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Security Protocol and Data Model (SPDM) over MCTP Binding Specification

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Foreword

The Platform Management Components Intercommunications (PMCI) Working Group prepared the *Security Protocol and Data Model (SPDM) over MCTP Binding Specification* (DSP0275).

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Editor:

- Mahesh Natsu — Intel Corporation

Contributors:

- Richelle Ahlvers — Broadcom Inc.
- Lee Ballard — Dell Technologies
- Patrick Caporale — Lenovo
- Yu-Yuan Chen — Intel Corporation
- Nigel Edwards — Hewlett Packard Enterprise
- Brett Henning — Broadcom Inc.
- Jeff Hilland — Hewlett Packard Enterprise
- Yuval Itkin — Mellanox Technologies
- Theo Koulouris — Hewlett Packard Enterprise
- Luis Luciani — Hewlett Packard Enterprise
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Abstract

SPDM is designed to be an effective interface and data model that enables efficient access to low-level security capabilities and operations.

SPDM over MCTP binding defines the format of SPDM messages transported over MCTP.

Document conventions

Typographical conventions	<ul style="list-style-type: none">• Document titles are marked in <i>italics</i>.• Important terms that are used for the first time are marked in <i>italics</i>.• ABNF rules are in a mono-spaced font.
ABNF usage conventions	<p>Use ABNF to format definitions in this document, with the following deviation:</p> <ul style="list-style-type: none">• Interpret literal strings as case-sensitive Unicode characters rather than as case-insensitive US-ASCII characters, as in RFC5234. <p>See RFC5234.</p>
Deprecated material	<p>Deprecated material is not recommended for use in new development efforts.</p> <p>Existing and new implementations may use this material but they shall move to the favored approach as soon as possible.</p> <p>CIM service shall implement any deprecated elements as required by this document to achieve backwards compatibility.</p> <p>Although CIM clients may use deprecated elements, they are directed to use the favored elements instead.</p> <p>Deprecated material should contain references to:</p> <ul style="list-style-type: none">• The last published version that includes the deprecated material as normative material.• A description of the favored approach. <p>The following typographical convention indicates deprecated material:</p> <pre>DEPRECATED Deprecated material appears here. DEPRECATED</pre> <p>In places where this typographical convention cannot be used, such as in tables or figures, the <code>DEPRECATED</code> label is used alone.</p>
Experimental material	<p>Experimental material:</p> <ul style="list-style-type: none">• Has yet to receive sufficient review to satisfy the adoption requirements set forth by the DMTF.

- Is included in this document as an aid to implementers who are interested in likely future developments.
- May change as implementation experience is gained.

It is likely that an upcoming revision of the document will include experimental material. Until then, experimental material is purely informational.

The following typographical convention indicates experimental material:

```
EXPERIMENTAL
Experimental material appears here.
EXPERIMENTAL
```

In places where this typographical convention cannot be used, such as in tables or figures, the `EXPERIMENTAL` label is used alone.

1. Scope

This document defines the format of Security Protocol and Data Model (SPDM) over MCTP messages.

This document describes:

- [SPDM over MCTP binding](#)
- [Common format for SPDM over MCTP messages](#)

2. Normative references

The following referenced documents are indispensable for the application of this document. For dated or versioned references, only the edition cited (including any corrigenda or DMTF update versions) applies. For references without a date or version, the latest published edition of the referenced document (including any corrigenda or DMTF update versions) applies.

- DMTF DSP0236, *MCTP Base Specification 1.3.0*, https://dmtf.org/sites/default/files/standards/documents/DSP0236_1.3.0.pdf
- DMTF DSP0239, *MCTP IDs and Codes 1.6.0*, https://www.dmtf.org/sites/default/files/standards/documents/DSP0239_1.6.0.pdf
- DMTF DSP0274, *Security Protocol and Data Model (SPDM) Base Specification 0.9.0*, [Add link](#)
- ISO/IEC Directives, Part 2, *Principles and rules for the structure and drafting of ISO and IEC documents*, <https://isotc.iso.org/livelink/livelink.exe?func=ll&objId=4230456&objAction=browse&sort=subtype>
- IETF RFC5234, *Augmented BNF for Syntax Specifications: ABNF*, January 2008, <https://tools.ietf.org/html/rfc5234>

3. Terms and definitions

In this document, some terms have a specific meaning beyond the normal English meaning. Those terms are defined in this clause.

The terms "shall" ("required"), "shall not," "should"("recommended"), "should not" ("not recommended"), "may," "need not" ("not required"), "can" and "cannot" in this document are to be interpreted as described in [ISO/IEC Directives, Part 2](#), Clause 7. The terms in parentheses are alternatives for the preceding term, for use in exceptional cases when the preceding term cannot be used for linguistic reasons. Note that [ISO/IEC Directives, Part 2](#), Clause 7 specifies additional alternatives. Occurrences of such additional alternatives shall be interpreted in their normal English meaning.

The terms "clause," "subclause," "paragraph," and "annex" in this document are to be interpreted as described in [ISO/IEC Directives, Part 2](#), Clause 6.

The terms "normative" and "informative" in this document are to be interpreted as described in [ISO/IEC Directives, Part 2](#), Clause 3. In this document, clauses, subclauses, or annexes labeled "(informative)" do not contain normative content. Notes and examples are always informative elements.

The terms defined in [DSP0236](#), [DSP0239](#), and [DSP0274](#) apply to this document.

4. Symbols and abbreviated terms

The abbreviations defined in [DSP0236](#), [DSP0239](#), and [DSP0274](#) apply to this document.

5. SPDM over MCTP binding

This specification defines how the Security protocol and data models transported over MCTP communications. SPDM is supported as a message type over MCTP. SPDM over MCTP binding defines the format of SPDM messages transported over MCTP. [DSP0274](#) defines the common fields for SPDM messages and their usage.

5.1. SPDM over MCTP message fields

Figure 1 shows the fields of an MCTP message body carrying an SPDM message.

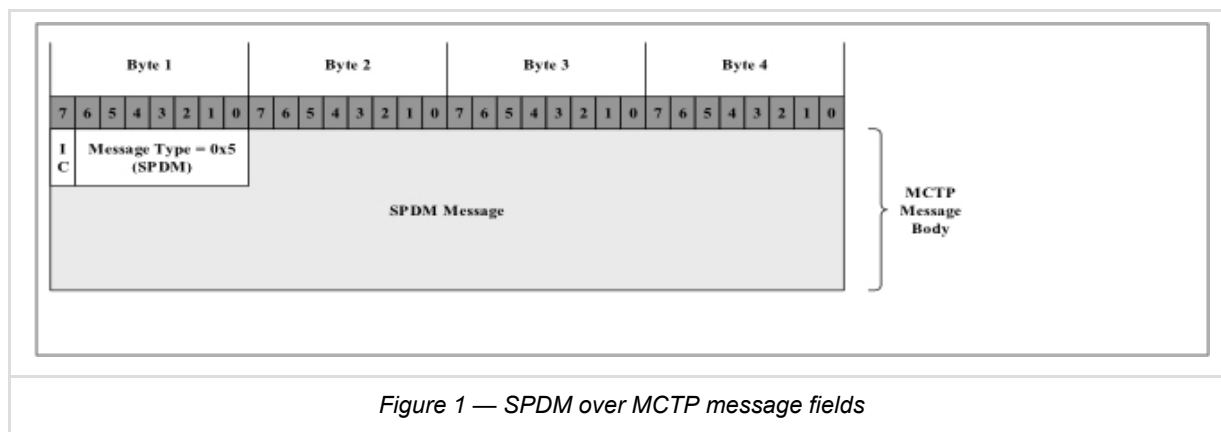


Figure 1 — SPDM over MCTP message fields

Table 1 defines the fields for the SPDM over MCTP message.

Table 1: SPDM over MCTP message field descriptions

Field name	Field size	Description
IC	One bit	Check bit = 0b SPDM over MCTP messages do not include an overall message integrity check field.
Message type	Seven bits	SPDM = 0x05 (000_0101b) Indicates that the MCTP message contains an SPDM message.
SPDM message	Variable	DSP0274 defines the base SPDM message fields.

5.2. Requestor and Responder Tracking

The Responder shall use the Source EID in the request message to track each SPDM Requestor. The Requestor shall use the Source EID in the response message to track each SPDM Responder.

6. ANNEX A (informative)

6.1. Change log

Version	Date	Description
0.9.0	2019-05-08	Work-in-progress release.

7. Bibliography

DMTF DSP4014, *DMTF Process for Working Bodies 2.6*, https://www.dmtf.org/sites/default/files/standards/documents/DSP4014_2.6.pdf

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