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Lawful Interception (LI);
Interface for warrant information

Reference
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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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Executive summary

The present document defines a protocol for the electronic exchange of legal and technical information for the purposes of establishing and managing lawfully required actions (e.g. Lawful Interception). In this phase, the present document is intended to provide the underlying functionality for HI-1, as defined in the ETSI LI Reference Model, and it has been designed for applicability beyond LI in future phases.

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 "warrantry"). 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 at https://docbox.etsi.org/Reference/.

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 4122: "A Universally Unique IDentifier (UUID) URN Namespace".

NOTE: Obsoleted by IETF RFC 9562.

[4] W3C® Recommendation 26 November 2008: "Extensible Markup Language (XML) 1.0".

[5] IETF RFC 2818: "HTTP over TLS".

NOTE: Obsoleted by IETF RFC 9110.

[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: Obsoleted by IETF RFC 4248 and IETF RFC 4266.

[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®: "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] ETSI TS 123 501: "5G; System architecture for the 5G System (5GS) (3GPP TS 23.501)".

[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] IETF RFC 6530: "Overview and Framework for Internationalized Email".

[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] IETF RFC 4648: "The Base16, Base32, and Base64 Data Encodings".

[33] ETSI TS 103 976: "LEA support services; Interface for Lawful Disclosure of vehicle-related data".

[34] GSMA SGP.02 v4.2: "Remote Provisioning Architecture for Embedded UICC Technical Specification".

[35] ETSI TS 103 705: "Lawful Interception (LI); Data Structures for Lawful Disclosure".

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 are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] ETSI TR 103 690: "Lawful Interception (LI); eWarrant Interface".

[i.2] IETF RFC 3261: "SIP: Session Initiation Protocol".

[i.3] IETF RFC 3966: "The tel URI for Telephone Numbers".

[i.4] IETF RFC 3508: "H.323 Uniform Resource Locator (URL) Scheme Registration".

[i.5] IETF RFC 4282: "The Network Access Identifier".

[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] ETSI TS 124 229: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; 5G; IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3 (3GPP TS 24.229)".

[i.8] IEEE Std 802™-2001: "IEEE Standard for Local and Metropolitan Area Networks: Overview and Architecture".

[i.9] Recommendation ITU-T E.164: "The international public telecommunication numbering plan".

[i.10] Recommendation ITU-T E.212: "The international identification plan for public networks and subscriptions".

[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] GSMA RCC.07: "Rich Communication Suite - Advanced Communications Services and Client Specification".

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 [32] Section 5, without trailing padding per IETF RFC 4648 [32], 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