VistA Application Developer Sandbox

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Outline

- **Introduction to the Developer Sandbox – Salim Semy**
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  - Concept of Operations
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- **An External Developer Perspective – Liam Morley**
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- **Key Takeaways – Liam Morley**
Overview

- **Sponsor:** Dr. Paul Tibbits (DCIO, VA Architecture, Strategy & Design)
- **Objective:** Build a proof of concept VistA Application Developer Sandbox to enable a broad community of developers with little to no VistA experience to build innovative VistA applications
- **Approach:**
  - Compile documentation to guide developers on standing up a local VistA application development environment
  - Stand up a proof of concept Developer Sandbox in a MITRE Lab and test the Sandbox by using it to implement a sample VistA application
  - Conduct a Community Hackfest motivated by a VHA opportunity or unmet need to validate Developer Sandbox
  - Define and execute VistA application testing criteria and a path to transition open source innovations into the VA
- **Success:** Defined VistA application testing criteria with proof of concept external developer sandbox documentation and sample VistA applications
Key Principles

- Target audience is an external open source developer with little to no background with MUMPS or VistA development

- Focus on compiling documentation on how an external innovator can assemble existing open source tools to create a local sandbox for VistA application development

- Facilitate the use of mainstream technologies that complement the existing MUMPS implementation of VistA

- Promote a unified development methodology for VistA applications across the VA and the broader open source community
Concept of Operations

VHA Business Analyst

User stories

Opportunity or unmet need

Sample data

Service calls to standard VistA APIs

VistA Application Developer Sandbox

JavaScript Developers

Apps

Apps

Apps

Community Hackfest

Innovation(s)

Develop Further

Adopt

Retire
VA Intake and Collaboration on VistA

- VA is committed to bringing in and working collaboratively with the open source community on VistA innovations

- Mr. Rick Avila, Open Source Advisor to Steph Warren, is VA lead on open source
  - Rick gave a presentation on “Open Source Practices at the VA” on Day 1 of the 2014 OSEHRA Open Source EHR Summit

- The Developer Sandbox team is defining criteria to evaluate externally developed applications for use by the VA
  - Starting with OSEHRA certification standards

We welcome community ideas and engagement
An External Developer Perspective
A Bit About Me…

- Started writing JavaScript in 1999
- Technical member of Open Health Services Department in MITRE’s Center for Transforming Health
- Participant in the National Day of Civic Hacking
- NO background in VistA nor MUMPS

**My Goal**: Establish a local VistA development environment and use it to stand up a web-based VistA application
Approach to Establish Developer Sandbox

Leverage VistA knowledge across the community

Create developer documentation

Build connections with key VistA contributors

Leverage existing work

Identify enabling technologies
VistA Application Developer Documentation

- Provides instructions on how an external innovator can assemble existing tools to establish a development environment to build VistA applications

- The documentation covers:
  - Setup of Development Environment
    - VistA Novo Test Stub
    - Open Source VistA Environment
    - VA VistA Environment
  - Application Programming Interface
  - Catalogue of Developer Tools
  - Forums, Lists and Blogs
  - Frequently Asked Questions

- The documentation will be published to a public wiki soon

VistA Novo: [http://www.osehra.org/content/vista-novo-open-source-vista-developer-toolkit](http://www.osehra.org/content/vista-novo-open-source-vista-developer-toolkit)
OSEHRA VistA: [http://www.osehra.org/content/osehra-vista](http://www.osehra.org/content/osehra-vista)
VA Sandbox Cloud: [http://www.vacloud.us/groups/sandboxdocs/](http://www.vacloud.us/groups/sandboxdocs/)
Potential Gap: VistA API and Abstraction Layer

- Implement RESTful FHIR interface to VistA
- Provide a standardized application programming interface across multiple VistA environments
- Hide the complexity of VistA implementation from application developers
Potential Gap: Synthetic Patient Test Data

- **What Exists:**
  - OSEHRA VistA has about 25 unpopulated patient data records
  - VistA Sandbox has about 200 populated patient data records

- **What is Needed:**
  - Populated synthetic patient records are needed to develop and test applications
  - A mechanism to “bulk load” data into a local instance of OSEHRA VistA to make it easier to work with large datasets
Key Takeaways

- **Open Source tools exist but are not integrated**
  - Many existing open source tools that enable an open source developer to build innovative VistA applications
  - However integration across these tools is currently insufficient

- **Make it easy to engage: Use of mainstream technologies and consolidated developer documentation will help engage a broader open source community**

- **Two key gaps need to be addressed:**
  - Well-defined and standardized VistA API that also serves as a VistA abstraction layer will encourage consistency and reduce complexity
  - Synthetic patient records with a means to “bulk load” the data into a local VistA instance will facilitate data-driven application development and testing
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