Test description

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| **Test ID** | MIP4SLT3IS\_1236 |
| **Test Title** | Consumer Unexpected Disconnection |
| **Execution Priority** | 1 |
| **Objective** | To verify fault tolerance of the MIP4 IES to resume operational data exchange between a Consumer (A) and Provider (B) after the network has unexpectedly disconnected Consumer (A) by completing a stand-alone Request/Response exchange pattern to re-synchronize and establish ground truth and resume publish/subscribe services established prior to the network disruption. |
| **Scenario** | Consumer (A) and Produced (B) have established a Publish/Subscribe exchange pattern that is satisfying the subscription as of the moment when Consumer (A) loses network connectivity to Producer (B). Once network is re-established Consumer (A) requests stand-alone initialization data using a request/response exchange mechanism and resumes the subscription data that was established prior to network interruption. |
| **Environment** | Internet or Co-located. Exchange Pattern: R/R, P/S. |
| **Participation** | 2 or more. |
| **MTRS** | N/A |
| **Pre-test Conditions** | A subscription between Consumer (A) and Producer (B) has been initialized and routine updates are occurring using Publish/Subscribe exchange patterns. |
| **Test Inputs** | N/A. |
| **Conclusion** | This test is considered a success if the Consumer (A) has successfully re-connected to the network, re-synchronized with Producer (B) and established ground truth without data loss. |
| **Test Outputs** | N/A. |
| **Traceability** | REQ\_EM\_0006, REQ\_EM\_0008, REQ\_EM\_0010 |

Test Procedure

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| Step | Action | Expected Result | Src | Dst |
|  | Consumer (A) is subscribed to receive routine operational data from Producer (B). ~~ | Network and MIP4 Gateways are in an operational state and Consumer (A) is receiving routine operational data. ~~ | 1 | 2 |
|  | Simulate a Consumer (A) network disruption losing connectivity with Provider (B). ~~ | The connections between Consumer (A) and Provider (B) prevents the Consumer from receiving operational data. ~~ | 1 | 2 |
|  | Upon re-establishment of Network and MIP Gateway operational state, Consumer (A) requests a stand-alone request/response exchange from Produced (B). ~~ | Producer (B) provides the request/response exchange update to Consumer (A), and resumes the publish/subscribe information flow as previously established between Consumer (A) and Producer (B) prior to the network disruption. ~~ | 1 | 2 |

**Configuration**

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| Item | Value | Comment |
| EventGeneration | 1 | 0 🡪 Combine steps to one event in the MTMT, generate new MTMT events on every source - destination change. 1 🡪 Every step will be added to the MTMT as a separate event. |