

ETSI TS 103 161-17 V1.1.1 (2011-04)

Technical Specification

**Access, Terminals, Transmission and Multiplexing (ATTM);
Integrated Broadband Cable and Television Networks;
IPCablecom 1.5;
Part 17: CMS Subscriber Provisioning Specification**

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[ETSI TS 103 161-17 V1.1.1 \(2011-04\)](https://standards.iteh.ai/catalog/standards/etsi/5d457a19-699f-425a-9cd8-fafe82604996/etsi-ts-103-161-17-v1-1-1-2011-04)

<https://standards.iteh.ai/catalog/standards/etsi/5d457a19-699f-425a-9cd8-fafe82604996/etsi-ts-103-161-17-v1-1-1-2011-04>



Reference

DTS/ATTM-003011-17

Keywords

access, broadband, cable, IP, multimedia, PSTN

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

(<https://standards.iteh.ai>)
Document Preview

Important notice

Individual copies of the present document can be downloaded from:

<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at

<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, please send your comment to one of the following services:

http://portal.etsi.org/chaicor/ETSI_support.asp

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2011.
All rights reserved.

DECT™, **PLUGTESTS™**, **UMTS™**, **TIPHON™**, the TIPHON logo and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.

3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

LTE™ is a Trade Mark of ETSI currently being registered

for the benefit of its Members and of the 3GPP Organizational Partners.

GSM® and the GSM logo are Trade Marks registered and owned by the GSM Association.

Contents

Intellectual Property Rights	5
Foreword.....	5
1 Scope	7
2 References	7
2.1 Normative references	7
2.2 Informative references.....	8
3 Definitions and abbreviations.....	8
3.1 Definitions.....	8
3.2 Abbreviations	8
4 Void.....	9
5 Technical Overview	9
5.1 Void.....	9
5.2 IPCom Reference Architecture	9
5.3 Components and Interfaces	10
5.4 Components.....	11
5.4.1 Back Office Components (Service Provider Business and Service Management Systems).....	11
5.4.2 Provisioning Server.....	11
5.4.3 CMS.....	11
5.4.4 MTA	11
5.4.5 TFTP.....	11
5.5 Interface Descriptions.....	11
5.5.1 Pkt-p1.....	11
5.5.2 Pkt-p4.....	11
5.5.3 Pkt-prov-p1	11
6 Assumptions	12
7 Subscriber Provisioning	12
7.1 Customer Records (Billing).....	12
7.2 Equipment Setup and Configuration	12
7.2.1 CMS Basic POTS Provisioning (BPP)	12
7.2.2 CMS Call Feature Provisioning (CFP)	12
7.3 Static Versus Dynamic Subscriber Provisioning Data	13
8 Requirements.....	13
8.1 General Requirements	13
8.2 Transport Requirements	13
9 Data Model	14
9.1 Overview	14
9.1.1 PcspService Object	15
9.1.2 PcspMta Object.....	15
9.1.3 PktcEndpoint Object.....	16
9.1.4 PktcCMS Object	16
9.1.5 Inter Object Relationships	16
9.2 Relations are encoded using the PcspRelation entity.XML Encoding	16
9.2.1 The PCSP XML Schema	17
9.2.2 Sample PCSP Entity Encodings.....	17
9.2.3 Object Extensions	17
10 Messaging.....	17
10.1 Overview	17
10.2 CMS and PS Messaging Role Requirements	18
10.3 WSDL Document.....	19
11 Security.....	19

Annex A (normative):	PCSP XML Schema.....	20
Annex B (informative):	Sample Entity Encodings	37
B.1	PcspService Object Example.....	37
B.2	PcspEndpoint Object Example	39
B.3	PcspMTA Object Example.....	39
B.4	PcspCMS Object Example	39
B.5	PcspRelation Example.....	39
Annex C (informative):	Sample Object Extension	41
C.1	Extended PcspService Object Example.....	41
C.2	The Extension Schema	42
Annex D (normative):	WSDL Document For PCSP Messaging.....	43
Annex E (informative):	Data Encoding Evaluation	47
E.1	XML	47
E.2	ASN.1/BER	47
E.3	Proprietary ASCII	47
E.4	SDP (session description protocol)	47
E.5	RADIUS	48
E.6	SQL	48
E.7	Options Summary.....	48
E.8	Recommendation: XML.....	48
Annex F (informative):	Transport Protocol Evaluation.....	49
F.1	TFTP with IPsec.....	49
F.2	Batched RADIUS - multiple records in single request via event msgs.....	49
F.3	Diameter	49
F.4	Distributed Object Systems.....	49
F.4.1	CORBA/IIOP	49
F.5	DCOM.....	50
F.6	HTTP.....	50
F.7	Options Summary.....	51
F.8	Recommendation: HTTP 1.1.....	51
Annex G (informative):	Bibliography.....	52
	History	53

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://webapp.etsi.org/IPR/home.asp>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Access, Terminals, Transmission and Multiplexing (ATTM).

The present document is part 17 of a multi-part deliverable covering Access, Terminals, Transmission and Multiplexing (ATTM); Integrated Broadband Cable and Television Networks; IPCablecom 1.5, as identified below:

- Part 1: "Overview";
- Part 2: "Architectural framework for the delivery of time critical services over cable Television networks using cable modems";
- Part 3: "Audio Codec Requirements for the Provision of Bi-Directional Audio Service over Cable Television Networks using Cable Modems";
- Part 4: "Network Call Signalling Protocol";
- Part 5: "Dynamic Quality of Service for the Provision of Real Time Services over Cable Television Networks using Cable Modems";
- Part 6: "Event Message Specification";
- Part 7: "Media Terminal Adapter (MTA) Management Information Base (MIB)";
- Part 8: "Network Call Signalling (NCS) MIB Requirements";
- Part 9: "Security";
- Part 10: "Management Information Base (MIB) Framework";
- Part 11: "Media Terminal Adapter (MTA) device provisioning";
- Part 12: "Management Event Mechanism";
- Part 13: "Trunking Gateway Control Protocol - MGCP option";
- Part 14: "Embedded MTA Analog Interface and Powering Specification";
- Part 15: "Analog Trunking for PBX Specification";
- Part 16: "Signalling for Call Management Server";
- Part 17: "CMS Subscriber Provisioning Specification";**
- Part 18: "Media Terminal Adapter Extension MIB";
- Part 19: "IPCablecom Audio Server Protocol Specification - MGCP option";
- Part 20: "Management Event MIB Specification";

Part 21: "Signalling Extension MIB Specification".

NOTE 1: Additional parts may be proposed and will be added to the list in future versions.

NOTE 2: The choice of a multi-part format for this deliverable is to facilitate maintenance and future enhancements.

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[ETSI TS 103 161-17 V1.1.1 \(2011-04\)](https://standards.iteh.ai/catalog/standards/etsi/5d457a19-699f-425a-9cd8-fafe82604996/etsi-ts-103-161-17-v1-1-1-2011-04)

<https://standards.iteh.ai/catalog/standards/etsi/5d457a19-699f-425a-9cd8-fafe82604996/etsi-ts-103-161-17-v1-1-1-2011-04>

1 Scope

The present document defines the interface used between the Call Management Server (CMS) and Provisioning Server (PS) for the exchange of service provisioning information. The interface employs a Web Service model. Specified in Web Service Description Language 1.1 (WSDL 1.1), the interface transports XML encoded objects within Simple Object Access Protocol 1.1 (SOAP 1.1) encoded messages over an HTTP 1.1 transport. This interface is secured via IPSec.

The data model transported upon this interface is specifically designed to be extensible, allowing incorporation of as yet undefined IPCom features and specific vendor extensions.

The scope of the present document is limited to the provisioning of an IPCom CMS by a single service provider. Additionally:

- The CMS provisioning interface is limited to the exchange of service activation data between the CMS and the PS. The interface between the PS and the back-office Operations Support System (OSS) is out of scope.
- CMS element management and network element provisioning (dial plans, etc.) are out of scope.
- Customer record creation/billing is considered part of the back-office OSS application and is currently out of scope.

2 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 reference document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

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

2.1 Normative references

The following referenced documents are necessary for the application of the present document.

- | | |
|-----|--|
| [1] | PacketCable 1.5 PKT-TR-ARCH1.5-V02-700412: "Architecture Framework Technical Report", April 12 2007, Cable Television Laboratories, Inc. |
| [2] | PacketCable 1.5 PKT-SP-PROV1.5-I04-090624: "MTA Device Provisioning Specification", June 24 2009, Cable Television Laboratories, Inc. |
| [3] | PacketCable 1.5 PKT-SP-SEC1.5-I03-090624: "Security Specification", June 24 2009, Cable Television Laboratories, Inc. |
| [4] | Void. |
| [5] | Void. |
| [6] | Void. |