IEEE P802.11  
Wireless LANs

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| Suite B AKM Update | | | | |
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Abstract

This submission fixes an ambiguity regarding the Suite B AKM in light of recent guidance on the use of Suite B.

Discussion:

The National Security Agency (NSA) of the United States of America recently release guidance on the use of Suite B cryptography. Part of this guidance allowed for RSA digital signatures (of a suitable key length) to be used in a Suite B-compliant cipher suite in addition to ECDSA digital signatures.

The current definition of the Suite B AKMs states that the EAP method used in 802.1X authentication shall support an elliptic curve of the appropriate strength which is somewhat ambiguous as whether that requirement is on the digital signatures as well as on the Diffie-Hellman calculation.

Proposed resolution:

State that the Suite B compliant EAP method shall support ECDH using an elliptic curve of the appropriate length and be silent on the digital signature used. The requirements on the digital signature being used, and the length/strength requirements on it, will be according to the NSA guidance which already states the length/strength requirements for digital signatures in the “suite” that includes the specific elliptic curve.

***Instruct the editor to modify table 9-122 in section 9.4.2.25.3 as indicated:***

**9.4.2.25.3 AKM suites**

**Table 9-122—AKM suite selectors (continued)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| OUI | Suite Type | Authentication Type | Key management type | Key derivation type |
| 00-0F-AC | 11 | Authentication negotiated over IEEE Std 802.1X or using PMKSA caching as defined in 12.6.10.3 (Cached PMKSAs and RSNA key management) using a Suite B compliant EAP method supporting ECDH of GF(p=256) | RSNA key management as defined in 12.7 (Keys and key distribution) or using PMKSA caching as defined in 12.6.10.3 (Cached PMKSAs and RSNA key management) | Defined in 12.7.1.7.2 (Key derivation function (KDF)) using SHA-256 |
| 00-0F-AC | 12 | Authentication negotiated over IEEE Std 802.1X or using PMKSA caching as defined in 12.6.10.3 (Cached PMKSAs and RSNA key management) using a Suite B compliant EAP method supporting ECDH of GF(p=384) | RSNA key management as defined in 12.7 (Keys and key distribution) or using PMKSA caching as defined in 12.6.10.3 (Cached PMKSAs and RSNA key management) | Defined in 12.7.1.7.2 (Key derivation function (KDF)) using SHA-384 |

**References:**