

International Telecommunication Union

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

X.501

Amendment 1
(10/2021)

SERIES X: DATA NETWORKS, OPEN SYSTEM
COMMUNICATIONS AND SECURITY

Directory

Information Technology – Open systems
Interconnection – The Directory: Models

Amendment 1: Miscellaneous enhancements

Recommendation ITU-T X.501 (2019) – Amendment 1

ITU-T



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Summary

Amendment 1 to Rec. ITU-T X.501 (2019) | ISO/IEC 9594-2:2020 updates clause 9.2 and Annex A.

The amendment has successfully gone through the enquiry state at ISO/IEC and ISO/IEC does not anymore accept any technical comments. ITU-T SG 17 members have been part of the ISO/IEC ballot process and have had ample opportunities in the past to influence the technical content.

History

Edition	Recommendation	Approval	Study Group	Unique ID*
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3.3	ITU-T X.501 (1997) Technical Cor. 2	2001-02-02	7	11.1002/1000/5308
3.4	ITU-T X.501 (1997) Technical Cor. 3	2005-05-14	17	11.1002/1000/8499
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4.1	ITU-T X.501 (2001) Technical Cor. 1	2005-05-14	17	11.1002/1000/8500
4.2	ITU-T X.501 (2001) Technical Cor. 2	2005-11-29	17	11.1002/1000/8634
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5.1	ITU-T X.501 (2005) Cor. 1	2008-05-29	17	11.1002/1000/9432
5.2	ITU-T X.501 (2005) Cor. 2	2008-11-13	17	11.1002/1000/9589
5.3	ITU-T X.501 (2005) Cor. 3	2011-02-13	17	11.1002/1000/11040
5.4	ITU-T X.501 (2005) Cor. 4	2012-04-13	17	11.1002/1000/11575
6.0	ITU-T X.501	2008-11-13	17	11.1002/1000/9588
6.1	ITU-T X.501 (2008) Cor. 1	2011-02-13	17	11.1002/1000/11041
6.2	ITU-T X.501 (2008) Cor. 2	2012-04-13	17	11.1002/1000/11576
6.3	ITU-T X.501 (2008) Cor. 3	2012-10-14	17	11.1002/1000/11734
7.0	ITU-T X.501	2012-10-14	17	11.1002/1000/11733
8.0	ITU-T X.501	2016-10-14	17	11.1002/1000/13030
9.0	ITU-T X.501	2019-10-14	17	11.1002/1000/14032
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In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

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In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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INTERNATIONAL STANDARD
ITU-T RECOMMENDATION

Information Technology – Open systems Interconnection – The Directory: Models

Amendment 1

Miscellaneous enhancements

1) Clause 9.2, Names in general

Replace the **Name** data type with the following definition:

```
Name ::= CHOICE {
  rdnSequence  RDNSequence,
  dnsName      DomainName,
  oid          OBJECT IDENTIFIER }
```

```
DomainName ::= UTF8String (CONSTRAINED BY {
  -- Conforms to the format of an (internationalized) domain name. -- })
```

Add the following text right after the new **Name** definition:

The **rdnSequence** alternative shall be a sequence of relative distinguished names and shall be a distinguished name when identifying a particular entity.

The **dnsName** alternative shall hold a domain name system (DNS) domain name, which may be an internationalized domain name (IDN), as specified in IETF RFC 5890. It shall be a fully-qualified domain name (FQDN), i.e., it shall identify a particular entity.

A domain name may be in three formats:

- a) All characters in the label are from the Basic Latin collection as defined by ISO/IEC 10646 (i.e., having code points in the ranges 002D, 0030-0039, 0041-005A and 0061-007A) and it does not start with "xn--". The maximum length is 63 octets.
- b) It is an A-label as defined in IETF RFC 5890, i.e., it starts with the "xn--" and is a U-label converted to valid ASCII characters as in item a) using the Punycode algorithm defined by IETF RFC 3492. The converted string shall be maximum 59 octets. To be valid, it shall be possible for an A-label to be converted to a valid U-label.
- c) It is a U-label as defined in IETF RFC 5890, i.e., it contains characters outside the Basic Latin collection. A valid U-label shall not include any characters that are not included in the restricted Unicode repertoire as defined by IETF RFC 5892 and it shall be convertible to a valid A-label as defined in item b). A valid U-label may be more than 63 octets.

NOTE – In a constraint environment, it is recommended to use a domain name according to item a) whenever possible.

The **oid** alternative shall be an object identifier that uniquely identifies a particular entity.

2) Annex A, Object identifier usage

At the end of "categories of information object", add:

```
wrapperProtocolType  ID ::= {ds 43}
algorithm           ID ::= {ds 44}
```

At the end of "synonyms", add:

```
id-wrprot           ID ::= wrapperProtocolType
id-algo            ID ::= algorithm
```


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