IEEE P802.11  
Wireless LANs

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| LB274 CID Resolutions for PASN | | | | |
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Abstract

This document proposes resolutions and discussions for the following CIDs about PASN on 802.11bh D1.0:

84, 85, 87

R0. Initial Version. Thanks Nehru Bhandaru for some feedback.

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| --- | --- | --- | --- | --- | --- |
| CID | Page | Line | Comment | Proposed Change | Resolution |
| 84 | 30 | 6 | The details of encrypting IRM element in PASN frame 3 and device ID element in PASN frame 2 is missing.. | Add the details of encrypting IRM element in PASN frame 3 and device ID element in PASN frame 2 | ACCEPT. |
| 85 | 36 | 30 | This sentence talks about sending device ID IE encrypted in the second PASN frame (from AP to non-AP STA).  In this case, device ID IE should be encrypted.  This sentence does not mention encryption. | Change the sentence to:  If dot11DeviceIDActivated is true, including a Device ID element containing a device identifier as defined in (9.4.2.296a Device ID element), if any. The Device ID element shall be encrypted with the chosen cipher suite. | ACCEPT. |
| 87 | 36 | 48 | This statement talks about sending IRM Element encrypted in the third PASN frame.  The cipher suite (AES-128-CMAC) is strictly specified in this statement.  It is better not to mention a specific cipher suite. | Change  "The IRM element shall be encrypted with the cipher suite of AES-128-CMAC."  to  "The IRM element shall be encrypted with the chosen cipher suite." | ACCEPT. |
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**Proposed Changes**

**1) CID84**

*Change the paragraph of 12.7.1.3 Pairwise key hierarchy (as amended by IEEE Std 802.11az-2022) as follows:*

The PTK is partitioned into KCK, KEK, a temporal key, and a KDK. A KDK is 8 derived *if and only if* any of the following are true:

- WUR frame protection is negotiated

- dot11SecureLTFImplemented is true and the peer STA has advertised secure HE-LTF 11 support capability in its RSNXE (see 9.4.2.241 (RSN Extension element (RSNXE))

- dot1IRMActivated is true

- dot11DeviceIDActivated is true

*Change the sentence in 12.13.7 PTKSA derivation with PASN authentication (as amended by IEEE Std 802.11az-2022) as follows:*

KDK shall be derived if and only if any of the following are true: ~~if dot11SecureLTFImplemented is true and the peer STA has indicated Secure HE-LTF support capability in its advertised Extended Capabilities.~~

- if dot11SecureLTFImplemented is true and the peer STA has indicated Secure HE-LTF support capability in its advertised Extended Capabilities.

- dot1IRMActivated is true

- dot11DeviceIDActivated is true

*Add a subsection under 12.2.11 Changing MAC Address (as amended by IEEE Std 802.11bh-D1.0) as follows:*

12.2.11.3 Encryption of Device ID IE and IRM IE in PASN

When using PASN authentication, device ID element shall be encrypted in PASN frame 2 (if present) and IRM element shall be encrypted in PASN frame 3 (if present) with the chosen cipher suite.

To encrypt device ID element in PASN frame 2 or IRM element in PASN frame 3, the following key may be used:

PASN-PROT-KEY = HMAC-HASH-256(KDK, “PASN Protection Key”)

Where the KDK is derived as part of PTKSA, Hash is the hash determined by the AKM and used to derive the PTK.

**2) CID85**

36.30

Original:

If dot11DeviceIDActivated is true, including a Device ID element containing a device identifier as

defined in 9.4.2.307a (Device ID element), if any.

Proposed:

If dot11DeviceIDActivated is true, including a Device ID element containing a device identifier as defined in (9.4.2.296a Device ID element), if any. The Device ID element shall be encrypted with the chosen cipher suite.

**3) CID87**

36.48

Original:

—If dot11IRMActivated is true, including a IRM element containing an IRM as defined in Figure 9.4.2.307b (IRM element), if any. The IRM element shall be encrypted with the cipher suite of AES-128-CMAC.

Proposed:

—If dot11IRMActivated is true, including a IRM element containing an IRM as defined in Figure 9.4.2.307b (IRM element), if any. The IRM element shall be encrypted with the chosen cipher suite.