
**Information technology — Open
systems interconnection directory —
Part 11:
Protocol specifications for secure
operations**

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INTERNATIONAL STANDARD ISO/IEC 9594-11
RECOMMENDATION ITU-T X.510

Information technology – Open Systems Interconnection –
The Directory: Protocol specifications for secure operations

Summary

Recommendation ITU-T X.510 | ISO/IEC 9594-11 specifies a general protocol, called the wrapper protocol, that provides cybersecurity for protocols designed for its protection. The wrapper protocol provides authentication, integrity and optionally confidentiality (encryption). The wrapper protocol allows cybersecurity to be provided independently of the protected protocols, which means that security may be enhanced without affecting protected protocol specifications.

The wrapper protocol is specified without specifying specific cryptographic algorithms, but is designed for plucking-in cryptographic algorithms as required.

The wrapper protocol is designed for easy migration of cryptographic algorithms, as stronger cryptographic algorithms become necessary.

Recommendation ITU-T X.510 | ISO/IEC 9594-11 contains recommendations for how other Recommendations and International Standards may include features for migration of cryptographic algorithms, and it includes ASN.1 specifications to be applied for that purpose.

Recommendation ITU-T X.510 | ISO/IEC 9594-11 also specifies three protocols that make use of the wrapper protocol protection. This includes a protocol for maintenance of authorization and validation lists (AVLs), a protocol for subscribing of public-key certificate status and a protocol for accessing a trust broker.

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Certification authority, cryptography, cryptographic algorithm, digital signature, public-key certificate, PKI, quantum-safe, trust anchor, validation.

* To access the Recommendation, type the URL <http://handle.itu.int/> in the address field of your web browser, followed by the Recommendation's unique ID. For example, <http://handle.itu.int/11.1002/1000/11830-en>.

FOREWORD

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

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.

NOTE

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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