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Lawful Interception (LI); Interface for warrant information

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Lawful Interception (LI).

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).

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Introduction

The present document was constructed in multiple phases. The first phase of the present document consisted of a reference architecture. It was created by investigating current practices and procedures across TC LI. It makes clear the distinction between the process of communicating with the Communication Service Provider to inform them about the interception details (commonly called "tasking") and also communication among government/law enforcement/judiciary to establish the warrant (commonly called "warranting"). The second phase of the present document provided a standardized detailed interface based on the architecture in the first phase, in particular for LI. The present document anticipates that future phases will add other requests for legal action.

1 Scope

The present document defines an electronic interface between two systems for the exchange of information relating to the establishment and management of lawful required action, typically Lawful Interception. Typically this interface would be used between on one side, a Communications Service Provider and on the other side, a Government or Law Enforcement Agency who is entitled to request a lawful action.

The present document is a specific and detailed example of one particular Warrantry interface for eWarrants [i.1].

The ETSI reference model for LI (ETSI TS 102 232-1 [i.11]) defines three interfaces between law enforcement and CSPs, called HI-1, HI-2 and HI-3. The protocol defined in the present document is designed to provide a large part of the functionality for HI-1. It is not designed to be used for HI-2 (delivery of intercept related information) or HI-3 (delivery of communications content). The protocol designed in the present document may also be used for interfaces which require structured exchange of information relating to the establishment and management of Lawful Interception. The general view is that the HI-1 concept can also be used for other legal actions than LI. For that reason, the present document could, besides LI, also be applied for retained data requests, seized data requests, data preservation orders and other similar legal requests.

2 References

2.1 Normative 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 referenced document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found in the [ETSI docbox](#).

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

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

- [1] Void.
- [2] Void.
- [3] [IETF RFC 9562](#): "Universally Unique IDentifiers (UUIDs)".
- [4] W3C® Recommendation 26 November 2008: "[Extensible Markup Language \(XML\) 1.0](#)".
- [5] [IETF RFC 9110](#): "HTTP Semantics".
- [6] [IETF RFC 4279](#): "Pre-Shared Key Ciphersuites for Transport Layer Security (TLS)".
- [7] [ETSI TS 103 280](#): "Lawful Interception (LI); Dictionary for common parameters".
- [8] [IETF RFC 1738](#): "Uniform Resource Locators (URL)".

NOTE: Updated by IETF RFC 3986. Obsoleted by IETF RFC 4248 and IETF RFC 4266. This reference is retained as the only direct reference for the "ftp" URIs.

- [9] [IETF RFC 2045](#): "Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies".
- [10] [IETF RFC 2046](#): "Multipurpose Internet Mail Extensions (MIME) Part Two: Media Types".
- [11] [IETF RFC 1321](#): "The MD5 Message-Digest Algorithm".
- [12] W3C® Recommendation 14 December 2017: "[HTML 5.2](#)".

- [13] [IEEE POSIX 1003.1™-2017](#): "IEEE Standard for Information Technology -- Portable Operating System Interface (POSIX™) Base Specifications, Issue 7".
- [14] [ISO 3166-1](#): "Codes for the representation of names of countries and their subdivisions — Part 1: Country code".
- [15] [ETSI TS 102 232-2](#): "Lawful Interception (LI); Handover Interface and Service-Specific Details (SSD) for IP delivery; Part 2: Service-specific details for messaging services".
- [16] [ETSI TS 102 232-3](#): "Lawful Interception (LI); Handover Interface and Service-Specific Details (SSD) for IP delivery; Part 3: Service-specific details for internet access services".
- [17] [ETSI TS 102 232-4](#): "Lawful Interception (LI); Handover Interface and Service-Specific Details (SSD) for IP delivery; Part 4: Service-specific details for Layer 2 services".
- [18] [ETSI TS 102 232-5](#): "Lawful Interception (LI); Handover Interface and Service-Specific Details (SSD) for IP delivery; Part 5: Service-specific details for IP Multimedia Services".
- [19] [ETSI TS 102 232-6](#): "Lawful Interception (LI); Handover Interface and Service-Specific Details (SSD) for IP delivery; Part 6: Service-specific details for PSTN/ISDN services".
- [20] [ETSI TS 102 232-7](#): "Lawful Interception (LI); Handover Interface and Service-Specific Details (SSD) for IP delivery; Part 7: Service-specific details for Mobile Services".
- [21] Void.
- [22] [ETSI TS 102 657](#): "Lawful Interception (LI); Retained data handling; Handover interface for the request and delivery of retained data".
- [23] [IETF RFC 6234](#): "US Secure Hash Algorithms (SHA and SHA-based HMAC and HKDF)".
- [24] [ETSI TS 103 707](#): "Lawful Interception (LI); Handover Interface for HTTP delivery".
- [25] Void.
- [26] IANA: "[Hash Function Textual Names](#)".
- [27] [IETF RFC 8259](#): "The JavaScript Object Notation (JSON) Data Interchange Format".
- [28] [IETF Draft draft-bhutton-json-schema-01](#): "JSON Schema: A Media Type for Describing JSON Documents".
- [29] [IETF RFC 7515](#): "JSON Web Signature (JWS)".
- [30] [IETF RFC 7518](#): "JSON Web Algorithms (JWA)".
- [31] [IETF RFC 7797](#): "JSON Web Signature (JWS) Unencoded Payload Option".
- [32] Void.
- [33] [ETSI TS 103 976](#): "Interface for Lawful Disclosure of vehicle-related data".
- [34] Void.
- [35] [ETSI TS 103 705](#): "Lawful Interception (LI); Data Structures for Lawful Disclosure".
- [36] [IETF RFC 8037](#): "CFRG Elliptic Curve Diffie-Hellman (ECDH) and Signatures in JSON Object Signing and Encryption (JOSE)".
- [37] [ISO 639:2023](#): "Code for individual languages and language groups".
- [38] [IETF RFC 6838](#): "Media Type Specifications and Registration Procedures".
- [39] [GSMATM RCC.07](#): "RCS Advanced Communications Services and Client Specification".

2.2 Informative 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 referenced document (including any amendments) applies.

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

The following referenced documents may be useful in implementing an ETSI deliverable or add to the reader's understanding, but are not required for conformance to the present document.

- [i.1] ETSI TR 103 690: "Lawful Interception (LI); eWarrant Interface".
- [i.2] Void.
- [i.3] Void.
- [i.4] Void.
- [i.5] Void.
- [i.6] ETSI TS 123 003: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; 5G; Numbering, addressing and identification (3GPP TS 23.003)".
- [i.7] Void.
- [i.8] Void.
- [i.9] Void.
- [i.10] Void.
- [i.11] ETSI TS 102 232-1: "Lawful Interception (LI); Handover Interface and Service-Specific Details (SSD) for IP delivery; Part 1: Handover specification for IP delivery".
- [i.12] Void.
- [i.13] [IETF RFC 4648](#): "The Base16, Base32, and Base64 Data Encodings".

3 Definition of terms, symbols and abbreviations

3.1 Terms

For the purposes of the present document, the following terms apply:

base64url: base64 encoding using the URL- and filename-safe character set as defined in IETF RFC 4648 [i.13] Section 5, without trailing padding per IETF RFC 4648 [i.13], Section 3.2

NOTE See also IETF RFC 7515 [29], Appendix C.

Communications Service Provider (CSP): Network Operator (NWO) or Access Provider (AP) who is obliged by law to perform a lawful action in response to a Warrant (e.g. perform Lawful Interception)

Law Enforcement Agency (LEA): government or Law Enforcement Agency who is entitled to request a lawful action

shim: extra piece of software or software modification inserted into a process in order to help with compatibility or add additional functionality

warrant: legal authorisation to perform an action or set of actions