هيئة الاتصالات والفضاء والتقنية
Communications, Space & Technology Commission

INTERNET OF THINGS (IOT) REGULATIONS

RT18

Third Version

July 2024

Disclaimer: English language text is not an official translation and is provided for information purposes only. It confers no rights and impose no obligation separate from those conferred or imposed by the original Arabic text formally adopted and published. In the event of any discrepancies between the English translation and the Arabic original, the Arabic original shall prevail.

Version Control Table

Version	Issuance Date
REGULATORY FRAMEWORK ON INTERNET OF THINGS (IOT) RT18 First Version	September 2019
REGULATORY FRAMEWORK ON INTERNET OF THINGS (IOT) RT18 Second Version	October 2023
INTERNET OF THINGS (IOT) REGULATIONS RT18 Third Version	July 2024

Table of Content

1- Introduction

The Communications, Space & Technology Commission (CST) shall, in accordance with the Telecommunication and Information Technology Law (Law) issued by Royal Decree No. M/106, dated 2/11/1443H, and the Implementing Regulations thereof, and the Statute of CST (Commission), as amended by the Council of Ministers Resolution No. 133, dated 21/5/1424H, which entrusted the CST with regulatory tasks for the information technology sector, and in addition to the provisions of Article 7 in the Council of Ministers Resolution No. 292, dated 27/4/1441H, which stipulates the jurisdiction of the Commission to regulate Internet of Things (IoT) technology, be the entity responsible for regulating the communications and information technology sector in the Kingdom of Saudi Arabia (the Kingdom), including Internet of Things (IoT) technology and all use cases resulting therefrom in order to achieve the objectives set forth in Article 2 of the of the Law, including promoting digital transformation, technology use, and the benefits thereof across all domains, as well as promoting entrepreneurship, innovation, and research and technical development in the field of information technology, along with promoting the growth of sub-sectors and emerging technologies.

Consequently, and in accordance with the Commission strategy and the strategic directions of the information technology and emerging technologies sector where such directions are based on enabling digital transformation and emerging technologies in the Kingdom, as well as encouraging competition and investment, and stemming from the keenness of the CST to enable the Internet of Things market in the Kingdom, the CST has issued these Regulations to adopt the best practices and administrative technological recommendations that relate to the technology of the Internet of Things.

2- Definitions

Terms and phrases used herein shall have the same meanings defined in the Telecommunication and Information Technology Law, the Implementing Regulations thereof, and the CST Statue. The following terms and phrases shall have the meanings assigned thereto, unless the context stipulates otherwise:

2-1 **IoT Devices:** Devices cabaple to autonomously sense, monitor, and interact with their surrounding environment, alongside the ability to collect and transmit data. Such devices may be referred to as “Things” or “IoT device”.

2-2 **Internet of Things (IoT):** A network of IoT devices connected to platforms capable of managing these devices, as well as collecting and analyzing information monitored thereby. Internet of Things may be refrred to as “IoT’’.

2-3 **IoT Connectivity:** Communication means that enable IoT devices to connect and transmit data among each other, or to platforms, or to the Internet.

2-4 **IoT Service:** A service that allows controlling IoT devices, including obtaining the monitored data therefrom.

2-5 **IoT Connectivity Service Provider:** An entity that provides IoT connectivity to others.

2-6 **IoT Service Provider:** An entity that provides IoT service to others.

2-7 **IoT User:** Any person or entity that uses IoT service.

2-8 **IoT Connectivity Service User:** Any person or entity that uses IoT connectivity service.

2-9 **IP (Internet Protocol) Address:** A unique address that identifies a device on the Internet or Local Area Network (LAN).

2-10 **License-Exempt Frequency:** Specified frequencies that can be used on a non-exclusive basis without the need to obtain a license from the CST.

2-11 **Wide Area Networks (WAN):** Low-power, wide-coverage, low-data-rate transmission wireless networks using exempted frequencies. Such networks include unlicensed low-power wide area networks (Unlincensed LPWANs) as well as wireless mesh networks that enable communication among IoT devices.

2-12 **Indoor Areas:** Areas that are within private properties, inlcuding areas surrounded by urban boundaries or fences), such as homes, airports, private farms, universities, private compounds, and others. They might be referred to as "On-premises".

2-13 **Outdoor Areas :** Areas located outside of indoor areas, including streets, public parks, and others,

2-14 **The CST website:** (www.cst.gov.sa).

3- IoT Regulations Scope of Application

This document shall apply to IoT technology, IoT connectivity, and IoT devices, and its provisions shall apply to:

3-1 IoT connectivity service providers who hold one of the following licenses or registrations:

3-1-1 Facilities-Based Unified License

3-1-2 Mobile Virtual Network Operators Services (MVNO)

3-1-3 Internet of Things Virtual Network Operator Services (IoT-VNO)

3-1-4 Provision of the IoT Services Using License-Exempt Frequency

3-1-5 Provisioning of Telecommunication Services Over Non-Terrestrial Networks

3-1-6 Facilities-Based Fixed Telecommunications Services License

3-1-7 Any license or registration issued by the CST to allow providing IoT connectivity service in the Kingdom.

3-2 IoT service providers.

3-3 IoT service users.

3-4 IoT connectivity service users.

4- IoT Devices

4-1 All IoT devices must comply with its technical specifications published on the CST website.

4-2 IoT devices must be approved by the CST, and a certificate of conformity for the IoT deivces must be obtained from the CST before being imported or used. All requirements and procedures for approval and clearance of telecommunications and information technology equipment are outlined in the Regulations for Licensing of Telecommunications and Information Technology Equipment, and published on the CST website.

4-3 The features and functions of the IoT devices must be described in the device user manual; provided that said manual should indicate which features and functions will be affected if IoT connectivity is limited, interrupted, or unavailable.

4-4 The CST recommends verifying that IoT devices support interoperability with IoT connectivity, and that IoT devices support interoperability with IoT platforms.

5- IoT Connectivity Service

5-1 IoT connectivity service is divided into:

5-1-1 IoT connectivity using wired fixed-line networks.

5-1-2 IoT connectivity using licensed frequency wireless networks, such as mobile communications and satellites.

5-1-3 IoT connectivity using license-exempt frequency wireless networks.

5-2 Only those who have obtained the licenses, issued by the CST, for the provision of the relevant service are allowed to provide IoT connectivity services using wired fixed-line networks or licensed frequency wireless networks. The list of licensed service providers can be found on the CST website.

5-3 IoT connectivity service providers must adhere to "National Numbering Plan" published on the CST website.

5-4 All SIM cards used in IoT devices must be issued by telecommunications service providers licensed by the CST.

5-5 As an exception to Article (5-4), foreign SIM cards used in IoT devices can be used for a period not exceeding 120 days, provided that the following requirements are adhered to:

5-5-1 During said period, foreign SIM cards must be replaced with local cards issued by one of the CST licensed telecommunications service providers.

5-5-2 During said period, these devices must be used for specific pre-defined applications, without providing unrestricted access to the internet.

5-6 IoT connectivity service can be used and provided using license-exempt frequency wireless networks, provided that the following conditions must be complied with:

5-6-1 Only holders of Facilities-Based Unified License or Provision of the IoT Services using License Exempt Frequency licenses are allowed to build WAN using license-exempt frequencies or provide IoT connectivity services using these networks. List of relevant licensees can be found on the CST website.

5-6-2 As an exception to Article (5-6-1), WAN may be built and used via license-exempt frequencies if the coverage is for indoor areas, and for non-commercial purposes, while adhering to the following:

5-6-2-1 Compliance with the regulations and requirements issued by the CST or relevant agencies in the Kingdom.

5-6-2-2 The establishment of these networks shall be carried out by the owner of the indoor area, or by an IoT connectivity service provider holding either one of the two licenses mentioned in Article (5-6-1).

5-6-2-3 Coverage of these networks must not exceed boundaries of the indoor area.

5-6-2-4 Devices used in these networks must be imported by the owners of the indoor areas, or by a service provider who holds either one of the two licenses mentioned in Article (5-6-1).

5-6-3 The use of license-exempt frequencies is subject to the terms and conditions set by the CST.

5-6-4 WAN shall use exempted frequencies on a non-exclusive basis, as said frequencies are being used by different technologies and are not exclusive for a specific user. Thus, such networks must not cause harmful wireless interference to the primary and licensed uses operating in such frequencies. The users of such networks shall not have the right to ask for protection from harmful wireless interference.

5-6-5 All IoT devices used in these networks must comply with the technical specifications referred to in Article (4-1).

5-6-6 IoT connectivity service providers and users using license-exempt frequencies used in Wireless Local Area Networks (WLAN) must adhere to WLAN Regulations, which are published on the CST website.

5-6-7 IoT connectivity service providers and users using license-exempt frequencies must comply with the documents issued by the CST regulating these frequencies, which are published on the CST website.

5-6-8 IoT connectivity service providers using license-exempt frequencies must make IoT users aware of the following:

5-6-8-1 Importance of IoT connectivity security.

5-6-8-2 Optimal use, characteristics and quality of IoT connectivity service.

5-6-8-3 Shared use of frequencies with other users.

6- General Provisions

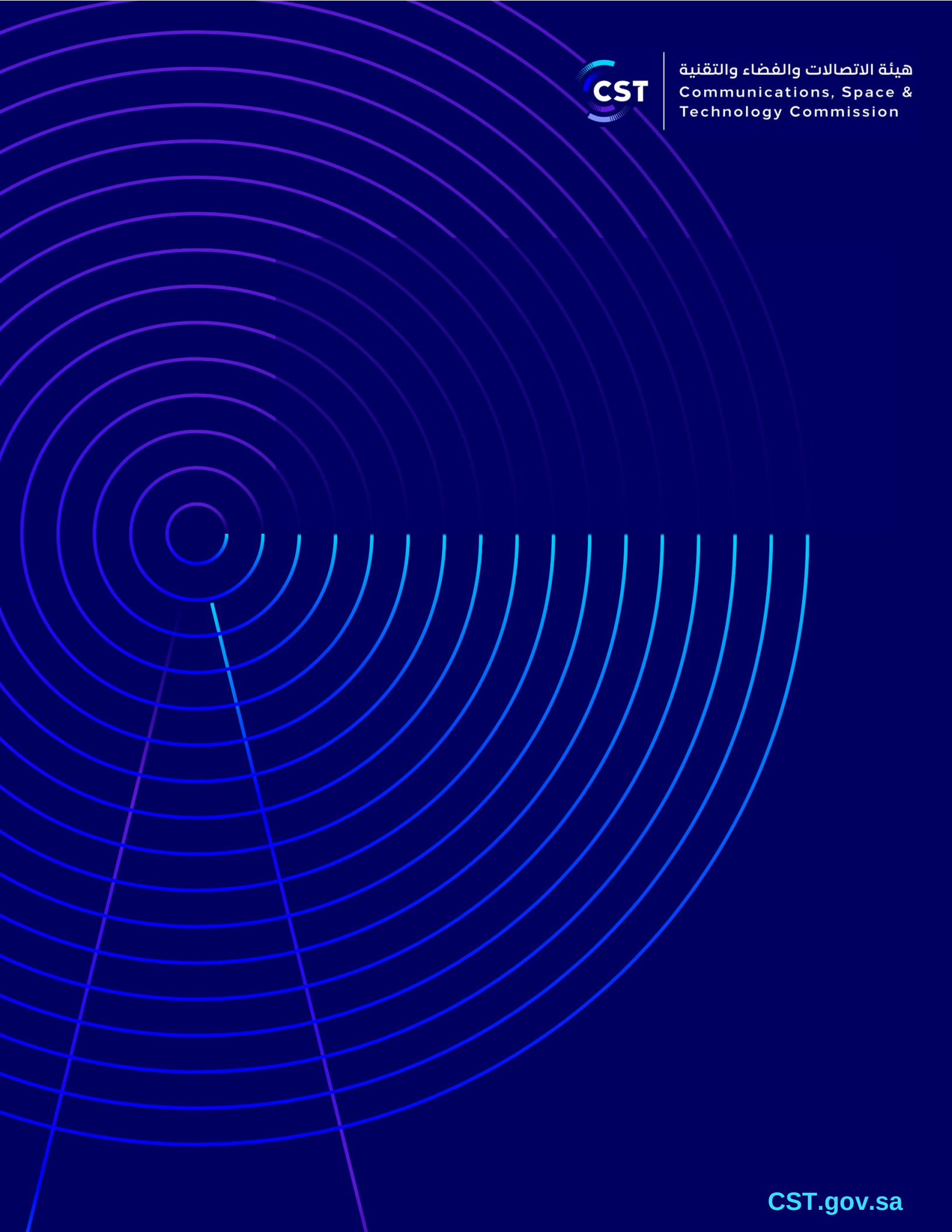
6-1 The CST shall reserve the right to request reports from IoT service providers and IoT connectivity service providers. The CST shall determine the requirements for these reports, the required data, and the time period for providing the same.

6-2 The CST recommends using IPv6 protocol, which provides technical advantages in addition to the large capacity of this resource.

6-3 The CST recommends all IoT service providers and IoT connectivity service providers to make their commercial offers publicly available and accessible.

6-4 All IoT service providers and IoT connectivity service providers must declare in advance all the financial fees against their provided services.

6-5 All IoT service providers and IoT connectivity service providers must adhere to regulations and requirements issued by the CST or the relevant agencies in the Kingdom, including data management, security, privacy and protection thereof.


CST
هيئة الاتصالات والفضاء والتقنية
Communications, Space &
Technology Commission
CST.gov.sa