IEEE P802.11
Wireless LANs

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| Resolutions of CID 7772 on D5 |
| Date: 2016-26-04 |
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Abstract

This submission proposes resolution for CID 7772

Was part of 16/0278

At 04/26/16 Cambridge meeting decided to separate out.

Green indicates material agreed to in the group,

yellow material to be discussed, red material rejected by the group and

cyan material not to be overlooked.

The “Final” view should be selected in Word.

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| --- | --- | --- |
| Identifiers | Comment | Proposed change |
| CID 7772Mark Rison11.3.5.51628.33 | Where is the AP/PCP definition of the reassociation initiation procedures on the current AP (which might as a special case be the same as the new AP), and in particular all the stuff which is deleted or reset (such as BA agreements)? | Add a:p) If  the  ResultCode  in  the  MLME-REASSOCIATE.response  primitive  is  SUCCESSand the CurrentAPAddress parameter in the MLME-REASSOCIATION.indication  primitive  had  the  new  AP's  MAC  address  in  theCurrentAPAddress parameter (reassociation to the same AP), the following states, agreements andallocations shall be deleted or reset to initial values:1) All EDCAF state2) Any block ack agreements3) Sequence number4) Packet number5) Duplicate detection caches6) Anything queued for transmission7) Fragmentation and reassembly buffers8) Power management mode9) WNM sleep mode.The following states, agreements and allocations are not affected by the reassociation procedure:1) PSMP sessions2) Enablement/Deenablement3) GDD enablement4) STSL, DLS and TDLS agreements5) SMKSAs, STKSAs and TPKSAs established with any peers6) MMSLs7) GCR agreements8) DMS agreements9) TFS agreements10) FMS agreements11) Triggered autonomous reporting agreements12) FTM sessions13) DMG SP and CBAP allocations. |

Discussion:

p) If  the  ResultCode  in  the  MLME-REASSOCIATE.response  primitive  is  SUCCESS and the CurrentAPAddress parameter in the MLME-REASSOCIATION.indication  primitive  had  the  new  AP's  MAC  address  in  the CurrentAPAddress parameter (reassociation to the same AP), the following states, agreements and allocations shall be deleted or reset to initial values with reference to the non-AP STA:

Any block ack agreements

Packet number
Duplicate detection caches
Anything queued for transmission??? (currently required of the non AP STA
Fragmentation and reassembly buffers ??? (currently required of the non AP STA
Power management mode
WNM sleep mode.

The following states, agreements and allocations are not affected by the reassociation procedure:

PSMP sessions
Enablement/Deenablement
GDD enablement
STSL, DLS and TDLS agreements
SMKSAs, STKSAs and TPKSAs established with any peers
MMSLs
GCR agreements
DMS agreements
TFS agreements
FMS agreements
Triggered autonomous reporting agreements
FTM sessions
DMG SP and CBAP allocations

All EDCAF state

Sequence number

Discuss

Pull this out to separate document.

Questions on TSPECS, what is a non-AP STA expecting when it re-associates?

Compare to the non-AP STA side on P1627.

Jouni

Interesting.. And a challenging topic to have full coverage for.. To start with something:

It looks like there is some ambiguity or mismatching claims in the standard in this area.. Somehow I have not looked at the list in P1627 in more detail previously, but the claims (4) and (5) on what is not affected does not match the RSN section of the standard.

The list on P1627 indicates SMKSAs, STKSAs, and TPKSAs as not being affected by reassociate-to-the-same-AP. P1979 (12.6.18 RSNA security association termination) on the other hand states this:

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When a non-AP STA’s SME receives a successful MLME-ASSOCIATE.confirm or MLME-REASSOCIATE.confirm primitive that is not part of a fast BSS transition or receives or invokes an MLME Disassociation or Deauthentication primitive, it deletes some security associations.

Similarly, when an AP’s SME

— receives an MLME-ASSOCIATE.indication or MLME-REASSOCIATE.indication primitive from a STA that has not negotiated management frame protection, or — receives an MLME-ASSOCIATE.indication or MLME-REASSOCIATE.indication primitive from a STA that has negotiated management frame protection that a) has resulted in an MLME (re)association response that is successful, and b) is not part of a fast BSS transition, or — receives or invokes an MLME Disassociation or Deauthentication primitive, it deletes some security associations. In the case of an ESS, the non-AP STA’s SME shall delete the PTKSA, GTKSA, IGTKSA, SMKSA, any TPKSA, and any STKSA, and the AP’s SME shall delete the PTKSA and invoke an STSL application teardown procedure for any of its STKSAs.

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The text in 12.6.18 gives the same rules for reassociation-to-the-same-BSS and reassociation-to-another-BSS. In other words, 12.6.18 says that the non-AP STA shall delete SMKSA, TPKSA, and STKSA which is what the entry (5) on P1627 L31 claims as being "unaffected". Sure, the text in 11.3.5.4 talks about MLME-REASSOCIATION.request, not MLME-REASSOCIATE.confirm, but the way this is worded seems to imply that the SAs would remain unaffected even in the case of a successful reassociation. That does not match what

12.6.18 says.

As far as the entry (4) on P1627 L30 is concerned, I'd expect STSL, DLS, and TDLS agreements to be affected (i.e., practically deleted) if the SA related to such agreement gets deleted.

As a semi-related item, it is kind of interesting to see "Packet number"

as the item (4) in the list of deleted/reset values (P1627 L15) when the more appropriate thing to list here would be the SA that this PN is referring to.. Likely PTKSA in this context. Just reseting PN to "a default value" would not work at all here since the TK or PTK needs to change (and that operation on its own gets rid of the relevant PN).

In discussions 5/6/16 Adrian suggested that the AP text simply notes the list for the non-AP STA and then, if necessary, the list on P1267.10 is maybe discussed along the lines as noted by Jouni.

First attempt:

“p) If  the  ResultCode  in  the  MLME-REASSOCIATE.response  primitive  is  SUCCESS and the CurrentAPAddress parameter in the MLME-REASSOCIATION.indication  primitive  had  the  new  AP's  MAC  address  in  the CurrentAPAddress parameter (reassociation to the same AP), the AP shall note the states, agreements and allocations deleted or reset to initial values by the non-AP STA (see 11.3.5.4 c)). “

ASIDE – do we need to say anything like “AP shall take the any necessary action so as to be compatible with the actions at the non-AP STA”??

Adrian, 5/9/16

I don’t think “shall note” is good enough.

How about something like:

the agreements and allocations deleted or reset to initial values by the non-AP STA  are described in 11.3.5.4 list item c).  The AP shall match the non-AP STAs treatment of the listed agreements and allocations – i.e., the AP deletes or resets to initial values those items that the non-AP STA is required in 11.3.5.4 list item c) to delete or reset to initial values, and the AP does not modify the states, agreements and allocations that are listed as not affected by the reassociation procedure.

Agreed, but put into the bullet form.

Do we touch 11.3.5.4.c)? as per Jouni’s observation – why not?

Proposed Resolution

REVISED

At 1630.26 add

“p) If  the  ResultCode  in  the  MLME-REASSOCIATE.response  primitive  is  SUCCESS and the CurrentAPAddress parameter in the MLME-REASSOCIATION.indication  primitive  had  the  new  AP's  MAC  address  in  the CurrentAPAddress parameter (reassociation to the same AP), the AP shall match the non-AP STAs treatment of the listed agreements and allocations as described in 11.3.5.4 list item c). The AP deletes or resets to initial values those items that the non-AP STA is required in 11.3.5.4 list item c) to delete or reset to initial values, and the AP does not modify the states, agreements and allocations that are listed as not affected by the reassociation procedure.”

AND

At P1627.23 insert bullet “10) SMKSAs, STKSAs and TPKSAs established with any peers”

At P1627.31 delete bullet “5) SMKSAs, STKSAs and TPKSAs established with any peers”

and renumber remaining bullets in list