Open@Epic CONFERENCE

OEC22: Bulking Up Your Data

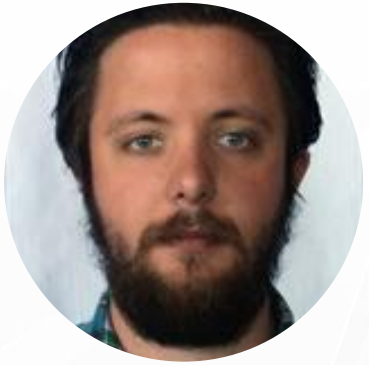
Data Extracts for Populations and Analytics

Presenters



Emily Williams

Quality Management



Sam Northcott

Software Developer

Agenda

01 Data Exchange with Epic

02 Bulk FHIR

03 Kit

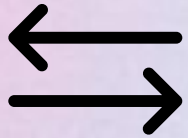
04 Q&A

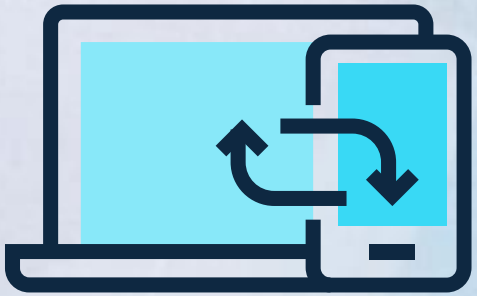
Who owns the data and how can it be shared?



APIs

HL7 Interfaces





Bulk FHIR

SQL Database Connections

Tools in Your Toolbox

- Standards Based Interfaces
- RESTful FHIR APIs
- Public APIs
- Kit
- Reporting Extracts
- Event Notifications
- SMART on FHIR
- Bulk FHIR
- CDS Hooks

Tools That … Follow an Industry Standard

- Standards Based Interfaces
- RESTful FHIR APIs
- Public APIs
- Kit
- Reporting Extracts
- Event Notifications
- SMART on FHIR
- Bulk FHIR
- CDS Hooks

Tools That … Handle Large Amounts of Data

Standards Based Interfaces



RESTful FHIR APIs

Public APIs

Kit



Reporting Extracts



Event Notifications

SMART on FHIR

Bulk FHIR



CDS Hooks

Tools That … Use Real-Time Data

- Standards Based Interfaces
- RESTful FHIR APIs
- Public APIs
- Kit
- Reporting Extracts
- Event Notifications
- SMART on FHIR
- Bulk FHIR
- CDS Hooks

Tools That … We're Looking at Today

Standards Based Interfaces

RESTful FHIR APIs

Public APIs

Kit



Reporting Extracts

Event Notifications

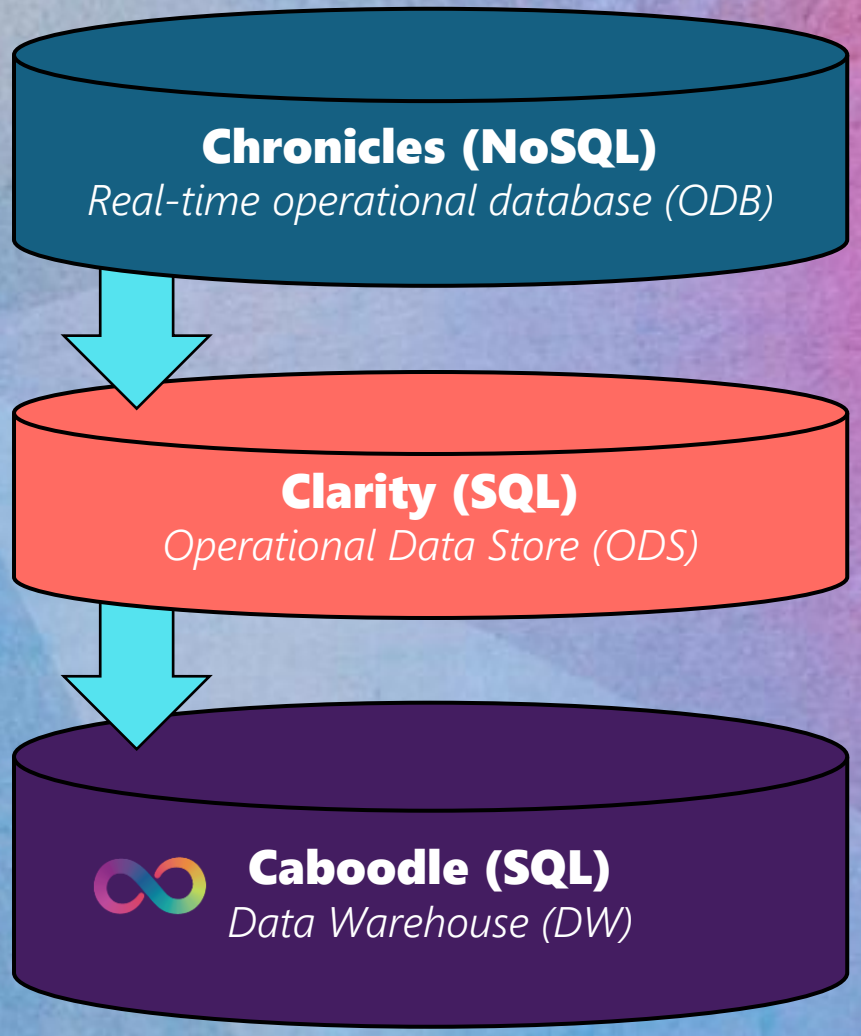
SMART on FHIR

Bulk FHIR



CDS Hooks

Epic Databases



- Operational, users interacting live 24/7/365
- Read/write web services, HL7 & APIs
- Transactional, optimized for user workflows

- SQL representation of all user-entered data
- Read/write with standard ODBC connections
- Optimized for regulatory extracts / staging
- Every data element in Chronicles

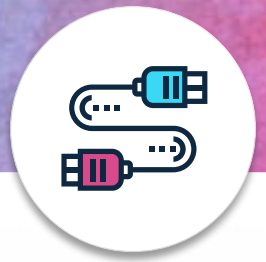
- Single conformed star schema data model
- Optimized for on-demand analytic workloads

Examples of Using Each Database



Chronicles

Show me the notes about Sam's encounter on October 11th.



Caboodle

Show me a list of all patients who were diagnosed with Type 2 Diabetes in the last 30 days.



Clarity

Show me a list of all patients who were diagnosed with Type 2 Diabetes in the last 30 days and I need specific data elements not yet in Caboodle.

What is Bulk FHIR?



Standards-Based



Multi-Patient



Multi-Resource

What is Bulk FHIR?

Export



Published

Submit



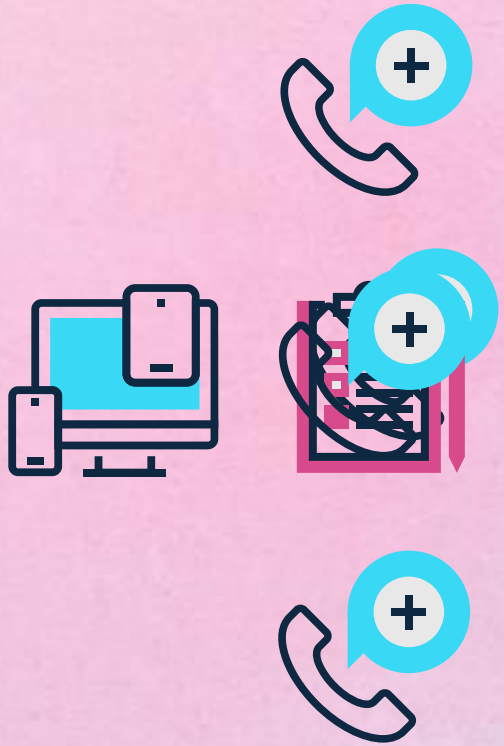
In Ballot

Publish



In Ballot

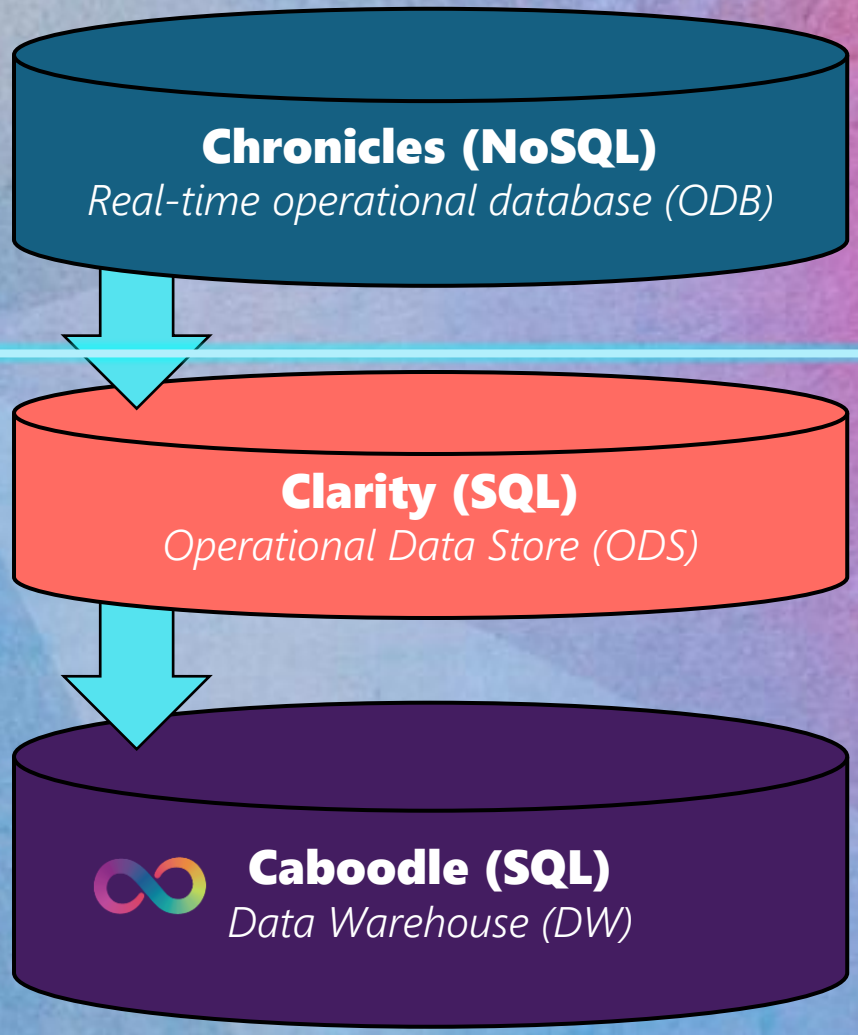
Export Operation





Epic Databases

FHIR APIs
Bulk FHIR



- Operational, users interacting live 24/7/365
- Read/write web services, HL7 & APIs
- Transactional, optimized for user workflows

- SQL representation of all user-entered data
- Read/write with standard ODBC connections
- Optimized for regulatory extracts / staging
- Every data element in Chronicles

- Single conformed star schema data model
- Optimized for on-demand analytic workloads

Advantages of Bulk FHIR on Chronicles

1. Same data as Epic's RESTful FHIR APIs

Advantages of Bulk FHIR on Chronicles

1. Same data as Epic's RESTful FHIR APIs
2. Parity with new RESTful FHIR resources

Advantages of Bulk FHIR on Chronicles

1. Same data as Epic's RESTful FHIR APIs
2. Parity with new RESTful FHIR resources
3. Access to up-to-date data

Advantages of Bulk FHIR on Chronicles

1. Same data as Epic's RESTful FHIR APIs
2. Parity with new RESTful FHIR resources
3. Access to up-to-date data
4. Uses established access & security policies

Standards-Based Exchange

Standards-Based Exchange

1. Works across EHRs

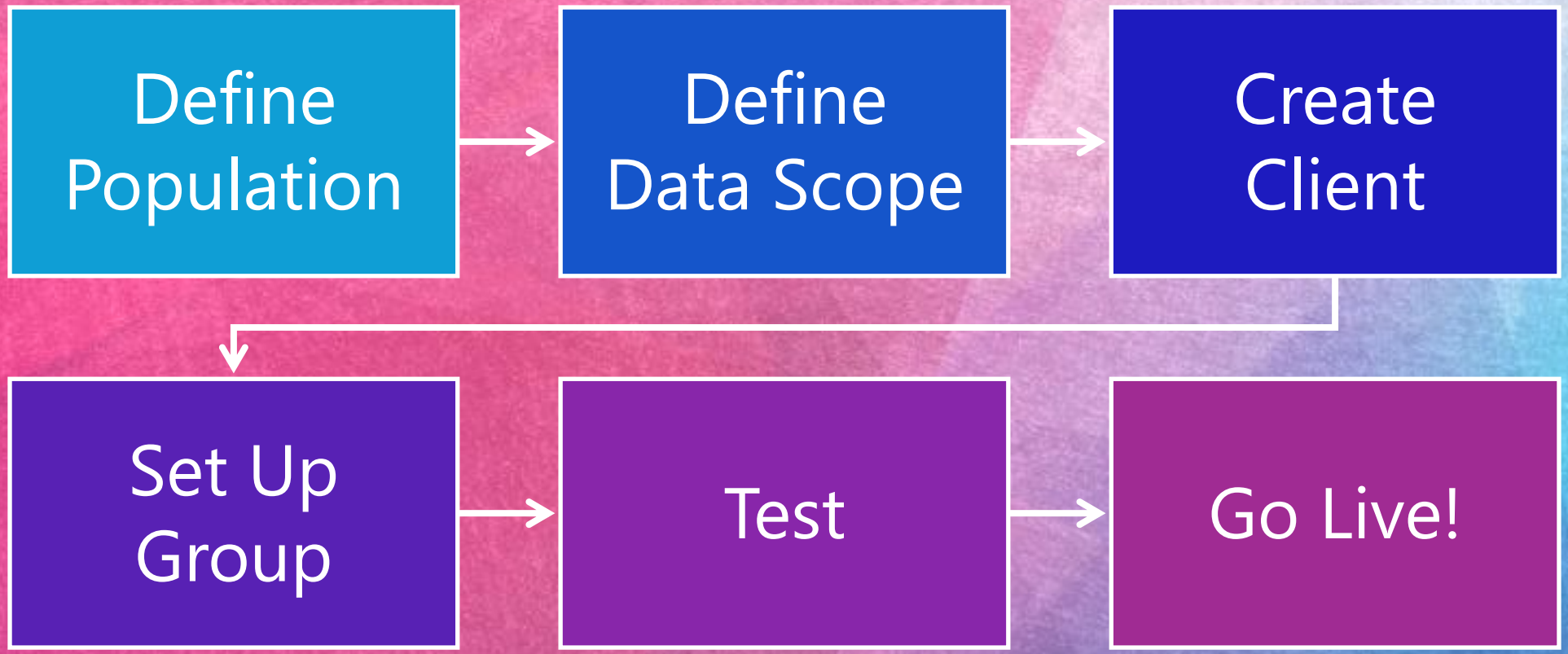


Standards-Based Exchange

1. Works across EHRs
2. Familiar technology



Setting Up a Bulk FHIR Integration



What Makes a Good Use Case?



Live Data



Standards-Based



Specific Populations

Bulk FHIR Successes

OHA-RESP-NET

- Oregon Health Authority in collaboration with Oregon Health & Science University
- Population based on location, test results, and admission status
- Bulk FHIR allows for more frequent data pulls and discrete information

Georgia Emerging Infections Program

- Emory Healthcare using Rimidi
- Streamlines and automates epidemiologist workflows
- Paired with a SMART on FHIR workflow
- Check out the implementation experience: OEC17 Bulk FHIR: Lessons Learned

Bulk FHIR Successes

OHA-RESP-NET

- Oregon Health Authority in collaboration with Oregon Health & Science University
- Population based on location, test results, and admission status
- Bulk FHIR allows for more frequent data pulls and discrete information

Georgia Emerging Infections Program

- Emory Healthcare using Rimidi
- Streamlines and automates epidemiologist workflows
- Paired with a SMART on FHIR workflow
- Check out the implementation experience: OEC17 Bulk FHIR: Lessons Learned

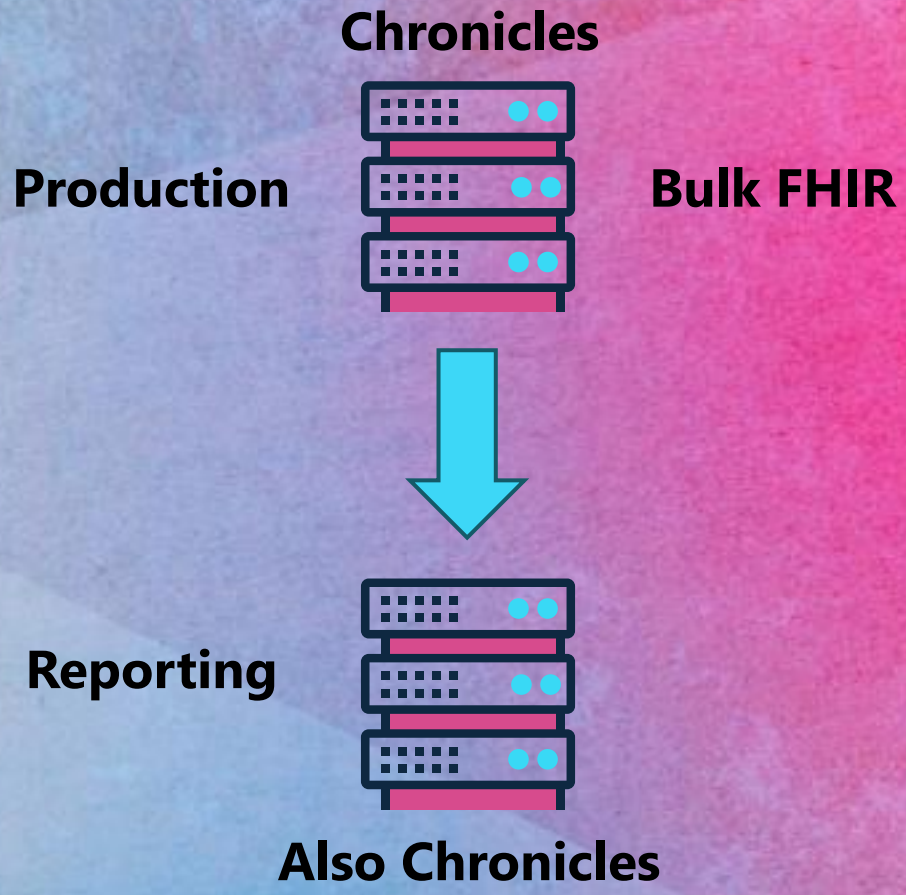
What's next for bulk FHIR at Epic?

Submit & Publish





Taking Bulk Out of Production



Nov 2026

Multithreading



Nov 2026

Multithreading



Nov 2026

Multithreading



Nov 2026

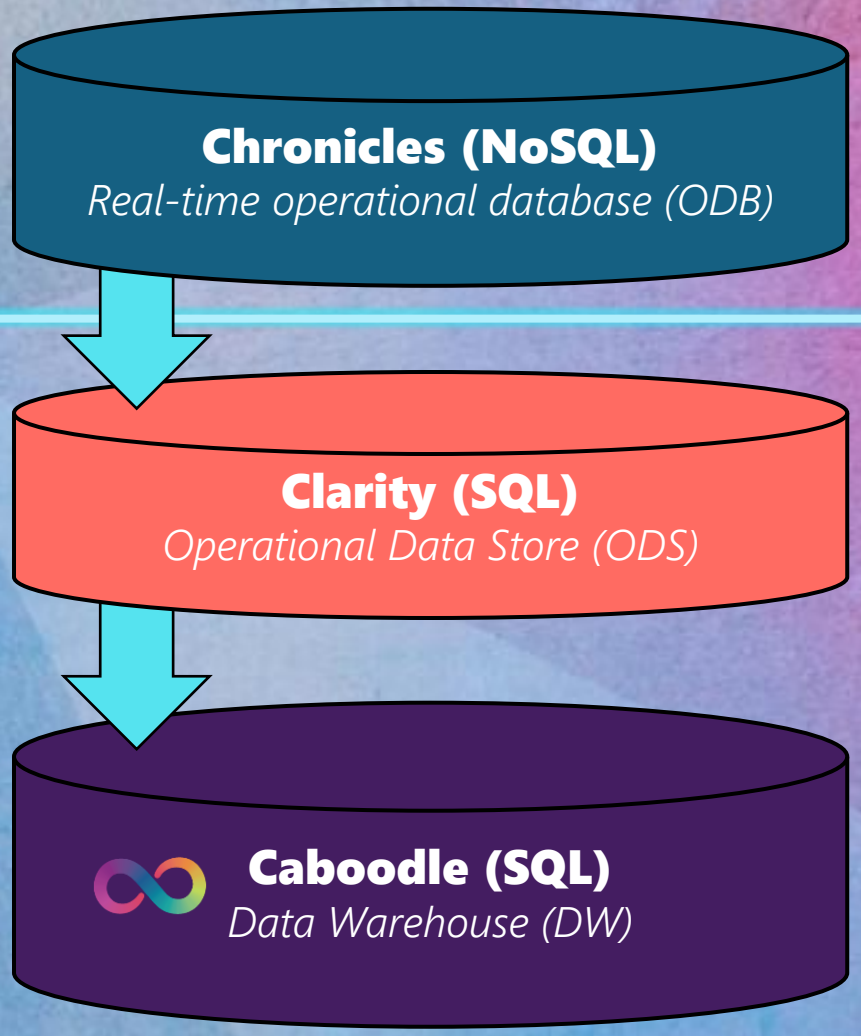
What's next for bulk FHIR at Epic?

More!

Bulk Data With Cogito: ergo sum

Kit and Clarity

Epic Databases



- Operational, users interacting live 24/7/365
- Read/write web services, HL7 & APIs
- Transactional, optimized for user workflows

- SQL representation of all user-entered data
- Read/write with standard ODBC connections
- Optimized for regulatory extracts / staging
- Every data element in Chronicles

- Single conformed star schema data model
- Optimized for on-demand analytic workloads

Cogito ergo sum

Cogito ergo sum

Clarity & Caboodle

Enterprise Data

Data Dictionary
Enterprise Warehouse
Healthcare Data Model
Developer Platform
Kit Platform

SD

Dashboards & Reports

On-demand Self-service
Real-time Action Lists
Executive Dashboards
Governed Content



Machine Learning

Model Library
Generative AI
Model Management
Developer Platform

Unified Security and Access

Cogito ergo sum

Clarity & Caboodle

Enterprise Data

Data Dictionary
Enterprise Warehouse
Healthcare Data Model
Developer Platform
Kit Platform

SD

Dashboards & Reports

On-demand Self-service
Real-time Action Lists
Executive Dashboards
Governed Content

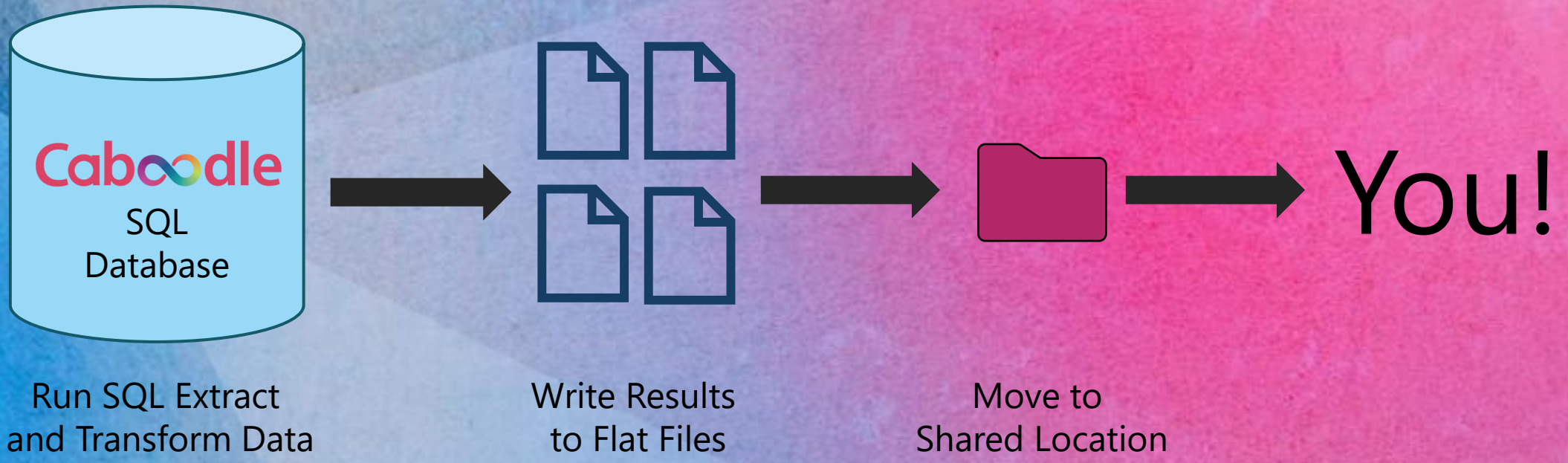


Machine Learning

Model Library
Generative AI
Model Management
Developer Platform

Unified Security and Access

Extracts From Cogito



A Few Questions

How can I **directly pull data** from Cogito rather than having it pushed to me?

How can I work with many organizations on Epic **without** having to **write code every time**?



How can I ensure that my application only has **access to the required data**?

How can I list my data connection as something accessible to **the entire Epic community**?

Kit



Framework for you to release Caboodle queries as standard data connectors through Showroom

Epic SHOWROOM



Automated view layer over Caboodle that ensures data access is secured and appropriate



Auditing of all data access for the data owner’s peace of mind.

Kit



Framework for you to release Caboodle queries as standard data connectors through Showroom

Epic SHOWROOM



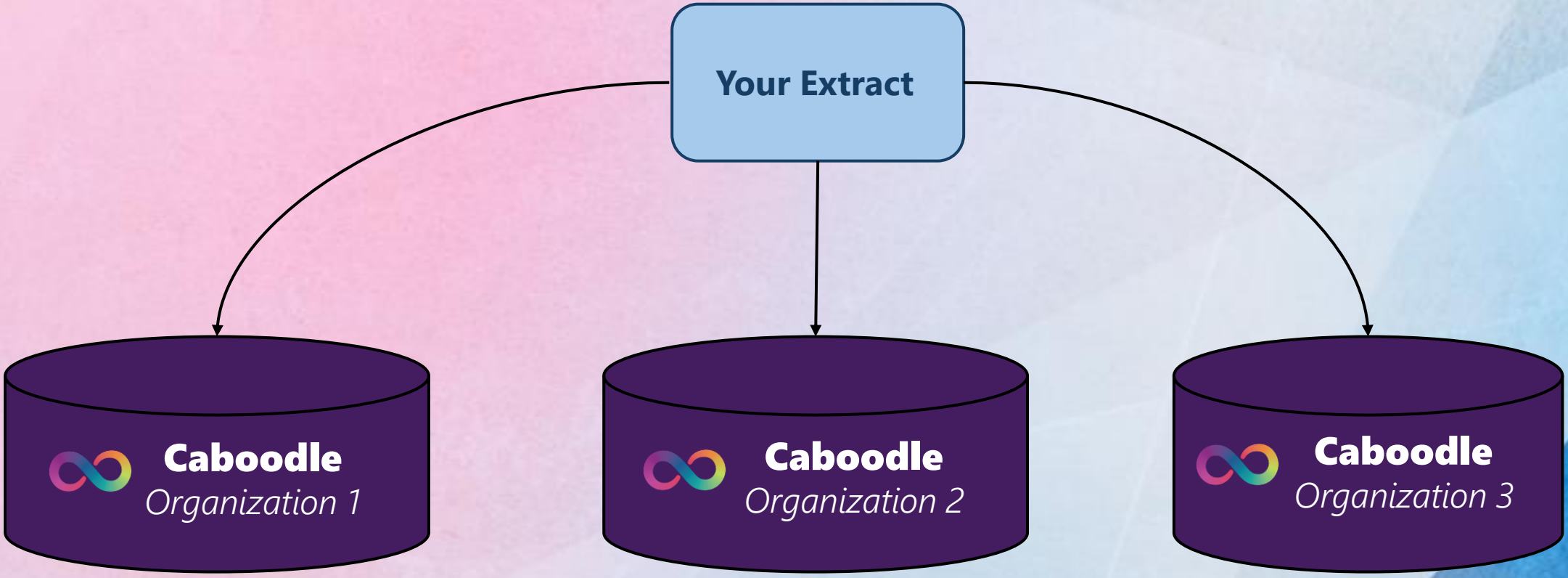
Automated view layer over Caboodle that ensures data access is secured and appropriate



Auditing of all data access for the data owner’s peace of mind.

Kit

Write your extract once, run it across many sites



Benefits

Why Kit is good for our shared customers:

Easily set up new vendor connectors

Simple deployment of table level authorization

Auditing

Benefits

Why Kit is good for our shared customers:

Easily set up new vendor connectors

Simple deployment of table level authorization

Auditing

Why Kit is good for you:

Connectors listed in Epic Showroom

Full Data Dictionary through Vendor Services

Sandbox environment for dev

Usage tracking

Specifications

APIs | Clarity

PatientDim

Apps: All | Versions: All

Kit | OAuth 2.0 User Type: All

Favorites | Can Try It | Clear Filters

4 results

- Clinical General
  - Patients
- Kit
  - PatientDim
  - ProspectiveDim
  - CcnInpatientDim

PatientDim

General Information

Supported User Types: Backend Systems and Non-OAuth 2.0

API Type: Kit Class F Dim

PatientDim

Try It

The patient dimension contains information about patients. Each row represents a patient record for a date range. This table contains both current and historical information. For current records, IsCurrent has a value of 1. Historical records contain information that is valid for the date range specified by the StartDate and EndDate columns. Change Type: Snapshot

Columns

PatientKey : bigint
Surrogate key used to uniquely identify the record

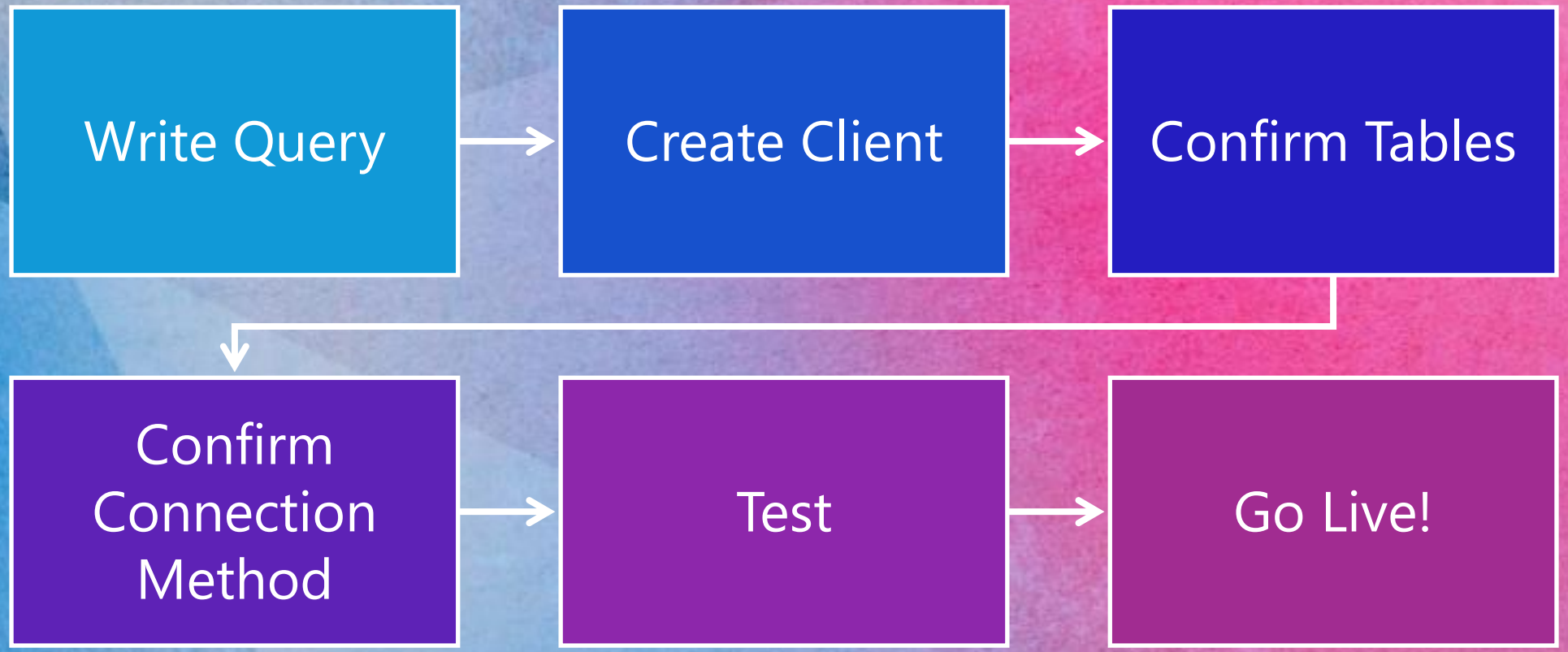
DurableKey : bigint
Durable key used to identify the record

ProblemComboKey : bigint — Links to DiagnosisBridge
All active problems for the patient. This column will be changed in the future to have no change tracking (Type 1).

PrimaryCareProviderKey : bigint — Links to ProviderDim
Primary care provider for the patient. This column will be changed in the future to have no change tracking (Type 1).

1979 Milky Way, Verona, WI 5
© 1979-2026 Epic Systems Corporation. All rights reserved. Protected by U.S. patents. For details visit www.epic.com/

Setting Up a Kit Connector



CONNECTION HUB

DATA ANALYTICS

Vizient Data Connector *by Vizient*

Version 2.1

Data Analytics | Analytics, Insights, & Discovery

57 Live Organizations | 11 Installing Organizations | Version available since 5/8/2024

54 Nominations

The Vizient Data Connector automates data submission to Vizient, speeds time to Vizient analytics, and improves the quality of data you send to Vizient.

Intended Purposes: Administrative Tasks, Clinical Team Intended Users: Clinical Team

The product developer provides the information on this page. The Live and Installing Organizations stats are set manually by Epic customers or automatically by auditable API usage with the product's client ID. Not all APIs are auditable. Contact the product developer for more information.
Epic does not endorse, certify, or verify the integrity, safety, performance, or practices of this developer or their software.

Consumer Type

Backend Systems

Kit APIs Used

Accounts
Encounters
Transactions
Hospital Admissions
Emergency Department Visits
Procedures

CONNECTION HUB

DATA ANALYTICS

Vizient Data Connector *by Vizient*

Version 2.1

Data Analytics | Analytics, Insights, & Discovery

57 Live Organizations | 11 Installing Organizations | Version available since 5/8/2024

54 Nominations

The Vizient Data Connector automates data submission to Vizient, speeds time to Vizient analytics, and improves the quality of data you send to Vizient.

Intended Purposes: Administrative Tasks, Clinical Team Intended Users: Clinical Team

The product developer provides the information on this page. The Live and Installing Organizations stats are set manually by Epic customers or automatically by auditable API usage with the product's client ID. Not all APIs are auditable. Contact the product developer for more information.
Epic does not endorse, certify, or verify the integrity, safety, performance, or practices of this developer or their software.

Consumer Type

Backend Systems

Kit APIs Used

Accounts
Encounters
Transactions
Hospital Admissions
Emergency Department Visits
Procedures

More Columns in Kit

~8K



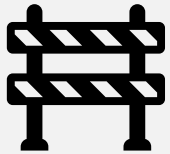
Before Epic Nov 26

More Columns in Kit

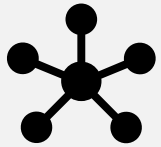


Clarity

You should use Clarity for your data connector if…



You need access to data that **doesn't yet exist** in Caboodle



You need access to a **different granularity** of data than exists in Caboodle

Specifications

APIs | Clarity

PATIENT

Favorites

96 results Clear Filter

<< < Page 1 of 2 > >>

- OR_LNLG_PATIENT_STATUS
- PATIENT
- PATIENT_2
- PATIENT_3
- PATIENT_4
- PATIENT_5
- PATIENT_6
- PATIENT_ALG_UPD_HX
- PATIENT_ALIAS
- PATIENT_AVATAR_INFO
- PATIENT_CONF_ADDR
- PATIENT_CONF_EMAIL
- PATIENT_CONF_STADD
- PATIENT_DISMISSAL
- PATIENT_DOCS

PATIENT

General Information

API Type: Clarity Class E Standard Tables

Supported OAuth 2.0 User Types: Backend Systems and Non-OAuth 2.0

PATIENT

The PATIENT table contains one record for each patient in your system. The data contained in each record consists of demographics, PCP and primary location information, registration information, and other information.

Columns

_SURROGATEKEY : BIGINT

Surrogate key used to uniquely identify rows in this (and only this) table on Cogito Cloud only, do not assume the surrogate key in this table will correspond to the surrogate key in another table

ADD_LINE_1 : VARCHAR

This column, although not deprecated, should no longer be used. Instead you should use the column ADDRESS (EPT 50) in table PAT_ADDRESS. Patient addresses can contain an unlimited number of lines. Previously you could only access the first two lines with the columns PATIENT.ADD_LINE_1 and PATIENT.ADD_LINE_2. Now, there is a new table, called PAT_ADDRESS, which allows you to get all lines of the patient's permanent address. We have chosen not to deprecate PATIENT.ADD_LINE_1 and PATIENT.ADD_LINE_2 because doing so would break any custom reports that use these columns. To use the new column, join column PATIENT.PAT_ID to table PAT_ADDRESS on column PAT_ID and get the ADDRESS value and also the LINE value. Each PAT_ID value represents a different patient, and each LINE value represents a different line of that patient's address.

ADD_LINE_2 : VARCHAR

1979 Milky Way, Verona, WI 535
© 1979-2026 Epic Systems Corporation. All rights reserved. Protected by U.S. patents. For details visit www.epic.com/pate
Epic is a registered trademark of Epic Systems Corporat

Cogito Cloud

New Platform

Healthcare data lakehouse built on Azure and Microsoft Fabric

New Capabilities

Non-relational data

Hourly Epic tables

More options for sharing

Data Platform for AI

Cogito Cloud is central to Epic's AI platform

Epic expects all customers will adopt in some capacity

Kit Coming to Cogito Cloud by end-of-year 2026!

Cogito Cloud

New Platform

Healthcare data lakehouse built on Azure and Microsoft Fabric

New Capabilities

Non-relational data

Hourly Epic tables

More options for sharing

Data Platform for AI

Cogito Cloud is central to Epic's AI platform

Epic expects all customers will adopt in some capacity

Kit Coming to Cogito Cloud by end-of-year 2026!

Comparison of Access Patterns

Pattern	*When to Use*
Bulk FHIR	You need data for a specific patient population, and up-to-the minute accuracy is required
Kit	You need data for a large patient population, and daily updates are acceptable
Clarity	You need less common data elements for a large patient population and daily updates are acceptable

Resources

- Exchanging Bulk Data with Epic Customers Guide
- Bulk FHIR Tutorial
- Vendor Services

Q&A

Q&A

OEC32

Wrap-Up: Putting It All Together

Form closes today at 5:00 PM

© 2026 Epic Systems Corporation. All rights reserved. PROPRIETARY INFORMATION - This item and its contents may not be accessed, used, modified, reproduced, performed, displayed, distributed or disclosed unless and only to the extent expressly authorized by an agreement with Epic. This item is a Commercial Item, as that term is defined at 48 C.F.R. Sec. 2.101. It contains trade secrets and commercial information that are confidential, privileged, and exempt from disclosure under the Freedom of Information Act and prohibited from disclosure under the Trade Secrets Act. After Visit Summary, ASAP, Aura, Beacon, Beaker, Beans, BedTime, Best Care Choices for My Patient, Bones, Break-the-Glass, Bugsy, Caboodle, Cadence, Canto, Care Everywhere, Charge Router, Cheers, Chronicles, Clarity, Cogito ergo sum, Cohort, Comfort, Community Connect, Compass Rose, Cosmos, Cosnome, Cupid, Discovery, Epic, EpicCare, EpicCare Link, Epicenter, EpicShare, EpicWeb, Epic Earth, Epic Nexus, Epic Research, Garden Plot, Grand Central, Haiku, Happy Together, Healthy Planet, Hello World, Hey Epic!, Hyperdrive, Hyperspace, Kaleidoscope, Kit, Limerick, Lucy, Lumens, MyChart, Nebula, OpTime, Phoenix, Powered by Epic, Prelude, Radar, Radiant, Resolute, Revenue Guardian, Rover, Share Everywhere, SmartForms, Sonnet, Stork, System Pulse, Tapestry, Trove, Welcome, Willow, Wisdom, With the Patient at Heart, and WorldWise are registered trademarks, trademarks, or service marks of Epic Systems Corporation in the United States of America and/or other countries. Other company, product, and service names referenced herein may be trademarks or service marks of their respective owners. Patents Notice: www.epic.com/patents.