Inferno Tech Talk – April 2025

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Inferno Tech Talk Introduction

- Purpose: to provide regularly scheduled updates on the Inferno tool and its implementation of the (g)(10) test procedure

- Typical agenda to include:

  - Announcements about upcoming releases

  - Training on new features

  - Highlight outstanding issues or known problems

  - Open discussion

- Monthly recurrence: 2nd Wednesday at 1PM ET

- This call is being recorded and will be posted on https://inferno.healthit.gov/events/

Content reflects Inferno's implementation of applicable Test Procedure
and does not necessarily reflect ASTP/ONC policy.

Today's Agenda

- Inferno Framework Updates

- (g)(10) Standardized API Test Kit v7.1.0/v7.2.0

- Other Test Kits Update

  - Bulk Data Test Kit v0.12.1

  - SMART App Launch v0.6.1

  - UDAP Security v0.11.3

  - PAS v0.12.2

- Discussions / Questions

Inferno Framework Updates

- ALL Inferno Test Kits are updated to Ruby v3.3.6

  - For local deployment using Ruby environment:

    - Need update Ruby version to v3.3.6.

- Move shared testing logic into Inferno Core

  - Ex: Must Support assertions

- AuthInfo

  - If you have automatic test using UI integration, you should update for the new UI layout.

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ONC (g)(10) Standardized API Test Kit v7.1.0/v7.2.0

- Test Update:

  - Test changes that should not result in new failure: 0

    - Due to core Inferno updates (Ruby version and authorization-related input changes), we categorized these two releases as "minor" releases instead of "patch" releases, as test behavior may have changed slightly as a result

  - Test changes that should not affect score of passing implementations: 2
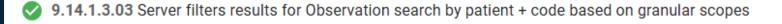
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(g)(10) Updates: Observation BMI dataAbsentReason Validation

- FHIR Validator throws error if a resource

  - Does not have valueQuantity but provides dataAbsentReason

  - Is validated using US Core BMI profile

- Observation: Slice 'Observation.value[x]:valueQuantity': a matching slice is required, but not found (from http://hl7.org/fhir/StructureDefinition/bmi|4.0.1).

- Reason:

  - US Core BMI profile has an optional valueQuantity slice

  - FHIR BMI profile has a required valueQuantity slice

  - When validator validate a resource, the resource has to not only conform to its own profile but also profiles in FHIR base spec.

- Solution:

  - Add a validation error filter.

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(g)(10) Updates: Granular Read Test with 4xx error

- Test error reported on zulip for test 9.14.1.3.04 "Server filters results for Observation read on granular scopes"

- After granular authorizsation, Inferno sends read request on unauthorized granular resource and expect server to return 4xx error with OperationOutcome payload

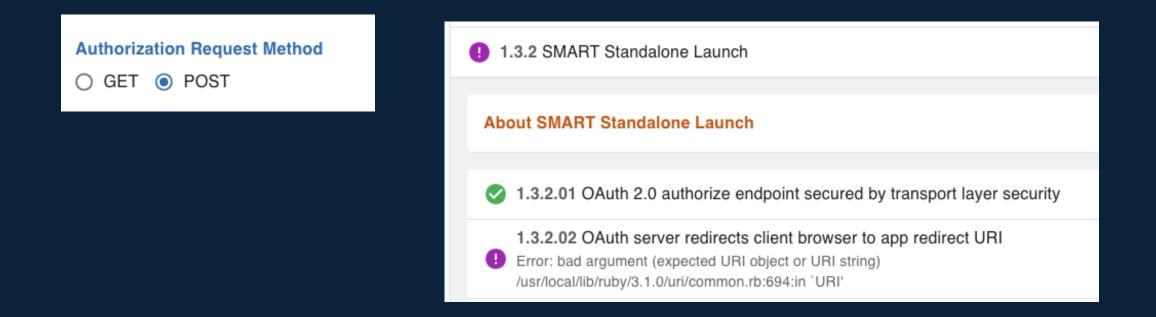- If server returns only 4xx without empty payload, Inferno test crashes because the response body does not contain any FHIR resource(s).

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SMART App Launch v0.6.1

- Fixed a bug when running POST authorization request in some Inferno Test Kit, such as US Core Test Kit.

  - (g)(10) Certification Test Kit is NOT affected by this change.

Authorization Request Method
○ GET ● POST

! 1.3.2 SMART Standalone Launch

About SMART Standalone Launch

✓ 1.3.2.01 OAuth 2.0 authorize endpoint secured by transport layer security

1.3.2.02 OAuth server redirects client browser to app redirect URI
! Error: bad argument (expected URI object or URI string)
/usr/local/lib/ruby/3.1.0/uri/common.rb:694:in `URI'

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Bulk Data Test Kit v0.12.1

- New Bulk Data Access Client Test Suite

  - For Bulk Data v2.0.0

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SMART App Launch v0.6.1 and UDAP Security v0.11.3

- Added client tests for server-to-server flows, including

  - UDAP business to business client credentials flow

  - SMART backend services

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PAS v0.12.2

- Implemented PAS Subscriptions for pended prior authorization requests within the Client tests.

Open Discussion / Feedback

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Resources and Contact Information

- https://inferno.healthit.gov/

    - General materials & live demonstration server

- https://inferno-framework.github.io

    - Create your own Inferno Test Kits!

- https://github.com/onc-healthit/onc-certification-g10-test-kit/

    - ONC Certification tests repository, downloads, issues

    - "Watch" repository to receive alerts (new releases, etc)

    - Note: this repository is specific to ONC Certification testing

- inferno@groups.mitre.org (or rscanlon@mitre.org)

- FHIR Zulip Chat: https://chat.fhir.org/#narrow/stream/179309-inferno

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Upcoming Meetings

- Next Inferno Tech Talk: Wednesday May 14 at 1 PM ET

- Please reach out with questions & issues

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