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Multi-access Edge Computing (MEC); Terminology

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Reference RGR/MEC-0001v321-Terms Keywords acronym, MEC, terminology

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Foreword

This Group Report (GR) has been produced by ETSI Industry Specification Group (ISG) Multi-access Edge Computing (MEC).

Modal verbs terminology

In the present document "should", "should not", "may", "need not", "will", "will not", "can" and "cannot" are to be interpreted as described in clause 3.2 of the <u>ETSI Drafting Rules</u> (Verbal forms for the expression of provisions).

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1 Scope

The present document provides a glossary of terms relating to the conceptual, architectural and functional elements within the scope of work on Multi-access Edge Computing.

The purpose of this glossary is to ensure that all terminology defined in the present document is used in a consistent way by all ETSI MEC deliverables as well as in wider industry discussions on Multi-access Edge Computing.

2 References

2.1 Normative references

Normative references are not applicable in the present document.

2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] ETSI GR NFV 003: "Network Functions Virtualisation (NFV); Terminology for Main Concepts in NFV".
- [i.2] ETSI TS 123 002: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; Network architecture (3GPP TS 23.002)".

3 Definition of terms, symbols and abbreviations

3.1 Terms

Α

access provider: entity providing a user of some network with access from the user's device to that network

aggregation point: location in a physical network deployment intermediate between the core network and a number of homogeneous or heterogeneous network termination points (base station, cable modems, WLAN access points, etc.) which can act as a location for a MEC host

application context: set of reference data about an application instance that is used to identify it, enable lifecycle management operations and associate it with its device application

application descriptor: descriptor provided by the application provider which describes the application rules and requirements of a MEC application

application package: bundle of files provided by an application provider, to on-boarded into a MEC system and used by the MEC system for application instantiation, including package metadata (application descriptor, manifest) and artifacts (software image(s), e.g. VM image or container images, and optionally other files), or URIs to artifacts

application provider: entity that manages and distributes software-based services and solutions to customers

application rules and requirements: rules and requirements associated to MEC applications, such as required resources, maximum latency, required or useful services, traffic rules, DNS rules, mobility support, etc.

В

Void.

C

client application: application software running on a device (e.g. UE, laptop with internet connectivity) in order to utilize functionality provided by one or more specific MEC application(s)

content provider: entity (e.g. a web server, or a content distribution network) that provides content to consumers

D

device application: application running in the device that has the capability to interact with the MEC system via the user application lifecycle management proxy

F - H

Void.

I

infrastructure provider: entity that provides components into the network infrastructure ranging from compute elements and/or platforms to a software component (i.e. software component examples include security, virtualisation, controller, etc.)

J - K

Void.

L

lawful interception: action (based on the law), performed by a network operator/service provider/access provider, of making available certain information and providing that information to a law enforcement monitoring facility

lifecycle management: set of functions required to manage the instantiation, maintenance and termination of a MEC application instance

M

MEC application: virtualised software application that can be instantiated and run on virtualisation infrastructure of the MEC system and can potentially provide and/or consume MEC services

MEC federation: federated model of MEC systems enabling shared usage of MEC services and applications

MEC host: entity that contains a MEC platform and a virtualisation infrastructure which provides compute, storage and network resources to MEC applications

MEC host level management: components which handle the management of the MEC specific functionality of a particular MEC platform, MEC host and the MEC applications running on it

MEC management: MEC system level management and MEC host level management

MEC platform: collection of functionality that is required to run MEC applications on a specific MEC host virtualisation infrastructure and to enable them to provide and consume MEC services, and that can provide itself a number of MEC services

MEC service: service provided via the MEC platform either by the MEC platform itself or by a MEC application

MEC system: collection of MEC hosts and MEC management necessary to run MEC applications

MEC system level management: management components which have the overview of the complete MEC system

mobile edge application: MEC application that can be instantiated on a mobile edge host within the mobile edge system and can potentially provide or consume mobile edge services

mobile edge host: MEC host that contains a mobile edge platform and a virtualisation infrastructure which provides compute, storage and network resources to mobile edge applications

mobile edge host level management: components which handle the management of the mobile edge specific functionality of a particular mobile edge platform, mobile edge host and the mobile edge applications running on it

mobile edge management: mobile edge system level management and mobile edge host level management

mobile edge platform: MEC platform to run mobile edge applications on a specific mobile edge host virtualisation infrastructure and to enable them to provide and consume mobile edge services, and that can provide itself a number of mobile edge services

mobile edge service: MEC service provided via the mobile edge platform either by the mobile edge platform itself or by a mobile edge application

mobile edge system: special kind of MEC system that is a collection of mobile edge hosts and mobile edge management necessary to run mobile edge applications within an operator network or a subset of an operator network

mobile edge system level management: management components which have the overview of the complete mobile edge system

Multi-access Edge Computing (MEC): system which provides an IT service environment and cloud-computing capabilities at the edge of an access network which contains one or more type of access technology, and in close proximity to its users

Ν

Network Functions Virtualisation (NFV): principle of separating network functions from the hardware they run on by using virtual hardware abstraction, as defined in ETSI GR NFV 003 [i.1]

network operator: entity that provides a network for the provision of telecommunications services

NOTE: If the same entity also offers services it also becomes the service provider.

O - Q

Void.

R

resource: object with a type, associated data, a set of methods that operate on it, and, if applicable, relationships to other resources

NOTE: A resource is a fundamental concept in a RESTful API. Resources are acted upon by the RESTful API using the Methods (e.g. POST, GET, PUT, DELETE, etc.). Operations on Resources affect the state of

the corresponding managed entities.

retained data: set of data elements for a specific subscriber/user related to a specific service transaction

S

service provider: entity providing a service to the end-user

Т

Void.

U

user application: MEC application that is instantiated in the MEC system in response to a request from a user via a device application

user context: application-specific runtime data maintained by the MEC application, which is associated with a user of that application

User Equipment (UE): mobile equipment used to access the operator's mobile network and supporting applications that transmit IP packets over the mobile network

NOTE: User Equipment is originally defined in ETSI TS 123 002 [i.2]. For the purpose of the present document, the definition above is used instead.

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virtualised resource: compute, storage or network resource provided by the virtualisation infrastructure to a mobile edge application

W - Z

Void.

3.2 Symbols

Void.

3.3 Abbreviations

0 - 9

3GPP	3 rd Generation Partnership Project
4G	4 th Generation
5G	5 th Generation
5GS	5G System

A-F

ACK/ack	ACKnowledgement
API	Application Programming Interface
App/app	Application/application
CAPEX	CAPital EXpenditure
CAPIF	Common API Framework for 3GPP northbound APIs
CCF	CAPIF Core Function
DNS	Domain Name System
E-UTRA	Evolved Universal Terrestrial Radio Access
EPS	Evolved Packet System
FTP	File Transfer Protocol
FQDN	Fully Qualified Domain Name
	-

G

GPRS General Packet Radio Service

GR Group Report

GRE Generic Routing Encapsulation

GS Group Specification

GSM Global System for Mobile communications

GSMA GSM Association

GTP GPRS Tunnelling Protocol

GTP-U GPRS Tunnelling Protocol - User plane

GW Gateway

H - J

HTTP Hyper Text Transfer Protocol

HTTPS HTTP over TLS

IETF Internet Engineering Task Force

IP Internet Protocol

ISG Industry Specification Group IT Information Technology JSON JavaScript Object Notation

K

KPI Key Performance Indicator

L

LAN Local Area Network
LCM Life Cycle Management
LTE Long Term Evolution

M

MAC Media Access Control

MANO Management And Orchestration
MEAO MEC Application Orchestrator
MEC Multi-access Edge Computing

MEF MEC Federator

MEFB MEC Federation Broker
MEFM MEC Federation Manager
MEC On host attacks

MEO MEC Orchestrator MEP MEC Platform

MEPM MEC Platform Manager
MEPM-V MEC Platform Manager - NFV
MNO Mobile Network Operator

MQTT Message Queue Telemetry Transport

Ν

NFV Network Functions Virtualisation

NFVI Network Functions Virtualisation Infrastructure NFVO Network Functions Virtualisation Orchestrator

NGMN Next Generation Mobile Network

NR New Radio NS Network Service

NSD Network Service Descriptor

O - Q

OEM Original Equipment Manufacturer
OSS Operations Support System

PLMN Public Land Mobile Network
QCI Quality Class Indicator
QoE Quality of Experience
QoS Quality of Service

R

RAN Radio Access Network reconfig reconfiguration ref reference req request

REST REpresentational State Transfer RFC Request For Comments RNI Radio Network Information

RNIS Radio Network Information Service

RPC Remote Procedure Call

S - T

TCP Transmission Control Protocol TLS Transport Layer Security

U

UE User Equipment

UMTS Universal Mobile Telecommunications System

UP User Plane

UPF User Plane Function

URI Uniform Resource Indicator or Uniform Resource Identifier or Universal Resource Identifier

UTC Coordinated Universal Time

٧

V2X Vehicle-to-Everything

VIM Virtualised Infrastructure Manager

VM Virtual Machine

VNF Virtualised Network Function

VNFM Virtualised Network Function Manager

W - Z

WLAN Wireless LAN

XML eXtensible Markup Language

Annex A: Change History

Date	Version	Information about changes	
July 2021	3.0.1	Base line for phase 3	
August 2021	3.0.2	MEC(21)000363 MEC001 add some term definitions MEC(21)000365 MEC001 add some abbreviations	
October 2021	3.0.3	MEC(21)000483 MEC001 prepare for stable draft MEC(21)000490r1 MEC001 capturing short expressions as abbreviations MEC(21)000498 MEC001 postpone abbreviations for federation MEC(21)000502 MEC001-update to the abbreviations	
November 2021	3.0.4	Final draft for publication as 3.1.1	
January 2022	3.1.2	Base line for v3.2.1	
January 2022	3.1.3	MEC(22)000024 MEC001 restore abbreviations for federation MEC(22)000025r1 MEC001 add missing terms for consistency MEC(22)000030r1 MEC application definition	
November 2023	3.1.4	MEC(23)000366r1 MEC001 - addition of new abbreviations MEC(23)000438 MEC001 add abbreviations from contribution 399r1	
December 2023	3.1.5	Cleanup by EditHelp Removed Editor's note reminding on MEC040 terms Final draft for MEC Remote Consensus (RC) review	
January 2024	3.1.6	Final draft v3.1.6 is similar to v3.1.5 and is submitted to MEC RC for approval, as there were no comments during the RC for review	

History

Document history			
V1.1.1	March 2016	Publication as ETSI GS MEC 001	
V2.1.1	January 2019	Publication as ETSI GS MEC 001	
V3.1.1	January 2022	Publication	
V3.2.1	February 2024	Publication	