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Zigbee Document 19-02821-001

Test House Notification for Urgent CCB #2975

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Abstract:
This document issues a test house notification to address urgent CCB #2975 against the BDB PICS.

Keywords:
BDB, Zigbee 3.0, PICS

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2 References

- [R1] “Base Device Behavior PICS Proforma v1.0 Errata”, Zigbee document 16-02829-005, March 29th, 2019.

3 Change History

The following table shows the change history for this document.

Table 1 – Revision Change History

Revision	Date	Description
000	August 1 st , 2019	Initial draft
001	August 1 st , 2019	Added document number.

4 Details of CCB #2975

From the CCB tool:

Document Number	16-02829-005
Document Section	7.7
Subject	TL target PICS should not be mandatory for all devices
Issue Description	<p>TLT10, TLT11 and TLT12 all have the same status: TLT1: M - if the TL target procedure is supported they are mandatory. However, some items need to be conditional on other factors such as stealing or being a router.</p> <p>TLT10 (If the target is already part of a network when it receives a network join router or a network join end device command, does it leave its current network?) should be conditional on whether the DUT supports stealing.</p> <p>TLT11 (If requested by the initiator, does the target start a new network and respond with a network start response command frame?) should be conditional on whether the DUT supports stealing and is a router.</p> <p>TLT12 (After starting a new network, does the target direct join the initiator to its new network?) should be conditional on whether the DUT is a router.</p> <p>This issue was found during an active certification.</p>
Suggested Remedy	Change the conditions of TLT10-12 to incorporate the conditions indicated above.

5 BD WG Resolution

The BD WG reviewed this CCB and have determined that TLT10, TLT11 and TLT12 do indeed need to be dependent on other features, specifically, the concept of stealing and whether the target is a router. To make these PICS items clearer, a new PICS item is required to specify whether the target allows starting a new network or joining another network when it is not factory new (i.e. stealing). This PICS item can, in turn, be used as a dependency in TLT10 and TLT11. Furthermore, TLT11 and TLT12 are considering starting a new network so these are clearly dependent on whether the target is a router.

On reviewing the issues, highlighted by this CCB, however, it become apparent that some previous changes made to this section were not correct. These are:

- TLT7.1 (does the target allow itself to start a new network?) and TLT8 (does the target allow itself to be joined to another network?) are not correct. These were added to try to capture the stealing feature in a previous CCB. As these are marked as optional, if the target does not support these features, it could not start or join a network when factory new. The suggestion here is to remove these PICS items.
- TLT7.2 and TLT7.2 have as a dependency TLT7.1 but the items are mandatory regardless of whether TLT7.1 is supported, i.e. if the target decides not to start a new network, it must return failure. Otherwise it must return success.

- TLT8.1, TLT8.2, TLT9.1 and TLT9.2 have as a dependency TLT8 but the items are mandatory regardless of whether TLT8 is supported, i.e. if the target decides not to start a join a network, it must return failure. Otherwise it must return success.
- TLT9.1 specifies if an end device decides not to join a network, it must return a *network join end device response* with status of failure, not a *network join router response*.
- TLT10 is also applicable to a target that has received a *network start request* and permits stealing.
- In TLT11, if the router target is already part of a network and receives a *network start request*, it starts a new network but doesn't then send a *network start response* – this happens before the network is started.

These changes are specified in the next section.

6 Changes to Documents.

Section 7.7 ([TLT] Touchlink procedure for a target): Change as follows:

Item number	Feature	Reference	Status	Support
TLT7	Does the target allow starting a new network or joining another network when not factory new (i.e. stealing)?	8.7	TLT1: O	/No
TLT7.2	If the target receives a <i>network start request</i> command frame, is a ZigBee Router and decides not to start a network, does it respond with a <i>network start response</i> command frame with the <i>Status</i> field set to 0x01 (failure)?	8.7	(TLT1 && ZLT2): M	/No
TLT7.3	If the target receives a <i>network start request</i> command frame, is a ZigBee Router and decides to start a network, does it perform a network discovery?	8.7	(TLT1 && ZLT2): M	/No
TLT8.1	If the target receives a <i>network join router request</i> command frame, is a ZigBee Router and decides not to be joined to another network, does it respond with a <i>network join router response</i> command frame with the <i>Status</i> field set to 0x01 (failure)?	8.7	(TLT1 && ZLT2): M	/No

Item number	Feature	Reference	Status	Support
TLT8.2	If the target receives a <i>network join router request</i> command frame, is a ZigBee Router and decides to join the network of the initiator, does it respond with a <i>network join router response</i> command frame with the <i>Status</i> field set to 0x00 (success)?	8.7	(TLT1 && ZLT2): M	/No
TLT9.1	If the target receives a <i>network join end device request</i> command frame, is a ZigBee End Device and decides not to be joined to another network, does it respond with a <i>network join end device response</i> command frame with the <i>Status</i> field set to 0x01 (failure)?	8.7	(TLT1 && ZLT3): M	Yes/
TLT9.2	If the target receives a <i>network join end device request</i> command frame, is a ZigBee End Device and decides to join the network of the initiator, does it respond with a <i>network join end device response</i> command frame with the <i>Status</i> field set to 0x00 (success)?	8.7	(TLT1 && ZLT3): M	Yes/
TLT10	If the target is already part of a network when it receives a <i>network start request</i> , <i>network join router request</i> or a <i>network join end device request</i> command and permits stealing, does it leave its current network?	8.7	(TLT1 && TLT7): M	/No
TLT11	If the target router is already part of a network when it receives a <i>network start request</i> and the target router permits stealing, does the target router start a new network?	8.7	(TLT1 && ZLT2 && TLT7): M	/No
TLT12	After starting a new network, does the target router direct join the initiator to its new network?	8.7	(TLT1 && ZLT2): M	/No

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