

Research code as a service

How to square the circle of providing a stable web-based user interface to evolving research code

Rob Ashton, Jeff Eaton, Rich FitzJohn, Alex Hill, Wes Hinsley, Emma Russell

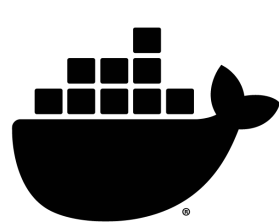


Domain specific knowledge is decoupled from web app and API and written in a language scientists are already familiar with



Interactions between API and web app are validated against JSON schemas

The web app interface is dynamically generated from metadata provided by the API



Orchestration with docker allows deploying stable versions and updating of the backend without disconnecting users



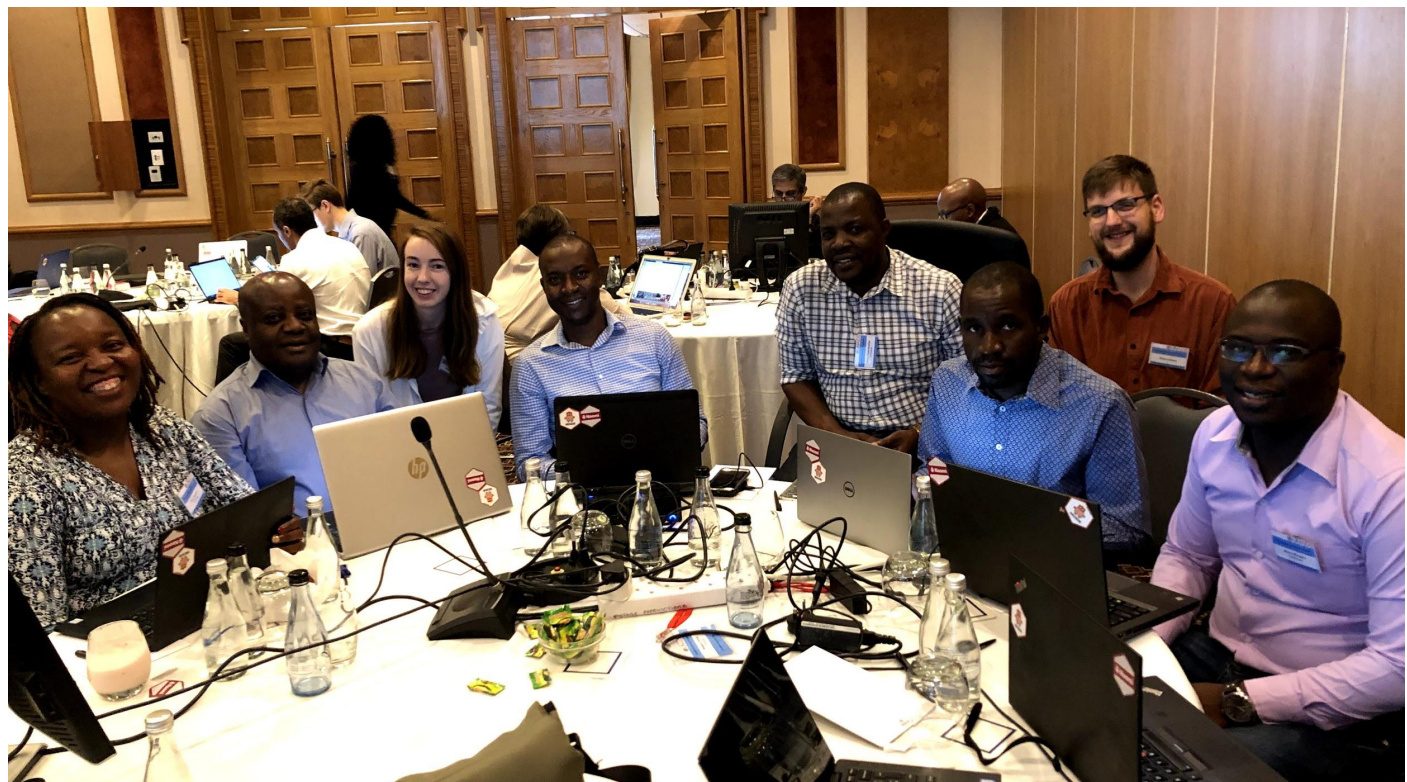
Long running processes are executed in parallel at scale using a load balancer implemented with Redis



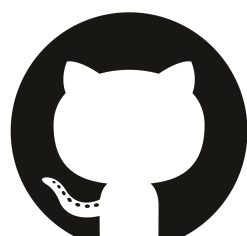
Continuous integration to automatically test updates against a suite of integration tests



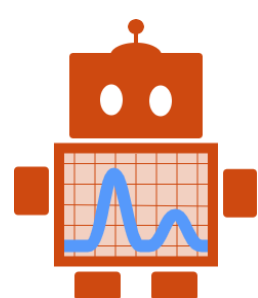
Internationalisation using i18next (JS) and traduire (R)



Public health officials from Zimbabwe, who used Naomi to produce estimates of people living with HIV, and their treatment needs - results will be used in their national budgeting and grant applications



All code is open source and hosted on GitHub



RESIDE



Imperial College London

naomi.unaids.org
bit.do/naomi-reside