Test Driven Development II - Advanced - Exercises
99 - Touchstone TestScript Execution - Connectathon Track
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*Please see **Test Driven Development I - Intro – Exercises, Connectathon Track** for background information*

FHIR Subscriptions (Second Analysis Example)
http://wiki.hl7.org/index.php?title=201801_FHIR_Subscriptions

Second Test Scenario - REST Hook with payload [snipped]
Action: FHIR Server notifies Subscribing client pushing a FHIR resource to the endpoint in the Subscription resource.
Precondition: Create FHIR Subscription (first scenario)
Success Criteria: FHIR server pushes FHIR payload of relevant resource using REST Hook when the subscribed event occurs.
Bonus point: n/a

Analysis / Re-definition - REST Hook with Payload (Vital Signs/BMI)
Actors
- ❖ Touchstone (T) - Test Platform, default FHIR Client
- ❖ Subscriptions System (SS) - FHIR Server supporting Subscription resource
- ❖ Subscribing Client (SC) - Subscribes to SS and receives notifications/updates

Test Data
- ❖ Subscription static fixture - used to create the Subscription resource instance on (SS)
- ❖ Observation static fixture - matches Subscription criteria for Vital Signs/BMI measurement

Setup
- ❖ Delete any existing Subscription resources that match the new Subscription to be created on (SS)
- ❖ Create the Subscription resource instance on (SS) (*may use first test scenario test steps*)

Test - Create Vital Signs/BMI Observation
Create a new Vital Signs/BMI Observation resource instance on the target Subscriptions System
- ❖ (T) sends Vital Signs/BMI Observation resource to (SS)
  - o Operation 'create'
  - o HTTP POST [SS Base URL]/Observation
- ❖ (SS) responds with conformant FHIR API success

Test - Send Notification
The Subscriptions System sends the Vital Signs/BMI Observation resource instance to the Subscribing Client's notification endpoint (base URL) as a FHIR update operation
- ❖ (SS) sends Vital Signs/BMI Observation resource to (SC)
  - o Operation 'update'
  - o HTTP PUT [SC Base URL]/Observation
- ❖ (SC) responds with conformant FHIR API success

Test - Read Observation (optional)
  Only possible if SC Base URL supports Observation read
Read the updated Observation resource instance on the Subscribing Client to validate the Observation resource has been created and processed correctly
- ❖ (T) sends read request for Observation to (SC)
  - o Operation 'read'
  - o HTTP GET [SS Base URL]/ Observation/${observationResourceId}
- ❖ (SC) responds with conformant FHIR API success and payload of the updated Observation
  - o Validate returned Observation contents