSE
searchFlags: 0
linkID: 2000
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.232 Attribute msDS-Security-Group-Extra-Classes

This attribute specifies the common names of the nonstandard classes that can be added to a security group through the Active Directory Users and Computers snap-in.

```
cn: ms-DS-Security-Group-Extra-Classes
ldapDisplayName: msDS-Security-Group-Extra-Classes
attributeId: 1.2.840.113556.1.4.1688
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 4f146ae8-a4fe-4801-a731-f51848a4f4e4
systemOnly: FALSE
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.233 Attribute msDS-ServiceAccount

This attribute specifies the FPO representing the AD LDS service account.

```
cn: ms-DS-Service-Account
ldapDisplayName: msDS-ServiceAccount
attributeId: 1.2.840.113556.1.4.1866
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: a7f73651-688b-401e-b0cf-9345857bab23
systemOnly: TRUE
searchFlags: 0
linkID: 2040
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.234 Attribute msDS-ServiceAccountBL

This attribute specifies a backlink reference to the AD LDS DSA object that uses this service account.

```
cn: ms-DS-Service-Account-BL
ldapDisplayName: msDS-ServiceAccountBL
attributeId: 1.2.840.113556.1.4.1867
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 1322c9ff-1334-3d4a-9396-4d9284d42636
systemOnly: TRUE
searchFlags: 0
linkID: 2041
```

```
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.235 Attribute msDS-ServiceAccountDNSDomain

This attribute specifies the domain of which the AD LDS service account is a member.

```
cn: ms-DS-Service-Account-DNS-Domain
ldapDisplayName: msDS-ServiceAccountDNSDomain
attributeId: 1.2.840.113556.1.4.1862
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: fba633d4-20d7-4773-8b2c-c7445f54360d
systemOnly: TRUE
searchFlags: 0
rangeLower: 0
rangeUpper: 2048
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.236 Attribute msDS-Settings

This attribute is used to store settings for an object. Its use is solely determined by the object's owner. It is recommended to use it to store name/value pairs; for example, color=blue.

```
cn: ms-DS-Settings
ldapDisplayName: msDS-Settings
attributeId: 1.2.840.113556.1.4.1697
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 0e1b47d7-40a3-4b48-8d1b-4cac0c1cdf21
systemOnly: FALSE
searchFlags: 0
rangeUpper: 1000000
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.237 Attribute msDS-TasksForAzRole

This attribute specifies a list of tasks for Az-Role.

```
cn: ms-DS-Tasks-For-Az-Role
ldapDisplayName: msDS-TasksForAzRole
attributeId: 1.2.840.113556.1.4.1814
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: 35319082-8c4a-4646-9386-c2949d49894d
systemOnly: FALSE
searchFlags: 0
linkID: 2024
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.238 Attribute msDS-TasksForAzRoleBL

This attribute specifies a backlink from Az-Task to the Az-Role objects that link to it.

```
cn: ms-DS-Tasks-For-Az-Role-BL
ldapDisplayName: msDS-TasksForAzRoleBL
attributeId: 1.2.840.113556.1.4.1815
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: a0dcd536-5158-42fe-8c40-c00a7ad37959
systemOnly: TRUE
searchFlags: 0
linkID: 2025
showInAdvancedViewOnly: TRUE
systemFlags: FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.239 Attribute msDS-TasksForAzTask

This attribute specifies a list of tasks linked to Az-Task.

```
cn: ms-DS-Tasks-For-Az-Task
ldapDisplayName: msDS-TasksForAzTask
attributeId: 1.2.840.113556.1.4.1810
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: b11c8ee2-5fcd-46a7-95f0-f38333f096cf
systemOnly: FALSE
searchFlags: 0
linkID: 2020
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.240 Attribute msDS-TasksForAzTaskBL

This attribute specifies a backlink from Az-Task to the Az-Task objects that link to it.

```
cn: ms-DS-Tasks-For-Az-Task-BL
ldapDisplayName: msDS-TasksForAzTaskBL
attributeId: 1.2.840.113556.1.4.1811
attributeSyntax: 2.5.5.1
omSyntax: 127
omObjectClass: 1.3.12.2.1011.28.0.714
isSingleValued: FALSE
schemaIdGuid: df446e52-b5fa-4ca2-a42f-13f98a526c8f
systemOnly: TRUE
searchFlags: 0
linkID: 2021
systemFlags: FLAG_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.241 Attribute msDS-TombstoneQuotaFactor

This attribute specifies the percentage factor by which the tombstone object count is reduced for the purpose of quota accounting.

```
cn: ms-DS-Tombstone-Quota-Factor
ldapDisplayName: msDS-TombstoneQuotaFactor
attributeId: 1.2.840.113556.1.4.1847
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 461744d7-f3b6-45ba-8753-fb9552a5df32
systemOnly: FALSE
searchFlags: 0
rangeLower: 0
rangeUpper: 100
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.242 Attribute msDS-TopQuotaUsage

This attribute lists the top quota users, ordered by decreasing quota usage currently in the directory database.

```
cn: ms-DS-Top-Quota-Usage
ldapDisplayName: msDS-TopQuotaUsage
attributeId: 1.2.840.113556.1.4.1850
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
schemaIdGuid: 7b7cce4f-f1f5-4bb6-b7eb-23504af19e75
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.243 Attribute msDS-UpdateScript

This attribute is used to hold the script with the domain restructure instructions.

```
cn: ms-DS-UpdateScript
ldapDisplayName: msDS-UpdateScript
attributeId: 1.2.840.113556.1.4.1721
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: TRUE
schemaIdGuid: 146eb639-bb9f-4fc1-a825-e29e00c77920
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.244 Attribute msDS-User-Account-Control-Computed

This attribute specifies flags that control behavior of the user account. For more information, see [MS-ADTS] section 3.1.1.4.5.17.

```
cn: ms-DS-User-Account-Control-Computed
ldapDisplayName: msDS-User-Account-Control-Computed
attributeId: 1.2.840.113556.1.4.1460
attributeSyntax: 2.5.5.9
omSyntax: 2
isSingleValued: TRUE
schemaIdGuid: 2cc4b836-b63f-4940-8d23-ea7acf06af56
systemOnly: FALSE
searchFlags: 0
attributeSecurityGuid: 4c164200-20c0-11d0-a768-00aa006e0529
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.245 Attribute msDS-UserAccountDisabled

This attribute specifies a Boolean flag that controls whether an account is disabled or enabled.

```
cn: ms-DS-User-Account-Disabled
ldapDisplayName: msDS-UserAccountDisabled
attributeId: 1.2.840.113556.1.4.1853
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 7c708658-7372-4211-b22b-13a45ffd1d61
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.246 Attribute msDS-UserDontExpirePassword

This attribute specifies a Boolean flag that controls whether the password will expire for the account that this attribute references.

```
cn: ms-DS-User-Dont-Expire-Password
ldapDisplayName: msDS-UserDontExpirePassword
attributeId: 1.2.840.113556.1.4.1855
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 8788193a-2925-43d9-a221-bb7fff397675
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.247 Attribute msDS-UserPasswordExpired

This attribute specifies a Boolean flag that indicates whether the password has expired for the account that this attribute references. TRUE means that the password has expired.

```
cn: ms-DS-User-Password-Expired
ldapDisplayName: msDS-UserPasswordExpired
attributeId: 1.2.840.113556.1.4.1858
attributeSyntax: 2.5.5.8
omSyntax: 1
isSingleValued: TRUE
schemaIdGuid: 565c7ab5-e13e-47f6-abb5-de741806f125
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_CONSTRUCTED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.248 Attribute msDS-USNLastSyncSuccess

This attribute specifies the USN at which the last successful replication synchronization occurred.

```
cn: ms-DS-USN-Last-Sync-Success
ldapDisplayName: msDS-USNLastSyncSuccess
attributeId: 1.2.840.113556.1.4.2055
attributeSyntax: 2.5.5.16
omSyntax: 65
isSingleValued: TRUE
schemaIdGuid: 31f7b8b6-c9f8-4f2d-a37b-58a823030331
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_NOT_REPLICATED |
 FLAG_ATTR_IS_OPERATIONAL
schemaFlagsEx: FLAG_ATTR_IS_CRITICAL
```

Version-Specific Behavior: First implemented on Windows Server 2008 R2.

2.249 Attribute mustContain

This attribute specifies the list of mandatory attributes for a class. These attributes have to be specified when an instance of the class is created.

```
cn: Must-Contain
ldapDisplayName: mustContain
attributeId: 1.2.840.113556.1.2.24
attributeSyntax: 2.5.5.2
omSyntax: 6
isSingleValued: FALSE
schemaIdGuid: bf9679d3-0de6-11d0-a285-00aa003049e2
systemOnly: FALSE
searchFlags: 0
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.250 Attribute name

This attribute specifies the relative distinguished name of an object.

```
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
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
 FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.251 Attribute nCName

This attribute specifies the distinguished name of the naming context for the object.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.252 Attribute nETBIOSName

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

```
cn: NETBIOS-Name
ldapDisplayName: nETBIOSName
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.253 Attribute networkAddress

This attribute specifies the TCP/IP address for a network segment. 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.254 Attribute nonIndexedMetadata

ms-DS-Non-Indexed-Metadata

```
cn: ms-DS-Non-Indexed-Metadata
ldapDisplayName: nonIndexedMetadata
attributeId: 1.2.840.113556.1.4.1887
attributeSyntax: 2.5.5.12
omSyntax: 64
isSingleValued: FALSE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.255 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: First implemented on ADAM and Windows Server 2008.

2.256 Attribute ntPwdHistory

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

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.257 Attribute nTSecurityDescriptor

This attribute specifies the Windows NT security descriptor for an object.

```
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
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_ATTR_IS_OPERATIONAL |
 FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.258 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
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
 FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.259 Attribute objectCategory

This attribute specifies an object class name used to group objects of this or derived classes.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.260 Attribute objectClass

This attribute specifies the list of classes of which this object is an instance.

```
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: fPRESERVEONDELETE | fATTINDEX
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
  FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.261 Attribute objectClassCategory

This attribute contains the class type, such as abstract, auxiliary, or structured.

```
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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.262 Attribute objectClasses

This attribute is a multivalued property containing strings that represent each class in the schema.
Each value contains the governsID, lDAPDisplayName, mustContain, mayContain, and so on.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.263 Attribute objectGUID

This attribute specifies the unique identifier for an object.

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

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.264 Attribute objectSid

This attribute contains 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.

```
    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
    isMemberOfPartialAttributeSet: TRUE
    systemFlags: FLAG_SCHEMA_BASE_OBJECT |
     FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.265 Attribute objectVersion

This attribute can be used to store a version number for the object.

```
    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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.266 Attribute oMObjectClass

This attribute specifies the unique OID for the attribute or class.

```
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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.267 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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.268 Attribute options

This attribute is 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.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.269 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.270 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.271 Attribute otherIpPhone

This attribute specifies the 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.272 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.273 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.274 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.275 Attribute otherWellKnownObjects

This attribute contains 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 will automatically update the distinguished name.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.276 Attribute ou

This attribute specifies the name of the organizational unit.

```
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
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
 FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.277 Attribute owner

This attribute specifies the distinguished name of an object that has ownership of an object.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.278 Attribute ownerBL

This attribute specifies the backlink to the owner attribute. It 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_ATTR_NOT_REPLICATED
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.279 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.280 Attribute parentGUID

This is a constructed attribute, invented to support the DirSync control. 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.281 Attribute partialAttributeDeletionList

This attribute tacks the internal replication state of partial replicas (that is, on GCs). It is an attribute of the partial replica NC object, and is used when the GC is in the process of removing attributes from the objects in its partial replica NCs.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.282 Attribute partialAttributeSet

This attribute tracks 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.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.283 Attribute pekList

This attribute specifies a list of password encryption keys. The attribute is used internally. It is not replicated and its content is not accessible through any protocol. For more information see [MS-ADTS] section 3.1.1.4.4 (Extended Access Checks).

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.284 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.285 Attribute photo

This attribute specifies an object encoded in G3 fax as explained in recommendation T.4, with an ASN.1 wrapper to make it compatible with an X.400 BodyPart as defined in X.420.

```
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
showInAdvancedViewOnly: FALSE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.286 Attribute physicalDeliveryOfficeName

This attribute contains 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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.287 Attribute possibleInferiors

This attribute specifies the list of objects that this object can contain.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.288 Attribute possSuperiors

This attribute specifies the list of objects that can contain this class.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.289 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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.290 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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.291 Attribute postOfficeBox

This attribute specifies the P.O. 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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.292 Attribute preferredDeliveryMethod

This attribute specifies the X.500–preferred way [X500] to deliver to the addressee.

```
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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.293 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
showInAdvancedViewOnly: FALSE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.294 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.295 Attribute prefixMap

The **Prefix-Map** 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.296 Attribute primaryGroupToken

A computed attribute that is used in retrieving the membership list of a group such as Domain Users. The complete membership of such groups is not stored explicitly for scaling reasons.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.297 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.298 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.299 Attribute proxiedObjectName

This attribute is used internally 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.300 Attribute proxyAddresses

This attribute specifies proxy addresses. A proxy address is the address by which a 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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.301 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).

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.302 Attribute queryFilter

Query-Filter attribute.

```
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
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.303 Attribute queryPolicyBL

This attribute is the back link attribute of queryPolicy and lists 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: First implemented on ADAM and Windows Server 2008.

2.304 Attribute queryPolicyObject

This attribute contains a 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.305 Attribute rangeLower

This attribute specifies the minimum value or length of an attribute.

```
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
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.306 Attribute rangeUpper

This attribute specifies the maximum value or length of an attribute.

```
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
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.307 Attribute rDNAttID

This attribute specifies the RDN for the attribute that is used to name a class.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.308 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.309 Attribute replInterval

The attribute of Site-Link objects that defines the interval in minutes between replication cycles between the sites in the Site-List. It has to 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).

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.310 Attribute replPropertyMetaData

This attribute tracks internal replication state information for DS objects. Information here can be extracted in public form through the public DsReplicaGetInfo() API. This attribute is present on all DS objects.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.311 Attribute replTopologyStayOfExecution

This attribute specifies the delay between deleting a server object and permanently removing it from the replication topology.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.312 Attribute replUpToDateVector

This attribute tracks internal replication state information for an entire NC. Information here can be extracted in public form through the DsReplicaGetInfo() API. Present on all NC root objects.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.313 Attribute repsFrom

This attribute lists the servers from which the directory will accept changes for the defined naming context (NC).

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.314 Attribute repsTo

This attribute lists the servers that the directory will notify of changes and the servers that the directory will send changes to, upon request for the defined NC.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.315 Attribute retiredReplDSASignatures

This attribute tracks the past DS replication identities of a given DC.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.316 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.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.317 Attribute rightsGuid

This attribute specifies the GUID that is used to represent an extended right within an access control entry.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.318 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
showInAdvancedViewOnly: FALSE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.319 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.320 Attribute schedule

This attribute specifies a schedule BLOB as defined by the NT Job Service. Used by replication.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.321 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.

This attribute is defined as follows:

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

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

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.

2.322 Attribute schemaIDGUID

This attribute specifies the unique identifier for a schema object.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.323 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. 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.324 Attribute schemaUpdate

```
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: First implemented on ADAM and Windows Server 2008.

2.325 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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.326 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
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.327 Attribute sDRightsEffective

This constructed attribute 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.

Note: "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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.328 Attribute searchFlags

This attribute contains a set of flags that specify search and indexing information for an attribute.

```
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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.329 Attribute searchGuide

This attribute specifies information of suggested search criteria that might 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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.330 Attribute secretary

This attribute contains 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
showInAdvancedViewOnly: FALSE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.331 Attribute seeAlso

This attribute specifies the list of DNs 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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.332 Attribute serialNumber

This attribute is 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.333 Attribute serverReference

This attribute specifies a site computer object. The attribute is not necessary for Active Directory Lightweight Directory Services to function. The protocol does not define a format beyond that required by the schema.

```
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
```

```
showInAdvancedViewOnly: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.334 Attribute serverReferenceBL

This attribute is the backlink attribute of serverReference, and it contains the DN of a server object under the sites folder. This attribute is not necessary for Active Directory Lightweight Directory Services to function. The protocol does not define a format beyond that required by the schema.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.335 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
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.336 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
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.337 Attribute showInAdvancedViewOnly

This attribute is TRUE if the corresponding attribute is to be visible in the advanced mode of the UI.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.338 Attribute siteLinkList

This attribute specifies a 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.339 Attribute siteList

This attribute specifies a list of sites that are 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.340 Attribute siteObject

This attribute specifies the DN 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.341 Attribute siteObjectBL

This attribute is the backlink 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: First implemented on ADAM and Windows Server 2008.

2.342 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: First implemented on ADAM and Windows Server 2008.

2.343 Attribute sn

This attribute contains 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
isMemberOfPartialAttributeSet: TRUE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.344 Attribute sourceObjectGuid

ms-DS-Source-Object-Guid

```
cn: ms-DS-Source-Object-Guid
ldapDisplayName: sourceObjectGuid
attributeId: 1.2.840.113556.1.4.1885
attributeSyntax: 2.5.5.10
omSyntax: 4
isSingleValued: FALSE
searchFlags: fATTINDEX
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.345 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
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
 FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.346 Attribute street

This attribute specifies the user's 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
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
 FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.347 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.348 Attribute structuralObjectClass

This constructed attribute stores a list of classes contained in a class hierarchy, including abstract classes. This list contains 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.349 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.350 Attribute subRefs

This attribute specifies a list of subordinate references of a naming context.

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

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.351 Attribute subSchemaSubEntry

This attribute specifies the DN 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.352 Attribute superiorDNSRoot

This system attribute 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.353 Attribute supplementalCredentials

This attribute specifies stored credentials for use in authenticating. It provides the encrypted version of the user's password. This attribute is neither readable nor writable.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.354 Attribute systemAuxiliaryClass

This attribute specifies a list of auxiliary classes that cannot be modified by the user.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.355 Attribute systemFlags

This attribute specifies an integer value that contains flags that define additional properties of the 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.356 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 [MS-ADOD].

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.357 Attribute systemMustContain

This attribute specifies the list of mandatory attributes for a class. These attributes have to be specified when an instance of the class is created. The list of attributes can be modified only by the Active Directory system.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.358 Attribute systemOnly

This attribute is 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.359 Attribute systemPossSuperiors

This attribute specifies the list of classes that can contain this class. This list can only be modified by the Active Directory system.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.360 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
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.361 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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.362 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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.363 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.364 Attribute thumbnailPhoto

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

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.365 Attribute title

This attribute contains 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: 64
attributeSecurityGuid: e48d0154-bcf8-11d1-8702-00c04fb96050
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.366 Attribute tokenGroups

This computed attribute 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.367 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.

```
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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.368 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.369 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.370 Attribute transportType

This attribute specifies the DN for a type of transport that is being used to connect sites together. This value can point to an IP or 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.371 Attribute treatAsLeaf

This attribute defines a flag for display specifiers (see the displaySpecifier class in section 3). 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
```

Version-Specific Behavior: First implemented on Windows Server 2008.

2.372 Attribute trustParent

This attribute specifies the parent in the Kerberos trust hierarchy.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.373 Attribute uid

This attribute specifies the 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
showInAdvancedViewOnly: FALSE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.374 Attribute unicodePwd

The password of the user in Windows NT one-way format (OWF). Windows 2000 uses the Windows NT OWF. This property is used only by the operating system.

Note: The clear password cannot be derived back from the OWF form of the password.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.375 Attribute uPNSuffixes

This attribute specifies the list of User-Principal-Name suffixes for a domain.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.376 Attribute url

This attribute specifies a list of alternate webpages.

```
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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.377 Attribute userCertificate

This attribute contains the DER-encoded X509v3 certificates issued to the user ([RFC3280]).

Note: 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
isMemberOfPartialAttributeSet: TRUE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.378 Attribute userParameters

This attribute specifies the user's parameters and is set aside for use by applications. Microsoft products use this member to store user data that is specific to the individual program.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.379 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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.380 Attribute userPKCS12

This attribute specifies PKCS #12 PFX 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
showInAdvancedViewOnly: FALSE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.381 Attribute userPrincipalName

This attribute contains the UPN that is an Internet-style logon name for a user, as specified in [RFC822]. The UPN is shorter than the DN and easier to remember.

By convention, this attribute maps to the user email name. The value set for this attribute is equal to the length of the user's ID and the domain name.

```
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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.382 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
isMemberOfPartialAttributeSet: TRUE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.383 Attribute uSNChanged

This attribute specifies an update sequence number (USN) value assigned by the local directory for the latest change, including creation.

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

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.384 Attribute uSNCreated

This attribute specifies a USN-Changed value that is assigned at object creation.

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

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.385 Attribute uSNDSALastObjRemoved

This attribute contains the USN for the last system object that was removed from a server.

```
cn: USN-DSA-Last-Obj-Removed
ldapDisplayName: uSNDSALastObjRemoved
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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.386 Attribute USNIntersite

This attribute specifies the USN for intersite replication.

```
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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.387 Attribute uSNLastObjRem

This attribute contains the USN for the last non-system object that was removed from a server.

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

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.388 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.

```
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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.389 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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.390 Attribute wbemPath

This attribute specifies references to objects in other 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: First implemented on ADAM and Windows Server 2008.

2.391 Attribute wellKnownObjects

This attribute contains 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 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 6.1.1.4.

```
    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
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.392 Attribute whenChanged

This attribute specifies the date when this object was last changed. This value is not replicated and exists in the global catalog.

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

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.393 Attribute whenCreated

This attribute specifies the date when this object was created. This value is replicated and is in the global catalog.

```
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
isMemberOfPartialAttributeSet: TRUE
systemFlags: FLAG_SCHEMA_BASE_OBJECT |
 FLAG_ATTR_REQ_PARTIAL_SET_MEMBER
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.394 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: First implemented on ADAM and Windows Server 2008.

2.395 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
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

2.396 Attribute x500uniqueIdentifier

This attribute is used to distinguish between objects when a DN has been reused.

Note: 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
showInAdvancedViewOnly: FALSE
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3   Classes

The following sections specify the classes in the **Active Directory Lightweight Directory Services** schema.

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

Note: In the following class definitions, "<SchemaNCDN>" is the DN of the schema NC. For more information, see [MS-ADTS] section 3.1.1.1.7.

Note: Lines of text in the class definitions that are excessively long have been "folded" in accordance with [RFC2849] Note 2.

3.1   Class applicationSettings

This is the base class for server-specific application settings.

```
cn: Application-Settings
ldapDisplayName: applicationSettings
governsId: 1.2.840.113556.1.5.7000.49
objectClassCategory: 2
rdnAttId: cn
subClassOf: top
systemMayContain: msDS-Settings
systemPossSuperiors: server
schemaIdGuid: f780acc1-56f0-11d1-a9c6-0000f80367c1
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Application-Settings,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on Active Directory Application Mode (ADAM) and Windows Server 2008 operating system.

3.2   Class applicationSiteSettings

This class specifies the container that holds all site-specific settings.

```
cn: Application-Site-Settings
ldapDisplayName: applicationSiteSettings
governsId: 1.2.840.113556.1.5.68
objectClassCategory: 2
rdnAttId: cn
subClassOf: top
systemPossSuperiors: site
schemaIdGuid: 19195a5c-6da0-11d0-afd3-00c04fd930c9
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Application-Site-Settings,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.3   Class attributeSchema

This class defines an attribute object in the schema.

```
cn: Attribute-Schema
ldapDisplayName: attributeSchema
governsId: 1.2.840.113556.1.3.14
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMustContain: schemaIDGUID, oMSyntax, lDAPDisplayName,
 isSingleValued, cn, attributeSyntax, attributeID
systemMayContain: systemOnly, searchFlags, schemaFlagsEx, rangeUpper,
 rangeLower, oMObjectClass, msDs-Schema-Extensions, msDS-IntId,
 linkID, isMemberOfPartialAttributeSet, isEphemeral, isDefunct,
 extendedCharsAllowed, classDisplayName, attributeSecurityGUID
systemPossSuperiors: dMD
schemaIdGuid: bf967a80-0de6-11d0-a285-00aa003049e2
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Attribute-Schema,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_DOMAIN_DISALLOW_RENAME
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.4   Class classSchema

This class defines a class object in the schema.

```
cn: Class-Schema
ldapDisplayName: classSchema
governsId: 1.2.840.113556.1.3.13
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMustContain: subClassOf, schemaIDGUID, objectClassCategory,
 governsID, defaultObjectCategory, cn
systemMayContain: systemPossSuperiors, systemOnly, systemMustContain,
 systemMayContain, systemAuxiliaryClass, schemaFlagsEx, rDNAttID,
 possSuperiors, mustContain, msDs-Schema-Extensions, msDS-IntId,
 mayContain, lDAPDisplayName, isDefunct, defaultSecurityDescriptor,
 defaultHidingValue, classDisplayName, auxiliaryClass
systemPossSuperiors: dMD
schemaIdGuid: bf967a83-0de6-11d0-a285-00aa003049e2
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Class-Schema,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_DOMAIN_DISALLOW_RENAME
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.5   Class configuration

This class is a container that holds the configuration information for a domain.

```
cn: Configuration
ldapDisplayName: configuration
governsId: 1.2.840.113556.1.5.12
objectClassCategory: 1
rdnAttId: cn
```

```
subClassOf: top
systemMustContain: cn
systemMayContain: msDS-USNLastSyncSuccess, msDS-ReplAuthenticationMode
systemPossSuperiors: domainDNS
schemaIdGuid: bf967a87-0de6-11d0-a285-00aa003049e2
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: TRUE
defaultObjectCategory: CN=Configuration,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.6   Class container

This class is used to hold other classes.

```
cn: Container
ldapDisplayName: container
governsId: 1.2.840.113556.1.3.23
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMustContain: cn
systemMayContain: schemaVersion
possSuperiors: msDS-AzScope, msDS-AzApplication, msDS-AzAdminManager
systemPossSuperiors: subnet, server, nTDSService, domainDNS,
 organization, configuration, container, organizationalUnit
schemaIdGuid: bf967a8b-0de6-11d0-a285-00aa003049e2
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Container,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.7   Class controlAccessRight

This class identifies an extended right that can be granted or revoked via an access control list (ACL).

```
cn: Control-Access-Right
ldapDisplayName: controlAccessRight
governsId: 1.2.840.113556.1.5.77
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMayContain: validAccesses, rightsGuid, localizationDisplayId,
 appliesTo
systemPossSuperiors: container
schemaIdGuid: 8297931e-86d3-11d0-afda-00c04fd930c9
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Control-Access-Right,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.8 Class country

This class specifies the country/region in the address of the user. This is the full name.

```
cn: Country
ldapDisplayName: country
governsId: 2.5.6.2
objectClassCategory: 0
rdnAttId: c
subClassOf: top
systemMustContain: c
systemMayContain: co, searchGuide
systemPossSuperiors: domainDNS, organization
schemaIdGuid: bf967a8c-0de6-11d0-a285-00aa003049e2
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Country,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.9 Class crossRef

This class holds knowledge information about all directory service (DS) naming contexts and all external directories to which referrals can be generated.

```
cn: Cross-Ref
ldapDisplayName: crossRef
governsId: 1.2.840.113556.1.3.11
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMustContain: nCName, cn
systemMayContain: trustParent, superiorDNSRoot, rootTrust,
 nETBIOSName, msDS-Other-Settings, Enabled, msDS-SDReferenceDomain,
 msDS-Replication-Notify-Subsequent-DSA-Delay,
 msDS-Replication-Notify-First-DSA-Delay, msDS-NC-Replica-Locations,
 msDS-DnsRootAlias, msDS-Behavior-Version, dnsRoot
systemPossSuperiors: crossRefContainer
schemaIdGuid: bf967a8d-0de6-11d0-a285-00aa003049e2
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Cross-Ref,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.10 Class crossRefContainer

This class holds cross-reference objects for all naming contexts.

```
cn: Cross-Ref-Container
ldapDisplayName: crossRefContainer
governsId: 1.2.840.113556.1.5.7000.53
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMayContain: msDS-EnabledFeature, uPNSuffixes, msDS-UpdateScript,
 msDS-ExecuteScriptPassword, msDS-Behavior-Version
```

```
systemPossSuperiors: configuration
schemaIdGuid: ef9e60e0-56f7-11d1-a9c6-0000f80367c1
defaultSecurityDescriptor: D:S:
defaultHidingValue: FALSE
systemOnly: TRUE
defaultObjectCategory: CN=Cross-Ref-Container,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.11 Class displaySpecifier

This class describes the context menus and property pages to be used with an object in the directory.

```
cn: Display-Specifier
ldapDisplayName: displaySpecifier
governsId: 1.2.840.113556.1.5.84
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMayContain: treatAsLeaf, shellPropertyPages, shellContextMenu,
 scopeFlags, queryFilter, iconPath, extraColumns, creationWizard,
 createWizardExt, createDialog, contextMenu, classDisplayName,
 attributeDisplayNames, adminPropertyPages,
 adminMultiselectPropertyPages, adminContextMenu
systemPossSuperiors: container
schemaIdGuid: e0fa1e8a-9b45-11d0-afdd-00c04fd930c9
systemOnly: FALSE
defaultObjectCategory: CN=Display-Specifier,<SchemaNCDN>
```

Version-Specific Behavior: First implemented on Windows Server 2008.

3.12 Class dMD

This class specifies the Directory Management Domain. In Active Directory, this is the class that holds the schema.

```
cn: DMD
ldapDisplayName: dMD
governsId: 1.2.840.113556.1.3.9
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMustContain: cn
systemMayContain: msDS-USNLastSyncSuccess, schemaUpdate, schemaInfo,
 prefixMap, msDs-Schema-Extensions, msDS-IntId, dmdName
systemPossSuperiors: configuration
schemaIdGuid: bf967a8f-0de6-11d0-a285-00aa003049e2
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: TRUE
defaultObjectCategory: CN=DMD,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.13 Class domain

This class contains information about a domain.

```
cn: Domain
ldapDisplayName: domain
governsId: 1.2.840.113556.1.5.66
objectClassCategory: 2
rdnAttId: dc
subClassOf: top
systemMustContain: dc
systemPossSuperiors: domain, organization
schemaIdGuid: 19195a5a-6da0-11d0-afd3-00c04fd930c9
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Domain-DNS,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.14 Class domainDNS

This class specifies a Windows NT operating system domain with DNS-based (DC=) naming.

```
cn: Domain-DNS
ldapDisplayName: domainDNS
governsId: 1.2.840.113556.1.5.67
objectClassCategory: 1
rdnAttId: dc
subClassOf: domain
systemMayContain: msDS-EnabledFeature, msDS-USNLastSyncSuccess,
 msDS-Behavior-Version, msDS-AllowedDNSSuffixes, managedBy
systemPossSuperiors: domainDNS
schemaIdGuid: 19195a5b-6da0-11d0-afd3-00c04fd930c9
defaultSecurityDescriptor: D:S:
defaultHidingValue: FALSE
systemOnly: FALSE
defaultObjectCategory: CN=Domain-DNS,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.15 Class dSUISettings

This class is used to store configuration settings used by the Active Directory Users and Computers snap-in.

```
cn: DS-UI-Settings
ldapDisplayName: dSUISettings
governsId: 1.2.840.113556.1.5.183
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMayContain: msDS-Security-Group-Extra-Classes,
 msDS-Non-Security-Group-Extra-Classes, msDS-FilterContainers,
 dSUIShellMaximum, dSUIAdminNotification, dSUIAdminMaximum
systemPossSuperiors: container
schemaIdGuid: 09b10f14-6f93-11d2-9905-0000f87a57d4
systemOnly: FALSE
defaultObjectCategory: CN=DS-UI-Settings,<SchemaNCDN>
```

Version-Specific Behavior: First implemented on Windows Server 2008.

3.16 Class dynamicObject

If present in an entry, this class indicates that this entry has a limited lifetime and can disappear automatically when its time-to-live has reached 0. If the client has not supplied a value for the entryTtl attribute, the server will provide one.

```
cn: Dynamic-Object
ldapDisplayName: dynamicObject
governsId: 1.3.6.1.4.1.1466.101.119.2
objectClassCategory: 3
rdnAttId: cn
subClassOf: top
systemMayContain: msDS-Entry-Time-To-Die, entryTTL
schemaIdGuid: 66d51249-3355-4c1f-b24e-81f252aca23b
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Dynamic-Object,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.17 Class foreignSecurityPrincipal

This class specifies the security principal from an external source.

```
cn: Foreign-Security-Principal
ldapDisplayName: foreignSecurityPrincipal
governsId: 1.2.840.113556.1.5.76
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMustContain: objectSid
systemPossSuperiors: container
schemaIdGuid: 89e31c12-8530-11d0-afda-00c04fd930c9
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Foreign-Security-Principal,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.18 Class group

This class stores a list of user names. Used to apply security principals on resources.

```
cn: Group
ldapDisplayName: group
governsId: 1.2.840.113556.1.5.8
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemAuxiliaryClass: securityPrincipal
systemMustContain: groupType
mayContain: msDS-AzGenericData, msDS-AzObjectGuid,
 msDS-AzApplicationData, msDS-AzLastImportedBizRulePath,
 msDS-AzBizRuleLanguage, msDS-AzBizRule, msDS-AzLDAPQuery
systemMayContain: msDS-NonMembers, primaryGroupToken, member,
 managedBy, desktopProfile
possSuperiors: msDS-AzScope, msDS-AzApplication, msDS-AzAdminManager
```

```
systemPossSuperiors: container, organizationalUnit, domainDNS
schemaIdGuid: bf967a9c-0de6-11d0-a285-00aa003049e2
defaultSecurityDescriptor: D:S:
defaultHidingValue: FALSE
systemOnly: FALSE
defaultObjectCategory: CN=Group,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.19 Class groupOfNames

Group-Of-Names

```
cn: Group-Of-Names
ldapDisplayName: groupOfNames
governsId: 2.5.6.9
objectClassCategory: 0
rdnAttId: cn
subClassOf: top
systemMustContain: cn
systemMayContain: member, businessCategory, o, ou, owner, seeAlso
systemPossSuperiors: container, organization, locality,
 organizationalUnit
schemaIdGuid: bf967a9d-0de6-11d0-a285-00aa003049e2
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Group-Of-Names,<SchemaNCDN>
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.20 Class inetOrgPerson

This class represents people who are associated with an organization in some way.

```
cn: inetOrgPerson
ldapDisplayName: inetOrgPerson
governsId: 2.16.840.1.113730.3.2.2
objectClassCategory: 1
rdnAttId: cn
subClassOf: user
mayContain: audio, businessCategory, carLicense, departmentNumber,
 displayName, employeeNumber, employeeType, givenName, homePhone,
 homePostalAddress, initials, jpegPhoto, labeledURI, mail, manager,
 mobile, o, pager, photo, preferredLanguage, roomNumber, secretary,
 uid, userCertificate, userPKCS12, userSMIMECertificate,
 x500uniqueIdentifier
possSuperiors: container, organizationalUnit, domainDNS
schemaIdGuid: 4828cc14-1437-45bc-9b07-ad6f015e5f28
defaultSecurityDescriptor:
 D:(OA;;CR;ab721a53-1e2f-11d0-9819-00aa0040529b;;PS)S:
showInAdvancedViewOnly: FALSE
defaultHidingValue: FALSE
systemOnly: FALSE
defaultObjectCategory: CN=Person,<SchemaNCDN>
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.21 Class interSiteTransport

This class specifies an optional attribute of nTDSConnection objects. If present, it holds the DN of an interSiteTransport object in the CN=Inter-Site Transports,CN=Sites,CN=Configuration,... container.

```
cn: Inter-Site-Transport
ldapDisplayName: interSiteTransport
governsId: 1.2.840.113556.1.5.141
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMustContain: transportDLLName, transportAddressAttribute
systemMayContain: replInterval, options
systemPossSuperiors: interSiteTransportContainer
schemaIdGuid: 26d97376-6070-11d1-a9c6-0000f80367c1
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Inter-Site-Transport,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.22 Class interSiteTransportContainer

This class holds Inter-Site-Transport objects.

```
cn: Inter-Site-Transport-Container
ldapDisplayName: interSiteTransportContainer
governsId: 1.2.840.113556.1.5.140
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemPossSuperiors: sitesContainer
schemaIdGuid: 26d97375-6070-11d1-a9c6-0000f80367c1
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Inter-Site-Transport-Container,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.23 Class leaf

This class is the base class for leaf objects.

```
cn: Leaf
ldapDisplayName: leaf
governsId: 1.2.840.113556.1.5.20
objectClassCategory: 2
rdnAttId: cn
subClassOf: top
schemaIdGuid: bf967a9e-0de6-11d0-a285-00aa003049e2
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Leaf,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.24 Class locality

This class contains a locality, such as a street address, city, and state.

```
cn: Locality
ldapDisplayName: locality
governsId: 2.5.6.3
objectClassCategory: 1
rdnAttId: l
subClassOf: top
systemMustContain: l
systemMayContain: street, st, seeAlso, searchGuide
systemPossSuperiors: domainDNS, country, organizationalUnit,
 organization, locality
schemaIdGuid: bf967aa0-0de6-11d0-a285-00aa003049e2
defaultSecurityDescriptor: D:S:
defaultHidingValue: FALSE
systemOnly: FALSE
defaultObjectCategory: CN=Locality,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.25 Class lostAndFound

This class is a special container for orphaned objects.

```
cn: Lost-And-Found
ldapDisplayName: lostAndFound
governsId: 1.2.840.113556.1.5.139
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMayContain: moveTreeState
systemPossSuperiors: configuration, domainDNS, dMD
schemaIdGuid: 52ab8671-5709-11d1-a9c6-0000f80367c1
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Lost-And-Found,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.26 Class msDS-AzAdminManager

This class specifies the root of Authorization Policy store instance.

```
cn: ms-DS-Az-Admin-Manager
ldapDisplayName: msDS-AzAdminManager
governsId: 1.2.840.113556.1.5.234
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
mayContain: msDS-AzGenericData, msDS-AzObjectGuid
systemMayContain: description, msDS-AzMinorVersion,
 msDS-AzMajorVersion, msDS-AzDomainTimeout,
 msDS-AzScriptEngineCacheMax, msDS-AzScriptTimeout,
 msDS-AzGenerateAudits, msDS-AzApplicationData
```

```
systemPossSuperiors: container, organizationalUnit, domainDNS
schemaIdGuid: cfee1051-5f28-4bae-a863-5d0cc18a8ed1
defaultSecurityDescriptor: D:(A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;DA)
 (A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;SY)(A;;RPLCLORC;;;AU)
 (A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;CO)
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=ms-DS-Az-Admin-Manager,<SchemaNCDN>
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.27 Class msDS-AzApplication

This class defines an installed instance of an application that is bound to a particular policy store.

```
cn: ms-DS-Az-Application
ldapDisplayName: msDS-AzApplication
governsId: 1.2.840.113556.1.5.235
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
mayContain: msDS-AzGenericData, msDS-AzObjectGuid
systemMayContain: description, msDS-AzApplicationName,
 msDS-AzClassId, msDS-AzApplicationVersion, msDS-AzGenerateAudits,
 msDS-AzApplicationData
systemPossSuperiors: msDS-AzAdminManager
schemaIdGuid: ddf8de9b-cba5-4e12-842e-28d8b66f75ec
defaultSecurityDescriptor: D:(A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;DA)
 (A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;SY)(A;;RPLCLORC;;;AU)
 (A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;CO)
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=ms-DS-Az-Application,<SchemaNCDN>
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.28 Class msDS-AzOperation

This class describes a particular operation supported by an application.

```
cn: ms-DS-Az-Operation
ldapDisplayName: msDS-AzOperation
governsId: 1.2.840.113556.1.5.236
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMustContain: msDS-AzOperationID
mayContain: msDS-AzGenericData, msDS-AzObjectGuid
systemMayContain: description, msDS-AzApplicationData
systemPossSuperiors: container, msDS-AzApplication
schemaIdGuid: 860abe37-9a9b-4fa4-b3d2-b8ace5df9ec5
defaultSecurityDescriptor: D:(A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;DA)
 (A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;SY)(A;;RPLCLORC;;;AU)
 (A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;CO)
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=ms-DS-Az-Operation,<SchemaNCDN>
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.29 Class msDS-AzRole

This class defines a set of operations that can be performed by a particular set of users within a particular scope.

```
cn: ms-DS-Az-Role
ldapDisplayName: msDS-AzRole
governsId: 1.2.840.113556.1.5.239
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
mayContain: msDS-AzGenericData, msDS-AzObjectGuid
systemMayContain: description, msDS-MembersForAzRole,
 msDS-OperationsForAzRole, msDS-TasksForAzRole, msDS-AzApplicationData
systemPossSuperiors: container, msDS-AzApplication, msDS-AzScope
schemaIdGuid: 8213eac9-9d55-44dc-925c-e9a52b927644
defaultSecurityDescriptor: D:(A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;DA)
 (A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;SY)(A;;RPLCLORC;;;AU)
 (A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;CO)
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=ms-DS-Az-Role,<SchemaNCDN>
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.30 Class msDS-AzScope

This class describes a set of objects that is managed by an application.

```
cn: ms-DS-Az-Scope
ldapDisplayName: msDS-AzScope
governsId: 1.2.840.113556.1.5.237
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMustContain: msDS-AzScopeName
mayContain: msDS-AzGenericData, msDS-AzObjectGuid
systemMayContain: description, msDS-AzApplicationData
systemPossSuperiors: msDS-AzApplication
schemaIdGuid: 4feae054-ce55-47bb-860e-5b12063a51de
defaultSecurityDescriptor: D:(A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;DA)
 (A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;SY)(A;;RPLCLORC;;;AU)
 (A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;CO)
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=ms-DS-Az-Scope,<SchemaNCDN>
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.31 Class msDS-AzTask

This class describes a set of operations.

```
cn: ms-DS-Az-Task
ldapDisplayName: msDS-AzTask
governsId: 1.2.840.113556.1.5.238
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
mayContain: msDS-AzGenericData, msDS-AzObjectGuid
systemMayContain: description, msDS-AzBizRule,
```

```
msDS-AzBizRuleLanguage, msDS-AzLastImportedBizRulePath,
 msDS-AzTaskIsRoleDefinition, msDS-AzApplicationData,
 msDS-OperationsForAzTask, msDS-TasksForAzTask
systemPossSuperiors: container, msDS-AzApplication, msDS-AzScope
schemaIdGuid: 1ed3a473-9b1b-418a-bfa0-3a37b95a5306
defaultSecurityDescriptor: D:(A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;DA)
 (A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;SY)(A;;RPLCLORC;;;AU)
 (A;;RPWPCRCCDCLCLORCWOWDSDDTSW;;;CO)
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=ms-DS-Az-Task,<SchemaNCDN>
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.32 Class msDS-BindableObject

This class specifies an auxiliary class to represent a bindable object. Any user-defined class that represents an entity that can be used to bind to the directory (that is, a user) includes this auxiliary class.

```
cn: ms-DS-Bindable-Object
ldapDisplayName: msDS-BindableObject
governsId: 1.2.840.113556.1.5.244
objectClassCategory: 3
rdnAttId: cn
subClassOf: securityPrincipal
systemMayContain: lastLogonTimestamp, accountExpires,
 ms-DS-User-Account-Control-Computed, ms-DS-UserAccountAutoLocked,
 ms-DS-UserPasswordExpired, ms-DS-UserEncryptedTextPasswordAllowed,
 ms-DS-UserPasswordNotRequired, msDS-UserAccountDisabled,
 msDS-UserDontExpirePassword, ntPwdHistory, lockoutTime, badPwdCount,
 badPasswordTime, pwdLastSet, unicodePwd
schemaIdGuid: 89f4a69f-4416-6b49-821d-6e3c4a0ff802
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=ms-DS-Bindable-Object,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.33 Class msDS-BindProxy

This class specifies an auxiliary class to represent a bind proxy in AD LDS. A bind proxy references a Windows security principal via its objectSid attribute. When a user performs a simple bind against a bind-proxy object, the bind is redirected to the corresponding Windows principal.

```
cn: ms-DS-Bind-Proxy
ldapDisplayName: msDS-BindProxy
governsId: 1.2.840.113556.1.5.245
objectClassCategory: 3
rdnAttId: cn
subClassOf: top
systemMustContain: objectSid
systemMayContain: msDS-PrincipalName
schemaIdGuid: 717532ab-66e9-684d-a62b-8af1e3985e2f
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=ms-DS-Bind-Proxy,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.34 Class msDS-OptionalFeature

This class defines the configuration object for an optional feature.

```
cn: ms-DS-Optional-Feature
ldapDisplayName: msDS-OptionalFeature
governsId: 1.2.840.113556.1.5.265
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMustContain: msDS-OptionalFeatureFlags, msDS-OptionalFeatureGUID
systemMayContain: msDS-RequiredDomainBehaviorVersion,
 msDS-RequiredForestBehaviorVersion
systemPossSuperiors: container
schemaIdGuid: 44f00041-35af-468b-b20a-6ce8737c580b
defaultSecurityDescriptor: D:(A;;RPLCLORC;;;AU)
 (A;;RPWPCRLCLOCCDCRCWDWOSDDTSW;;;EA)
 (A;;RPWPCRLCLOCCDCRCWDWOSDDTSW;;;CO)
 (A;;RPWPCRLCLOCCDCRCWDWOSDDTSW;;;SY)
defaultHidingValue: TRUE
systemOnly: TRUE
defaultObjectCategory: CN=ms-DS-Optional-Feature,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on Windows Server 2008 R2 operating system.

3.35 Class msDS-QuotaContainer

This class specifies a special container that holds all quota specifications for the directory database.

```
cn: ms-DS-Quota-Container
ldapDisplayName: msDS-QuotaContainer
governsId: 1.2.840.113556.1.5.242
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMustContain: cn
systemMayContain: msDS-TopQuotaUsage, msDS-QuotaUsed,
 msDS-QuotaEffective, msDS-TombstoneQuotaFactor, msDS-DefaultQuota
systemPossSuperiors: configuration, domainDNS
schemaIdGuid: da83fc4f-076f-4aea-b4dc-8f4dab9b5993
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=ms-DS-Quota-Container,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.36 Class msDS-QuotaControl

This class is used to represent quota specifications for the directory database.

```
cn: ms-DS-Quota-Control
ldapDisplayName: msDS-QuotaControl
governsId: 1.2.840.113556.1.5.243
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMustContain: msDS-QuotaAmount, msDS-QuotaTrustee, cn
systemPossSuperiors: msDS-QuotaContainer
schemaIdGuid: de91fc26-bd02-4b52-ae26-795999e96fc7
```

```
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=ms-DS-Quota-Control,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.37 Class msDS-ServiceConnectionPointPublicationService

This class stores configuration options for the SCP publication service in AD LDS.

```
cn: ms-DS-Service-Connection-Point-Publication-Service
ldapDisplayName: msDS-ServiceConnectionPointPublicationService
governsId: 1.2.840.113556.1.5.247
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMayContain: Enabled, msDS-SCPContainer,
 msDS-DisableForInstances, keywords
systemPossSuperiors: nTDSService
schemaIdGuid: d33f5da6-b009-7e48-8268-b2305529e933
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: TRUE
defaultObjectCategory:
  CN=ms-DS-Service-Connection-Point-Publication-Service,<SchemaNCDN>
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.38 Class nTDSConnection

This class specifies a connection from a remote domain controller (DC).

```
cn: NTDS-Connection
ldapDisplayName: nTDSConnection
governsId: 1.2.840.113556.1.5.71
objectClassCategory: 1
rdnAttId: cn
subClassOf: leaf
systemMustContain: options, fromServer, enabledConnection
systemMayContain: transportType, schedule, mS-DS-ReplicatesNCReason,
 generatedConnection
systemPossSuperiors: nTDSDSA
schemaIdGuid: 19195a60-6da0-11d0-afd3-00c04fd930c9
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=NTDS-Connection,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.39 Class nTDSDSA

This class represents the Active Directory DSA process on the server.

```
cn: NTDS-DSA
ldapDisplayName: nTDSDSA
```

```
governsId: 1.2.840.113556.1.5.7000.47
objectClassCategory: 1
rdnAttId: cn
subClassOf: applicationSettings
systemMayContain: msDS-DefaultNamingContext, serverReference,
 msDS-RetiredReplNCSignatures, retiredReplDSASignatures,
 queryPolicyObject, options, networkAddress, msDS-ServiceAccount,
 msDS-ServiceAccountDNSDomain, msDS-PortSSL, msDS-PortLDAP,
 msDS-ReplicationEpoch, msDS-HasInstantiatedNCs, msDS-hasMasterNCs,
 msDS-HasDomainNCs, msDS-Behavior-Version, managedBy,
 lastBackupRestorationTime, invocationId, hasPartialReplicaNCs,
 hasMasterNCs, dMDLocation, msDS-EnabledFeature
systemPossSuperiors: organization, server
schemaIdGuid: f0f8ffab-1191-11d0-a060-00aa006c33ed
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: TRUE
defaultObjectCategory: CN=NTDS-DSA,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.40 Class nTDSService

This class is used for an NTDS services object, which contains information about the configuration of the directory service forest. This object is kept in the CN=Directory Service,CN=Windows NT,CN=Services,CN=Configuration,... container.

```
cn: NTDS-Service
ldapDisplayName: nTDSService
governsId: 1.2.840.113556.1.5.72
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMayContain: msDS-DeletedObjectLifetime, tombstoneLifetime,
 replTopologyStayOfExecution, msDS-Other-Settings, garbageCollPeriod,
 dSHeuristics
systemPossSuperiors: container
schemaIdGuid: 19195a5f-6da0-11d0-afd3-00c04fd930c9
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=NTDS-Service,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.41 Class nTDSSiteSettings

This class specifies a container for holding all Active Directory site-specific settings.

```
cn: NTDS-Site-Settings
ldapDisplayName: nTDSSiteSettings
governsId: 1.2.840.113556.1.5.69
objectClassCategory: 1
rdnAttId: cn
subClassOf: applicationSiteSettings
systemMayContain: schedule, queryPolicyObject, options,
 msDS-Preferred-GC-Site, managedBy, interSiteTopologyRenew,
 interSiteTopologyGenerator, interSiteTopologyFailover
systemPossSuperiors: site
schemaIdGuid: 19195a5d-6da0-11d0-afd3-00c04fd930c9
```

```
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=NTDS-Site-Settings,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.42 Class organizationalPerson

This class is used for objects that contain organizational information about a user, such as the employee number, department, manager, title, and office address.

```
cn: Organizational-Person
ldapDisplayName: organizationalPerson
governsId: 2.5.6.7
objectClassCategory: 0
rdnAttId: cn
subClassOf: person
mayContain: homePostalAddress, houseIdentifier
systemMayContain: streetAddress, assistant, company, countryCode,
 c, department, destinationIndicator, division, mail, employeeID,
 facsimileTelephoneNumber, generationQualifier, givenName, initials,
 internationalISDNNumber, l, thumbnailLogo, manager, o, ou,
 middleName, personalTitle, otherFacsimileTelephoneNumber, homePhone,
 otherHomePhone, otherIpPhone, ipPhone,
 primaryInternationalISDNNumber, otherMobile, mobile, otherTelephone,
 otherPager, pager, physicalDeliveryOfficeName, thumbnailPhoto,
 postOfficeBox, postalAddress, postalCode, preferredDeliveryMethod,
 registeredAddress, st, street, teletexTerminalIdentifier,
 telexNumber, primaryTelexNumber, co, title, comment, x121Address
systemPossSuperiors: container, organization, organizationalUnit
schemaIdGuid: bf967aa4-0de6-11d0-a285-00aa003049e2
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Person,<SchemaNCDN>
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.43 Class organization

This class stores information about a company or organization.

```
cn: Organization
ldapDisplayName: organization
governsId: 2.5.6.4
objectClassCategory: 1
rdnAttId: o
subClassOf: top
systemMustContain: o
systemMayContain: x121Address, userPassword, telexNumber,
 teletexTerminalIdentifier, telephoneNumber, street, st, seeAlso,
 searchGuide, registeredAddress, preferredDeliveryMethod, postalCode,
 postalAddress, postOfficeBox, physicalDeliveryOfficeName, l,
 internationalISDNNumber, facsimileTelephoneNumber,
 destinationIndicator, businessCategory
systemPossSuperiors: locality, country, domainDNS
schemaIdGuid: bf967aa3-0de6-11d0-a285-00aa003049e2
defaultSecurityDescriptor: D:S:
defaultHidingValue: FALSE
systemOnly: FALSE
defaultObjectCategory: CN=Organization,<SchemaNCDN>
```

```
      systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.44 Class organizationalUnit

This class specifies a container for storing users, computers, and other account objects.

```
      cn: Organizational-Unit
      ldapDisplayName: organizationalUnit
      governsId: 2.5.6.5
      objectClassCategory: 1
      rdnAttId: ou
      subClassOf: top
      systemMustContain: ou
      systemMayContain: x121Address, userPassword, uPNSuffixes, co,
       telexNumber, teletexTerminalIdentifier, telephoneNumber, street, st,
       seeAlso, searchGuide, registeredAddress, preferredDeliveryMethod,
       postalCode, postalAddress, postOfficeBox,
       physicalDeliveryOfficeName, managedBy, thumbnailLogo, l,
       internationalISDNNumber, facsimileTelephoneNumber,
       destinationIndicator, desktopProfile, defaultGroup, countryCode, c,
       businessCategory
      systemPossSuperiors: country, organization, organizationalUnit,
       domainDNS
      schemaIdGuid: bf967aa5-0de6-11d0-a285-00aa003049e2
      defaultSecurityDescriptor: D:S:
      defaultHidingValue: FALSE
      systemOnly: FALSE
      defaultObjectCategory: CN=Organizational-Unit,<SchemaNCDN>
      systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.45 Class person

This class contains personal information about a user.

```
      cn: Person
      ldapDisplayName: person
      governsId: 2.5.6.6
      objectClassCategory: 0
      rdnAttId: cn
      subClassOf: top
      systemMustContain: cn
      mayContain: attributeCertificateAttribute
      systemMayContain: seeAlso, serialNumber, sn, telephoneNumber,
       userPassword
      systemPossSuperiors: container, organizationalUnit
      schemaIdGuid: bf967aa7-0de6-11d0-a285-00aa003049e2
      defaultSecurityDescriptor: D:S:
      defaultHidingValue: TRUE
      systemOnly: FALSE
      defaultObjectCategory: CN=Person,<SchemaNCDN>
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.46 Class queryPolicy

This class holds administrative limits for LDAP server resources for sorted and paged results.

```
cn: Query-Policy
ldapDisplayName: queryPolicy
governsId: 1.2.840.113556.1.5.106
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMayContain: lDAPIPDenyList, lDAPAdminLimits
systemPossSuperiors: container
schemaIdGuid: 83cc7075-cca7-11d0-afff-0000f80367c1
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Query-Policy,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.47 Class securityPrincipal

This class contains the security information for an object.

```
cn: Security-Principal
ldapDisplayName: securityPrincipal
governsId: 1.2.840.113556.1.5.6
objectClassCategory: 3
rdnAttId: cn
subClassOf: top
systemMustContain: objectSid
systemMayContain: supplementalCredentials, tokenGroups,
 nTSecurityDescriptor
schemaIdGuid: bf967ab0-0de6-11d0-a285-00aa003049e2
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Security-Principal,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.48 Class server

This class represents a server computer within a site.

```
cn: Server
ldapDisplayName: server
governsId: 1.2.840.113556.1.5.17
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMayContain: mailAddress, serverReference, managedBy,
 nETBIOSName, dNSHostName, bridgeheadTransportList
systemPossSuperiors: serversContainer
schemaIdGuid: bf967a92-0de6-11d0-a285-00aa003049e2
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Server,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.49 Class serversContainer

This class holds server objects within a site.

```
cn: Servers-Container
ldapDisplayName: serversContainer
governsId: 1.2.840.113556.1.5.7000.48
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemPossSuperiors: site
schemaIdGuid: f780acc0-56f0-11d1-a9c6-0000f80367c1
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Servers-Container,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.50 Class site

This class specifies a container for storing server objects. This class represents a physical location containing computers; it is used to manage replication.

```
cn: Site
ldapDisplayName: site
governsId: 1.2.840.113556.1.5.31
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMayContain: msDS-BridgeHeadServersUsed, notificationList,
 managedBy, location
systemPossSuperiors: sitesContainer
schemaIdGuid: bf967ab3-0de6-11d0-a285-00aa003049e2
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Site,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.51 Class siteLink

This object represents the connection between two sites.

```
cn: Site-Link
ldapDisplayName: siteLink
governsId: 1.2.840.113556.1.5.147
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMustContain: siteList
systemMayContain: schedule, replInterval, options, cost
systemPossSuperiors: interSiteTransport
schemaIdGuid: d50c2cde-8951-11d1-aebc-0000f80367c1
defaultSecurityDescriptor: D:S:
defaultHidingValue: FALSE
systemOnly: FALSE
defaultObjectCategory: CN=Site-Link,<SchemaNCDN>
```

```
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.52 Class siteLinkBridge

This class specifies an object for tracking the site links that are transitively connected.

```
cn: Site-Link-Bridge
ldapDisplayName: siteLinkBridge
governsId: 1.2.840.113556.1.5.148
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMustContain: siteLinkList
systemPossSuperiors: interSiteTransport
schemaIdGuid: d50c2cdf-8951-11d1-aebc-0000f80367c1
defaultSecurityDescriptor: D:S:
defaultHidingValue: FALSE
systemOnly: FALSE
defaultObjectCategory: CN=Site-Link-Bridge,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.53 Class sitesContainer

This class specifies a container for storing site objects. Located in the configuration naming context.

```
cn: Sites-Container
ldapDisplayName: sitesContainer
governsId: 1.2.840.113556.1.5.107
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemPossSuperiors: configuration
schemaIdGuid: 7a4117da-cd67-11d0-afff-0000f80367c1
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Sites-Container,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.54 Class subnet

This class represents a specific subnet in the network to which servers and workstations are attached.

```
cn: Subnet
ldapDisplayName: subnet
governsId: 1.2.840.113556.1.5.96
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMayContain: siteObject, location
systemPossSuperiors: subnetContainer
schemaIdGuid: b7b13124-b82e-11d0-afee-0000f80367c1
defaultSecurityDescriptor: D:S:
```

```
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Subnet,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.55 Class subnetContainer

This class specifies a container for holding all subnet objects.

```
cn: Subnet-Container
ldapDisplayName: subnetContainer
governsId: 1.2.840.113556.1.5.95
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemPossSuperiors: sitesContainer
schemaIdGuid: b7b13125-b82e-11d0-afee-0000f80367c1
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=Subnet-Container,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.56 Class subSchema

This class contains the schema definition.

```
cn: SubSchema
ldapDisplayName: subSchema
governsId: 2.5.20.1
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemMayContain: objectClasses, modifyTimeStamp, extendedClassInfo,
 extendedAttributeInfo, dITContentRules, attributeTypes
systemPossSuperiors: dMD
schemaIdGuid: 5a8b3261-c38d-11d1-bbc9-0080c76670c0
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: TRUE
defaultObjectCategory: CN=SubSchema,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT | FLAG_DOMAIN_DISALLOW_RENAME
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.57 Class syncEngineAuxConfiguration

ms-DS-Sync-Engine-Aux-Configuration

```
cn: ms-DS-Sync-Engine-Aux-Configuration
ldapDisplayName: syncEngineAuxConfiguration
governsId: 1.2.840.113556.1.4.1891
objectClassCategory: 3
rdnAttId: cn
subClassOf: top
```

```
systemMayContain: configurationFile
systemOnly: FALSE
defaultObjectCategory: CN=ms-DS-Sync-Engine-Aux-Configuration,
 <SchemaNCDN>
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.58 Class syncEngineAuxObject

ms-DS-Sync-Engine-Aux-Object

```
cn: ms-DS-Sync-Engine-Aux-Object
ldapDisplayName: syncEngineAuxObject
governsId: 1.2.840.113556.1.4.1890
objectClassCategory: 3
rdnAttId: cn
subClassOf: top
systemMayContain: nonIndexedMetadata, lastAgedChange,
 configurationFileGuid, sourceObjectGuid
systemOnly: FALSE
defaultObjectCategory: CN=ms-DS-Sync-Engine-Aux-Object,<SchemaNCDN>
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.59 Class top

This class is the top-level class from which all classes are derived.

```
cn: Top
ldapDisplayName: top
governsId: 2.5.6.0
objectClassCategory: 2
rdnAttId: cn
subClassOf: top
systemMustContain: objectClass, objectCategory, nTSecurityDescriptor,
 instanceType
mayContain: directReports, ownerBL, msDS-TasksForAzRoleBL,
 msDS-OperationsForAzRoleBL, msDS-TasksForAzTaskBL,
 msDS-OperationsForAzTaskBL
systemMayContain: msDS-EnabledFeatureBL, msDS-LastKnownRDN,
 msDS-LocalEffectiveRecycleTime, msDS-LocalEffectiveDeletionTime,
 isRecycled, url, wWWHomePage, whenCreated, whenChanged,
 wellKnownObjects, wbemPath, uSNSource, uSNLastObjRem, USNIntersite,
 uSNDSALastObjRemoved, uSNCreated, uSNChanged, systemFlags,
 subSchemaSubEntry, subRefs, structuralObjectClass, siteObjectBL,
 serverReferenceBL, sDRightsEffective, revision, repsTo, repsFrom,
 replUpToDateVector, replPropertyMetaData, name, queryPolicyBL,
 proxyAddresses, proxiedObjectName, possibleInferiors,
 partialAttributeSet, partialAttributeDeletionList,
 otherWellKnownObjects, objectVersion, objectGUID, distinguishedName,
 msDS-DisableForInstancesBL, msDS-ServiceAccountBL,
 msDS-ReplValueMetaData, msDS-ReplAttributeMetaData,
 msDS-NCReplOutboundNeighbors, msDS-NCReplInboundNeighbors,
 msDS-NCReplCursors, msDS-NonMembersBL, msDS-MembersForAzRoleBL,
 msDs-masteredBy, msDS-DefaultNamingContextBL, mS-DS-ConsistencyGuid,
 mS-DS-ConsistencyChildCount, msDS-Approx-Immed-Subordinates,
 modifyTimeStamp, masteredBy, managedObjects, lastKnownParent,
 memberOf, isDeleted, isCriticalSystemObject, showInAdvancedViewOnly,
 fSMORoleOwner, fromEntry, dSASignature, dSCorePropagationData,
 displayName, description, createTimeStamp, cn, canonicalName,
 bridgeheadServerListBL, allowedChildClassesEffective,
 allowedChildClasses, allowedAttributesEffective, allowedAttributes,
 adminDisplayName, adminDescription, msds-memberOfTransitive,
```

```
   msds-memberTransitive, msDS-parentdistname, msDS-ReplValueMetaDataExt
systemPossSuperiors: lostAndFound
schemaIdGuid: bf967ab7-0de6-11d0-a285-00aa003049e2
defaultSecurityDescriptor: D:S:
defaultHidingValue: TRUE
systemOnly: TRUE
defaultObjectCategory: CN=Top,<SchemaNCDN>
systemFlags: FLAG_SCHEMA_BASE_OBJECT
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.60 Class userProxy

This class is the sample class for bind proxy implementation.

```
cn: User-Proxy
ldapDisplayName: userProxy
governsId: 1.2.840.113556.1.5.246
objectClassCategory: 1
rdnAttId: cn
subClassOf: top
systemAuxiliaryClass: msDS-BindProxy
systemMayContain: userPrincipalName
possSuperiors: organization, container, organizationalUnit, domainDNS
schemaIdGuid: 60d6186f-f3b6-4898-b0ad-6535afc07620
defaultSecurityDescriptor:
 D:(OA;;CR;ab721a53-1e2f-11d0-9819-00aa0040529b;;PS)S:
defaultHidingValue: TRUE
systemOnly: FALSE
defaultObjectCategory: CN=User-Proxy,<SchemaNCDN>
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.61 Class userProxyFull

This class is the sample user proxy class with the same properties as the native user class.

```
cn: User-Proxy-Full
ldapDisplayName: userProxyFull
governsId: 1.2.840.113556.1.5.248
objectClassCategory: 1
rdnAttId: cn
subClassOf: organizationalPerson
systemAuxiliaryClass: msDS-BindProxy
mayContain: audio, carLicense, departmentNumber, displayName,
 employeeNumber, employeeType, givenName, homePostalAddress,
 jpegPhoto, labeledURI, photo, preferredLanguage, roomNumber,
 secretary, uid, userPKCS12, userSMIMECertificate,
 x500uniqueIdentifier
systemMayContain: defaultClassStore, dynamicLDAPServer,
 lastLogonTimestamp, preferredOU, userParameters, userPrincipalName,
 userCertificate, businessCategory, homePhone, initials, mail,
 manager, mobile, o, pager
systemPossSuperiors: domainDNS, organizationalUnit
schemaIdGuid: 2210527a-eb01-4ff0-b883-186f40a92979
defaultSecurityDescriptor:
 D:(OA;;CR;ab721a53-1e2f-11d0-9819-00aa0040529b;;PS)S:
defaultHidingValue: FALSE
systemOnly: FALSE
defaultObjectCategory: CN=Person,<SchemaNCDN>
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

3.62 Class user

This class is used to store information about an employee or contractor who works for an organization. It is also possible to apply this class to long-term visitors.

```
cn: User
ldapDisplayName: user
governsId: 1.2.840.113556.1.5.9
objectClassCategory: 1
rdnAttId: cn
subClassOf: organizationalPerson
systemAuxiliaryClass: msDS-BindableObject, securityPrincipal
mayContain: audio, carLicense, departmentNumber, displayName,
 employeeNumber, employeeType, givenName, homePostalAddress,
 jpegPhoto, labeledURI, photo, preferredLanguage, roomNumber,
 secretary, uid, userPKCS12, userSMIMECertificate,
 x500uniqueIdentifier
systemMayContain: defaultClassStore, dynamicLDAPServer,
 lastLogonTimestamp, preferredOU, userParameters, userPrincipalName,
 userCertificate, businessCategory, homePhone, initials, mail,
 manager, mobile, o, pager
systemPossSuperiors: domainDNS, organizationalUnit
schemaIdGuid: bf967aba-0de6-11d0-a285-00aa003049e2
defaultSecurityDescriptor:
 D:(OA;;CR;ab721a53-1e2f-11d0-9819-00aa0040529b;;PS)S:
defaultHidingValue: FALSE
systemOnly: FALSE
defaultObjectCategory: CN=Person,<SchemaNCDN>
```

Version-Specific Behavior: First implemented on ADAM and Windows Server 2008.

4   Change Tracking

This section identifies changes that were made to this document since the last release. Changes are classified as Major, Minor, or None.

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.
- A document revision that captures changes to protocol functionality.

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 **None** means that no new technical changes were introduced. Minor editorial and formatting changes may have been made, but the relevant technical content is identical to the last released version.

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

Section	Description	Revision class
1 Introduction	Added a reference to [MS-ADTS] for the list of applicable products.	Minor

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