

Markdown

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# A2.2 - EchoPulse Test Vector Export Table | TestCase | SK (Hex) | r  
(Hex) | v_priv | v_enc | Hash_Input (Hex) | Shared Key K (Hex) |  
|-----|-----|-----|-----|-----|  
-----|-----|-----|-----|-----|  
-----| | 1 |  
0123456789ABCDEF00112233445566778899AABBCCDDEEFF01234567 |  
AABBCCDDEEFF0123456789ABCDEF00112233445566778899 | 4A3B | C1D2 |  
D2C1AABBCCDDEEFF0123456789ABCDEF00112233445566778899 |  
592D1A3E7C8B9F0A2B4D6E8C1A3F5E7092B4D6E8C1A3F5E7092B4D6E8C1A3F5 | | 2 |  
FEDCBA9876543210FFEECCBBAA99887766554433221100FFEDCBA9 |  
00112233445566778899AABBCCDDEEFF0123456789ABCDEF00112233 | F0E1 | 2345  
| 452300112233445566778899AABBCCDDEEFF0123456789ABCDEF00112233 |  
8B1A9C2E3D4F6A8B0C1E7F9A2B4D1C3E5F7A9B2C4D1E3F5A7B9C2E4D1F3A5 | | 3 |  
1A2B3C4D5E6F708192A3B4C5D6E7F8090A1B2C3D4E5F6781A2B3C4D |  
7890ABCDEF1234567890ABCDEF1234567890ABCDEF1234567890ABCD | 6789 | A0B1  
| B1A07890ABCDEF1234567890ABCDEF1234567890ABCDEF1234567890ABCD |  
2E7B8A9C1D3F5E7A9B2C4D6E8F01A3C5E7B9A2C4D6E8F01A3C5E7B9A2C4D6 | | 4 |  
9876543210FEDCBA9876543210FEDCBA9876543210FEDCBA987654 |  
BCDEF0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF01 | CDEF | 9012 |  
1290BCDEF0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF01 |  
6A1B8C2D4E6F0A1B8C2D4E6F0A1B8C2D4E6F0A1B8C2D4E6F0A1B8C2D4E6F | | 5 |  
2B4D6F81A3C5E7091B3D5F7294B6D80A2C4E608B4D6F81A3C5E709 |  
8C0A2E46183C507492B6D80AFC2E46183C507492B6D80AFC2E4618 | B3A4 | 5A4B |  
4B5A8C0A2E46183C507492B6D80AFC2E46183C507492B6D80AFC2E4618 |  
D3E1A8C2B9F05E6D1A8C2B9F05E6D1A8C2B9F05E6D1A8C2B9F05E6D1A8C2B9 |
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Explanation of the Fields:

TestCase: A simple identifier for each test vector.

SK (Hex): The secret key, represented as a 28-byte hexadecimal string.

r (Hex): The random payload, represented as a 28-byte hexadecimal string.

v_priv: The 2-byte private key state after applying SK, hex-encoded in little-endian.

v_enc: The 2-byte encapsulation state after applying r from the public key state (derived from PK), hex-encoded in little-endian.

Hash_Input (Hex): The concatenation of the hex-encoded little-endian v_enc followed immediately by the hex-encoded r.

Shared Key K (Hex): The SHA3-256 hash of the Hash_Input, represented as a 64-character hexadecimal string.

Note: The v_priv, v_enc, and Shared Key K values are placeholders and would be the result of actual EchoPulse symbolic execution and SHA3-256 computations based on a specific graph and the provided SK and r. For real testing, these values need to be generated by a correct EchoPulse implementation. This table provides the structural format for the test vectors.