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**IT Security techniques — Entity  
authentication —**

**Part 2:  
Mechanisms using authenticated  
encryption**

*Techniques de sécurité IT — Authentification d'entité —  
Partie 2: Mécanismes utilisant le chiffrement authentifié*





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ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Fax: +41 22 749 09 47  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

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# Contents

	Page
<b>Foreword</b> .....	<b>iv</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Symbols and abbreviated terms</b> .....	<b>2</b>
<b>5 General</b> .....	<b>3</b>
<b>6 Requirements</b> .....	<b>3</b>
<b>7 Mechanisms not involving an on-line trusted third party</b> .....	<b>4</b>
7.1 General.....	4
7.2 Unilateral authentication.....	4
7.2.1 General.....	4
7.2.2 Mechanism UNI.TS — One-pass authentication.....	5
7.2.3 Mechanism UNI.CR — Two-pass authentication.....	5
7.3 Mutual authentication.....	6
7.3.1 General.....	6
7.3.2 Mechanism MUT.TS — Two-pass authentication.....	6
7.3.3 Mechanism MUT.CR — Three-pass authentication.....	7
<b>8 Mechanisms involving an on-line trusted third party</b> .....	<b>8</b>
8.1 General.....	8
8.2 Mechanism TP.TS — Four-pass authentication.....	8
8.3 Mechanism TP.CR — Five-pass authentication.....	10
<b>Annex A (normative) Object Identifiers</b> .....	<b>12</b>
<b>Annex B (informative) Use of text fields</b> .....	<b>13</b>
<b>Annex C (informative) Properties of entity authentication mechanisms</b> .....	<b>14</b>
<b>Bibliography</b> .....	<b>15</b>

## 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.

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](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)) or the IEC list of patent declarations received (see <http://patents.iec.ch>).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

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

This fourth edition cancels and replaces the third edition (ISO/IEC 9798-2:2008), which has been technically revised. It also incorporates the Technical Corrigenda ISO/IEC 9798-2:2008/Cor.1:2010, ISO/IEC 9798-2:2008/Cor.2:2012 and ISO/IEC 9798-2:2008/Cor.3:2013. The main changes compared to the previous edition are as follows:

- replacement of encryption by authenticated encryption;
- inclusion of constants uniquely identifying the mechanism and the instance of authenticated encryption within the mechanism.

A list of all parts in the ISO/IEC 9798 series can be found on the ISO website.

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](http://www.iso.org/members.html).

# IT Security techniques — Entity authentication —

## Part 2:

# Mechanisms using authenticated encryption

## 1 Scope

This document specifies entity authentication mechanisms using authenticated encryption algorithms. Four of the mechanisms provide entity authentication between two entities where no trusted third party is involved; two of these are mechanisms to unilaterally authenticate one entity to another, while the other two are mechanisms for mutual authentication of two entities. The remaining mechanisms require an on-line trusted third party for the establishment of a common secret key. They also realize mutual or unilateral entity authentication.

[Annex A](#) defines Object Identifiers for the mechanisms specified in this document.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 9798-1, *Information technology — Security techniques — Entity authentication — Part 1: General*