Canada Health Infoway

Projectathon Tooling

CA:FeX Client & Server Simulators

What are the CA:FeX Client & Server Simulators?

- **CA:FeX Client Simulator:** A web application, based on the Swagger UI, used to simulate CA:FeX conformant clients, with or without IUA authorization.

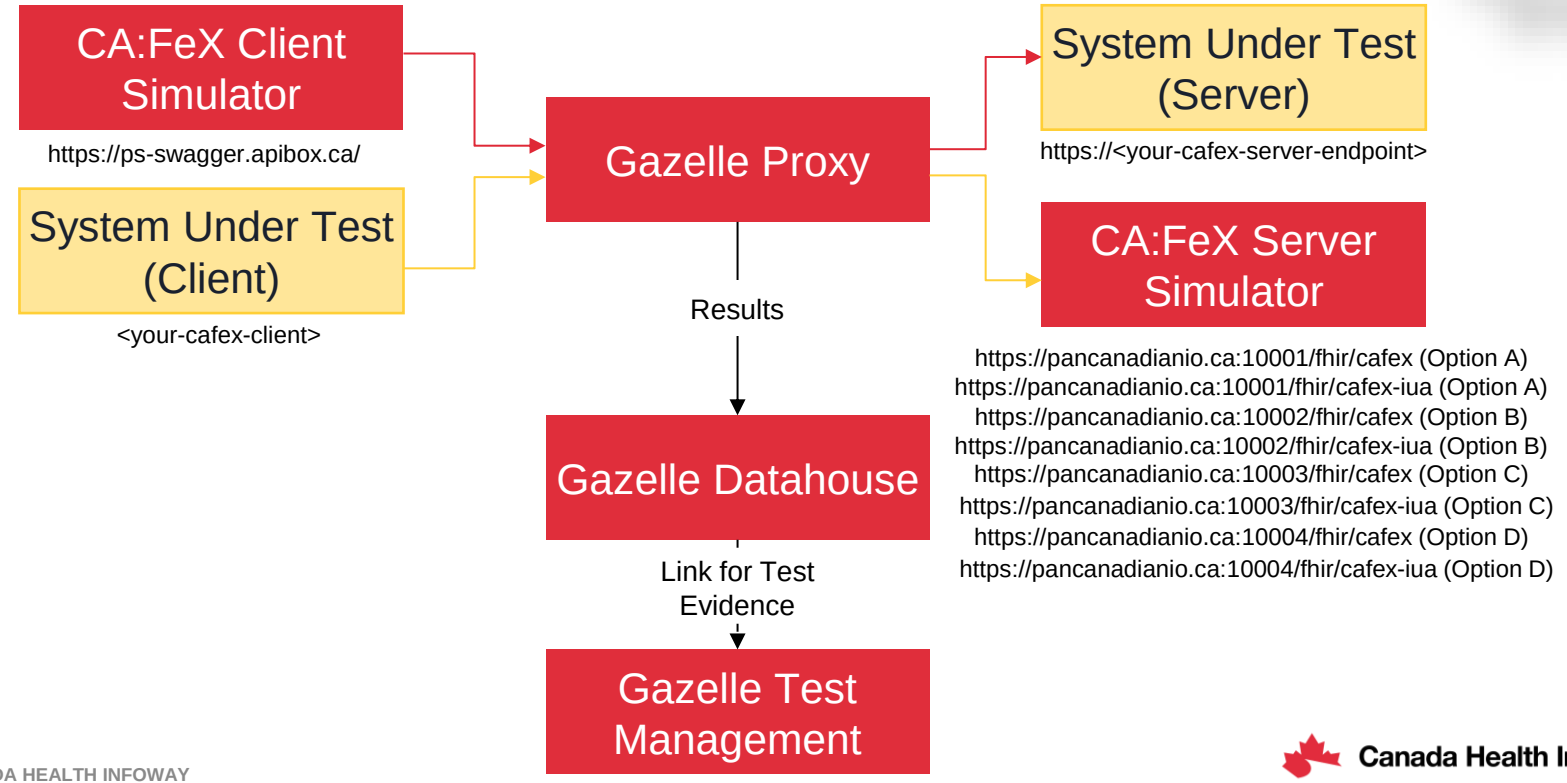
- **CA:FeX Server Simulator:** A FHIR server with RESTful APIs used to simulate CA:FeX conformant servers, with or without IUA authorization.

Training Objectives

This training aims to meet the following objectives:

- ✓ Provide an understanding of the **CA:FeX Client Simulator, when** to use it, **how** to use it, and **where** to access it
- ✓ Provide an understanding of the **CA:FeX Server Simulator, when** to use it, **how** to use it, the options for using this tool with authorization and without authorization, and **where** to access it

CA:FeX Simulators Architectural Overview



What are the CA:FeX Simulators' Capabilities?

CA:FeX has three types of transactions: CA:FeX-1 (Submit), CA:FeX-2 (Search), CA:FeX-3 (Retrieve), each with various options (A, B, C, D) for how they can be performed based on the FHIR resources used.

The **Client Simulator and Server Simulator** are configured to execute all transactions and options:

- ❖ Submit, Search, & Retrieve FHIR Document Bundles (Option A)
- ❖ Fetch (Create and/or Retrieve) DocumentReferences and surrounding content (Option B)
- ❖ Submit, Search, & Retrieve Individual Patient Resources (Option C)
- ❖ Retrieve the most recent Patient Summary Document using $summary operation (Option D)

Each transaction can be simulated with or without authorization tokens (using the IHE IUA profile).

When to use the CA:FeX Client Simulator

The **CA:FeX Client Simulator** is used in Pre-Projectathon and No Peer testing when a participant wants to test that their FHIR Server (System Under Test) can receive FHIR Resources and respond to requests according to the CA:FeX transactions

- The Client Simulator UI is organized into pages by Option (A, B, C, D), each page has a visual documentation and buttons to execute various APIs. Participants can test some or all of the CA:FeX transactions using this tool
- The user designates the server endpoint that the Client Simulator will interact with, typically entering the proxied endpoint that allows traffic to be logged for test evidence
- The UI is pre-loaded with examples and configurable parameters that allow the tester to customize what is sent to their System Under Test
- Responses to API calls are viewable in the UI and stored in the Gazelle Datahouse-Proxy to use for test evidence

When to use the CA:FeX Server Simulator

The **CA:FeX Server Simulator** is used in Pre-Projectathon and No Peer testing when a participant wants to test that their FHIR Client (System Under Test) can request FHIR Resources according to the CA:FeX transactions

- The Server Simulator has no UI but is configured to support the required endpoints and parameters for all transactions and options in CA:FeX. Participants can test some or all of the CA:FeX transactions using this tool
- The Server Simulator has open and IUA-authorized endpoints that are proxied to allow traffic to be logged for test evidence
- Responses to API calls are returned to the Client and stored in the Gazelle Datahouse-Proxy to use for test evidence

Tool Demonstration – Client Simulator UI

1. Navigate to the page directly or select from the dropdown menu

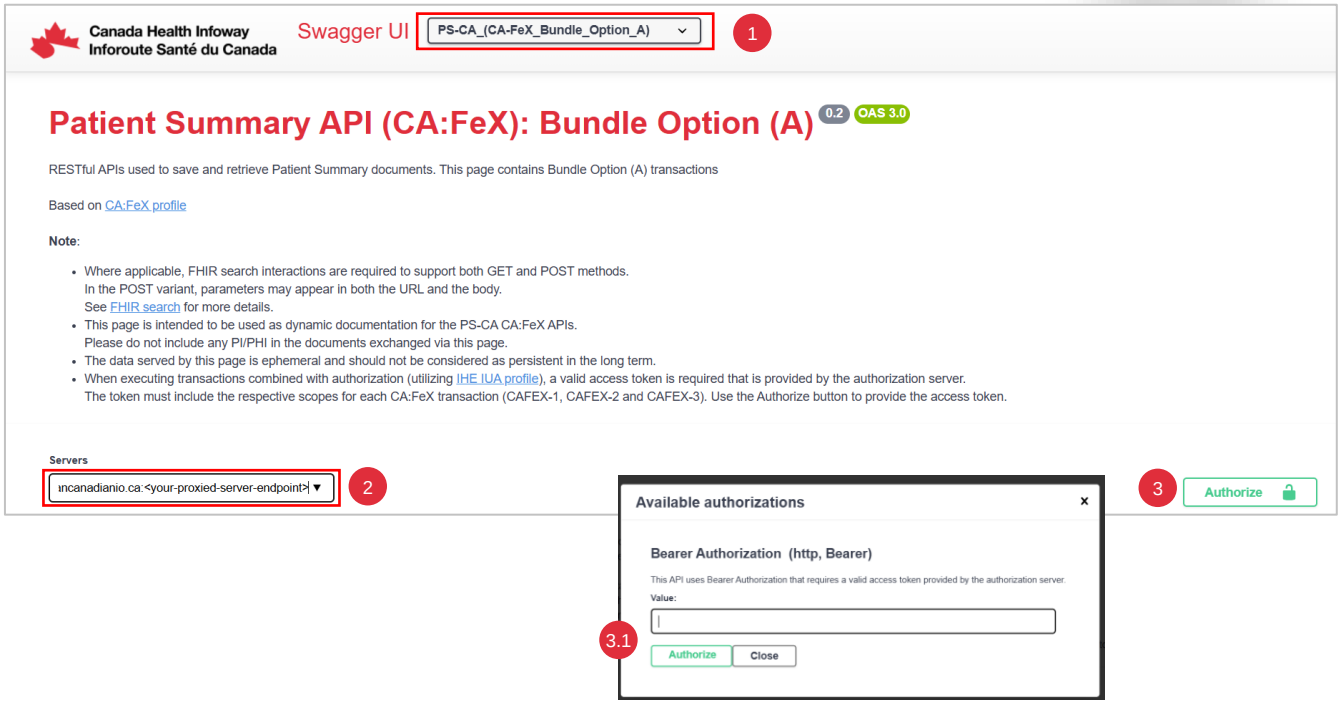
2. Enter your server's proxied endpoint information

   See instructions for setting up proxy: https://pancanadianio.ca/gazelle-documentation/Proxy/user.html

Optional:

3. If testing with IUA Authorization Token, click "Authorize" button

3.1 In pop-up, enter Bearer Token and click "Authorize"



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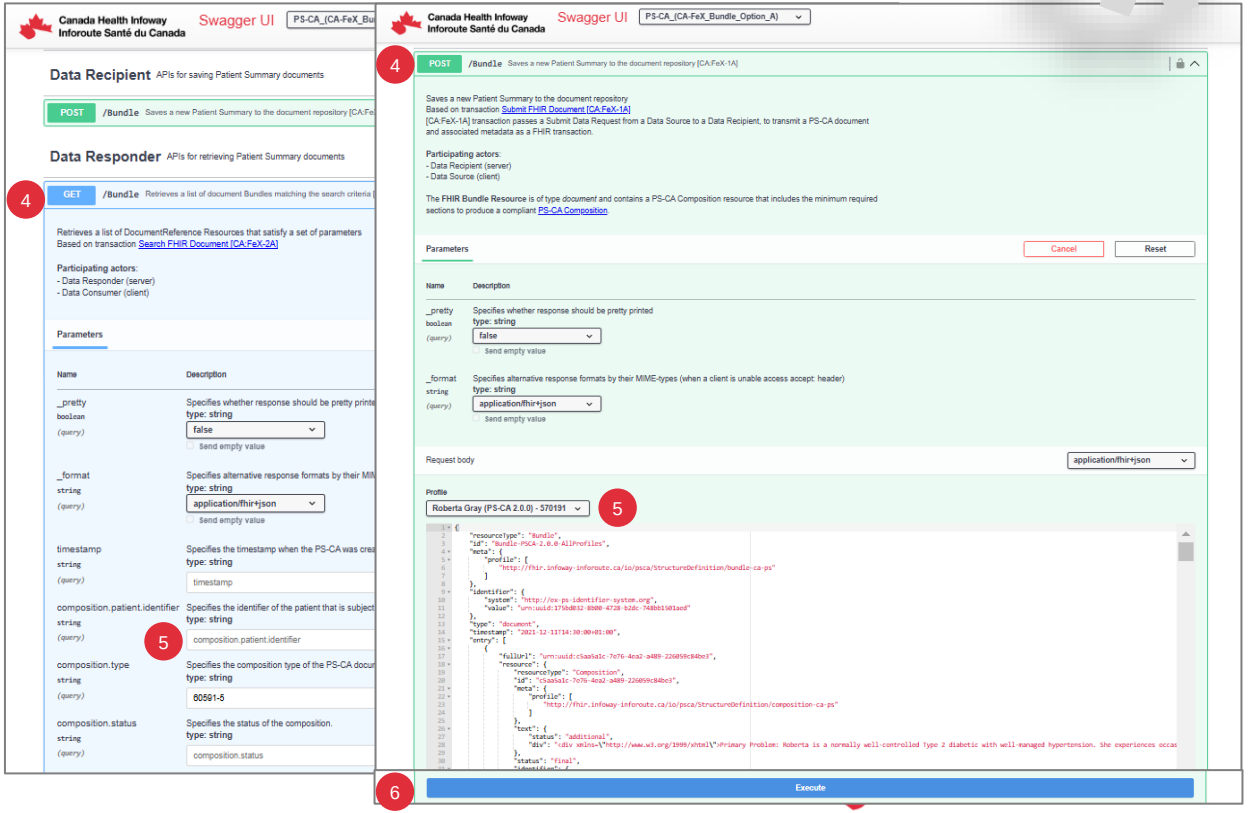
Tool Demonstration – Client Simulator UI

4 Click to expand the API that you would like to execute

5 Customize the content of the call to your server's Endpoint, examples include:
- Use loaded patient examples or paste in your own
- Use presets or provide values for parameters that the client will use in the call to your server

6 Click "Execute"

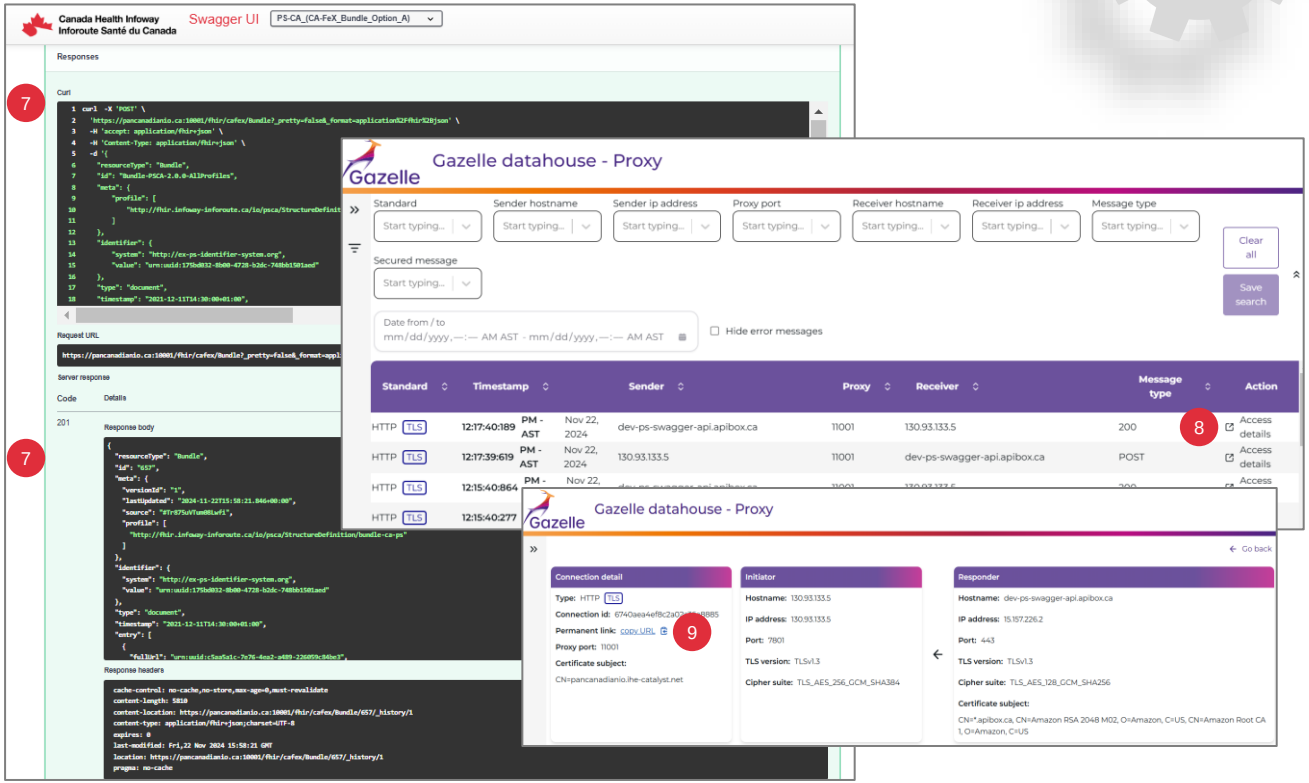


Tool Demonstration – Client Simulator UI

7 After execution, scroll down to view the Curl request sent to your proxied endpoint and the Server Response details

8 After successfully executing the request against your proxied endpoint, navigate to the Gazelle Datahouse to select the "Access detail" you would like to use for evidence

9 Copy the permanent link for pasting into Gazelle Test Instance



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Where to Access the CA:FeX Simulators

Simulator	URL
CA:FeX Client Simulator (Direct Links for Option A, B, C, D)	❖ https://ps-swagger.apibox.ca/index.html?spec=PS-CA_(CA-FeX_Bundle_Option_A) ❖ https://ps-swagger.apibox.ca/index.html?spec=PS-CA_(CA-FeX_Metadata_Option_B) ❖ https://ps-swagger.apibox.ca/index.html?spec=CA-FeX_(Single_Resource_Option_C) ❖ https://ps-swagger.apibox.ca/index.html?spec=PS-CA_(CA-FeX_Summary_Option_D)
CA:FeX Server Simulator (without authorization)	https://pancanadianio.ca:10001/fhir/cafex (Option A) https://pancanadianio.ca:10002/fhir/cafex (Option B) https://pancanadianio.ca:10003/fhir/cafex (Option C) https://pancanadianio.ca:10004/fhir/cafex (Option D)
CA:FeX Server Simulator (with authorization)	https://pancanadianio.ca:10001/fhir/cafex-iua (Option A) https://pancanadianio.ca:10002/fhir/cafex-iua (Option B) https://pancanadianio.ca:10003/fhir/cafex-iua (Option C) https://pancanadianio.ca:10004/fhir/cafex-iua (Option D)
CA:FeX Specification	https://infoscribe.infoway-inforoute.ca/display/PCI/CA%3AFeX+Release+Information

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Thank you!

To learn more about the Projectathon 2025, visit:

https://infoscribe.infoway-inforoute.ca/display/PCI/Scope%3A+Projectathon+2025

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