

# INTERNATIONAL STANDARD

Internet of things (IoT) – Vocabulary

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## CONTENTS

FOREWORD.....	3
1 Scope .....	5
2 Normative references .....	5
3 Terms and definitions .....	5
3.1 General terms .....	5
3.2 Internet of Things specific terms .....	9
Bibliography.....	11

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## INTERNET OF THINGS (IoT) – VOCABULARY

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This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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## INTERNET OF THINGS (IoT) – VOCABULARY

### 1 Scope

This document provides a definition of Internet of Things along with a set of terms and definitions. This document is a terminology foundation for the Internet of Things.

### 2 Normative references

There are no normative references in this document.

### 3 Terms and definitions

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

#### 3.1 General terms

##### 3.1.1 address

<endpoint> value that can be used to identify an endpoint, which can designate the originating source or destination of data being transmitted

##### 3.1.2 application

software designed to fulfil a particular purpose

[SOURCE: ISO/IEC 24713-2:2008, 4.1, modified – “program or piece of” has been removed from the beginning of the definition.]

##### 3.1.3 architecture

<system> set of 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, modified – “set of” has been added to the beginning of the definition.]

##### 3.1.4 asset

physical entity or digital entity that has value to an individual, an organization or a government

[SOURCE: ISO/IEC 27032:2012, 4.6, modified – “anything” has been replaced by “physical entity or digital entity” at the beginning of the definition.]

##### 3.1.5 availability

property of being accessible and usable upon demand by an authorized entity

Note 1 to entry: IoT systems can include both human users and service components as “authorized entities”.

[SOURCE: ISO/IEC 27000:2018, 3.7]

### 3.1.6

#### **characteristic**

abstraction of a property of an entity or of a set of entities

[SOURCE: ISO 18104:2014, 3.1.4]

### 3.1.7

#### **cloud computing**

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

[SOURCE: ISO/IEC 17788:2014, 3.2.5]

### 3.1.8

#### **cloud service**

one or more capabilities offered via cloud computing invoked using a defined interface

[SOURCE: ISO/IEC 17788:2014, 3.2.8]

### 3.1.9

#### **cloud service provider**

party which makes cloud services available

[SOURCE: ISO/IEC 17788:2014, 3.2.15]

### 3.1.10

#### **compliance**

characteristic of conformance to rules such as those defined by a law, a regulation, a standard, or a policy

### 3.1.11

#### **component**

modular, deployable, and replaceable part of a system that encapsulates implementation and exposes a set of interfaces

[SOURCE: ISO 14813-5:2010, B.1.31]

### 3.1.12

#### **confidentiality**

property that information is not made available or disclosed to unauthorized individuals, entities, or processes

[SOURCE: ISO/IEC 27000:2018, 3.10]

### 3.1.13

#### **data store**

persistent repository for digital information

Note 1 to entry: A data store can be accessed by a single entity or shared by multiple entities via a network or other connection.

### 3.1.14

#### **digital entity**

computational and/or data element

Note 1 to entry: A digital entity can exist as a cloud service or as a service in a data centre, or as a network element or as an IoT gateway.



**3.1.15****digital user**

digital entity that uses an IoT system

Note 1 to entry: digital user includes automation services that act on behalf of human users.

**3.1.16****discovery service**

service to find unknown resources, entities or services based on a specification of the desired target

Note 1 to entry: Discovery service can be used by a human user or a digital user.

**3.1.17****endpoint**

component that exposes or uses one or more network interfaces

**3.1.18****entity**

thing (physical or non-physical) having a distinct existence

[SOURCE: ISO/IEC 15459-3:2014, 3.1]

**3.1.19****functional component**

functional building block needed to engage in an activity, backed by an implementation

Note 1 to entry: See also "component", which is a superset containing all functional components and other types of component that are deployable.

[SOURCE: ISO/IEC 17789:2014, 3.2.3, modified – Note 1 to entry has been added.]

**3.1.20****human user**

natural person who uses a system

**3.1.21****identifier**

information that unambiguously distinguishes one entity from other entities in a given identity context

**3.1.22****identity context**

environment where an entity can use a set of attributes for identification

**3.1.23****interface**

shared boundary between two functional components, defined by various characteristics pertaining to the functions, physical interconnections, signal exchanges, and other characteristics, as appropriate

[SOURCE: ISO/IEC 13066-1:2011, 2.15, modified – In the definition, "units" has been replaced by "components".]

**3.1.24****interoperability**

ability of two or more systems or applications to exchange information and to mutually use the information that has been exchanged