OsmoCBC - Feature #5641

OsmoCBC doesn't yet support reloading cells becoming operational with active messages

08/05/2022 05:07 PM - pespin

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<th>08/05/2022</th>
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Description

This applies to both CBSP and SBc-AP.

CBSP: 3GPP TS 48.049 7.8:

* The BSC informs the CBC by sending the RESTART message (see figure 7.8.2.1)
* containing the Cell List IE identifying the cell(s) being in CBS message
* operational state or in emergency message operational state and the Recovery
* Indication IE, indicating whether the broadcast information data is lost or
* not in the BSC.
* The RESTART message is sent once per broadcast message type
* as indicated by the Broadcast Message Type IE.

SBc-AP: 3GPP TS 29.168 4.3.3E:

* The CBC shall reload the warning message data (with the same Message
* Identifier and Serial Number) to the (H)eNB by initiating Write Replace
* Warning procedure(s) as specified in clause 4.3.3.2 with the following
* additions:
  * - the CBC should set the Warning Area List IE in the Write-Replace
  * Warning Request message to the identities of the cell(s) received in the
  * Restarted-Cell-List which are relevant to the warning message data being
  * reloaded;
  * - the CBC shall copy the Global eNB ID into the Write-Replace
  * Warning Request message; and
  * - the CBC may update the Number of Broadcast Requested, if necessary.

So the idea is that when a BTS becomes operational for CBS/ETWS message, the BSC will send a CBSP RESTART message
containing info about the cell.
Similarly, when an ENB becomes operational, the MME will send a SBc-AP PWS Restart message containing info about the cell.

Upon receival of those messages, OsmoCBC should iterate over the list of ACTIVE messages and see if the cell matches the scope
of any of them. For each message matching, the osmo-cbc should initiate a Write-Replace Request transaction against the peer with
the specific cell IDs received from the Restart message.

History

#1 - 08/05/2022 05:10 PM - pespin

Tests validating the scenario https://gerrit.osmocom.org/c/osmo-ttcn3-hacks/+r/28949 cbc: Introduce test TC_cell_failure_restart_active_{cbc,mme}

The tests are not 100% correct since they should validate the specificites of the "reload" messages. Right now they only check for a regular initiaing
Write-Replace Request.
They should be good as a test bed to polish when implementing the feature though.