ILNAS

Cloud Computing

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".

ISO/IEC 22123-1:2021 Information technology -- Cloud computing -- Part 1: Vocabulary

Technical Committees working on Cloud Computing standardization

- International level -

ISO/IEC JTC 1/SC 38 - **Cloud Computing and Distributed platforms**

■ Scope:
Standardization in the areas of Cloud Computing and Distributed Platforms including:

- Foundational concepts and technologies,
- Operational issues, and
- Interactions among Cloud Computing systems and with other distributed systems.

SC 38 serves as the focus, proponent, and systems integration entity on Cloud Computing, Distributed Platforms, and the application of these technologies. SC 38 provides guidance to JTC 1, IEC, ISO and other entities developing standards in these areas.

■ 26 standards published
■ 7 projects
■ 2 working groups
■ 6 national delegates registered for Luxembourg

ITU-T/SG 13 - **Future networks and emerging network technologies**

■ Scope (extract):
ITU-T Study Group 13 is notably responsible for studies relating to future computing including Cloud Computing and data handling in telecommunication networks. This covers capabilities and technologies from the network side to support data utilization, exchange, sharing, and data quality assessment and computing-aware networking as well as end-to-end awareness, control and management of future computing, including Cloud, Cloud security and data handling.

The SG 13 hosts a Working Party (WP) on Cloud Computing which addresses four Questions in its standardization work:

WP2/13: "Cloud Computing & Data Handling"

- Question 7/13, Future Networks: Deep Packet inspection and network intelligence
- Question 17/13, Future Networks: Requirements and capabilities for Computing including Cloud Computing and data handling
- Question 18/13, Future Networks: Functional architecture for Computing including Cloud Computing and data handling
- Question 19/13, Future Networks: End-to-end management, governance, and security for computing including Cloud Computing and data handling

Cloud Computing standards

The following table lists standards related to Cloud Computing that were published in 2022 by
ISO/IEC JTC 1/SC 38 and ITU-T/SG 13

ISO/IEC TR 3445:2022
Information technology -- Cloud Computing -- Audit of Cloud services

Scope:
This document surveys aspects of the audit of Cloud services including:
1) role and responsibilities of parties conducting audit and description of the interactions between the CSC, CSP, and CSN;
2) approaches for conducting audits of Cloud services to facilitate confidence in delivering and using Cloud services;
3) examples of available frameworks and standards which can be used for audit schemes, for certification, and for authorization.

This document builds upon the Cloud auditor role as defined in ISO/IEC 17789 and ISO/IEC 22123.
This document is applicable to all types and sizes of organizations that need to plan and conduct internal or external audits, and that use, provide and support Cloud services.
This document is not intended to describe certification or to identify controls that are published elsewhere.

ISO/IEC 19944-2:2022
Information technology -- Cloud Computing and distributed platforms -- Data flow, data categories and data use -- Part 2: Guidance on application and extensibility

Scope:
This document provides guidance on the application of the taxonomy and use statements from ISO/IEC 19944-1 in real world scenarios, and how to develop extensions to the data taxonomy, data processing and use categories and data use statements.

ISO/IEC 23751:2022
Information technology -- Cloud Computing and distributed platforms -- Data sharing agreement (DSA) framework

Scope:
This document establishes a set of building blocks, i.e. concepts, terms, and definitions, including Data Level Objectives (DLOs) and Data Qualitative Objectives (DQOs), that can be used to create Data Sharing Agreements (DSAs). This document is applicable to DSAs where the data is intended to be processed using one or more Cloud services or other distributed platforms.

ITU-T Y.3528 (02/22)
Cloud Computing -- Framework and requirements of container management in inter-Cloud

Scope:
This Recommendation provides framework and functional requirements of container management in inter-Cloud. It addresses overview, framework, functional requirements and use cases of container management in inter-Cloud. The functional requirements are derived from the corresponding typical use cases.

ITU-T Y.3535 (02/2022)
Cloud Computing -- Functional requirements for container

Scope:
This Recommendation provides the overview and functional requirements of container in Cloud Computing. It describes the technical aspects of container and provides the relationship between containers and Cloud Computing. It also provides functional requirements for container in terms of container engine, container management system and Cloud Computing to support container.