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Part 4: Guidelines for security of cloud services

Technologies de l'information — Techniques de sécurité — Sécurité d'information pour la relation avec le fournisseur —

Partie 4: Lignes directrices pour la sécurité des services du nuage



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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).

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).

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For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, Subcommittee SC 27, *IT Security techniques*.

A list of all parts in the ISO/IEC 27036 series can be found on the ISO website.

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Introduction

This document provides guidance on information security to cloud service customers and cloud service providers. Its application should result in

- increased understanding and definition of information security in cloud services,
- increased understanding by the customers of the risks associated with cloud services to enhance the specification of information security requirements, and
- increased ability of cloud service providers to provide assurance to customers that they have identified risks in their service(s) and associated supply chains and have taken measures to manage those risks.

This document is intended to be used by all types of organizations that acquire or supply cloud services. The document is intended primarily for risk owners in cloud service customers, who finally accept the use of the cloud service, and the individual accountable for the cloud service provided by the cloud service provider. The guidance is primarily focused on the initial link of the first cloud service customer and cloud service provider, but the principal steps should be applied throughout the supply chain, starting when the first cloud service provider changes its role to being a cloud service customer and so on. The manner in which this change of roles is repeated and the manner in which the same steps are repeated for each new cloud service customer-cloud service provider link in the chain are central to this document. By following the guidance contained within this document, it should be possible to have a seamless linkage of information security priorities visible across the supply chain. Information security concerns related to supplier relationships cover a broad range of scenarios. Organizations that wish to improve trust within their cloud service provision should define their trust boundaries, evaluate the risk associated with their supply chain activities, and then define and implement appropriate risk identification and mitigation techniques to reduce the risk of vulnerabilities being introduced through their cloud service provision supply chain.

ISO/IEC 27001 and ISO/IEC 27002 framework and controls provide a useful starting point for identifying appropriate requirements for customers and providers. ISO/IEC 27017 and ISO/IEC 27018 provide guidance on how a cloud service customer and cloud service provider can implement, manage and operate information security for a cloud service. ISO/IEC 27036 (all parts) provides further detail regarding specific requirements to be used in establishing and monitoring information security in supplier relationships. This document is based upon the premise that a cloud service customer has applied general information security according to an information security management system (ISMS) (ISO/IEC 27001). As a result, much of the content is focused on the cloud service provider and depends on the capabilities type, service category and deployment model of the actual cloud service.

Typically, cloud services are purchased “as is”; a cloud service customer has no ability to specify or request changes to the cloud service being purchased. However, in certain cases, the customer has the ability to specify the service and the detail of that service, including the information security arrangements required of the supplier. ISO/IEC 27036 is written to cover both of these eventualities. This document is written to cover the first of these eventualities and refers to ISO/IEC 27036-1, ISO/IEC 27036-2 and ISO/IEC 27036-3 for the cases when security arrangements can be specified.

For a cloud service customer, this means that when reading this document, it should be noted that it is only addressing what are cloud service-specific security processes and controls. It is assumed all other general information security processes and controls necessary for the cloud service customer organization are in place to handle information security in the cloud service to be or being used. The general information security processes and controls are found in other ISO/IEC standards and in particular ISO/IEC 27036-1, ISO/IEC 27036-2, ISO/IEC 27036-3, ISO/IEC 27017 and ISO/IEC 27018.