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MULTIMEDIA SIGNALS

IPCablecom

IPCablecom2 data collection to support accounting

ITU-T Recommendation J.363



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IPCablecom2 data collection to support accounting

Summary

This Recommendation defines the requirements and functionality needed to support Accounting functions within this release of the IPCablecom2 Architecture. The main focus is to define how the collection of usage data is done to assure that the required billing functions can be supported, though usage data may also be used for other purposes (e.g., network or service trend analysis, network planning, and traffic engineering). In addition, this Recommendation details the various accounting events and their associated attributes.

Source

ITU-T Recommendation J.363 was approved on 29 November 2006 by ITU-T Study Group 9 (2005-2008) under the ITU-T Recommendation A.8 procedure.

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1 Scope

This Recommendation defines the requirements and functionality needed to support Accounting functions within this release of the IPCablecom2 Architecture. The main focus is to define how the collection of usage data is done to assure that the required billing functions can be supported, though usage data may also be used for other purposes (e.g., network or service trend analysis, network planning, and traffic engineering). In addition, this Recommendation details the various accounting events and their associated attributes.

An Accounting Event message is a data record containing information about network usage and activities. A single Accounting Event may contain a complete set of data regarding usage or it may only contain part of the total usage information. When correlated by the Charging Data Function (CDF), information contained in multiple Accounting Events provides a complete record of the service. This complete record of the service is often referred to as a Call Detail Record (CDR). Accounting Events or CDRs may be sent to one or more back-office applications such as a billing system, fraud detection system, or pre-paid services processor.

The structure of an Accounting Event Message data record is designed to be flexible and extensible in order to carry information about network usage for a wide variety of services. It needs to support the correlation of accounting events generated in the session and bearer domains and to seamlessly interwork with the cable-specific access network.

It is an important objective of this work that interoperability between IPCablecom 2.0 and 3GPP IMS is provided. IPCablecom 2.0 is based upon 3GPP IMS, but includes additional functionality necessary to meet the requirements of cable operators. Recognizing developing converged solutions for wireless, wireline, and cable, it is expected that further development of IPCablecom 2.0 will continue to monitor and contribute to IMS developments in 3GPP, with the aim of alignment of 3GPP IMS and IPCablecom 2.0.

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

- [ITU-T J.366.4] ITU-T Recommendation J.366.4 (2006), *IPCablecom2 Multimedia Subsystem (IMS): Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3 Specification*.
- [TS 32.240] ETSI TS 132.240 V6.3.0 (2005-09), *Charging Architecture and Principles*, Release 6.
- [TS 32.260] ETSI TS 132.260 V6.4.0 (2005-09), *IP Multimedia Subsystem (IMS) charging*, Release 6.
- [TS 32.299] ETSI TS 132.299 V6.5.0 (2005-12), *Diameter charging applications*, Release 6.

3 Terms and definitions

The terms and definitions defined in the 3GPP Technical Specification TS 32.260 [TS 32.260] are generally applicable; please refer to clause 3 of [TS 32.260]. In addition, this Recommendation uses the following terms:

3.1 accounting: The process of collecting usage data.

3.2 billing correlation ID (BCID): A Billing Correlation ID (BCID) is an IPCablecom-defined term created for the multimedia session, which uniquely identifies the session within the IPCablecom Multimedia billing domain.

3.3 DIAMETER: The DIAMETER protocol provides an Authentication, Authorization and Accounting (AAA) framework for applications such as network access or IP mobility.

3.4 charging: The process of applying rating to usage data for a given session for the generation of a subscriber's bill.

3.5 HFC access network: The Hybrid-Fibre Coax Network, which provides physical transport of video and high-speed data services via DOCSIS.

3.6 usage data: A collection of data representing the usage of network resources for a given session.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations:

3GPP	Third Generation Partnership Project
AM	Application Manager
BCID	Billing Correlation ID
BSS	Business Support Systems
CCF	Charging Collection Function
CDF	Charging Data Function
CDR	Call Detail Record
CGF	Charging Gateway Function
CM	Cable Modem
CMS	Call Management Server
CMTS	Cable Modem Termination System
CSCF	Call Session Control Function
EM	Event Messages
E-MTA	Embedded Multimedia Terminal Adapter
GPRS	General Packet Radio Service
ICID	IMS Charging Identity
IMS	IP Multimedia Subsystem
IOI	Inter-Operator Identifier
IP	Internet Protocol
IP-CAN	IP Connectivity Access Network