
**Information technology — Security
techniques — Code of practice for
information security controls based on
ISO/IEC 27002 for cloud services**

*Technologies de l'information — Techniques de sécurité — Code de
pratique pour les contrôles de sécurité de l'information fondés sur
l'ISO/IEC 27002 pour les services du nuage*



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ISO/IEC 27017 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 27, *IT Security techniques*, in collaboration with ITU-T. The identical text is published as ITU-T. X.1631 (07/2015).

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

X.1631

(07/2015)

SERIES X: DATA NETWORKS, OPEN SYSTEM
COMMUNICATIONS AND SECURITY

Cloud computing security – Cloud computing security
design

**Information technology – Security techniques –
Code of practice for information security
controls based on ISO/IEC 27002 for cloud
services**

Recommendation ITU-T X.1631

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For further details, please refer to the list of ITU-T Recommendations.

**Information technology – Security techniques – Code of practice for information security
controls based on ISO/IEC 27002 for cloud services**

Summary

Recommendation ITU-T X.1631 | ISO/IEC 27017 provides guidelines for information security controls applicable to the provision and use of cloud services by providing:

- additional implementation guidance for relevant controls specified in ISO/IEC 27002;
- additional controls with implementation guidance that specifically relate to cloud services.

This Recommendation | International Standard provides controls and implementation guidance for both cloud service providers and cloud service customers.

History

| Edition | Recommendation | Approval | Study Group | Unique ID* |
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| 1.0 | ITU-T X.1631 | 2015-07-14 | 17 | 11.1002/1000/12490 |

* To access the Recommendation, type the URL <http://handle.itu.int/> in the address field of your web browser, followed by the Recommendation's unique ID. For example, <http://handle.itu.int/11.1002/1000/11830-en>.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at <http://www.itu.int/ITU-T/ipr/>.

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Introduction

The guidelines contained within this Recommendation | International Standard are in addition to and complement the guidelines given in ISO/IEC 27002.

Specifically, this Recommendation | International Standard provides guidelines supporting the implementation of information security controls for cloud service customers and cloud service providers. Some guidelines are for cloud service customers who implement the controls, and others are for cloud service providers to support the implementation of those controls. The selection of appropriate information security controls and the application of the implementation guidance provided, will depend on a risk assessment and any legal, contractual, regulatory or other cloud-sector specific information security requirements.

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**INTERNATIONAL STANDARD
ITU-T RECOMMENDATION**

Information technology – Security techniques – Code of practice for information security controls based on ISO/IEC 27002 for cloud services

1 Scope

This Recommendation | International Standard gives guidelines for information security controls applicable to the provision and use of cloud services by providing:

- additional implementation guidance for relevant controls specified in ISO/IEC 27002;
- additional controls with implementation guidance that specifically relate to cloud services.

This Recommendation | International Standard provides controls and implementation guidance for both cloud service providers and cloud service customers.

2 Normative references

The following Recommendations and International Standards contain provisions which, through reference in this text, constitute provisions of this Recommendation | International Standard. At the time of publication, the editions indicated were valid. All Recommendations and Standards are subject to revision, and parties to agreements based on this Recommendation | International Standard are encouraged to investigate the possibility of applying the most recent edition of the Recommendations and Standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards. The Telecommunication Standardization Bureau of the ITU maintains a list of currently valid ITU-T Recommendations.

2.1 Identical Recommendations | International Standards

- Recommendation ITU-T Y.3500 (in force) | ISO/IEC 17788: (in force), *Information technology – Cloud computing – Overview and vocabulary*.
- Recommendation ITU-T Y.3502 (in force) | ISO/IEC 17789: (in force), *Information technology – Cloud computing – Reference architecture*.

2.2 Additional References

- ISO/IEC 27000: (in force), *Information technology – Security techniques – Information security management systems – Overview and vocabulary*.
- ISO/IEC 27002:2013, *Information technology – Security techniques – Code of practice for information security controls*.

3 Definitions and abbreviations

3.1 Terms defined elsewhere

For the purposes of this Recommendation | International Standard, the terms and definitions given in ISO/IEC 27000, Rec. ITU-T Y.3500 | ISO/IEC 17788, Rec. ITU-T Y.3502 | ISO/IEC 17789 and the following definitions apply:

3.1.1 The following term is defined in ISO 19440:

- **capability**: Quality of being able to perform a given activity.

3.1.2 The following terms are defined in ISO/IEC 27040:

- **data breach**: Compromise of security that leads to the accidental or unlawful destruction, loss, alteration, unauthorized disclosure of, or access to protected data transmitted, stored, or otherwise processed.
- **secure multi-tenancy**: Type of multi-tenancy that employs security controls to explicitly guard against data breaches and provides validation of these controls for proper governance.

NOTE 1 – Secure multi-tenancy exists when the risk profile of an individual tenant is no greater than it would be in a dedicated, single-tenant environment.

NOTE 2 – In very secure environments, even the identity of the tenants is kept secret.