#BetterGlobalHealth

HAPI FHIR 5.4.0
Smile CDR 2021.05.R01
Pangolin Release Webinar

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HAPI FHIR

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Today's Agenda:

- What's New
- What's Coming
- Q&A

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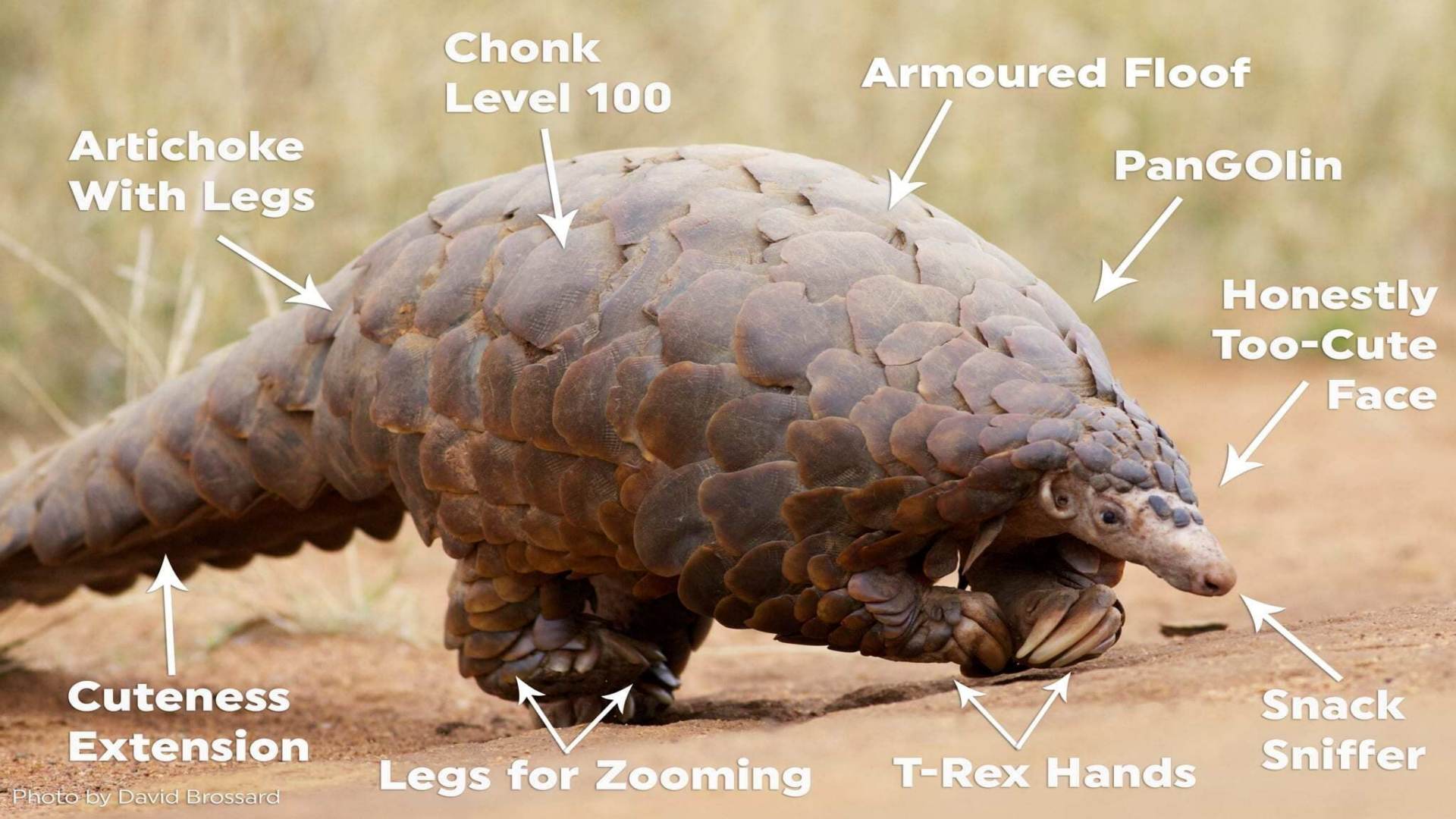
What's a pangolin?


Chonk
Level 100
Armoured Floof
Artichoke
With Legs
PanGOlin
Honestly
Too-Cute
Face
Cuteness
Extension
Legs for Zooming
T-Rex Hands
Snack
Sniffer
Photo by David Brossard

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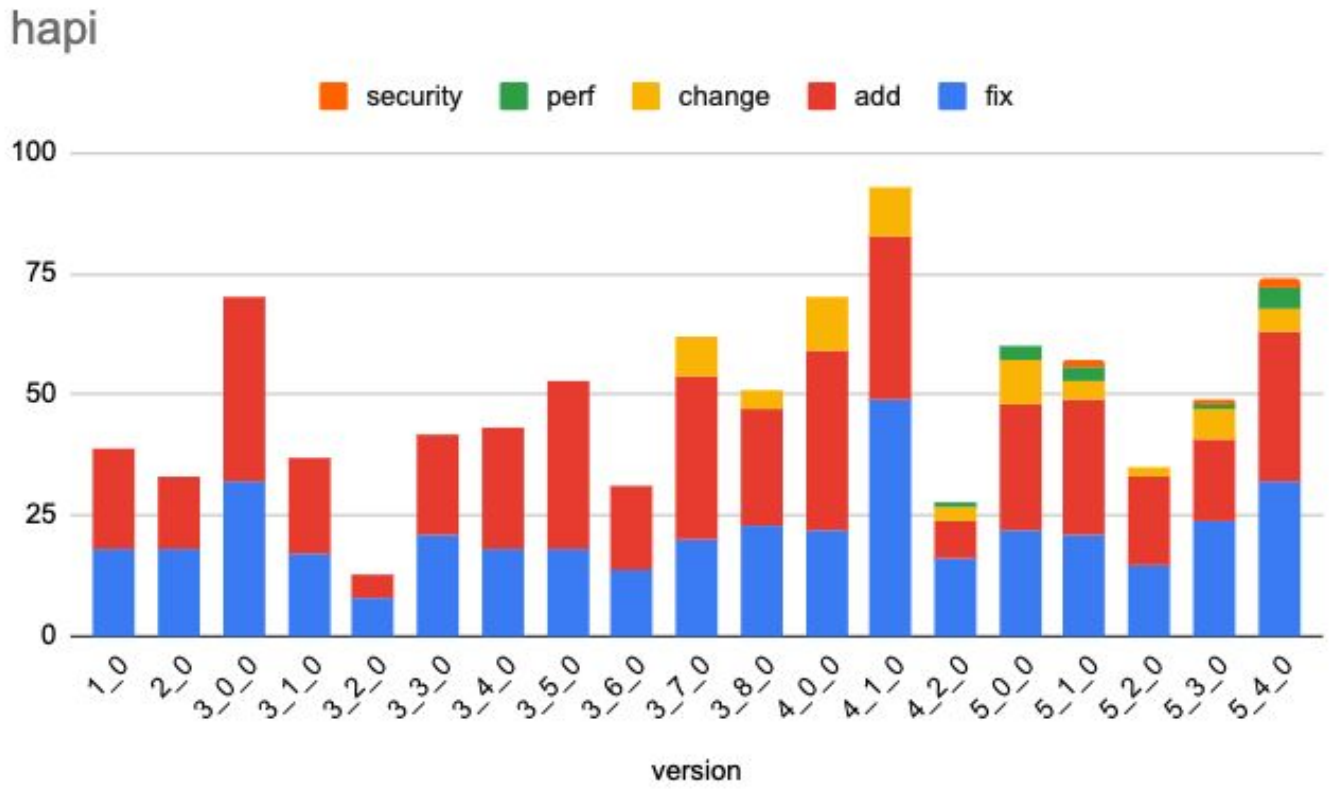
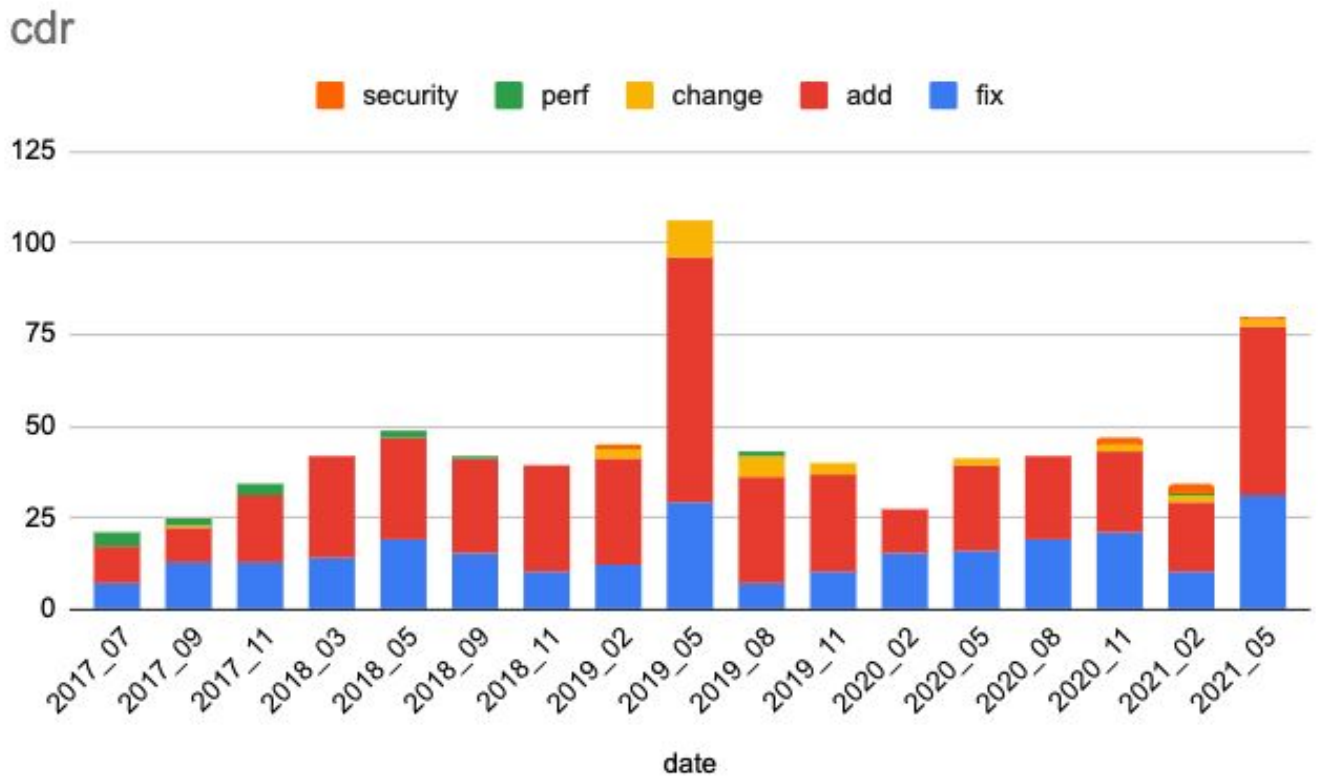
Pangolin:
New and Noteworthy

Changes over time: HAPI FHIR



Changes over time: Smile CDR



The Takeaway

- This release features a huge number of small enhancements
- See the changelogs for all the details:

  https://smilecdr.com/docs/introduction/changelog.html

  https://hapifhir.io/hapi-fhir/docs/introduction/changelog.html

Resource Exhaustion Vulnerability Fixed

- An inefficient SQL count query can result in concurrent _history calls exhausting the database connection pool making system unavailable
- A loading-cache layer has been added to mitigate this risk in Pangolin
- Reported as CVE-2021-32053. Thanks to Zachary Minneker at Security Innovation for reporting!

MDM Enhancements

- The MDM module now supports ***survivorship rules***, which allow the automatic creation of a ***"Golden Record"*** containing the best known attributes across linked records
- FHIRPath rules, numeric matchers, and extension matchers have been added

MDM Enhancements (2)

- New MDM match syntax:

```
Observation?patient:mdm=Patient/123
```

- MDM-aware Group Export

Partitioning Enhancements

- Reindexing now supported on partitioned servers
- Bulk Export now supported on partitioned servers

Ingestion Enhancements

- ***Channel Import*** (Kafka) pipeline now supports Transaction Bundles as a payload format
- ***ETL Module*** now adds an Asynchronous mode for background execution across the cluster

HL7 v2.x Enhancements

Inbound:

- ***VXU (Vaccines)*** inbound support has been added
- ***ORM (General Order)*** inbound support has been added
- ***SIU (Scheduling)*** inbound support has been added

Outbound:

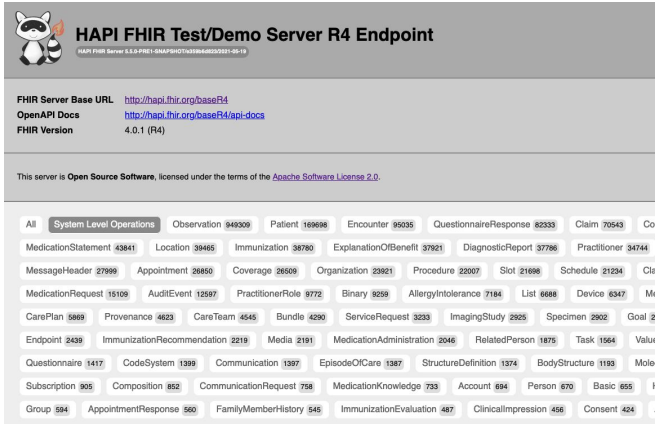
- ***Outbound General ADT Mode*** (sends the right message for the right change) has been added

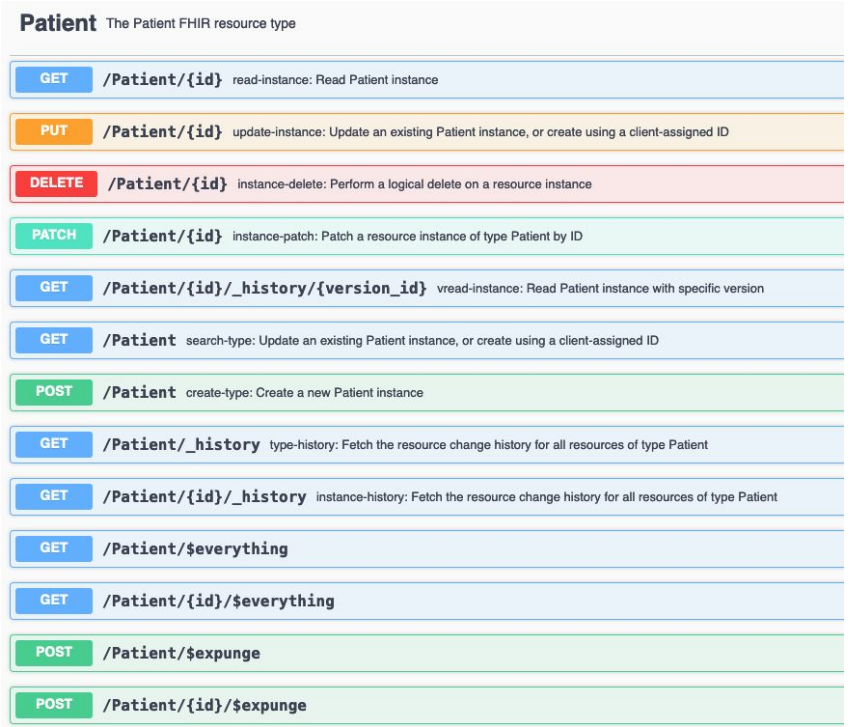
Bulk Data Enhancements

- ***Bulk Patient Export*** has been added
- ***Bulk Group Export*** has been added
- Framework changes to support bulk import have been completed (but general bulk $import is not yet complete)

OpenAPI / Swagger

- Support for OpenAPI (aka Swagger) has finally landed!





Search Enhancements

- Support for searching contained resources has been added
- Support for the `_list` search parameter has been added

Terminology Enhancements

- ValueSet Expansion can now return code hierarchy
- Improved support for not failing on unknown CodeSystems

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New Smile CDR Feature: App Management Tools

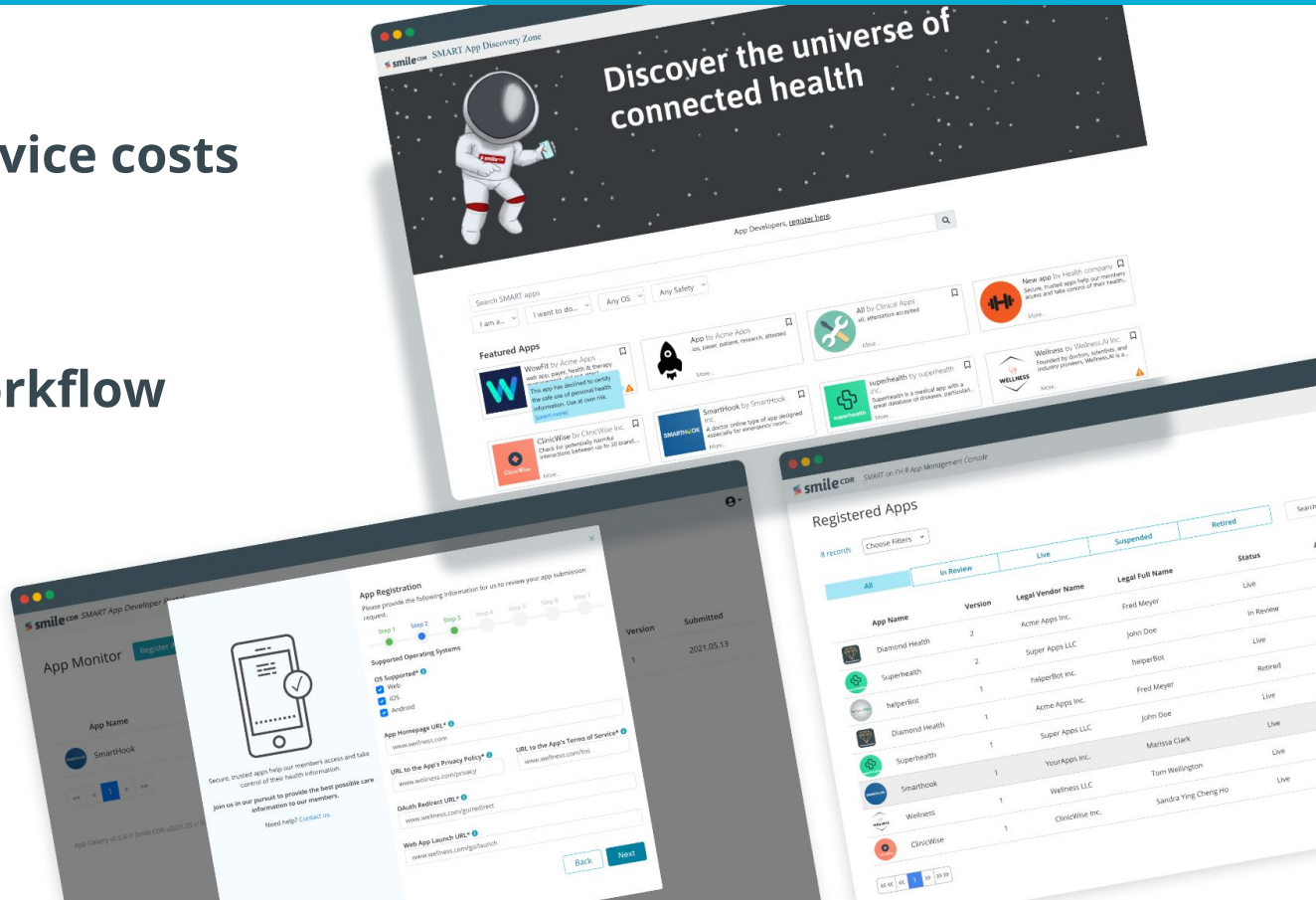
App Management Tools: Overview

App Management Benefits

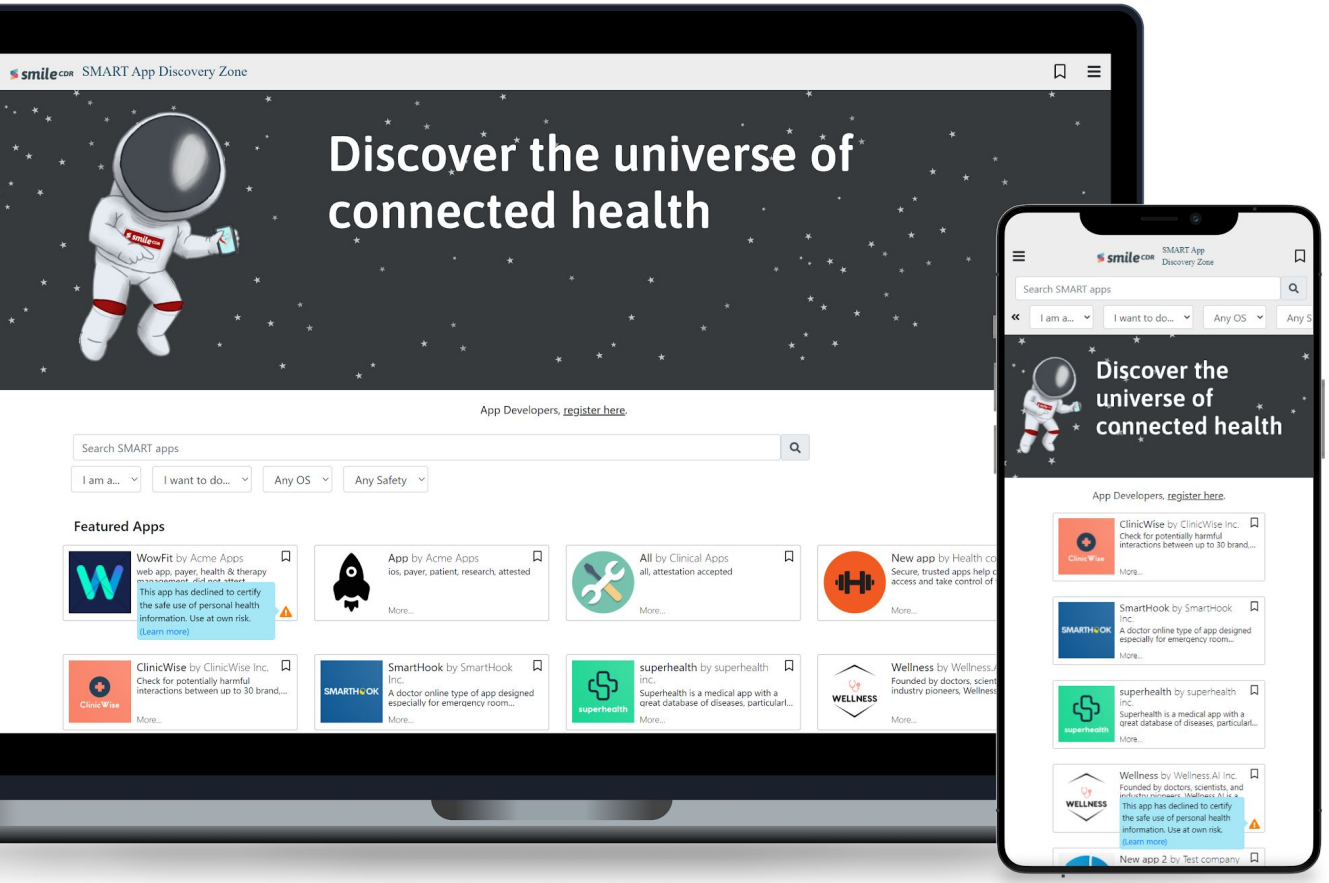
Reduce customer service costs

Engage developers

Efficient approval workflow

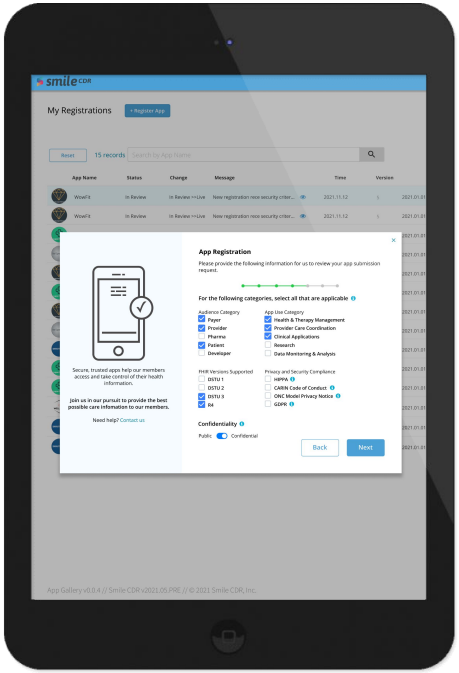


White-labeled App Gallery

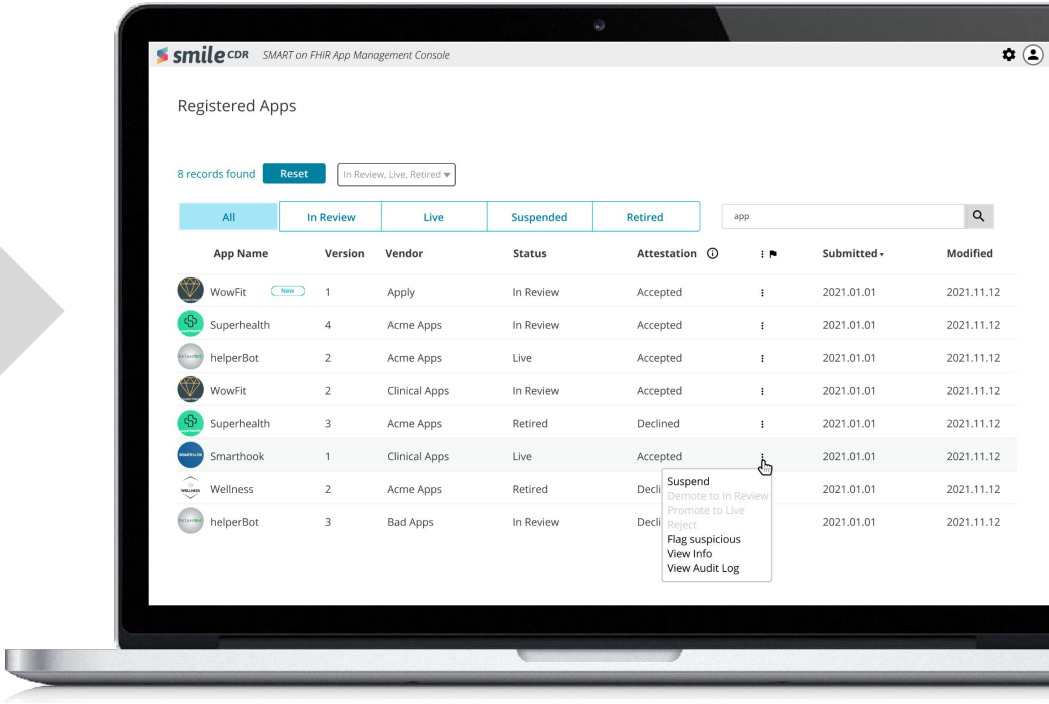


- Auto-updates with approved apps
- Links to developer & app registration
- Mobile-responsive
- Content & brand customizability

Developer Portal



App Management Console



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What's Next?

Coming Up This Quarter

- A point release (5.4.1 / 2021.05.R02) is scheduled in roughly 1 month in order to accommodate July 1 "Final Rule" Enforcement Date
- CDA/CCD Import/Export enhancements
- Ongoing Gateway work

JDK Updates

- **Already:** HAPI FHIR and Smile CDR support JDK 8 and JDK 11
- **New:** HAPI FHIR 5.4.0 now supports JDK 16
- **Next:** Smile CDR 2021.08.R01 will add support for JDK 16
- **Under Consideration:** We may begin dropping support for JDK 8 in a future release. Please get in touch if you have concerns.

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Q & A