# ETSI TS 132 299 V10.17.0 (2015-10)


**Digital cellular telecommunications system (Phase 2+);**
**Universal Mobile Telecommunications System (UMTS);**
**LTE;**
**Telecommunication management;**
**Charging management;**
**Diameter charging applications**
**(3GPP TS 32.299 version 10.17.0 Release 10)**

Reference
RTS/TSGS-0532299vah0

Keywords
GSM,LTE,UMTS

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# Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

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# 1 Scope

The present document is part of a series of documents that specify charging functionality and charging management in GSM/UMTS networks. The GSM/UMTS core network-charging architecture and principles are specified in TS 32.240 [1], which provides an umbrella for other charging management documents that specify.

- The content of the CDRs' per domain and subsystem (offline charging);
- The content of real-time charging messages per domain / subsystem (online charging);
- The functionality of online and offline charging for those domains and subsystems;
- The interfaces that are used in the charging framework to transfer the charging information (i.e. CDRs or charging events).

The complete document structure for these TSs is defined in TS 32.240 [1].

The present document specifies in detail the Diameter based offline and online charging applications for 3GPP networks. It includes all charging parameters, scenarios and message flows..

All terms, definitions and, abbreviations used in the present document, that are common across 3GPP TSs, are defined in TR 21.905 [100]. Those that are common across charging management in GSM/UMTS domains, services or subsystems are provided in the umbrella document TS 32.240 [1] and are copied into clause 3 of the present document for ease of reading. Finally, those items that are specific to the present document are defined exclusively in the present document.

Furthermore, requirements that govern the charging work are specified in TS 22.115 [101].

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
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[1] 3GPP TS 32.240: "Telecommunication management; Charging management; Charging Architecture and Principles".

[2] - [99] Void.

[100] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications"

[101] 3GPP TS 22.115: "Service aspects; Charging and billing".

[102] - [199] Void.

[200] 3GPP TS 23.207: "End to end quality of service concept and architecture".

[201] 3GPP TS 23.228: "IP Multimedia Subsystem (IMS); Stage 2".

[202] 3GPP TS 24.229: "IP Multimedia Call Control Protocol based on SIP and SDP; Stage 3."

[203] 3GPP TS 29.207: "Policy control over Go interface".

[204] 3GPP TS 29.229: "Cx and Dx Interfaces based on the Diameter protocol; Protocol Details".