

This is a preview of "BS ISO/IEC 27002:201...". Click [here](#) to purchase the full version from the ANSI store.

Incorporating corrigenda September 2014 and November 2015



BSI Standards Publication

Information technology — Security techniques — Code of practice for information security controls

bsi.

...making excellence a habit.™

This is a preview of "BS ISO/IEC 27002:201...". [Click here to purchase the full version from the ANSI store.](#)

This British Standard is the UK implementation of ISO/IEC 27002:2013, incorporating corrigenda September 2014 and November 2015. It supersedes BS ISO/IEC 27002:2005 (BS 7799-1:2005) which is withdrawn.

The start and finish of text introduced or altered by corrigendum is indicated in the text by tags. Text altered by ISO/IEC corrigendum September 2014 is indicated in the text by AC1 AC1.

The UK participation in its preparation was entrusted by Technical Committee IST/33, IT - Security techniques, to Subcommittee IST/33/-/1, Requirements, security services and guidelines.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2015.
Published by BSI Standards Limited 2015

ISBN 978 0 580 91369 3

ICS 35.040

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 1 October 2013.

Amendments/corrigenda issued since publication

Date	Text affected
31 October 2014	Implementation of ISO/IEC corrigendum September 2014
30 November 2015	Implementation of ISO/IEC corrigendum November 2015: Subclause 14.2.8 modified

Second edition
2013-10-01

Information technology — Security techniques — Code of practice for information security controls

Technologies de l'information — Techniques de sécurité — Code de bonne pratique pour le management de la sécurité de l'information



Reference number
ISO/IEC 27002:2013(E)

© ISO/IEC 2013



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2013

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

This is a preview of "BS ISO/IEC 27002:2013...". Click here to purchase the full version from the ANSI store.

Contents

Page

Foreword	v
0 Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Structure of this standard	1
4.1 Clauses	1
4.2 Control categories	1
5 Information security policies	2
5.1 Management direction for information security	2
6 Organization of information security	4
6.1 Internal organization	4
6.2 Mobile devices and teleworking	6
7 Human resource security	9
7.1 Prior to employment	9
7.2 During employment	10
7.3 Termination and change of employment	13
8 Asset management	13
8.1 Responsibility for assets	13
8.2 Information classification	15
8.3 Media handling	17
9 Access control	19
9.1 Business requirements of access control	19
9.2 User access management	21
9.3 User responsibilities	24
9.4 System and application access control	25
10 Cryptography	28
10.1 Cryptographic controls	28
11 Physical and environmental security	30
11.1 Secure areas	30
11.2 Equipment	33
12 Operations security	38
12.1 Operational procedures and responsibilities	38
12.2 Protection from malware	41
12.3 Backup	42
12.4 Logging and monitoring	43
12.5 Control of operational software	45
12.6 Technical vulnerability management	46
12.7 Information systems audit considerations	48
13 Communications security	49
13.1 Network security management	49
13.2 Information transfer	50
14 System acquisition, development and maintenance	54
14.1 Security requirements of information systems	54
14.2 Security in development and support processes	57
14.3 Test data	62
15 Supplier relationships	62
15.1 Information security in supplier relationships	62

This is a preview of "BS ISO/IEC 27002:201...". Click [here](#) to purchase the full version from the ANSI store.

15.2	Supplier service delivery management	66
16	Information security incident management	67
16.1	Management of information security incidents and improvements	67
17	Information security aspects of business continuity management	71
17.1	Information security continuity	71
17.2	Redundancies	73
18	Compliance	74
18.1	Compliance with legal and contractual requirements	74
18.2	Information security reviews	77
Bibliography		79

This is a preview of "BS ISO/IEC 27002:2013...". [Click here to purchase the full version from the ANSI store.](#)

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

ISO/IEC 27002 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 27, *IT Security techniques*.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

This second edition cancels and replaces the first edition (ISO/IEC 27002:2005), which has been technically and structurally revised.

0 Introduction

0.1 Background and context

This International Standard is designed for organizations to use as a reference for selecting controls within the process of implementing an Information Security Management System (ISMS) based on ISO/IEC 27001[10] or as a guidance document for organizations implementing commonly accepted information security controls. This standard is also intended for use in developing industry- and organization-specific information security management guidelines, taking into consideration their specific information security risk environment(s).

Organizations of all types and sizes (including public and private sector, commercial and non-profit) collect, process, store and transmit information in many forms including electronic, physical and verbal (e.g. conversations and presentations).

The value of information goes beyond the written words, numbers and images: knowledge, concepts, ideas and brands are examples of intangible forms of information. In an interconnected world, information and related processes, systems, networks and personnel involved in their operation, handling and protection are assets that, like other important business assets, are valuable to an organization's business and consequently deserve or require protection against various hazards.

Assets are subject to both deliberate and accidental threats while the related processes, systems, networks and people have inherent vulnerabilities. Changes to business processes and systems or other external changes (such as new laws and regulations) may create new information security risks. Therefore, given the multitude of ways in which threats could take advantage of vulnerabilities to harm the organization, information security risks are always present. Effective information security reduces these risks by protecting the organization against threats and vulnerabilities, and then reduces impacts to its assets.

Information security is achieved by implementing a suitable set of controls, including policies, processes, procedures, organizational structures and software and hardware functions. These controls need to be established, implemented, monitored, reviewed and improved, where necessary, to ensure that the specific security and business objectives of the organization are met. An ISMS such as that specified in ISO/IEC 27001[10] takes a holistic, coordinated view of the organization's information security risks in order to implement a comprehensive suite of information security controls under the overall framework of a coherent management system.

Many information systems have not been designed to be secure in the sense of ISO/IEC 27001[10] and this standard. The security that can be achieved through technical means is limited and should be supported by appropriate management and procedures. Identifying which controls should be in place requires careful planning and attention to detail. A successful ISMS requires support by all employees in the organization. It can also require participation from shareholders, suppliers or other external parties. Specialist advice from external parties can also be needed.

In a more general sense, effective information security also assures management and other stakeholders that the organization's assets are reasonably safe and protected against harm, thereby acting as a business enabler.

0.2 Information security requirements

It is essential that an organization identifies its security requirements. There are three main sources of security requirements:

- a) the assessment of risks to the organization, taking into account the organization's overall business strategy and objectives. Through a risk assessment, threats to assets are identified, vulnerability to and likelihood of occurrence is evaluated and potential impact is estimated;
- b) the legal, statutory, regulatory and contractual requirements that an organization, its trading partners, contractors and service providers have to satisfy, and their socio-cultural environment;

This is a preview of "BS ISO/IEC 27002:2013...". Click [here](#) to purchase the full version from the ANSI store.

- c) the set of principles, objectives and business requirements for information handling, processing, storing, communicating and archiving that an organization has developed to support its operations.

Resources employed in implementing controls need to be balanced against the business harm likely to result from security issues in the absence of those controls. The results of a risk assessment will help guide and determine the appropriate management action and priorities for managing information security risks and for implementing controls selected to protect against these risks.

ISO/IEC 27005^[11] provides information security risk management guidance, including advice on risk assessment, risk treatment, risk acceptance, risk communication, risk monitoring and risk review.

0.3 Selecting controls

Controls can be selected from this standard or from other control sets, or new controls can be designed to meet specific needs as appropriate.

The selection of controls is dependent upon organizational decisions based on the criteria for risk acceptance, risk treatment options and the general risk management approach applied to the organization, and should also be subject to all relevant national and international legislation and regulations. Control selection also depends on the manner in which controls interact to provide defence in depth.

Some of the controls in this standard can be considered as guiding principles for information security management and applicable for most organizations. The controls are explained in more detail below along with implementation guidance. More information about selecting controls and other risk treatment options can be found in ISO/IEC 27005.^[11]

0.4 Developing your own guidelines

This International Standard may be regarded as a starting point for developing organization-specific guidelines. Not all of the controls and guidance in this code of practice may be applicable. Furthermore, additional controls and guidelines not included in this standard may be required. When documents are developed containing additional guidelines or controls, it may be useful to include cross-references to clauses in this standard where applicable to facilitate compliance checking by auditors and business partners.

0.5 Lifecycle considerations

Information has a natural lifecycle, from creation and origination through storage, processing, use and transmission to its eventual destruction or decay. The value of, and risks to, assets may vary during their lifetime (e.g. unauthorized disclosure or theft of a company's financial accounts is far less significant after they have been formally published) but information security remains important to some extent at all stages.

Information systems have lifecycles within which they are conceived, specified, designed, developed, tested, implemented, used, maintained and eventually retired from service and disposed of. Information security should be taken into account at every stage. New system developments and changes to existing systems present opportunities for organizations to update and improve security controls, taking actual incidents and current and projected information security risks into account.

0.6 Related standards

While this standard offers guidance on a broad range of information security controls that are commonly applied in many different organizations, the remaining standards in the ISO/IEC 27000 family provide complementary advice or requirements on other aspects of the overall process of managing information security.

Refer to ISO/IEC 27000 for a general introduction to both ISMSs and the family of standards. ISO/IEC 27000 provides a glossary, formally defining most of the terms used throughout the ISO/IEC 27000 family of standards, and describes the scope and objectives for each member of the family.

This is a preview of "BS ISO/IEC 27002:2013". Click [here](#) to purchase the full version from the ANSI store.

This is a preview of "BS ISO/IEC 27002:2013...". Click [here](#) to purchase the full version from the ANSI store.

Information technology — Security techniques — Code of practice for information security controls

1 Scope

This International Standard gives guidelines for organizational information security standards and information security management practices including the selection, implementation and management of controls taking into consideration the organization's information security risk environment(s).

This International Standard is designed to be used by organizations that intend to:

- a) select controls within the process of implementing an Information Security Management System based on ISO/IEC 27001;^[10]
- b) implement commonly accepted information security controls;
- c) develop their own information security management guidelines.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 27000, *Information technology — Security techniques — Information security management systems — Overview and vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 27000 apply.

4 Structure of this standard

This standard contains 14 security control clauses collectively containing a total of 35 main security categories and 114 controls.

4.1 Clauses

Each clause defining security controls contains one or more main security categories.

The order of the clauses in this standard does not imply their importance. Depending on the circumstances, security controls from any or all clauses could be important, therefore each organization applying this standard should identify applicable controls, how important these are and their application to individual business processes. Furthermore, lists in this standard are not in priority order.

4.2 Control categories

Each main security control category contains:

- a) a control objective stating what is to be achieved;
- b) one or more controls that can be applied to achieve the control objective.