IEEE P802.11  
Wireless LANs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Comments related to FILS Indication Element | | | | | |
| Date: 2013-11-05 | | | | | |
| Author(s): | | | | | |
| Name | Affiliation | Address | | Phone | email |
| George Cherian | Qualcomm | 5775 Morehouse Dr, San Diego, CA, USA | +1 858 651 6645 | | gcherian@qti.qualcomm.com |

Abstract

Comments related to FILS Indication Element

Resolves the following comments:

CID2821, CID2664, CID2823, CID2215, CID2570, CID2666, CID2825, CID2402, CID2447, CID2824, CID2826, CID2309, CID2543, CID3114, CID3204, CID3206, CID3207, CID3045, CID3046

* FILS Indication element [CID #1272, 1273, 1428]

The FILS Indication element contains information related to FILS authentication and higher layer setup [CID2821] Capabilities of the AP.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Element ID | Length | FILS  Information | Domain information [CID #1295 |
| Octets | 1 | 1 | 2 | Variable |
| * FILS Indication element[CID #1272, 1273 | | | | |

The definitions of FILS Information field is as follows:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | B0 B2 | B3 B5 | B6 B7 | B8 | B9 – B15 |
|  | FILS Security Type | Number of Domains | IP Address Assignment Method | Subnet-ID Token present | Reserved |
| Bits | 3 | 3 | 2 | 1 | 7 |
| * FILS Information field definition [CID #1014, 1184 | | | | | |

[CID #1216, 1210, 1431 [CID #1216, 1210, 1431

Table  8-183<ANA> (FILS Security Type) shows the possible field values for the FILS security indication element. [CID2664, CID2823, CID2215, CID2570, CID3114, CID3204, CID3045]

|  |  |
| --- | --- |
| Table -183 <ANA> FILS Security Type [CID #1317, 1214 | |
| Bit values | FILS Security type |
| 0 | The FILS authentication exchange using a TTP is performed without PFS. |
| 1 | The FILS authentication exchange using a TTP is performed with PFS |
| 2 | The FILS authentication exchange without a TTP and with PFS |
| 3-7 | Reserved |

[CID2666, CID2825, CID2402, CID2309, CID3046] AP sets the Number of Domains field in the FILS Information field to the number of domain information fields (Fig 8-401df) included in the FILS indication element. [CID2447, CID2824] If the FILS Security type is set to 2 (Non TTP), then the number of domains is set to 1. [CID2666]If Number of Domains indication is set to 7, it indicates that more than 6 domains are available, and only the first six domain information are present in the Per domain information of the FILS indication Element. The STA shall use ANQP to obtain domain information of other domains that are not included in the FILS indication element..

The IP address assignment method supported by the Access Point is defined in Table 8-183af.

|  |  |
| --- | --- |
| * IP Address Assignment Method [CID #1317, 1214 | |
| Bit values | IP Address Assignment Method supported by the AP |
| 00 | IP Address assignment during Association is not supported by the AP |
| 01 | STA may use FILS HLP wrapped data to request IP address during Association |
| 10 | STA may use FILS IP Address Request TLV to request IP address during Association |
| 11 | STA may use either FILS HLP wrapped data or FILS IP Address Request TLV to request IP address during Association |

[CID2826, CID3207] The 1-bit Subnet-ID Token present subfield in FILS Information field indicates whether or not a subnet-ID Token corresponding to the IP subnet to which the domain is connected is present in the Domain information field, as defined in Table 8-183ah

|  |  |
| --- | --- |
|  | |
|  |  |
|  | [CID2543] IP routing |
|  | [CID2543] IP routing |

The domain information field is a 4[CID #1215, 1296 octet field formatted as defined in Figure 8-401df (Domain information field).[CID2447].

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | B0 B15 | B16 B18 | B19 B23 | B24 B31 |
|  | Hashed Domain Name | IP Address Type | Reserved | subnet ID token |
| Bits | 16 | 3 | 5 | 8 |
| * Domain information field | | | | |

[CID2447] If the FILS Security Type field is set to 2 (non TTP authentication), then the hashed domain name field is set to 0. If the FILS Security Type field is set to 0 or 1, then the hashed domain name is computed from the Domain Name that is compliant with the “Preferred Name Syntax” as defined in IETF RFC 1035 (same as the domain name used in 8.4.4.15[CID #1187). The exact computation method for the hashed domain name is given in  10.44.5 (FILS Indication element)[CID #.1429, 1316, 1187 except the submission gives reference to 10.43.11 and there is no such clause, assume it is 10.43.1

[CID3206] The IP Address Type field of the Domain Information field indicates the IP address type supported by the domain to which the AP is connected.

|  |  |
| --- | --- |
| * IP Address Type [CID #1430 | |
| Bit Value | IP address type |
| 000 | IPv4 only |
| 001 | IPv6 only |
| 010 | IPv4 & IPv6 |
| 011 - 111 | Reserved |

The Subnet-ID Token[CID #1432 is an identifier derived from the subnet using a hash of the subnet or other means that is out of scope of this specification. The Subnet-ID Token is used by the STA to select an AP that is connected to the same IP domain as the current AP.

|  |  |
| --- | --- |
|  | |
|  |  |
|  |  |
|  |  |