Weill Cornell Medicine | NewYork-Presbyterian

Supporting Data Management within a secure enclave:

the story of the Weill Cornell Medicine Data Core

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Samuel J. Wood Library

Maximizing data value and protecting patients' data

FAIR

Findable
Accessible
Interoperable
Reproducible

Secure

Confidential
Consented
Authorized
Traceable
Controlled-Disclosure

Data Core is your data and applications, in a Windows environment, *secured* in the WCM cloud

The Data Core interface (left) is a familiar Windows Desktop environment

One of few secure enclave environments described in the literature

Design and Implementation of a Secure Computing Environment for Analysis of Sensitive Data at an Academic Medical Center.
Oxley PR, Ruffing J, Campion TR Jr, Wheeler TR, Cole CL.
AMIA Annu Symp Proc. 2018 Dec 5; 2018:857-866.

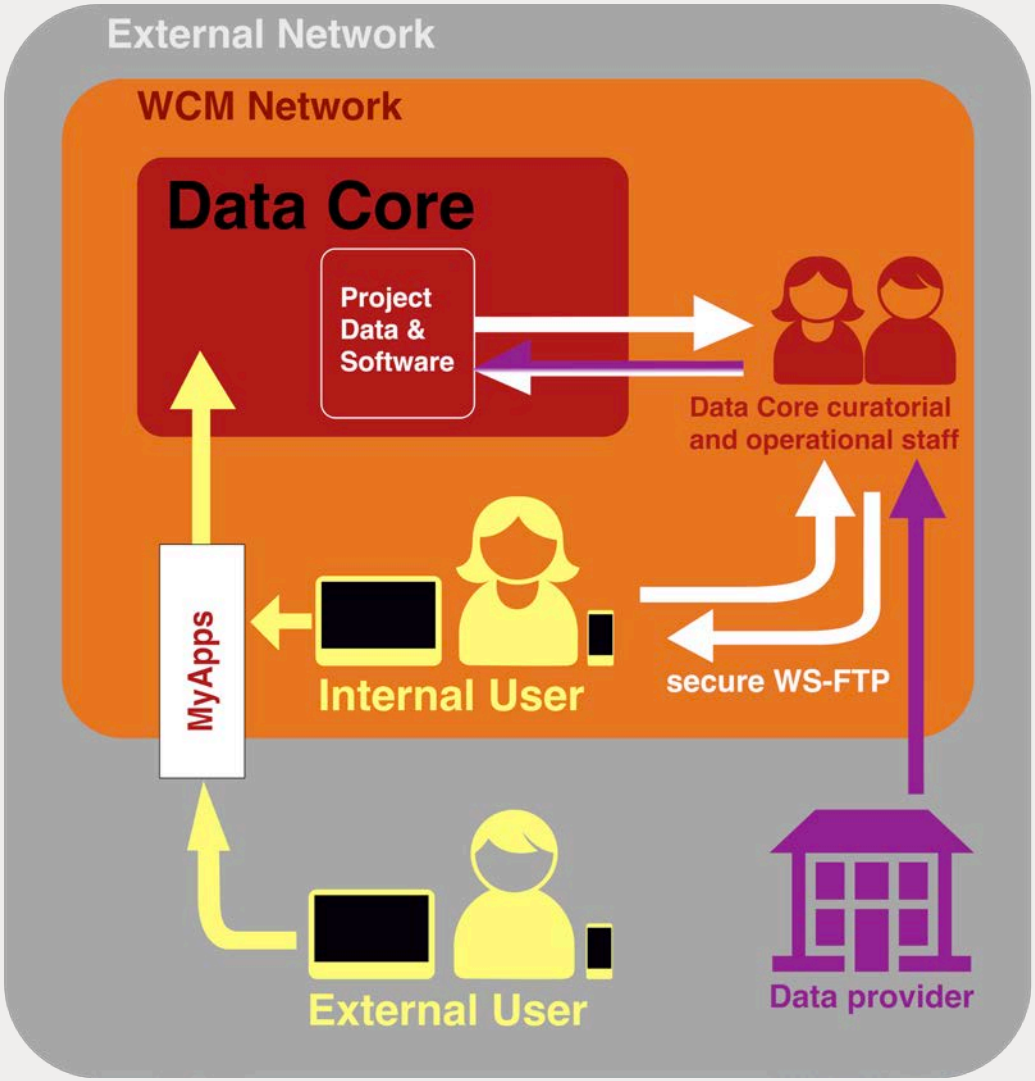
Data Core's approach is to provide curated, online analytics

Secured

Collaborative

Flexible

Data Core security meets the requirements of major 3rd-party providers



Consistent interface and access allows collaborative workflow for researchers

Within each project, all users see the same:

Applications

Open source
(Including CRAN mirroring)

Commercial
(Group discounts)

Database options

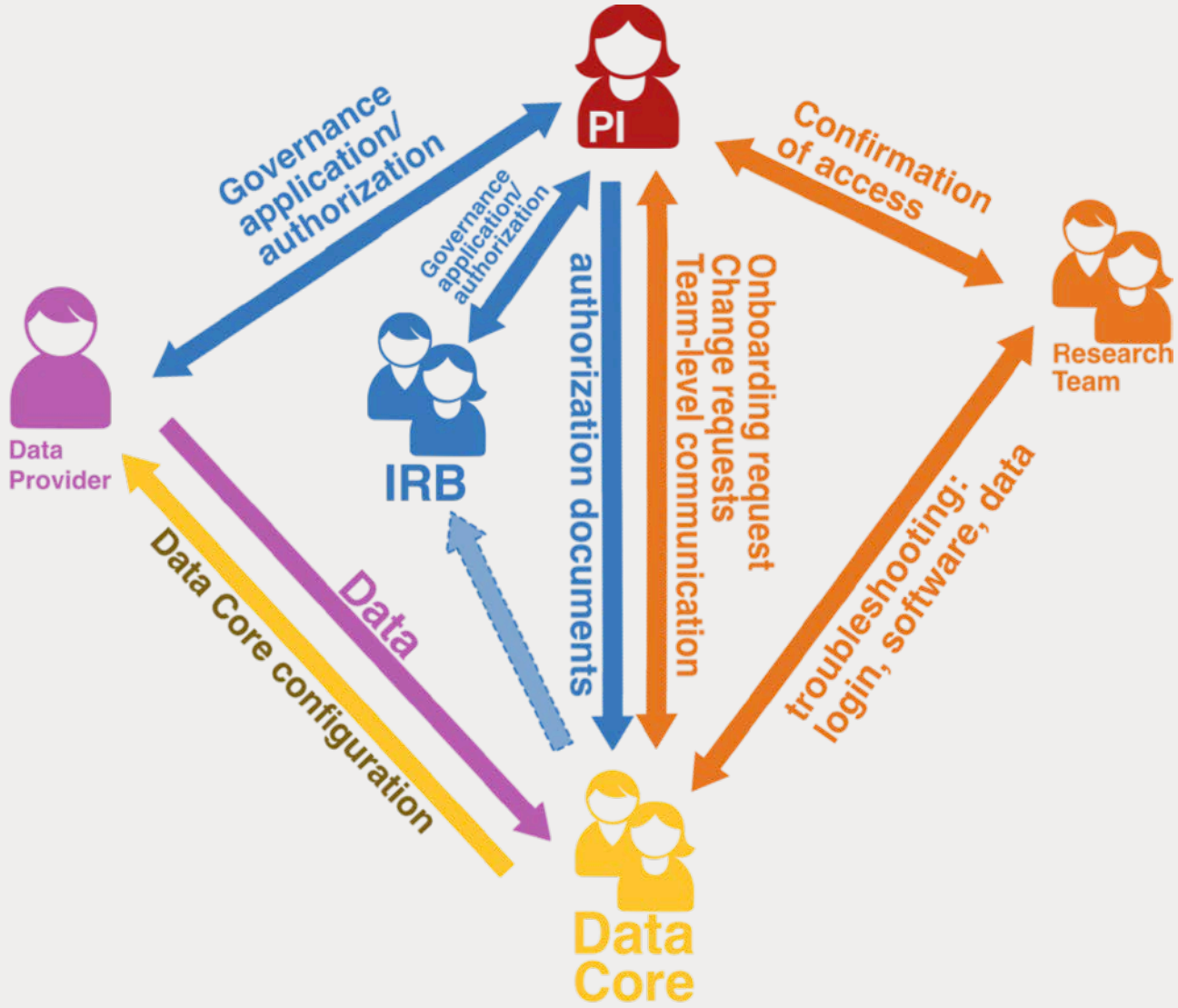
Data

Original
(protected read only)

Shared space

Private work area

Data Core team assists in collaboration with external parties, and curating governance



Data Core is designed to be flexible

Interface

- Can connect from anywhere
- Can connect from Mac, Windows, or even Unix-flavor endpoints

Users

- WCM or external
- Central credentials (WCM ID and password)

Operation

- Availability
  - single 6h monthly maintenance window
- Scalability
  - Baseline of 4 CPU / 16 GB RAM
  - storage and computation can grow as needed

Uses

- Faculty research
- Student projects/theses
- Classes

Data Core has served many people and projects over the last 4 years

Consistent usage

	PIs	All users	Projects
Current	22	108	46
Total	34	317	88

Notable data sets/studies

- CDRN (2 study-specific datamarts)
- Pediatric Epilepsy LHS (multiple data providers)
- SPARCS
- Medicare

WCM IRB and NYP prefer Data Core for ePHI

We are actively developing a Data Catalog

https://github.com/oxpeter/datacatalog

Captures three primary components of PHI:

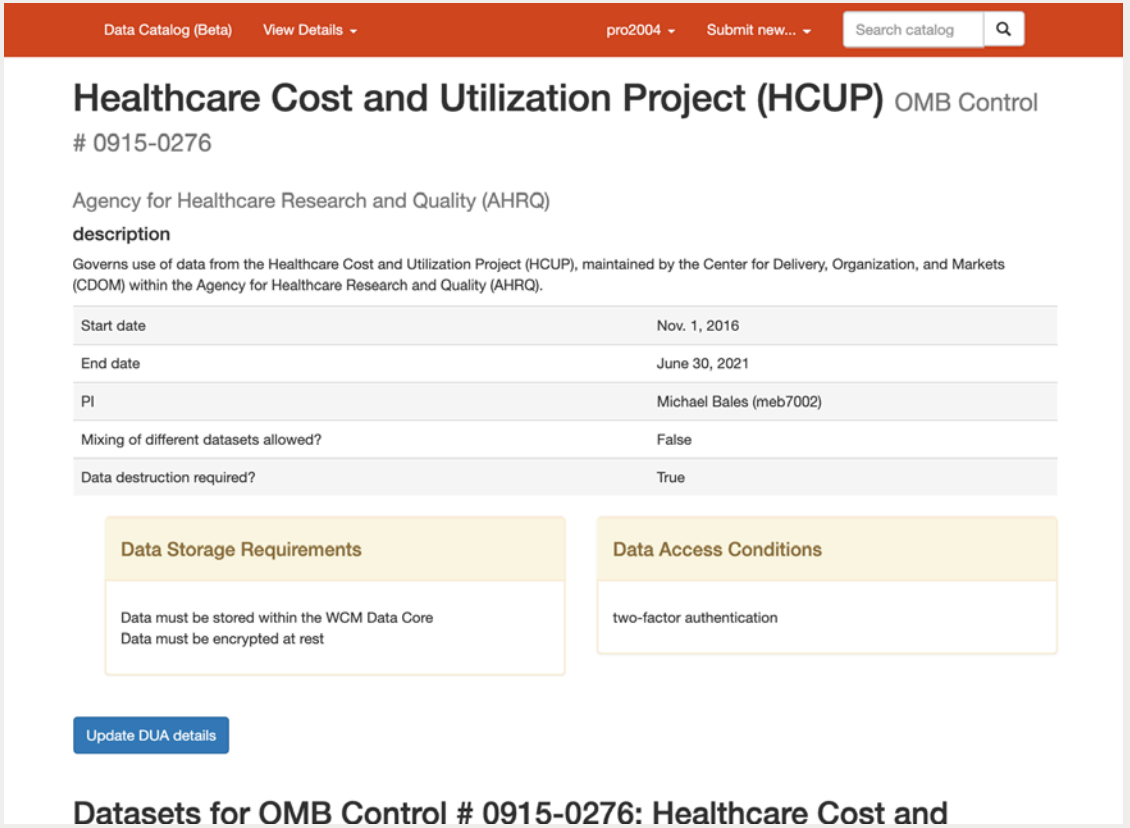
Dataset metadata

Governance

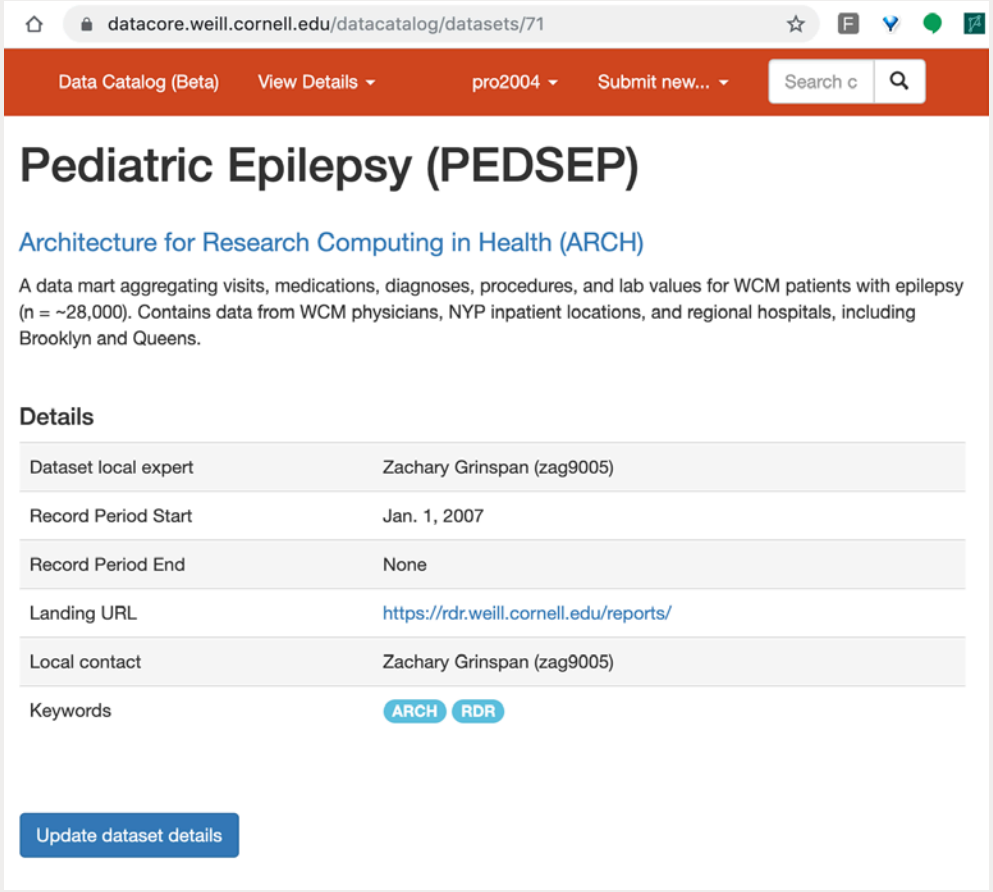
Access Requirements

The key feature of our data catalog is its ability to capture governance requirements

- Descriptive metadata
- Connect to datasets
- Scope of authorization
- Users authorization
- Data Controls
- Reuse scope



Current content includes Data Core datasets and ARCH Research Data Repositories



Primary records:

ARCH RDRs including NYP shared data

Data Core-hosted data from AHRQ, CMS, Aetna

Questions

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