

Regulation

1 (6)

TRAFICOM / 161584 / 03.04.05.00 / 2020

Date of issue:	Effective Date:	In effect:
5/19/2021	5/20/2021	for now

Legal basis

Section 244 (1), (3) and (12) and Section 244a (6) of the Electronic Communications Services Act (917/2014).

Penalties for non-compliance are provided for:

Section 244a (3), Sections 330–332 and 340 of the Electronic Communications Services Act

EU legislation to be implemented:

Change details:

Order on critical parts of the communication network**1 Scope of application**

This provision applies to public telecommunications as well as to electronic communications services referred to in section 244a (2) of the Bones Act (917/2014) to the public communications network of key actors connected to a separate network.

2 Definitions

For the purposes of this provision:

- 1) the *critical part* of the communications network 244 of the Act on Electronic Communications Services the key network functions and measures referred to in section a (1), which substantially control or direct network access and network transit traffic;
- 2) *critical critical* network in accordance with section 244a (2) of the Electronic Communications Services Act referred to in paragraph 1 for the vital functions of society. a separate network connected to the public communication network of its operator;
- 3) *unbundled network* operator means the owner or holder of a critical unbundled network;
- 4) a *component of a communication network or service* means a network element, device or information system; the system of which the communication network or service is composed or which it utilizes;
- 5) a mobile network implemented with LTE technology on a *4G network* ; and

6) *5G network means a fifth generation mobile network.*

In addition, this provision complies with the Electronic Communications Services Act Definitions of section 3.

3 Identification and documentation of critical parts of the communication network

The telecommunications operator and the unbundled network operator must identify the critical parts of their communications network and the components of the communications network or service they use. The telecommunications operator and the network operator shall establish and maintain up-to-date documentation to identify critical parts of their communications network, the communications network they use in them or service and the basis for its assessment.

The telecommunications operator and the separate network operator shall document the reasons for their assessment, if any. Considers, in the light of paragraph 7, that the 4G or 5G system referred to in Table 1 or 2 the function or operation of the network is not a critical part of its communication network. Such parts of the communications network and the components of the communications network or service used therein in addition, the provisions of paragraph 1 above shall apply to the documentation.

In particular, the unbundled network operator shall assess whether its unbundled access point in the critical part of the grid, taking into account in particular the geographical coverage of the availability, the share of an individual base station in the network traffic and the functions and measures in the separate network. The unbundled network operator shall draw up and thorough documentation of its assessment.

4 Critical parts of the communication network

The critical parts of a communication network are at least the functions and measures that complete or partially implement any of the following functionalities:

- 1) for routing and other controlling or directing end-user traffic
key functions related to the communication network that may have a significant impact traffic on the communications network, including:
 - i. components of a communications network or service when they belong to communications networks and the synchronization of communication networks.
priority categories 1 or 2 in accordance with that regulation, or according to the area of influence;
 - ii. components of a communications network or service when they otherwise control or share a substantial part of the total network traffic, as well;
 - iii. components of a communications network or service in a computer network when critical to the operation of a critical part of the communications network;
- 2) end-user access control, authentication and authorization, network resource allocation
end-user communication and management of end-user connections and sessions;
- 3) registration, verification and authorization of the functions of the communication network and services;
tus;

- 4) the information necessary to support the operation of the communication network and service;
infrastructure services;
- 5) functions that implement interfaces between communication networks or services
including roaming;
- 6) functions by means of which communication networks or services are interconnected when the function
may significantly affect access to a communications network or traffic on a network.
tea;
- 7) the encryption and key management of the communication network, its functions and end-user traffic;
centralized management;

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- 8) information security functions affecting critical parts of the communication network;
- 9) Network Management and Network Monitoring Systems when related to a communications network
control or supervision of critical parts or when they may otherwise materially
affect network access or traffic on the network, as well as other charges.
research, support and background systems that can have a significant impact on
network access or network traffic;
- 10) implementation of telecommunications interception or surveillance;
- 11) virtualization when used as a critical part of a communications network
implementation of an action or measure;
- 12) another function or measure when carried out in the above item of this list
11 as a critical part of the communication network referred to in and
- 13) key functions and measures enabling access to the communications network
information on the geographical location of the subscription or terminal to be processed
or which enable the location to be determined by means of a communication network.

5 Critical parts of a 4G network

In addition to the above, critical parts of the communication network are the core of the 4G network.
3rd Generation Partnership Project (3GPP)
Packet connections according to TS 23.002 clauses 4.1.1, 4.1.4 and 4.1.5
functionalities in so far as they substantially control or direct
network access and network traffic.

The critical parts of a communication network are at least the functions and measures that complete
or partially implement any of the 4G network functionalities in Table 1,
as defined in 3GPP Technical Specification TS 23.002.

Table 1. Critical components of a 4G network

Functionality	Description
Home Subscriber Server (HSS)	A subscriber register that stores information sessions and contacts. in order to
Equipment Identity Register (EIR)	Device ID register that contains information the use of mobile devices
Subscription Locator Function (SLF)	A function that communicates to other network

	central data containing user data strain (HSS) name
Mobile Management Entity (MME)	Terminal connections and mobility management unit
Serving Gateway (SGW)	A service gateway that is responsible for routing of high-level traffic
Packet Data Network Gateway (PDN GW)	A gateway to a packet-switched network operator's internal IP network and external Between the IP network
Evolved Packet Data Gateway (ePDG)	A gateway to implement users outside the mobile network contact

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3GPP AAA Server and 3GPP AAA Proxy Server and Proxy Server, respectively	users outside the mobile network verification and authorization
Access Network Discovery and Se- lection Function (ANDSF)	Function that corresponds to user traffic control of the mobile network and networks outside the messaging network lilla
Policy and Charging Rules Function (PCRF)	User access policy and billing control function

6 Critical parts of the 5G network

In addition to the above, critical parts of the communications network are the core of the 5G network. TS 23.501 of the 3GPP Technical Specification functionalities according to section 6.2 insofar as they control or direct essentially network access and network traffic.

The critical parts of a communication network are at least the functions and measures that complete or partially implement any of the 5G network functionalities in Table 2, defined in 3GPP Technical Specification TS 23.501.

Table 2.5 Critical components of the 5G network

Functionality	Description
Access and Mobility Management Function (AMF)	Corresponds to user control traffic registration of terminals and mobility management
User Plane Function (UPF)	Responsible for routing user traffic, guidance and management
Policy Control Function (PCF)	Responsible for traffic control and access implementation of governance policies
Authentication Server Function (AUSF)	Corresponds to the authentication of users' terminals misesta
Unified Data Management (UDM)	Responsible for user access control and

Application Function (AF)	creating and managing statement keys Supports online routing decisions
Network Exposure Function (NEF) and Intermediate NEF (I-NEF)	Enables the operation of the 5G core network provision of services to third parties. For lilla and external applications
Network Repository Function (NRF)	Responsible for the availability of network services, registration and authorization
Network Slice Selection Function (NSSF)	Responsible for network slicing services bones and definitions
Network Slice Specific Authentication and Authorization Function (NSSAAF)	Responsible for verification and authorization slices of the net
Session Management Function (SMF)	Responsible for managing user sessions
Security Edge Protection Proxy (SEPP)	A proxy server that enables security interconnection with other networks

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Unstructured Data Storage Function (UDSF)	A function that is used unstructured to store and retrieve information
Unified Data Repository (UDR)	A data warehouse capable of storing and retrieve, among other things, subscriber information
UE Radio Capability Management Function (UCMF)	A function that stores and stores terminal device-specific radio capability of the information
Non-3GPP InterWorking Function (N3IWF)	A function that allows access to network functionalities for users outside the messaging network
5G-Equipment Identity Register (5G-EIR)	Device ID register that contains information the use of mobile devices
Service Communication Proxy (SCP)	Routes messages to other network functions
Network Data Analytics Function (NWDAF), but not to the network for decentralized functionality in so far as it does not control or essentially share the network access and online traffic net	Collect and analyze data for network control for

7 Functions that support services provided at the edge of the network

However, such is not considered a critical part of the communication network in Table 1 or above 2G or 5G network functionality referred to in the provision of non-communications services at the edge of the network, provided that:

- (1) the functionality affects only a small number of end - users, terminals or base stations and does not transmit other traffic on the communication network; and

2) The critical parts of the communication network are protected from the functionality of them possibly harmful traffic targeted by the network by implementing the necessary reliable protection mechanisms.

The safeguards referred to in this paragraph shall be identified and addressed harmful traffic and to ensure that there is no unauthorized diversion of traffic possible. The protection mechanisms shall be implemented in such a way that The functionality supporting these services cannot be substantially controlled or controlled network access and network traffic.

8 IP-based telephone services in a mobile network

In addition to the above, critical parts of the communication network are the technicalities of 3GPP the IP Multimedia Core subsystem according to specification TS 23.228 Network Subsystem (IMS) definition includes the functions and activities of a measures to implement an IP-based public telephone service.

9 Entry into force and transition period

This provision shall enter into force on 20 May 2021.

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The documentation referred to in paragraph 3 shall be drawn up no later than six period after the entry into force of the order.

Helsinki, 19 May 2021

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