

ETSI TS 128 624 V17.0.0 (2022-04)



**Universal Mobile Telecommunications System (UMTS);  
LTE;  
Telecommunication management;  
State management data definition  
Integration Reference Point (IRP);  
Requirements  
(3GPP TS 28.624 version 17.0.0 Release 17)**



---

**Reference**

RTS/TSGS-0528624vh00

---

**Keywords**

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 - APE 7112B  
Association à but non lucratif enregistrée à la  
Sous-Préfecture de Grasse (06) N° w061004871

---

**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 prevailing version of an ETSI deliverable is the one made publicly available in PDF format at [www.etsi.org/deliver](http://www.etsi.org/deliver).

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

<https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

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

<https://portal.etsi.org/People/CommitteeSupportStaff.aspx>

If you find a security vulnerability in the present document, please report it through our  
Coordinated Vulnerability Disclosure Program:

<https://www.etsi.org/standards/coordinated-vulnerability-disclosure>

---

**Notice of disclaimer & limitation of liability**

The information provided in the present deliverable is directed solely to professionals who have the appropriate degree of experience to understand and interpret its content in accordance with generally accepted engineering or other professional standard and applicable regulations.

No recommendation as to products and services or vendors is made or should be implied.

No representation or warranty is made that this deliverable is technically accurate or sufficient or conforms to any law and/or governmental rule and/or regulation and further, no representation or warranty is made of merchantability or fitness for any particular purpose or against infringement of intellectual property rights.

In no event shall ETSI be held liable for loss of profits or any other incidental or consequential damages.

Any software contained in this deliverable is provided "AS IS" with no warranties, express or implied, including but not limited to, the warranties of merchantability, fitness for a particular purpose and non-infringement of intellectual property rights and ETSI shall not be held liable in any event for any damages whatsoever (including, without limitation, damages for loss of profits, business interruption, loss of information, or any other pecuniary loss) arising out of or related to the use of or inability to use the software.

---

**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.

© ETSI 2022.  
All rights reserved.

---

## Intellectual Property Rights

### Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The declarations pertaining to these essential IPRs, if any, are 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 Directives including the ETSI IPR Policy, no investigation regarding the essentiality of IPRs, 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.

### Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

**DECT™**, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members. **3GPP™** and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners. **oneM2M™** logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners. **GSM®** and the GSM logo are trademarks registered and owned by the GSM Association.

---

## Legal Notice

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. These shall be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between 3GPP and ETSI identities can be found under <http://webapp.etsi.org/key/queryform.asp>.

---

## 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 [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

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

---

# Contents

Intellectual Property Rights .....	2
Legal Notice .....	2
Modal verbs terminology.....	2
Foreword.....	4
Introduction .....	4
1 Scope .....	5
2 References .....	5
3 Definitions and abbreviations.....	6
3.1 Definitions .....	6
3.3 Abbreviations .....	6
4 Requirements for the State Management IRP .....	6
4.1 Introduction to requirements .....	6
4.2 Requirements.....	6
<b>Annex A (informative): Change history .....</b>	<b>8</b>
History .....	9

---

# Foreword

This Technical Specification (TS) 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:

- 28.624:** State Management Data Definition Integration Reference Point (IRP); Requirements
- 28.625: State Management Data Definition Integration Reference Point (IRP); Information Service (IS)
- 28.626: State Management Data Definition Integration Reference Point (IRP); Solution Set (SS) definitions

---

# 1 Scope

The present document defines, in addition to the requirements defined in 3GPP TS 32.101 [1], 3GPP TS 32.102 [2] and 3GPP TS 32.600 [3], the requirements for the present IRP: State Management Data Definition.

---

# 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 TS 32.101: "Telecommunication management; Principles and high level requirements".
- [2] 3GPP TS 32.102: "Telecommunication management; Architecture".
- [3] 3GPP TS 32.600: "Telecommunication management; Configuration Management (CM); Concept and high-level requirements".
- [4] 3GPP TS 28.625: "Telecommunication management; State Management Data Definition Integration Reference Point (IRP); Information Service (IS)".
- [5] 3GPP TS 28.702: "Telecommunication management; Core Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".
- [6] 3GPP TS 28.652: "Telecommunication management; UTRAN Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".
- [7] 3GPP TS 28.655: "Telecommunication management; GERAN Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".
- [8] ITU-T Recommendation X.731: "Information technology, Open Systems Interconnection, Systems Management: State management function".
- [9] 3GPP TS 32.107: "Telecommunication management; Fixed Mobile Convergence (FMC) Federated Network Information Model (FNIM)".
- [10] 3GPP TS 28.620: "Telecommunication management; Fixed Mobile Convergence (FMC) Federated Network Information Model (FNIM) Umbrella Information Model (UIM)".
- [11] 3GPP TS.28.622: "Generic Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".
- [12] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

---

## 3 Definitions and abbreviations

### 3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [12], 3GPP TS 32.101 [1], 3GPP TS 32.102 [2] 3GPP, TS 32.600 [3] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [12] and 3GPP TS 32.101 [1], 3GPP TS 32.102 [2] and 3GPP TS 32.600 [3].

**IRP:** See 3GPP TS 32.101 [1].

**Information Object Class (IOC):** See definition in TS 28.622 [11].

**Network Resource Model (NRM):** See definition in TS 28.622 [11].

### 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [12] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [12].

CM	Configuration Management
----	--------------------------

---

## 4 Requirements for the State Management IRP

### 4.1 Introduction to requirements

The management state of a managed object represents the instantaneous condition of availability and operability of the associated resource from the point of view of management. Different classes of managed object have a variety of state attributes that express and control aspects of the operation of their associated resource that are peculiar to each class. However, the management state is expected to be common to a large number of resources and for this reason is to be standardized; it expresses key aspects of their usability at any given time. Its purpose is to control the general availability of a resource and to make visible information about that general availability.

State Management Data Definition IRP is defined to specify and to standardise the generic attributes for modelling and managing the resources of 3G networks at the Itf-N. There are a variety of managed objects and the related network resources. It is the task of designers of specific managed object classes to model the state conditions of the associated network resources using the generic attributes provided in the State Management Data Definition IRP. Different managed objects and the network resources they model may require different subsets of the attributes defined in the State Management Data Definition IRP. Examples of network resource models can be found in 3GPP TS 28.625 [4], 3GPP TS 28.702 [5], 3GPP TS 28.652 [6] and 3GPP TS 28.655 [7].

### 4.2 Requirements

The following requirements apply for the State Management IRP:

- A. IRP-related requirements in 3GPP TS 32.101 [1].
- B. IRP-related requirements in 3GPP TS 32.102 [2].
- C. IRP-related requirements in 3GPP TS 32.600 [3].

The NRM defined by this IRP:

- A) Shall support communications for telecommunication network management purposes, including management of converged networks.
- B) Is a member of the Federated Network Information Model (FNIM) [9] and its information is derived from FNIM Umbrella Information Model (UIM) [10].

In addition to the above, the following more specific requirements apply:

1. The State Management Data Definition IRP IS shall specify state attributes, modelling operability, usage and administration related to 3G network resources.
  - operability: whether or not the resource is physically installed and working, if applicable.
  - usage: whether or not the resource is actively in use at a specific instant, and if so, whether or not it has spare capacity for additional users at that instant. A resource is said to be "in use" when it has received one or more requests for service that it has not yet completed or otherwise discharged, or when some part of its capacity has been allocated, and not yet reclaimed, as a result of a previous service request.
  - administration: permission to use or prohibition against using the resource, imposed through the management services.

The semantics and the value ranges of these state attributes shall be based on ITU-T Recommendation X.731 [8] while extensions and omissions may be made.

2. The State Management Data Definition IRP IS shall specify status attributes, modelling more detailed information about other aspects of the state of the corresponding 3G network resources that may affect their operability and usage. The status attributes also contain more detailed information about the administrative constraints on its operation that are controlled by a manager. The semantics and the value ranges of these status attributes shall be based on ITU-T Recommendation X.731 [8] while extensions and omissions may be made.



## Annex A (informative): Change history

Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
Dec 2012	SA#58				Draft sent for information and approval	0.1.0	1.0.0
Dec 2012					New version after approval	1.0.0	11.0.0
Jun-2014	SA#64	SP-140358	001	-	remove the feature support statements	11.0.0	11.1.0
2014-09	-	-	-	-	Update to Rel-12 version (MCC)	11.1.0	<b>12.0.0</b>
2016-01	-	-	-	-	Update to Rel-13 version (MCC)	12.0.0	<b>13.0.0</b>
2017-03	SA#75	-	-	-	Promotion to Release 14 without technical change	13.0.0	<b>14.0.0</b>
2018-06	-	-	-	-	Update to Rel-15 version (MCC)	14.0.0	<b>15.0.0</b>
2018-06	-		0002	-	Update to Rel-15 version (MCC)	14.0.0	<b>15.0.0</b>

Change history							
Date	Meeting	TDoc	CR	Rev	Cat	Subject/Comment	New version
2019-09	SA#85	SP-190751	0002	-	F	Remove NR with wrong definition to avoid misalignment with RAN2	15.1.0
2019-09	SA#85					Editorial revision to correct version on cover page	15.1.1
2020-07	-	-	-	-	-	Update to Rel-16 version (MCC)	<b>16.0.0</b>
2022-03	-	-	-	-	-	Update to Rel-17 version (MCC)	<b>17.0.0</b>

---

# History

<b>Document history</b>		
V17.0.0	April 2022	Publication