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Contents

Page

Foreword ..... **v**

Introduction ..... **vi**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**
3.1 Edge computing 2
3.2 IoT terms 2
3.3 Real time 3

4 Symbols and abbreviated terms **4**

5 Overview of edge computing **5**
5.1 General 5
5.2 Concepts of edge computing 5
5.3 Architectural foundations of edge computing 7
5.4 Relationship of edge computing to cloud computing 8
5.5 Relationship of edge computing to IoT 11

6 Networking and edge computing **12**
6.1 General 12
6.1.1 Overview 12
6.1.2 Proximity networks 13
6.1.3 Access networks 13
6.1.4 Services networks 13
6.1.5 User networks 13
6.2 Virtual networks 14

7 Hardware considerations for edge computing **15**
7.1 General 15
7.2 Hardware capabilities 15

8 Software technologies for edge computing **16**
8.1 General 16
8.2 Software classifications 16
8.2.1 Firmware 16
8.2.2 Platform software 17
8.2.3 Services 17
8.2.4 Application 17
8.3 Significant software technologies 17
8.3.1 General 17
8.3.2 Virtual machines 18
8.3.3 Containers 18
8.3.4 Serverless computing 19
8.3.5 Microservices 19

9 Deployment models and service capabilities types and service categories for edge computing **19**
9.1 General 19
9.2 Deployment models 19
9.3 Service model capabilities types 20
9.4 Service categories 20

10 Data in edge computing **20**
10.1 General 20
10.2 Data flow 21
10.3 Data storage 22
10.4 Data processing 23

11 Management of edge computing **24**
11.1 Management and orchestration fundamentals 24
11.2 Management plane, control plane and data plane 25
11.3 Cloud-based management and control of edge tier nodes and device tier devices 27
11.3.1 General 27
11.3.2 Control of services from a device 27
11.3.3 Management of devices and edge nodes from a cloud service 28
11.4 Orchestration and maintenance 28
11.5 Management of data, rights and resources 28
11.6 Security and privacy management 29

12 Virtual placement **29**

13 Security and privacy in edge computing **30**
13.1 General 30
13.2 Applying foundational security principles 30
13.3 Secure nodes and devices 31
13.4 Connectivity and network security 32
13.5 Organization of security elements 33
13.5.1 General 33
13.5.2 Network security 33
13.5.3 Data security 34
13.5.4 Application security 34
13.5.5 Node security 34
13.5.6 Security OSS 35
13.6 Privacy and personally identifiable information in edge computing 35

14 Real time in edge computing **36**
14.1 Overview 36
14.2 Factors influencing real time system design 37
14.3 Design approaches for real time edge computing 39

15 Edge computing and mobile devices **39**

Bibliography **41**

Foreword

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

This second edition cancels and replaces the first edition (ISO/IEC 23188:2020), which has been technically revised.

The main changes are as follows:

— this document has been aligned with the ISO/IEC 22123 series;

— reference to ISO/IEC 17788 and ISO/IEC 17789 have been changed to the ISO/IEC 22123 series;

— verbal forms have been updated in line with the ISO/IEC Directives Part 2.

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Introduction

Edge computing is increasingly used in systems that deal with aspects of the physical world. Edge computing involves the placement of processing and storage near or at the places where those systems interact with the physical world, which is where the "edge" exists. One of the trends in this space is the development of increasingly capable Internet of Things (IoT) devices (sensors and actuators), which generate more data or new types of data. There is significant benefit from moving the processing and storing of this data close to the place where the data is generated.

Cloud computing is commonly used in systems that are based on edge computing approaches. This can include the connection of both devices and edge computing nodes to centralized cloud services. However, it is the case that the locations in which cloud computing is performed are increasingly distributed in nature. The cloud services are being implemented in locations that are nearer to the edge in order to support use cases that demand reduced latency or avoiding the need to transmit large volumes of data over networks with limited bandwidth.

This document aims to describe edge computing and the significant elements which contribute to the successful implementation of edge computing systems, with an emphasis on the use of cloud computing and cloud computing technologies in the context of edge computing, including the virtualization of compute, storage and networking resources.

It is useful to read this document in conjunction with ISO/IEC TR 30164,[15] which takes a view of edge computing from the point of view of IoT systems and the IoT devices which interact with the physical world.