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Information technology — Security techniques — Best practices for the provision and use of time-stamping services

Technologies de l'information — Techniques de sécurité — Meilleures pratiques pour la fourniture et l'utilisation de services d'horodotage

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Contents

Page

Foreword

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The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

In exceptional circumstances, when the joint technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide to publish a Technical Report. A Technical Report is entirely informative in nature and shall be subject to review every five years in the same manner as an International Standard.

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ISO/IEC TR 29149 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 27, *IT Security techniques*.

Introduction

This Technical Report explains how to provide and use time-stamping services so that time-stamp tokens are effective when used to provide

- timeliness and data integrity services, or
- non-repudiation services (in conjunction with other mechanisms).

ISO/IEC 18014 specifies time-stamping services, explaining how to generate, renew, and verify time-stamp tokens. The goal of a non-repudiation service is to treat evidence concerning a claimed event or action in order to resolve disputes about the occurrence or non-occurrence of the event or action. Depending on the non-repudiation service which is required, the non-repudiation policy in effect for a specific application, and the legal environment within which the application operates, time-stamp tokens from time-stamping authorities may be required as components of non-repudiation information.

Information technology — Security techniques — Best practices for the provision and use of time-stamping services

1 Scope

This Technical Report explains how to provide and use time-stamping services so that time-stamp tokens are effective when used to provide timeliness, data integrity, and non-repudiation services in conjunction with other mechanisms. It defines:

— how time-stamp requesters should use time-stamp token generation services;

— how TSAs (time-stamping authorities) should provide a service of guaranteed quality;

— how TSAs should deserve trust based on good practices;

— which algorithms and parameters should be used in TST (time-stamp token) generation and TST renewal, so that TSTs resist during the time period during which the TSTs can be verified as being valid;

— how time-stamp verifiers should use the time-stamp token verification services, both when validating individual TSTs, and when validating sequences of renewal TSTs.