

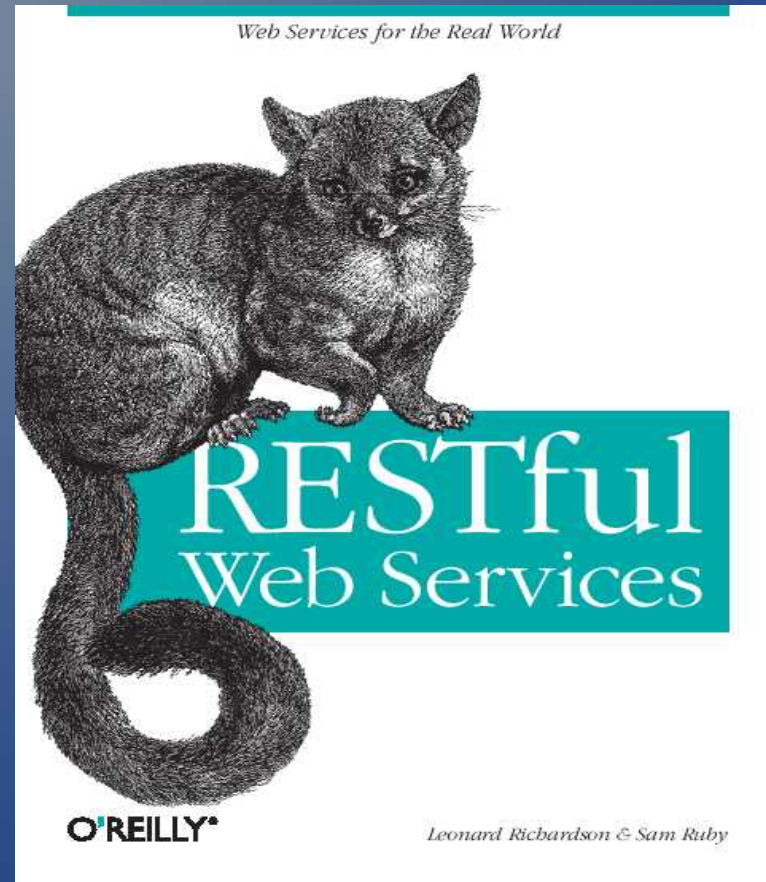
MUMPS Web Server for the Common (Wo)Man

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What is a Web Service?

- Let's talk about how non-M clients currently work in VISTA
 - Remote Procedures on a custom protocol over TCP
- A web service accomplishes the same purpose over TCP on a standard protocol.
- It's commonly used in the web world

The Bible for Web Services



Why another one?

- Existing Web Services (MDWS) for VISTA follow the pattern of “enterprise” web services
 - Stateful (uses cookies on the client side and keeps the session open on the server side)
 - Uses Remote Procedures in the background
 - Very much .Net focused (Hard to develop in any other language)
 - Divorced from VISTA data structures (most important!)

MDWS...

- Let's not underestimate it
- Very successful project
- Provided a way around the unmaintained VISTA infrastructure
- Works with other enterprise databases in the VA

Original Author of the M Web Server

- Kevin Muldrum, as part of the JSON Data Store, part of the Health Management Platform Project

Design Objectives

- Easy way to provide web services for VISTA
- Easy to install
- Completely Stateless
- Integrated with VISTA security mechanisms
 - HTTP Authentication; keys and menu options
- Meaningful URLs
- Easy to program against in any language

Main Design Objective

- Simplicity

What it does not do...

- Serve up web pages

Examples

- GET <https://url/fileman/2/222/.01>
 - Get field .01 (name) from entry 222 from file 2 (Patient)
- GET <https://url/fileman/2/222>
 - Get all fields for entry 222 from file 2
- POST ["S", "-1"] to <https://url/rpc/ORWU%20NEWPERS>
 - Get all Active Providers starting with S going backwards

Examples, continued...

- OPTIONS to <https://url/rpc/ORWU%20NEWSPERS>
 - Get documentation on how to invoke the call.

How does it compare to MDWS?

	MDWS	M-Web-Server
Authentication	POST web services with cookies for maintaining session	Send authorization header with every request
HTTP Verbs	Mostly POST and GET	ALL (POST, GET, DELETE, PUT, OPTIONS, TRACE, CONNECT)
Cookies	Cookies for session	None
URL format	URLs behind "facade"	Arbitrary
Return Format	Typically .Net custom objects	Typically JSON
Sites	Multi-Site	Single Site
Authorization	Context RPC Option or NONE!!	Combination of keys and options or NONE!!!
Data Model	Custom data model	None yet

State of the Software

- Pre-Alpha
 - DUZ(2) and Context selection not implemented yet

Where is it?

- <https://github.com/shabiel/M-Web-Server/>

Next Steps...

- Move all of the software to %W
- Implement the rest of the security framework for the RPC broker so that this can have the full capabilities of the broker
- Must be aware of Fileman Data Structures
 - Keeping it in sync when FLAP moves forward

What do we do about the Infrastructure?

- How come there is no pure M web server in VISTA?
- If the infrastructure is not maintained, VISTA will not be able to deal with the changing demands of medicine and technology
 - E.g. Current VA Fileman limits you to 255 characters, inappropriate to modern terminologies
 - Many systems use IPv6 by default right now. Kernel can't deal with these

Conclusion

- VEN will be continuing to work on this
- Code contributions welcome from other experienced VISTA developers
- Call to fund infrastructure development for VISTA
- Follow this project and educate yourself about web services
 - <https://github.com/shabiel/M-Web-Server/>

Questions

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