
**IT Security techniques — Key
management —**

**Part 2:
Mechanisms using symmetric
techniques**

Techniques de sécurité IT — Gestion de clés —

Partie 2: Mécanismes utilisant des techniques symétriques

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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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This document was prepared by Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 27, *Security techniques*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

This third edition cancels and replaces the second edition (ISO/IEC 11770-2:2008), which has been technically revised. It also incorporates ISO/IEC 11770-2:2008/Cor 1:2009.

The main changes compared to the previous edition are as follows:

- the list of requirements in [Clause 5](#) has been updated;
- an optional message and mechanism identifier to the encrypted strings sent within each of the mechanisms has been added;
- the set of inputs for calculation of the key in Mechanism 5 has been expanded;
- minor changes have been made to the fourth message in Mechanism 8 and the second message in Mechanism 10.

A list of all parts in the ISO/IEC 11770 series can be found on the ISO website.

Introduction

The purpose of key management is to provide procedures for handling cryptographic keying material to be used in symmetric or asymmetric cryptographic algorithms according to the security policy in force.

Key establishment mechanisms using symmetric cryptographic techniques can be derived from the entity authentication mechanisms of ISO/IEC 9798-2 and ISO/IEC 9798-4 by specifying the use of text fields available in those mechanisms. Other key establishment mechanisms exist for specific environments. Besides key establishment, the goals of such a mechanism can include unilateral or mutual authentication of the communicating entities. Further goals can be the verification of the integrity of the established key, or key confirmation.

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