
Information technology — TLS specification for storage systems

*Technologies de l'information — Spécification TLS pour systèmes de
stockage*

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: [Foreword — Supplementary information](#).

ISO/IEC 20648 was prepared by the Storage Networking Industry Association (SNIA) [as TLS Specification for Storage Systems, Version 1.0.1] and was adopted, under the PAS procedure, by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, in parallel with its approval by the national bodies of ISO and IEC. The content of ISO/IEC 20648 and SNIA TLS Specification for Storage Systems Version 1.0.1 is identical.

Introduction

Within Information and Communications Technology (CT), one of the best defenses against telecommunications attacks is to deploy security services implemented with mechanisms specified in standards that are thoroughly vetted in the public domain and rigorously tested by third party laboratories, by vendors, and by users of commercial off-the-shelf products. Three services that most often address network user security requirements are confidentiality, message integrity and authentication.

The Internet Engineering Task Force (IETF) with its Transport Layer Security (TLS) has a standard that is able to prevent tampering, message forgery, and eavesdropping by encrypting data units, or segments, from one end of the transport layer to the other. In addition, TLS is application protocol independent, which means higher-level protocols like HTTP can layer on top of the TLS protocol transparently.

Additional details beyond the basic TLS protocol specification are necessary to ensure both security and interoperability. This specification provides that detail in the form of specific requirements and guidance for using Transport Layer Security (TLS) in conjunction with storage systems.

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