SLOVENSKI STANDARD
SIST EN ISO 22123-3:2026

01-junij-2026

Informacijska tehnologija - Računalništvo v oblaku - 3. del: Referenčna arhitektura (ISO/IEC 22123-3:2023)

Information technology - Cloud computing - Part 3: Reference architecture (ISO/IEC 22123-3:2023)

Informationstechnik - Cloud Computing - Teil 3: Referenzarchitektur (ISO/IEC 22123-3:2023)

Technologies de l'information - Informatique en nuage - Partie 3: Architecture de référence (ISO/IEC 22123-3:2023)

Ta slovenski standard je istoveten z: **EN ISO/IEC 22123-3:2026**

ICS:

35.210	Računalništvo v oblaku	Cloud computing

SIST EN ISO 22123-3:2026 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO/IEC 22123-3

April 2026

ICS 35.210

English version

Information technology - Cloud computing - Part 3: Reference architecture (ISO/IEC 22123-3:2023)

Technologies de l'information - Informatique en nuage - Partie 3: Architecture de référence (ISO/IEC 22123-3:2023)

Informationstechnik - Cloud Computing - Teil 3: Referenzarchitektur (ISO/IEC 22123-3:2023)

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Ref. No. EN ISO/IEC 22123-3:2026 E

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European foreword

The text of ISO/IEC 22123-3:2023 has been prepared by Technical Committee ISO/IEC JTC 1 "Information technology" of the International Organization for Standardization (ISO) and has been taken over as EN ISO/IEC 22123-3:2026 by Technical Committee CEN-CENELEC/ JTC 25 "Data management, Dataspaces, Cloud and Edge" the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2026, and conflicting national standards shall be withdrawn at the latest by October 2026.

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

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INTERNATIONAL STANDARD

ISO/IEC 22123-3

First edition
2023-09

Information technology — Cloud computing —

Part 3: Reference architecture

Technologies de l'information — Informatique en nuage — Partie 3: Architecture de référence

Reference number
ISO/IEC 22123-3:2023(E)

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Published in Switzerland

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Foreword

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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 or www.iec.ch/members_experts/refdocs).

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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. In the IEC, see www.iec.ch/understanding-standards.

This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 38, *Cloud computing and distributed platforms*.

This first edition of ISO/IEC 22123-3 cancels and replaces ISO/IEC 17789:2014, which has been technically revised.

The main changes are as follows:

— added differentiation between cloud computing parties and role;

— Figures 13, 14, and 15 were removed.

A list of all parts in the ISO/IEC 22123 series can be found on the ISO and IEC websites.

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 and www.iec.ch/national-committees.

Information technology — Cloud computing —

Part 3: Reference architecture

1 Scope

This document specifies the cloud computing reference architecture (CCRA).

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 22123-1, *Information technology — Cloud computing — Part 1: Vocabulary*

ISO/IEC 22123-2, *Information technology — Cloud computing — Concepts*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 22123-1 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1 Terms related to security and privacy

3.1.1
personally identifiable information
PII
any information that (a) can be used to establish a link between the information and the natural person to whom such information relates, or (b) is or can be directly or indirectly linked to a natural person

Note 1 to entry: The "natural person" in the definition is the PII principal. To determine whether a PII principal is identifiable, account should be taken of all the means which can reasonably be used by the privacy stakeholder holding the data, or by any other party, to establish the link between the set of PII and the natural person.

[SOURCE: ISO/IEC 29100:2011/Amd.1:2018, 2.9]

3.2 Terms relating to architecture

3.2.1
architecture
fundamental concepts or properties of a system in its environment embodied in its elements, relationships, and in the principles of its design and evolution

[SOURCE: ISO/IEC/IEEE 42010:2011, 3.2]

4 Symbols and abbreviated terms

For the purposes of this document, the symbols and abbreviated terms given in ISO/IEC 22123-2 and the following apply.

CCRA	cloud computing reference architecture
KPI	key performance indicator
MSA	master service agreement
OSS	operational support systems
QoS	quality of service
ToS	terms of service
VLAN	virtual local area network

5 Conventions

The following conventions apply:

1) Diagrams are used throughout this document to help illustrate the cloud computing reference architecture (CCRA). Figure 1 provides the conventions in the diagrams.

NOTE In Figure 1, "Aspect" is to be understood as referring to "Cross-cutting aspect".

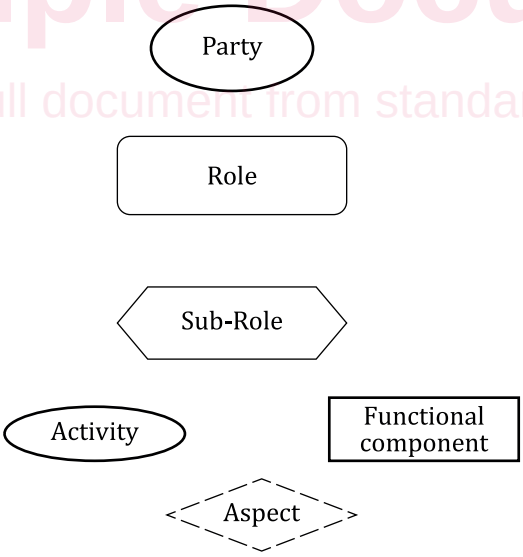

Figure 1 — Conventions for CCRA diagrams

2) This CCRA uses the term ICT (information and communication technology as defined in ISO/IEC/IEEE 24765:2017, 3.1853) and ICT systems. ICT is used to make it clear that the CCRA covers not only the compute and storage technologies associated with computer systems, but also the communications networks that link systems together.

6 Cloud computing reference architecture goals and objectives

Cloud computing is a paradigm for enabling network access to a scalable and elastic pool of shareable physical or virtual resources with self-service provisioning and administration on-demand (see ISO/IEC 22123-1).

The CCRA presented in this document provides an architectural framework that is effective for describing the cloud computing roles, sub-roles, cloud computing activities, cross-cutting aspects, as well as the functional architecture and functional components of cloud computing.

The CCRA serves the following goals:

— to describe the community of stakeholders for cloud computing;

— to describe the fundamental characteristics of cloud computing systems;

— to specify basic cloud computing activities and functional components, and describe their relationships to each other and to the environment;

— to identify principles guiding the design and evolution of the CCRA.

The CCRA supports the following important standardization objectives:

— to enable the production of a coherent set of international standards for cloud computing;

— to provide a technology-neutral reference point for defining standards for cloud computing;

— to encourage openness and transparency in the identification of cloud computing benefits and risks.

The CCRA focuses on the requirements of "what" cloud services provide and not on "how to" design cloud-based solutions and implementations. The CCRA does not represent the system architecture of a specific cloud computing system, although it can put constraints on a specific system. The CCRA does not define prescriptive solutions and is not tied to any specific vendor products, services or reference implementation.

The CCRA is also intended to:

— facilitate the understanding of the operational intricacies of cloud computing;

— illustrate and provide understanding of various cloud services and their provisioning and use;

— provide a technical reference to enable the international community to understand, discuss, categorize and compare cloud services;

— be a tool for describing, discussing, and developing a system-specific architecture using a common framework of reference;

— facilitate the analysis of candidate standards in areas including security, interoperability, portability, reversibility, reliability and service management, and support analysis of reference implementations.

7 CCRA viewpoints

7.1 General

This document defines a CCRA that can serve as a fundamental reference point for cloud computing standardization and which provides an overall framework for the basic concepts and principles of a cloud computing system.

This clause provides an overview of the architectural approaches that are used in this document. The cloud computing paradigm is composed of key characteristics, cloud computing roles and activities, cloud capabilities types and cloud service categories, cloud deployment models, and cloud computing cross cutting aspects.

7.2 CCRA architectural views

Cloud computing systems can be described using a viewpoint approach.