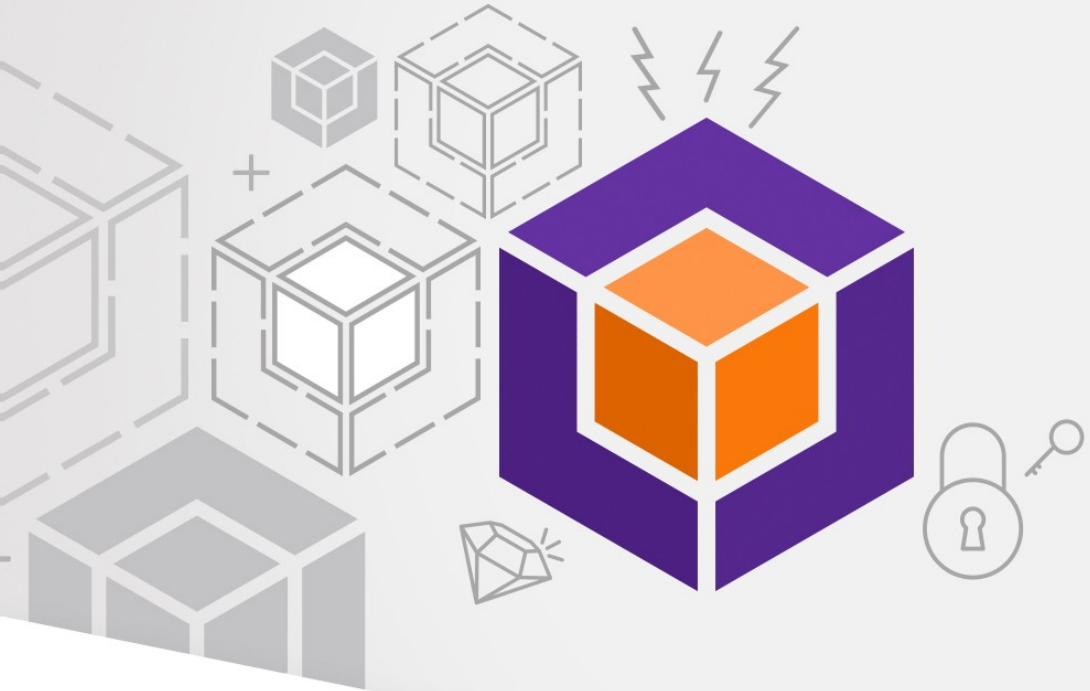
YottaDB

INSERT DATE



VistA on Linux

A Complete FOSS stack for Electronic Health Records

YottaDB® – https://yottadb.com

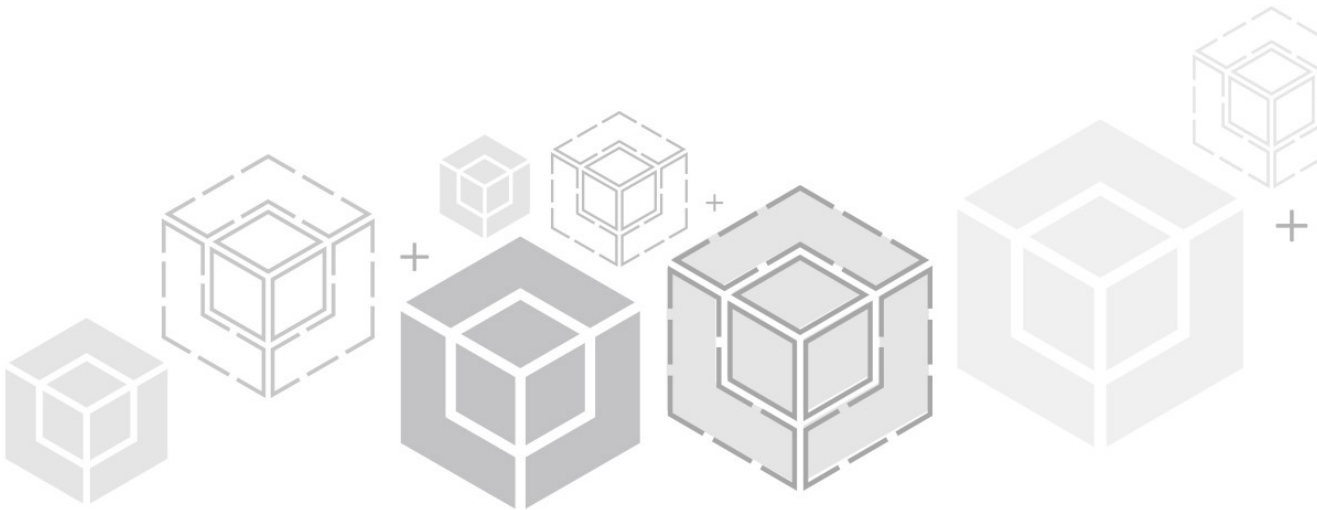
- A mature, high performance, hierarchical key-value NoSQL database whose code base scales up to mission-critical applications like large real-time core-banking and electronic health records, and also scales down to run on platforms like the Raspberry Pi Zero, as well as everything in-between.
- *Rock Solid. Lightning Fast. Secure. Pick any three.*

Know This Place?

YottaDB

YottaDB

Saved North Carolina Taxpayers Millions of Dollars by Implementing a VistA-based FOSS Stack for Electronic Health Records



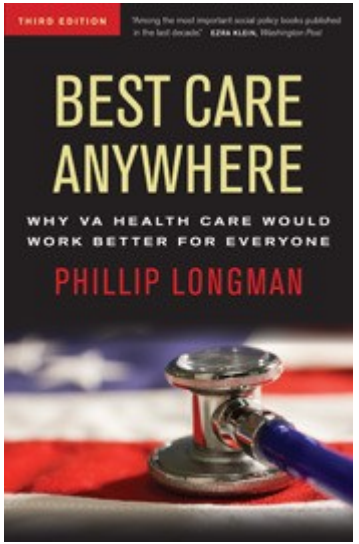
YottaDB

What is VistA?

What is VistA? …1

YottaDB

- Developed by the US Department of Veterans Affairs
- Used throughout the VA
  - Complete healthcare information system: not just for clinical applications, but also inventory management, scheduling, registration, etc.
  - Worth reading: *The Best Care Anywhere* by Philip Longman



What is VistA? …2

YottaDB

- Developed by the US Department of Veterans Affairs
- Used throughout the VA
- Other Federal Departments & Agencies
  - Department of Defense
    - (costing taxpayers far more than it should have!)
  - Indian Health Service (Dept. of Health & Human Svcs.)

What is VistA? …3

YottaDB

- Developed by the US Department of Veterans Affairs
- Used throughout the VA
- Other Federal Departments & Agencies
- Multiple States
  - New York, North Carolina, Oklahoma, Tennessee, Washington, …

What is VistA? …4

YottaDB

- Developed by the US Department of Veterans Affairs
- Used throughout the VA
- Other Federal Departments & Agencies
- Multiple States
- Hospitals & clinics in the United States
  - Oroville Hospital (CA), Family Physicians of Greeneville (TN), …

What is VistA? …5

YottaDB

- Developed by the US Department of Veterans Affairs
- Used throughout the VA
- Other Federal Departments & Agencies
- Multiple States
- Hospitals & clinics in the United States
- Internationally (Jordan, India, …)

YottaDB

History

Four Decades on one Slide

YottaDB

- Origins circa 1977 in Dept. of Veterans Affairs
- Birth through adversity to become “Legal” at VA in 1982
  - http://hardhats.org/history/hardhats.html
- Adopted by Indian Health Service 1980’s
  - http://thebes.smh101.com/articles/Hx_RPMS_final.html
- “Sold” as CHCS to Department of Defense in 1990’s
- Successful & failed deployments 1990s through today

YottaDB

Technology Stack

Technology Stack …1

YottaDB

- Back end
  - Application code in M (public domain, FOSS)
    - Terminal based, RPC, messaging, web services interfaces
  - M implementation (AGPLv3) – YottaDB
    - Language and database
  - GNU/Linux (GPL v2)

Technology Stack …2

YottaDB

- Back end
- Front end
  - Thick Delphi client “CPRS GUI” (public domain)
  - Thin clients and apps (FOSS and proprietary)

Technology Stack …3

YottaDB

- Back end
- Front end
- Ecosystem (FOSS and proprietary)
  - Interfaces, e.g., imaging, analytics
  - Drug interaction database
  - Diagnostic codes
  - Payment & billing

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Ingredients of Success

Ingredients of Success …1

YottaDB

- With power comes responsibility
  - FOSS empowers users
  - Medicine is complicated, and each facility is unique
    - Complexity of software matches complexity of practice
  - Build sustainable expertise (hire & train, or contract)
    - Clinical application coordinators
    - Programmers, system administrators

Ingredients of Success …2

YottaDB

- With power comes responsibility
- It's a journey, not a destination
  - Start small and expand
  - Plan for change
    - Medicine is not static
    - Software and business processes *must* track
    - Frequent, small changes; no big bang changes

Ingredients of Success …3

YottaDB

- With power comes responsibility
- It's a journey, not a destination
- Participate in and contribute to the community
  - https://worldvista.org
  - https://osehra.org
  - https://groups.google.com/forum/#!forum/hardhats
  - Wisdom is collective; no one is expert in all of VistA

Ingredients of Success …4

YottaDB

- With power comes responsibility
- It's a journey, not a destination
- Participate in and contribute to the community
- *It's free / open source software*
  - *You are too small to sustain VistA by yourself*
  - *Contribute your fixes and enhancements*

YottaDB

Recipes for Failure

Recipes for Failure …1

YottaDB

- Fixating on the next cool technology
  - Need evolution for the back end, not revolution
    - In step with the evolving practice of medicine
    - Medical records have long lives (like humans)
    - Knowledge is embedded in application source code
  - Yes, front end technology can change rapidly

Recipes for Failure …2

YottaDB

- Fixating on the next cool technology
- Not keeping medical practice & VistA in lock step
  - Example from large women's and children's hospital

Recipes for Failure …3

YottaDB

- Fixating on the next cool technology
- Not keeping medical practice & VistA in lock step
- Managing it like an office suite or operating system
  - Example from a national social security administration

Recipes for Failure …4

- Fixating on the next cool technology
- Not keeping medical practice & VistA in lock step
- Managing it like an office suite or operating system
- Not investing in sustaining expertise

Recipes for Failure …5

YottaDB

- Fixating on the next cool technology
- Not keeping medical practice & VistA in lock step
- Managing it like an office suite or operating system
- Not investing in sustaining expertise
- Ignoring the ecosystem

YottaDB

Thank You!

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