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**Digital cellular telecommunications system (Phase 2+) (GSM);
Universal Mobile Telecommunications System (UMTS);
LTE;
Telecommunication management;
Integration Reference Point (IRP) overview and usage guide
(3GPP TS 32103 version 16.3.0 Release 16)**

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Contents

Intellectual Property Rights	2
Legal Notice	2
Modal verbs terminology.....	2
Foreword.....	5
Introduction	5
1 Scope	6
2 References	6
3 Definitions and abbreviations.....	15
3.1 Definitions	15
3.2 Abbreviations	16
4 IRP Framework	17
4.1 Introduction	17
4.2 IRP Framework Highlights.....	18
4.2.1 IRP Concept.....	18
4.2.2 Relationships between IRPs.....	19
4.2.3 IRP Development Principles.....	20
4.2.4 IRP Specification Structure	20
4.2.5 Void	21
4.3 IRP related High-level Requirements & Architecture Specifications	21
4.4 Converged Management and IRPs	22
5 Interface IRPs.....	23
5.1 Interface IRP Overview.....	23
5.2 Generic/Common Interface IRPs	23
5.3 FM related interface IRPs.....	24
5.4 CM related interface IRPs.....	24
5.5 PM file format/collection & Trace related Interface IRPs.....	25
5.6 Special-purpose related Interface IRPs.....	25
5.7 SON related Interface IRPs	26
6 NRM IRPs	27
6.1 NRM IRP Overview	27
6.2 FMC Models and Common NRM IRPs	27
6.3 Access Network (AN) related NRM IRPs.....	28
6.4 Core Network (CN)/IMS related NRM IRPs	28
6.5 H(e)NB related NRM IRPs	28
6.6 Service management related NRM IRPs and UDC specifications	29
6.7 Special-purpose related NRM IRPs.....	30
6.8 EPC interworking with non-3GPP access NRM IRPs.....	30
7 Measurement & Trace Definitions	31
7.1 Performance Measurements	31
7.1.1 Overview and relationships to IRP Framework.....	31
7.1.2 Performance Measurement Specifications	32
7.2 Trace Specifications	34
7.2.1 Overview and relationships to IRP Framework.....	34
7.2.2 Trace Specifications.....	34
7.3 QoE measurements.....	35
7.3.1 Overview and relationships to management services	35
7.3.2 QoE specifications	35
8 Relationships between IRPs	37
9 SON functions	38

10	Network Function Virtualization (NFV).....	41
10.1	Overview	41
11	Void.....	43
Annex A (Informative):	Void	44
Annex B (normative):	Features supported	45
B.1	Converged management support table	45
B.2	Network sharing management support table	47
Annex C (informative):	Change history	55
History		56

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Foreword

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Introduction

This specification provides the IRP Overview for 3GPP specifications, addressing Interface IRPs, NRM IRPs, Measurement / Trace /SON specifications, as well as their relationships with each other.

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1 Scope

The present document gives an overview about 3GPP's management capabilities and related functionality. This document is intended to be a guide into the world of 3GPP management specifications, enabling also non-subject matter experts to gain an understanding about 3GPP's management solutions.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

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- [1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 32.150: "Telecommunication management; Integration Reference Point (IRP) Concept and definitions".
- [3] 3GPP TS 32.101: "Telecommunication management; Principles and high level requirements".
- [4] 3GPP TS 28.624: "Telecommunication management; State management data definition Integration Reference Point (IRP); Requirements".
- [5] 3GPP TS 28.625: "Telecommunication management; State management data definition Integration Reference Point (IRP); Information Service (IS)".
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- [7] 3GPP TS 32.601: "Telecommunication management; Configuration Management (CM); Basic CM Integration Reference Point (IRP); Requirements".
- [8] 3GPP TS 32.602: "Telecommunication management; Configuration Management (CM); Basic CM Integration Reference Point (IRP); Information Service (IS)".
- [9] 3GPP TS 32.603: "Telecommunication management; Configuration Management (CM); Basic CM Integration Reference Point (IRP); Common Object Request Broker Architecture (CORBA) Solution Set (SS)".
- [10] 3GPP TS 28.621: "Telecommunication management; Generic Network Resource Model (NRM) Integration Reference Point (IRP); Requirements".
- [11] 3GPP TS 28.622: "Telecommunication management; Generic Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".
- [12] 3GPP TS 28.623: "Telecommunication management; Generic Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions".
- [13] Void
- [14] Void
- [15] 3GPP TS 32.153: "Telecommunication management; Integration Reference Point (IRP) technology specific templates, rules and guidelines".

- [16] 3GPP TS 32.154: "Telecommunication management; Backward and Forward Compatibility (BFC); Concept and definitions".
- [17] 3GPP TS 32.155: "Telecommunication management; Requirements template".
- [18] 3GPP TS 32.156: "Telecommunication management; Fixed Mobile Convergence (FMC) model repertoire".
- [19] 3GPP TS 32.157: "Telecommunication management; Integration Reference Point (IRP) Information Service (IS) template".
- [20] 3GPP TS 32.102: "Telecommunication management; Architecture".
- [21] 3GPP TS 32.107: "Telecommunication management; Fixed Mobile Convergence (FMC) Federated Network Information Model (FNIM)".
- [22] 3GPP TS 32.111-1: "Telecommunication management; Fault Management; Part 1: 3G fault management requirements".
- [23] 3GPP TS 32.140: "Telecommunication management; Subscription Management (SuM) requirements".
- [24] 3GPP TS 32.141: "Telecommunication management; Subscription Management (SuM) architecture".
- [25] 3GPP TS 32.300: "Telecommunication management; Configuration Management (CM); Name convention for Managed Objects".
- [26] 3GPP TS 32.401: "Telecommunication management; Performance Management (PM); Concept and requirements".
- [27] 3GPP TS 32.500: "Telecommunication management; Self-Organizing Networks (SON); Concepts and requirements".
- [28] 3GPP TS 32.511: "Telecommunication management; Automatic Neighbour Relation (ANR) management; Concepts and requirements".
- [29] 3GPP TS 32.521: "Telecommunication management; Self-Organizing Networks (SON) Policy Network Resource Model (NRM) Integration Reference Point (IRP); Requirements".
- [30] 3GPP TS 32.541: "Telecommunication management; Self-Organizing Networks (SON); Self-healing concepts and requirements".
- [31] 3GPP TS 32.551: "Telecommunication management; Energy Saving Management (ESM); Concepts and requirements".
- [32] 3GPP TS 32.600: "Telecommunication management; Configuration Management (CM); Concept and high-level requirements".
- [33] Void
- [34] 3GPP TS 28.620: "Telecommunication management; Fixed Mobile Convergence (FMC) Federated Network Information Model (FNIM) Umbrella Information Model (UIM)".
- [35] 3GPP TS 28.627: "Telecommunication management; Self-Organizing Networks (SON) Policy Network Resource Model (NRM) Integration Reference Point (IRP); Requirements".
- [36] 3GPP TS 32.501: "Telecommunication management; Self-configuration of network elements; Concepts and requirements".
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- [38] 3GPP TS 32.441: "Telecommunication management; Trace Management Integration Reference Point (IRP); Requirements".
- [42] Void

- [43] Void
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- [54] Void
- [55] Void
- [56] Void
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- [58] 3GPP TS 28.404: "Telecommunication management; Quality of Experience (QoE) measurement collection; Concepts, use cases and requirements".
- [59] 3GPP TS 28.405: "Management of Quality of Experience (QoE) measurement collection; Control and configuration".
- [60] 3GPP TS 28.406: "Management of Quality of Experience (QoE) measurement collection; Information definition and transport".
- [61] 3GPP TS 28.402: "Telecommunication management; Performance Management (PM); Performance measurements for Evolved Packet Core (EPC) and non-3GPP access interworking system".
- [62] 3GPP TS 28.403: "Telecommunication management; Performance Management (PM); Performance measurements for Wireless Local Area Network (WLAN)".
- [63] 3GPP TS 32.111-2: "Telecommunication management; Fault Management; Part 2: Alarm Integration Reference Point (IRP): Information Service (IS)".
- [64] 3GPP TS 32.111-6: "Telecommunication management; Fault Management; Part 6: Alarm Integration Reference Point (IRP): Solution Set (SS) definitions".
- [65] 3GPP TS 32.121: "Telecommunication management; Advanced Alarm Management (AAM) Integration Reference Point (IRP): Requirements".
- [66] 3GPP TS 32.122: "Telecommunication management; Advanced Alarm Management (AAM) Integration Reference Point (IRP): Information Service (IS)".
- [67] 3GPP TS 32.126: "Telecommunication management; Advanced Alarm Management (AAM) Integration Reference Point (IRP); Solution Set (SS) definitions".
- [68] 3GPP TS 32.301: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP); Requirements".
- [69] 3GPP TS 32.302: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP); Information Service (IS)".

- [70] 3GPP TS 32.306: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP): Solution Set (SS) definitions".
- [71] 3GPP TS 32.311: "Telecommunication management; Generic Integration Reference Point (IRP) management; Requirements".
- [72] 3GPP TS 32.312: "Telecommunication management; Generic Integration Reference Point (IRP) management; Information Service (IS)".
- [73] 3GPP TS 32.316: "Telecommunication management; Generic Integration Reference Point (IRP) management; Solution Set (SS) definitions".
- [74] 3GPP TS 32.321: "Telecommunication management; Test management Integration Reference Point (IRP); Requirements".
- [75] 3GPP TS 32.322: "Telecommunication management; Test management Integration Reference Point (IRP); Information Service (IS)".
- [76] 3GPP TS 32.326: "Telecommunication management; Test management Integration Reference Point (IRP): Solution Set (SS) definitions".
- [77] 3GPP TS 32.331: "Telecommunication management; Notification Log (NL) Integration Reference Point (IRP); Requirements",
- [78] 3GPP TS 32.332: "Telecommunication management; Notification Log (NL) Integration Reference Point (IRP); Information Service (IS)".
- [79] 3GPP TS 32.336: "Telecommunication management; Notification Log (NL) Integration Reference Point (IRP): Solution Set (SS) definitions".
- [80] 3GPP TS 32.341: "Telecommunication management; File Transfer (FT) Integration Reference Point (IRP); Requirements".
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- [90] 3GPP TS 32.382: "Telecommunication management; Partial Suspension of Itf-N Integration Reference Point (IRP); Information Service (IS)".
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- [92] 3GPP TS 32.391: "Telecommunication management; Delta synchronization Integration Reference Point (IRP); Requirements".
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- [96] 3GPP TS 32.406: "Telecommunication management; Performance Management (PM); Performance measurements; Core Network (CN) Packet Switched (PS) domain".
- [97] 3GPP TS 32.407: "Telecommunication management; Performance Management (PM); Performance measurements; Core Network (CN) Circuit Switched (CS) domain; UMTS and combined UMTS/GSM".
- [98] 3GPP TS 32.408: "Telecommunication management; Performance Management (PM); Performance measurements; Teleservice".
- [99] 3GPP TS 32.409: "Telecommunication management; Performance Management (PM); Performance measurements; IP Multimedia Subsystem (IMS)".
- [100] 3GPP TS 32.410: "Telecommunication management; Key Performance Indicators (KPI) for UMTS and GSM".
- [101] 3GPP TS 32.411: "Telecommunication management; Performance Management (PM) Integration Reference Point (IRP); Requirements".
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- [103] 3GPP TS 32.416: "Telecommunication management; Performance Management (PM) Integration Reference Point (IRP); Solution Set (SS) definitions".
- [104] 3GPP TS 32.423: "Telecommunication management; Subscriber and equipment trace; Trace data definition and management".
- [105] 3GPP TS 32.425: "Telecommunication management; Performance Management (PM); Performance measurements Evolved Universal Terrestrial Radio Access Network (E-UTRAN)".
- [106] 3GPP TS 32.426: "Telecommunication management; Performance Management (PM); Performance measurements Evolved Packet Core (EPC) network".
- [107] 3GPP TS 32.432: "Telecommunication management; Performance measurement: File format definition".
- [108] 3GPP TS 32.435: "Telecommunication management; Performance measurement; eXtensible Markup Language (XML) file format definition".
- [109] 3GPP TS 32.436: "Telecommunication management; Performance measurement: Abstract Syntax Notation 1 (ASN.1) file format definition".
- [110] 3GPP TS 32.442: "Telecommunication management; Trace Management Integration Reference Point (IRP); Information Service (IS)".
- [111] 3GPP TS 32.446: "Telecommunication management; Trace Management Integration Reference Point (IRP); Solution Set (SS) definitions".
- [112] 3GPP TS 32.451: "Telecommunication management; Key Performance Indicators (KPI) for Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Requirements".
- [113] 3GPP TS 32.452: "Telecommunication management; Performance Management (PM); Performance measurements Home Node B (HNB) Subsystem (HNS)".

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- [117] 3GPP TS 32.502: "Telecommunication management; Self-configuration of network elements Integration Reference Point (IRP); Information Service (IS)".
- [118] 3GPP TS 32.506: "Telecommunication management; Self-configuration of network elements Integration Reference Point (IRP); Solution Set (SS) definitions".
- [119] 3GPP TS 32.522: "Telecommunication management; Self-Organizing Networks (SON) Policy Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".
- [120] 3GPP TS 32.526: "Telecommunication management; Self-Organizing Networks (SON); Policy Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions".
- [121] 3GPP TS 32.531: "Telecommunication management; Software management (SwM); Concepts and Integration Reference Point (IRP) Requirements".
- [122] 3GPP TS 32.532: "Telecommunication management; Software management (SwM); Integration Reference Point (IRP); Information Service (IS)".
- [123] 3GPP TS 32.536: "Telecommunication management; Software management Integration Reference Point (IRP); Solution Set (SS) definitions".
- [124] 3GPP TS 32.606: "Telecommunication management; Configuration Management (CM); Basic CM Integration Reference Point (IRP); Solution Set (SS) definitions".
- [125] 3GPP TS 32.611: "Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP); Requirements".
- [126] 3GPP TS 32.612: "Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP); Information Service (IS)".
- [127] 3GPP TS 32.616: "Telecommunication management; Configuration Management (CM); Bulk CM Integration Reference Point (IRP); Solution Set (SS) definitions".
- [128] 3GPP TS 32.621: "Telecommunication management; Generic Network Resource Model (NRM) Integration Reference Point (IRP); Requirements".
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- [130] 3GPP TS 32.626: "Telecommunication management; State management data definition Integration Reference Point (IRP); Solution Set (SS) definitions".
- [131] 3GPP TS 32.641: "Telecommunication management; Configuration Management (CM); UTRAN network resources Integration Reference Point (IRP); Requirements".
- [132] 3GPP TS 32.642: "Telecommunication management; Configuration Management (CM); UTRAN network resources Integration Reference Point (IRP); Network Resource Model (NRM)".
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- [134] 3GPP TS 32.661: "Telecommunication management; Configuration Management (CM); Kernel CM Requirements".
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- [137] 3GPP TS 32.761: "Telecommunication management; Evolved Universal Terrestrial Radio Access Network (E-UTRAN) Network Resource Model (NRM) Integration Reference Point (IRP); Requirements".
- [138] 3GPP TS 32.762: "Telecommunication management; Evolved Universal Terrestrial Radio Access Network (E-UTRAN) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".
- [139] 3GPP TS 32.766: "Telecommunication management; Evolved Universal Terrestrial Radio Access Network (E-UTRAN) Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions".
- [140] 3GPP TS 52.402: "Telecommunication management; Performance Management (PM); Performance measurements – GSM".
- [141] 3GPP TS 32.181: "Telecommunication management; User Data Convergence (UDC); Framework for Model Handling and Management".
- [142] 3GPP TS 32.182: "Telecommunication management; User Data Convergence (UDC); Common baseline information model (CBIM)".
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- [144] 3GPP TS 28.629: "Telecommunication management; Self-Organizing Networks (SON) Policy Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions".
- [145] 3GPP TS 28.631: "Telecommunication management; Inventory Management (IM) Network Resource Model (NRM) Integration Reference Point (IRP); Requirements".
- [146] 3GPP TS 28.632: "Telecommunication management; Inventory Management (IM) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".
- [147] 3GPP TS 28.633: "Telecommunication management; Inventory Management (IM) Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions".
- [148] 3GPP TS 28.651: "Telecommunication management; Universal Terrestrial Radio Access Network (UTRAN) Network Resource Model (NRM) Integration Reference Point (IRP); Requirements".
- [149] 3GPP TS 28.652: "Telecommunication management; Universal Terrestrial Radio Access Network (UTRAN) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".
- [150] 3GPP TS 28.653: "Telecommunication management; Universal Terrestrial Radio Access Network (UTRAN) Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions".
- [151] 3GPP TS 28.654: "Telecommunication management; GSM/EDGE Radio Access Network (GERAN) Network Resource Model (NRM) Integration Reference Point (IRP); Requirements".
- [152] 3GPP TS 28.655: "Telecommunication management; GSM/EDGE Radio Access Network (GERAN) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".
- [153] 3GPP TS 28.656: "Telecommunication management; GSM/EDGE Radio Access Network (GERAN) Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions".
- [154] 3GPP TS 28.657: "Telecommunication management; Evolved Universal Terrestrial Radio Access Network (E-UTRAN) Network Resource Model (NRM) Integration Reference Point (IRP); Requirements".

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- [158] 3GPP TS 28.662: "Telecommunication management; Generic Radio Access Network (RAN) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".
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- [166] 3GPP TS 28.701: "Telecommunication management; Core Network (CN) Network Resource Model (NRM) Integration Reference Point (IRP); Requirements".
- [167] 3GPP TS 28.702: "Telecommunication management; Core Network (CN) Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".
- [168] 3GPP TS 28.703: "Telecommunication management; Core Network (CN) Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions".
- [169] 3GPP TS 28.704: "Telecommunication management; IP Multimedia Subsystem (IMS) Network Resource Model (NRM) Integration Reference Point (IRP); Requirements".
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- [172] 3GPP TS 28.707: "Telecommunication management; Evolved Packet Core (EPC) Network Resource Model (NRM) Integration Reference Point (IRP); Requirements".
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- [175] 3GPP TS 28.731: "Telecommunication management; Transport Network (TN) interface Network Resource Model (NRM) Integration Reference Point (IRP); Requirements".

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- [189] 3GPP TS 28.500: "Telecommunication management; Management concept, architecture and requirements for mobile networks that include virtualized network functions".
- [190] 3GPP TS 28.510: "Telecommunication management; Configuration Management (CM) for mobile networks that include virtualized network functions; Requirements".
- [191] 3GPP TS 28.511: "Telecommunication management; Configuration Management (CM) for mobile networks that include virtualized network functions; Procedures".
- [192] 3GPP TS 28.512: "Telecommunication management; Configuration Management (CM) for mobile networks that include virtualized network functions; Stage 2".
- [193] 3GPP TS 28.513: "Telecommunication management; Configuration Management (CM) for mobile networks that include virtualized network functions; Stage 3".
- [194] 3GPP TS 28.515: "Telecommunication management; Fault Management (FM) for mobile networks that include virtualized network functions; Requirements".
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