# ETSI TS 132 508 V14.0.0 (2017-04)



Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE;

Telecommunication management;
Procedure flows for multi-vendor plug-and-play eNode B
connection to the network
(3GPP TS 32.508 version 14.0.0 Release 14)



# Reference RTS/TSGS-0532508ve00 Keywords GSM,LTE,UMTS

#### **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

### Important notice

The present document can be downloaded from: http://www.etsi.org/standards-search

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the only prevailing document is the print of the Portable Document Format (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 <a href="https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx">https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx</a>

If you find errors in the present document, please send your comment to one of the following services: https://portal.etsi.org/People/CommiteeSupportStaff.aspx

### Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2017.
All rights reserved.

**DECT**<sup>™</sup>, **PLUGTESTS**<sup>™</sup>, **UMTS**<sup>™</sup> and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members. **3GPP**<sup>™</sup> and **LTE**<sup>™</sup> are Trade Marks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

oneM2M logo is protected for the benefit of its Members

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

# 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 (https://ipr.etsi.org/).

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 3rd Generation Partnership Project (3GPP).

The present document may refer to technical specifications or reports using their 3GPP identities, UMTS identities or GSM identities. These should be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between GSM, UMTS, 3GPP and ETSI identities can be found under <a href="http://webapp.etsi.org/key/queryform.asp">http://webapp.etsi.org/key/queryform.asp</a>.

# Modal verbs terminology

In the present document "shall", "shall not", "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).

"must" and "must not" are NOT allowed in ETSI deliverables except when used in direct citation.

# Contents

Intell	lectual Property Rights	2
Forev	word	2
Moda	al verbs terminology	2
	word	
	duction	
1	Scope	
2	References	
3	Definitions and abbreviations	
3.1	Definitions	
3.2	Abbreviations	
4	Architecture for multi-vendor plug-and-play	6
4.1	Functional architecture	6
4.2	Functional elements	
4.2.1	IP Autoconfiguration services	
4.2.2	DNS server	
4.2.3	Certification Authority server	
4.2.4 4.2.5	Element Manager (EM)	
4.2.3	Security Gateway (SeGW)	/
5	Procedure flows	8
5.1	High-level plug-and-connect	8
5.2	Initial IP Autoconfiguration	
5.3	Certificate enrolment	13
5.4	Establishing secure connection	15
5.5	Establishing connection to Element Manager (EM)	17
Anne	ex A (informative): Change history	20
Histo	nrv	2.1

## **Foreword**

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

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

## Introduction

The present document is part of a TS-family covering the 3<sup>rd</sup> Generation Partnership Project Technical Specification Group Services and System Aspects, Telecommunication management; as identified below:

TS 32.501: "Self-configuration of network elements; Concepts and requirements".

TS 32.508: "Procedure flows for multi-vendor plug-and-play eNB connection to the network".

TS 32.509: "Data format for multi-vendor plug-and-play eNB connection to the network".

## 1 Scope

The present document describes the procedure flows between network entities involved in the **multi-vendor plug-and-play** eNB connection to network.

These procedures are based on requirements and use cases specified in 3GPP TS 32.501 [4]. The format of the data exchanged in these procedures is defined in 3GPP TS 32.509 [5].

## 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.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.
- [1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 32.101: "Telecommunication management; Principles and high level requirements".
- [3] 3GPP TS 32.102: "Telecommunication management; Architecture".
- [4] 3GPP TS 32.501: "Telecommunication management; Self-configuration of network elements; Concepts and requirements".
- [5] 3GPP TS 32.509: "Telecommunications management; Data format for multi-vendor plug-and-play eNB connection to the network".

## 3 Definitions and abbreviations

## 3.1 Definitions

For the purposes of the present document, the terms and definitions given in TR 21.905 [1], TS 32.501 [4] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in TR 21.905 [1] and in TS 32.501 [4].

## 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1], TS 32.501 [4] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [1] and in TS 32.501 [4].