VISTA Adaptive Maintenance
Veteran Integrated Cloud Services
Project V18-00154-000
Office of Information Technology
U.S. Department of Veterans Affairs
Architect: Rafael Richards MD MS

Veteran Integrated Care Services (VICS)

Providing Centralized Cloud-based Continuity of Care during EHR modernization and beyond

Rafael Richards MD MS
Architect, VistA Adaptive Maintenance | VA Enterprise Cloud
Member, Government Blockchain Association
Physician Informaticist, Veterans Health Administration
U.S. Department of Veterans Affairs
rafael.richards@va.gov

November 8, 2020

Continuity of Care during EHR modernization
## From 130 VISTAs to Centralized Cloud-based Veteran Integrated Care Services (VICS)

VA HEALTH CARE | Defining **EXCELLENCE** in the 21st Century

VISTA Current State

Decentralized Care across 130 VISTAs

Today, care is delivered in VA using the CPRS user interface, which relies on 130 unique decentralized VISTA systems for its functionality via remote procedure calls (RPCs).
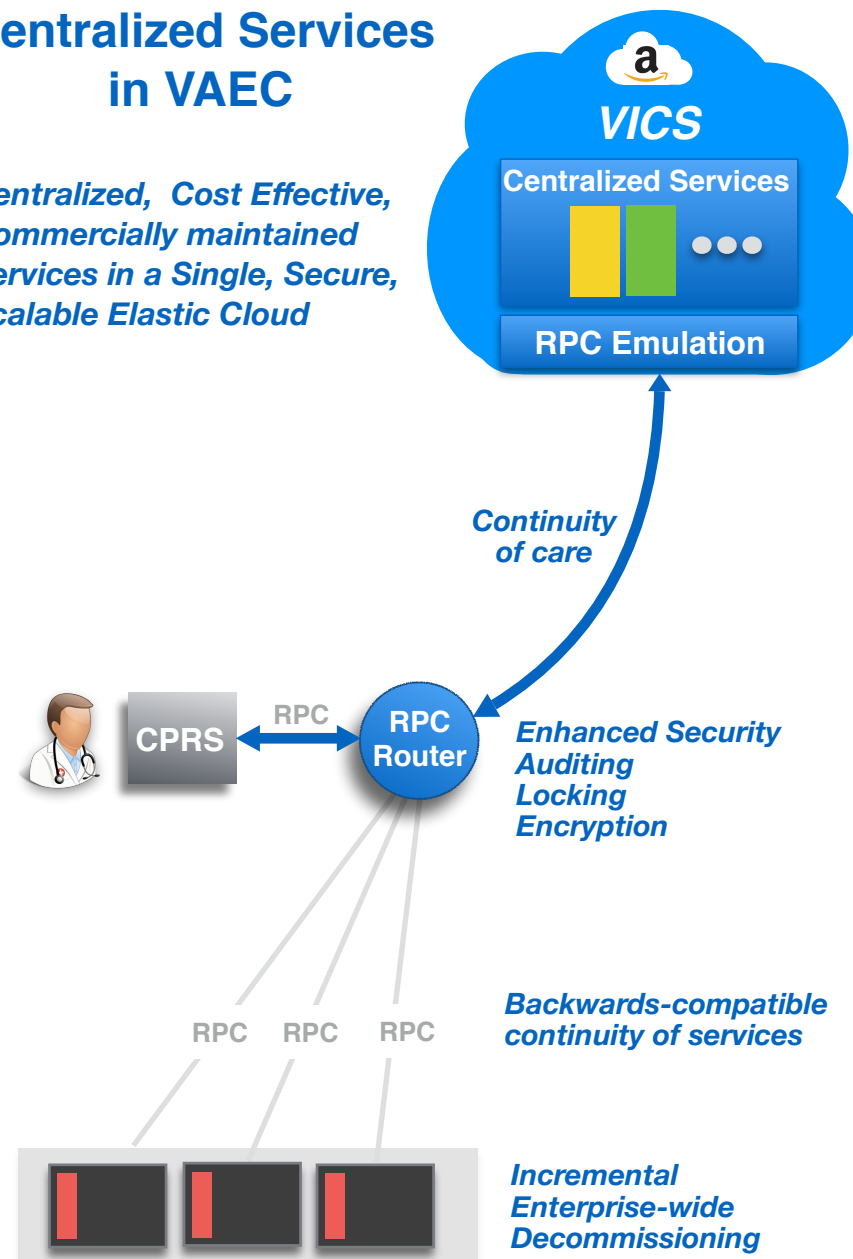
CPRS

RPC   RPC   RPC

VISTA x130
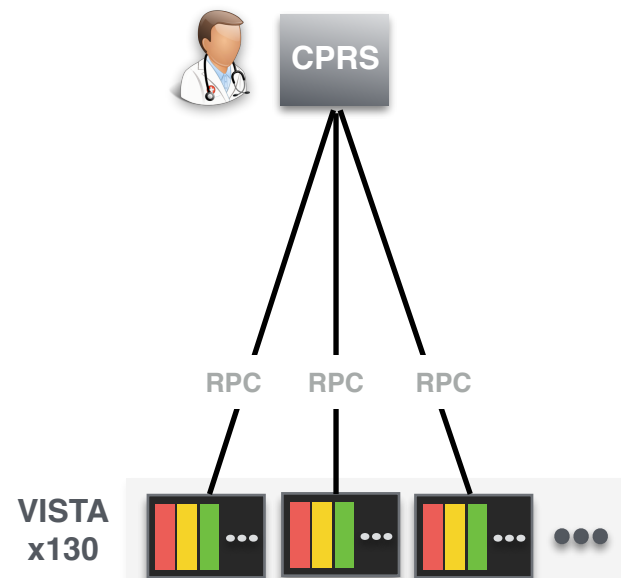
VISTA is comprised of many functional domains (colored bars) integrated within a single database (black).

VISTA Adaptive Maintenance

Centralized Services in VAEC

Centralized, Cost Effective, Commercially maintained Services in a Single, Secure, Scalable Elastic Cloud

VICS

Centralized Services

RPC Emulation

Continuity of care

CPRS — RPC — **RPC Router**

Enhanced Security
Auditing
Locking
Encryption

RPC   RPC   RPC

Backwards-compatible continuity of services

Incremental Enterprise-wide Decommissioning

Minimized Maintenance

Deployed and managed using COTS tools available on Federally-approved Commercial Clouds.

Continuity of Care

CPRS continues to work unchanged using the centralized services (via RPC Emulation) providing backwards-compatible continuity of care during centralization and decommissioning.

Enhanced Security

VISTA interfaces are fully audited, locked down, and all traffic encrypted via interception and grooming provided by the RPC Router.

Incremental Decommissioning

As functionality (colored bars) is incrementally centralized to the cloud following VA priorities, the corresponding functionality across ***all 130 VISTA systems may be safely decommissioned <u>enterprise-wide</u>, with no loss of continuity of care.***
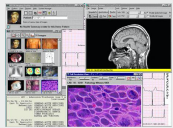
Veteran Integrated Care Services

Enables Cloud-based, COTS-integrated National Veteran Care Services while Preserving Continuity of Care

Supports the current…

Enables the new…

Clients

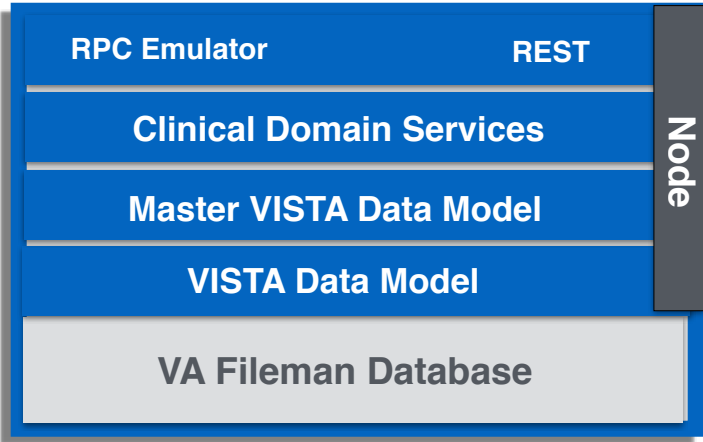CPRS   JLV   VPR

Web Mobile
COTS

Current and New Clients

Security Enhanced

Veteran Care Specifics maintained

VICS

Secure Symmetric Modern Node.js Model-driven Interface

VICS Server

RPC Emulator	REST
Clinical Domain Services	
Master VISTA Data Model	
VISTA Data Model	
VA Fileman Database	

Node

**New, Structured VISTA Server
(mainstream, modular, easily interfaced)**

VISTA Adaptive Maintenance
Veteran Integrated Cloud Services
Project V18-00154-000
Office of Information Technology
U.S. Department of Veterans Affairs
Architect: Rafael Richards MD MS

VA HEALTH CARE | Defining EXCELLENCE in the 21st Century

Veteran Integrated Care Services

Certified and in production use in
VA Enterprise Cloud in AWS GovEast

CPRS

RPC

virtual private cloud

VPC

VA Enterprise Cloud

aws

monitoring

router

(all)

(incremental)

VICS Server

emulation
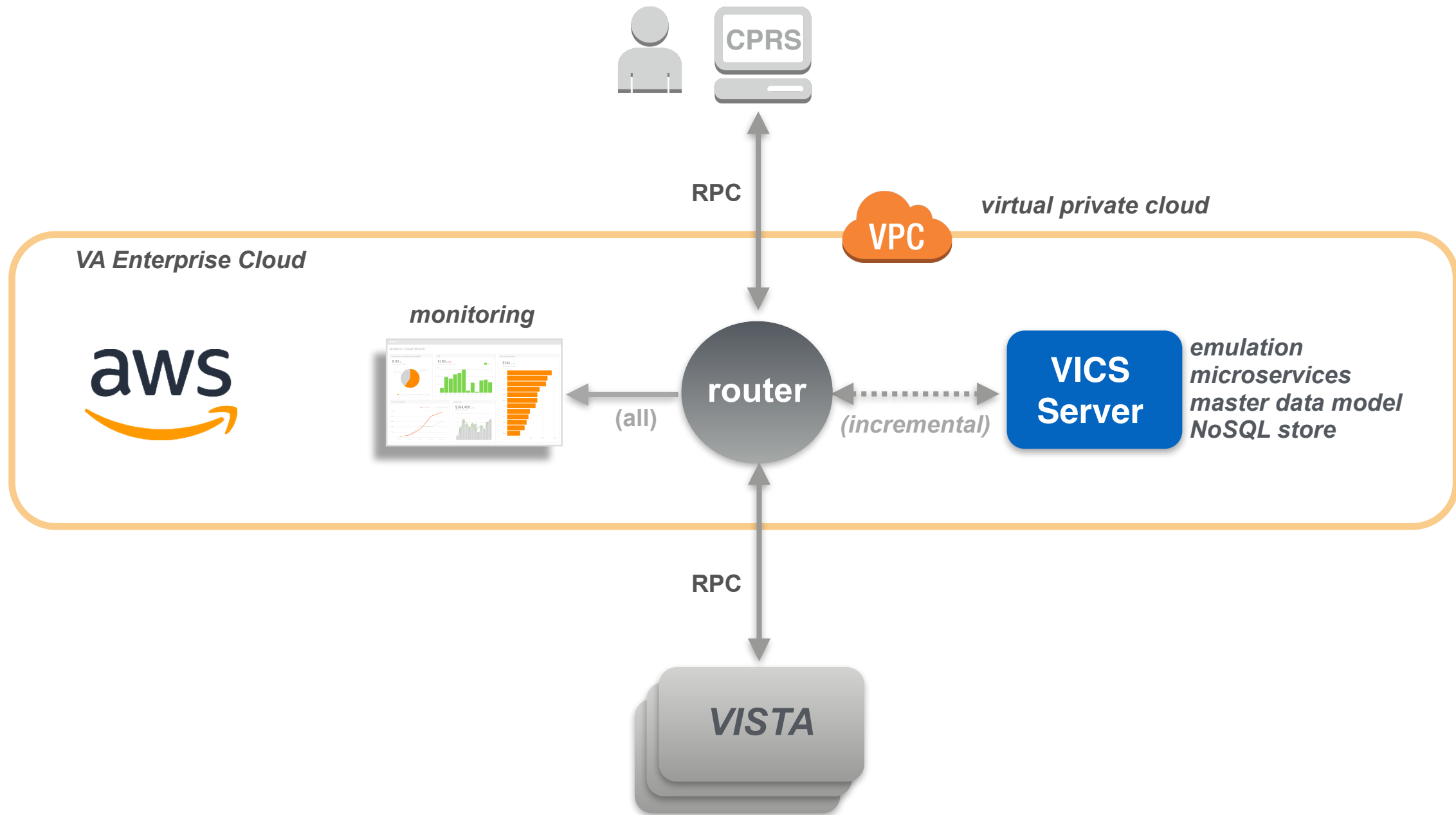microservices
master data model
NoSQL store

RPC

VISTA

VA HEALTH CARE | Defining **EXCELLENCE** in the 21st Century

VISTA Adaptive Maintenance
Veteran Integrated Cloud Services
Project V18-00154-000
Office of Information Technology
U.S. Department of Veterans Affairs
Architect: Rafael Richards MD MS

VISTA Adaptive Maintenance
Veteran Integrated Cloud Services
Project V18-00154-000
Office of Information Technology
U.S. Department of Veterans Affairs
Architect: Rafael Richards MD MS

Veteran Integrated Care Services

Continuity of care during EHR modernization

From 130 VISTAs to Single Integrated Cloud Service
Centralizes 130 VISTA system functionality to *integrated cloud services*.

Federally-Certified Commercial Cloud solution
* *Highest security* and availability in the industry
* *No* infrastructure to maintain

Preserves VA and Veteran-specific services
* *These are not* available in generic COTS EHR / ERP solutions
* *No* disruption of VA- or Veteran-specific services

Enterprise-wide VISTA retirement
* Retires functionality across all VISTAs enterprise-wide (not one-by-one)
* *No* residual and redundant technology to maintain

Minimizes cost of VISTA maintenance
VA leadership stated to Congress in 2017 that operating VISTA unchanged for the next ten years would cost $19 Billion. Centralized cloud services with VistA adaptive maintenance (VAM) eliminates much of this cost.