

WELCOME

#AIRA2023



Bulk Query on FHIR: Tips from the Connectathon

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...and many friends

Agenda

- **Overview of the IIP and Helios projects**
- **IIS bulk data exchange 101**
- **Demo**
- **Small group discussion**
- **Report in and wrap up**

Why FHIR?

The unbearable burden of too much data?



Why FHIR?

Solutions that
suit everyone



Why FHIR?

Things show up
when you don't
expect them



IIP – Bulk Query

- **Workgroup: IIS, EHRs, Payers, HIEs, Pharmacies, Schools +: April 2022**
- **Problem Statement – [..]need to retrieve [IIS data] without relying on individual queries which can be time consuming for users and overwhelming for IIS.**

IIP – Bulk Query

- **No agreed upon standard: CSV/flat files, Batch v2 QBPs, Serial v2 QBPs**
- **Toolkit Recommendations:**
 - Prepare for eventual needs
 - Keep doing what works well for both sides
 - Potential Strategies:
 - Parallel systems, throttling, scheduling, limit repeated queries
 - Communicate expectations: timing, volume, format, contents
 - Use Bulk FHIR for queries once developed by efforts like Helios

FHIR



**Next generation interoperability standard
created by HL7 combining the best
features of previous standards while
leveraging the latest web standards and
applying a tight focus on implementability**

**Fast
Healthcare
Interoperability
Resources**

HELIOS FHIR Accelerator

Helping public health to align with and benefit from the widespread standardization and transformation that is happening around digital health data

Deliver Aggregate Information to Public Health



Make Data in Public Health Systems Accessible in Bulk



Align and Optimize Public Health Data Sharing



Make Data in Public Health Systems Accessible in Bulk



Deliverables

By Summer 2023, Helios members will develop, test, and deliver initial guidance to support **real-world implementation of bulk FHIR APIs** within the IIS community.

Who is Actively Engaged

- IIS Vendors
 - Envision
 - Gainwell
 - HLN
 - STC
- EHR Vendors
 - eClinicalWorks
 - Epic
- State Immunization Programs
 - CA
 - MN
 - OR
 - RI
 - WA

Data Flow

User System (e.g. EHR)
AKA FHIR Client

IIS
AKA FHIR Server

Requester identifies individuals when they aren't already known

Step 1

Submit individual
patient demographics

Identify



Jane Doe 1962-01-20

Tom Kane 2001-06-30

Return each Patient
including the ID
(or non-match info)

- Match individual based on demographics
- Return ID

Identified patients added to a cohort

Step 2

Add/Remove to
cohort

Add/Remove

Reference to
Patient IDs

Update cohort

Bulk query

Step 3

Submit query that
references existing list

Bulk FHIR request

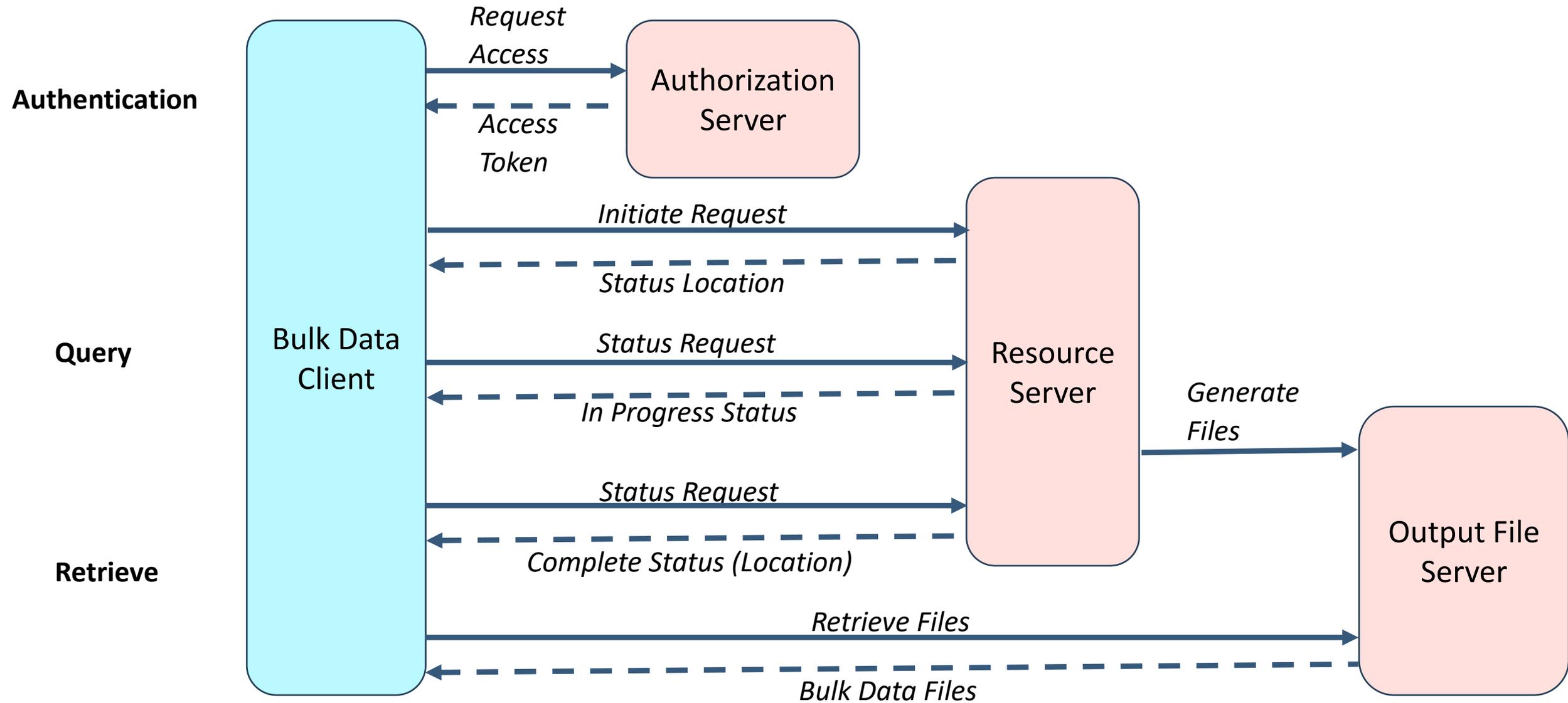


Reference to
Cohort ID

Query Response

Return data for members of the
cohort referenced in the request

Bulk Data Queries



Initial Testing

January 2023

HL7 Connectathon
Henderson, NV

Participants:

- AIRA/NIST, Epic, HLN/Rhode Island, AWS, STC, Envision, Intersystems* and MITRE*

Roles:

- FHIR Client:
 - Authorized User (e.g. Payor, Healthcare Organization, School)
 - Asks for data on a defined population of relevant patients
- FHIR Server:
 - Data Source (e.g. IIS)
 - Receives the request and makes data available

Objectives:

- Exchange Patient and Immunization data based on a predetermined patient population

Testing Summary

		Clients			
		Epic	HLN	AIRA/NIST	MITRE
Servers	STC	Green	Yellow	Green	
	Envision	Green	Green	Green	Green
	Intersystems	Green	Green	Green	Green
	AIRA/NIST	Green	Green	Grey	Green
	HLN	Green	Grey	Green	Green
	AWS	Green	Green	Green	Partial
	Key	Green	= Successful connection and response		
		Yellow	= Attempted but not successful		
		Grey	= Same participant		



Demo

Discussion

- **How are you fulfilling large data requests today?**
 - **Patient matching**
 - **Gathering data**
- **How are the needs of different trading partner variable?**
- **What sort of FHIR discussion or development are happening in your jurisdiction today?**

Wrap Up

Find out more!

Attend the FHIR session later today:

- Get FHIRed Up! 3:00pm – 4:15pm, here! (Santa Fe Room)
 - Firing up the Future of IIS – Nathan Bunker, AIRA
 - Sharing Immunization Data In Bulk: Lessons from the Helios FHIR Accelerator – Craig Newman, Altarum
 - IIS Bulk Data Demands and FHIR: Discussion and Direction and Solutions – Kevin Snow and Gary Wheeler, Envision

Join us!

- Visit the Helios website: www.hl7.org/helios
- The Helios Bulk FHIR Query group meets every other Monday at 12pm ET