# ETSI TS 124 555 V17.7.0 (2025-01)



### 5G; Proximity-services (ProSe) in 5G System (5GS); User Equipment (UE) policies; Stage 3 (3GPP TS 24.555 version 17.7.0 Release 17)

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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).

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### Foreword

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  - 1 presented to TSG for information;
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In the present document, modal verbs have the following meanings:

shall indicates a mandatory requirement to do something

shall not indicates an interdiction (prohibition) to do something

The constructions "shall" and "shall not" are confined to the context of normative provisions, and do not appear in

The constructions shall and shall not are confined to the context of normative provisions, and do not appear in Technical Reports.

The constructions "must" and "must not" are not used as substitutes for "shall" and "shall not". Their use is avoided insofar as possible, and they are not used in a normative context except in a direct citation from an external, referenced, non-3GPP document, or so as to maintain continuity of style when extending or modifying the provisions of such a referenced document.

should	indicates a recommendation to do something
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silvulu	indicates a recommendation to do something
should not	indicates a recommendation not to do something
may	indicates permission to do something
need not	indicates permission not to do something

The construction "may not" is ambiguous and is not used in normative elements. The unambiguous constructions "might not" or "shall not" are used instead, depending upon the meaning intended.

can	indicates that something is possible
cannot	indicates that something is impossible

The constructions "can" and "cannot" are not substitutes for "may" and "need not".

will	indicates that something is certain or expected to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document
will not	indicates that something is certain or expected not to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document
might	indicates a likelihood that something will happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

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**might not** indicates a likelihood that something will not happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

In addition:

- is (or any other verb in the indicative mood) indicates a statement of fact
- is not (or any other negative verb in the indicative mood) indicates a statement of fact

The constructions "is" and "is not" do not indicate requirements.

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#### 1 Scope

The present document defines User Equipment (UE) policies that are used to configure the UE for Proximity-based Services (ProSe) in 5G System (5GS) based on the architectural requirements defined in 3GPP TS 23.304 [2].

The protocol aspects for 5G ProSe are described in 3GPP TS 24.554 [3].

### 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 23.304: "Proximity based Services (ProSe) in the 5G System (5GS); Stage 2".
- [3] 3GPP TS 24.554: " Proximity-services (ProSe) in 5G System (5GS) protocol aspects; Stage 3".
- [4] 3GPP TS 24.501: "Non-Access-Stratum (NAS) protocol for 5G System (5GS); Stage 3".
- [5] ITU-T Recommendation E.212: "The international identification plan for public networks and subscriptions", 2016-09-23.
- [6] 3GPP TS 23.032: "Universal Geographical Area Description (GAD)".
- [7] 3GPP TS 38.331: "NR; Radio Resource Control (RRC) protocol specification".
- [8] 3GPP TS 38.101-1: "NR; User Equipment (UE) radio transmission and reception; Part 1: Range 1 Standalone".
  - [9] 3GPP TS 38.101-2: "NR; User Equipment (UE) radio transmission and reception; Part 2: Range 2 Standalone".
  - [10] 3GPP TS 23.003: "Numbering, addressing and identification".
  - [11] 3GPP TS 24.526: "User Equipment (UE) policies for 5G System (5GS); Stage 3".
  - [12] IETF RFC 4122: "A Universally Unique IDentifier (UUID) URN Namespace".
  - [13] 3GPP TS 33.503: "Security Aspects of Proximity based Services (ProSe) in the 5G System (5GS)".
- [14] 3GPP TS 32.277: " Proximity-based Services (ProSe) charging".

### 3 Definitions of terms, symbols and abbreviations

#### 3.1 Terms

For the purposes of the present document, the terms given in 3GPP TR 21.905 [1] 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 [1].

#### 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] 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 [1].

5G ProSe	5G Proximity-based Services
5G PKMF	5G ProSe Key Management Function
DUCK	Discovery User Confidentiality Key
DUIK	Discovery User Integrity Key
DUSK	Discovery User Scrambling Key
FQDN	Fully Qualified Domain Name
ProSeP	5G ProSe Policy
RSC	Relay Service Code

### 4 Descriptions of UE policies for 5G ProSe

#### 4.1 Overview

The ProSe policy in 5GS includes:

- a) UE policies for 5G ProSe direct discovery (see clause 4.2);
- b) UE policies for 5G ProSe direct communications (see clause 4.3);
- c) UE policies for 5G ProSe UE-to-network relay (see clause 4.4); and
- d) UE policies for 5G ProSe usage information reporting (see clause 4.5).

The ProSe policy can be delivered from the PCF to the UE. The UE policy delivery procedure is specified in 3GPP TS 24.501 [4].

### 4.2 UE policies for 5G ProSe direct discovery

The UE policies for 5G ProSe direct discovery are defined in clause 5.2.3 of 3GPP TS 24.554 [3]. The generic description of the UE policies for 5G ProSe direct discovery is specified in 3GPP TS 23.304 [2].

### 4.3 UE policies for 5G ProSe direct communications

The UE policies for 5G ProSe direct communications are defined in clause 5.2.4 of 3GPP TS 24.554 [3]. The generic description of the UE policies for 5G ProSe direct communications is specified in 3GPP TS 23.304 [2].

### 4.4 UE policies for 5G ProSe UE-to-network relay

The UE policies for 5G ProSe UE-to-network relay UE are defined in clause 5.2.5 of 3GPP TS 24.554 [3]. The generic description of the UE policies for 5G ProSe UE-to-network relay is specified in 3GPP TS 23.304 [2].

The UE policies for 5G ProSe remote UE are defined in clause 5.2.5 of 3GPP TS 24.554 [3]. The generic description of the UE policies for 5G ProSe remote UE is specified in 3GPP TS 23.304 [2].

### 4.5 UE policies for 5G ProSe usage information reporting

The UE policies for 5G ProSe usage information reporting are defined in clause 5.2.6 of 3GPP TS 24.554 [3]. The generic description of the UE policies for 5G ProSe usage information reporting is specified in 3GPP TS 32.277 [14].

### 5 Encoding of UE policies for 5G ProSe

#### 5.1 Overview

The UE policies for 5G ProSe are provided to the UE in a 5G ProSe policy (ProSeP) UE policy part using the UE policy delivery service as specified in 3GPP TS 24.501 [4] annex D.

### 5.2 Encoding of 5G ProSe policy UE policy part

The purpose of the ProSeP is to indicate UE policies for 5G ProSe direct discovery, 5G ProSe direct communications, 5G ProSe UE-to-network relay UE, 5G ProSe remote UE and UE policies for 5G ProSe usage information reporting.

The ProSeP is encoded as shown in figures 5.2.1 to 5.2.3 and table 5.2.1 according to the UE policy part top level format (see annex D of 3GPP TS 24.501 [4]).









UE policy part type field is set to '0100' (=ProSeP) as specified in 3GPP TS 24.501 [4] annex D. UE policy part contents length field indicate the length of the ProSeP contents in octets. ProSeP contents (octets 4 to x) ProSeP contents consist of 1 or more ProSeP info(s) (see figure 5.2.2). ProSeP info type (bit 1 to 4 of octet k) shall be set according to the following: Bits 4 3 2 1 0 UE policies for 5G ProSe direct discovery 0 0 1 0 UE policies for 5G ProSe direct communications 0 1 0 UE policies for 5G ProSe UE-to-network relay UE 0 0 1 1 0 UE policies for 5G ProSe remote UE 0 1 0 0 1 UE policies for 5G ProSe usage information reporting 0 1 All other values are reserved. Bits 8 to 5 of octet k are spare and shall be encoded as zero. Length of ProSeP info contents (octets k+1 to k+2) indicates the length of the ProSeP info contents field. ProSeP info contents (octets k+3 to I) can be UE policies for 5G ProSe direct discovery (see clause 5.3), UE policies for 5G ProSe direct communications (see clause 5.4), UE policies for 5G ProSe UE-to-network relay UE (see clause 5.5), UE policies for 5G ProSe remote UE (clause 5.6) or UE policies for 5G ProSe usage information reporting (clause 5.7).

### 5.3 Encoding of UE policies for 5G ProSe direct discovery

#### 5.3.1 General

The UE policies for 5G ProSe direct discovery are coded as shown in figures 5.3.1.1 and table 5.3.1.1.

#### 5.3.2 Information elements coding



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Table 5.3.2.1: ProSeP Info = {UE policies for 5G ProSe direct discovery}

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ProSeP info type (bit 1 to 4 of octet k) shall be set to "0001" (UE policies for 5G ProSe direct discovery)	
Length of ProSeP info contents (octets k+1 to k+2) indicates the length of ProSeP info contents.	
Validity timer (octet k+3 to k+7): The validity timer field provides the expiration time of validity of the UE policies for 5G ProSe direct discovery. The validity timer field is a binary coded representation of a UTC time, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).	
Served by NG-RAN (octet k+8 to o1): The served by NG-RAN field is coded according to figure 5.3.2.2 and table 5.3.2.2, and contains configuration parameters for 5G ProSe direct discovery when the UE is served by NG-RAN.	
Not served by NG-RAN (octet o1+1 to o2): The not served by NG-RAN field is coded according to figure 5.3.2.6 and table 5.3.2.6, and contains configuration parameters for 5G ProSe direct discovery when the UE is not served by NG-RAN.	
ProSe Direct Discovery UE ID (octet o2+1 to o2+3): The ProSe Direct Discovery UE ID is a 24-bit long bit string.	
Group member discovery parameters (octet o2+4 to o3): The group member discovery parameters field is coded according to figure 5.3.2.12 and table 5.3.2.12 and contains group member discovery parameters.	
ProSe identifiers (octet o3+1 to o4): The ProSe identifiers field is coded according to figure 5.3.2.14 and table 5.3.2.14 and contains ProSe identifiers.	
ProSe identifier to default destination layer-2 ID for initial discovery signalling mapping rules (octet o4+1 to o5) (NOTE 2): The ProSe identifier to default destination layer-2 ID for initial discovery signalling mapping rules field is coded according to figure 5.3.2.15 and table 5.3.2.15 and contains ProSe identifier to default destination layer-2 ID for initial discovery signalling mapping rules. The ProSe identifier to default destination layer-2 ID for initial discovery signalling mapping rules. The ProSe identifier to default destination layer-2 ID for initial discovery signalling mapping rules field may contain a default ProSe identifier to default destination layer-2 ID for the ProSe services that do not have dedicated mapping rules.	4-555-v17-7-0-2025-
HPLMN 5G DDNMF address information indicator (H5DAI) (octet I+1 bit 1 to bit 3): (NOTE 1) Bits	
<ul> <li>3 2 1</li> <li>0 0 0 HPLMN 5G DDNMF address information is absent</li> <li>0 0 1 HPLMN 5G DDNMF FQDN is present</li> <li>0 1 0 HPLMN 5G DDNMF IPv4 address is present</li> <li>1 0 0 HPLMN 5G DDNMF IPv6 address is present</li> <li>1 1 0 HPLMN 5G DDNMF IPv4 address and IPv6 address are present</li> <li>All other values are reserved.</li> </ul>	
HLMN 5G DDNMF address information (octet I+2 to octet m): The HPLMN 5G DDNMF address information field is coded according to figure 5.3.2.17 and table 5.3.2.17 and contains the 5G DDNMF address information in HPLMN.	
If the length of ProSeP info contents field is bigger than indicated in figure 5.3.2.1, receiving entity shall ignore any superfluous octets located at the end of the ProSeP info contents.	
NOTE 1: For backward compatibility with UEs compliant to earlier versions of present document, H5DAI values 011, 101 and 111 cannot be used.	

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NOTE 2: This field is prioritized in decreasing order according to the local configuration of the network. The default mapping rule for the ProSe services that do not have dedicated mapping rules, if present, is recommended to be the last one and with the lowest priority of this field.



Figure 5.3.2.2: Served by NG-RAN

#### Table 5.3.2.2: Served by NG-RAN

Authorization for direct discovery info: The authorization for direct discovery info field is coded according to figure 5.3.2.3 and table 5.3.2.3.

#### **Document Preview**



octet o50+1 Length of authorization for direct discovery info contents octet o50+2 0 0 0 0 0 Role DDT octet o50+3 Model spare spare spare spare spare

	octet o50+4
Authorized PLMN info	
	octet o51

