

11-18-2016

Growing Up Fast: Using Vagrant to Prototype New Infrastructure

Joshua Neds-Fox

Wayne State University, dp5745@wayne.edu

Cole Hudson

Wayne State University, fi1806@wayne.edu

Graham S. Hukill

Wayne State University, ej2929@wayne.edu

Recommended Citation

Neds-Fox, Joshua; Hudson, Cole; and Hukill, Graham S., "Growing Up Fast: Using Vagrant to Prototype New Infrastructure" (2016).
Library Scholarly Publications. Paper 125.
<http://digitalcommons.wayne.edu/libsp/125>

This Presentation is brought to you for free and open access by the Wayne State University Libraries at DigitalCommons@WayneState. It has been accepted for inclusion in Library Scholarly Publications by an authorized administrator of DigitalCommons@WayneState.



Growing Up Fast: Using Vagrant to Prototype New Infrastructure

LITA Annual
Conference
11/19/2016

Part I: History / Context

trusted repositories?

- University Libraries / Reuther Library relationship
- Parallel systems
- Impact on development cycle



“union” archives

- Times change
- Sharing systems
- Impact on development cycle

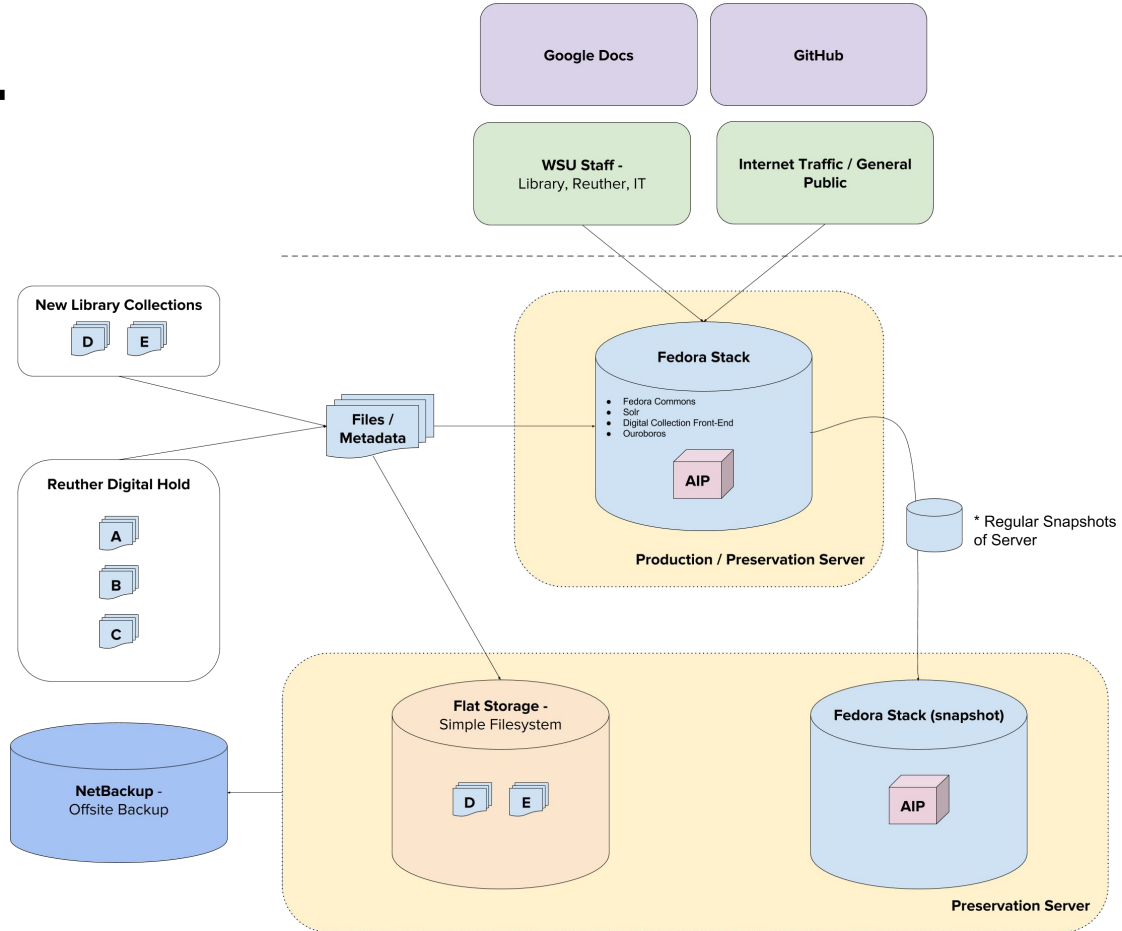


Part II: Distributed Infrastructure for Preservation

"Here are 60TB
of collections
for your
trustworthy
digital object
repository."

love, the archives

v.1



sketch a new infrastructure

What does "Trustworthy" digital preservation infrastructure include?

Research...discuss...research...discuss...

Sketch out theoretical arrangement...

we were going to need more servers...

- storage redundancy
- separation of concerns
 - development / production
 - storage / access

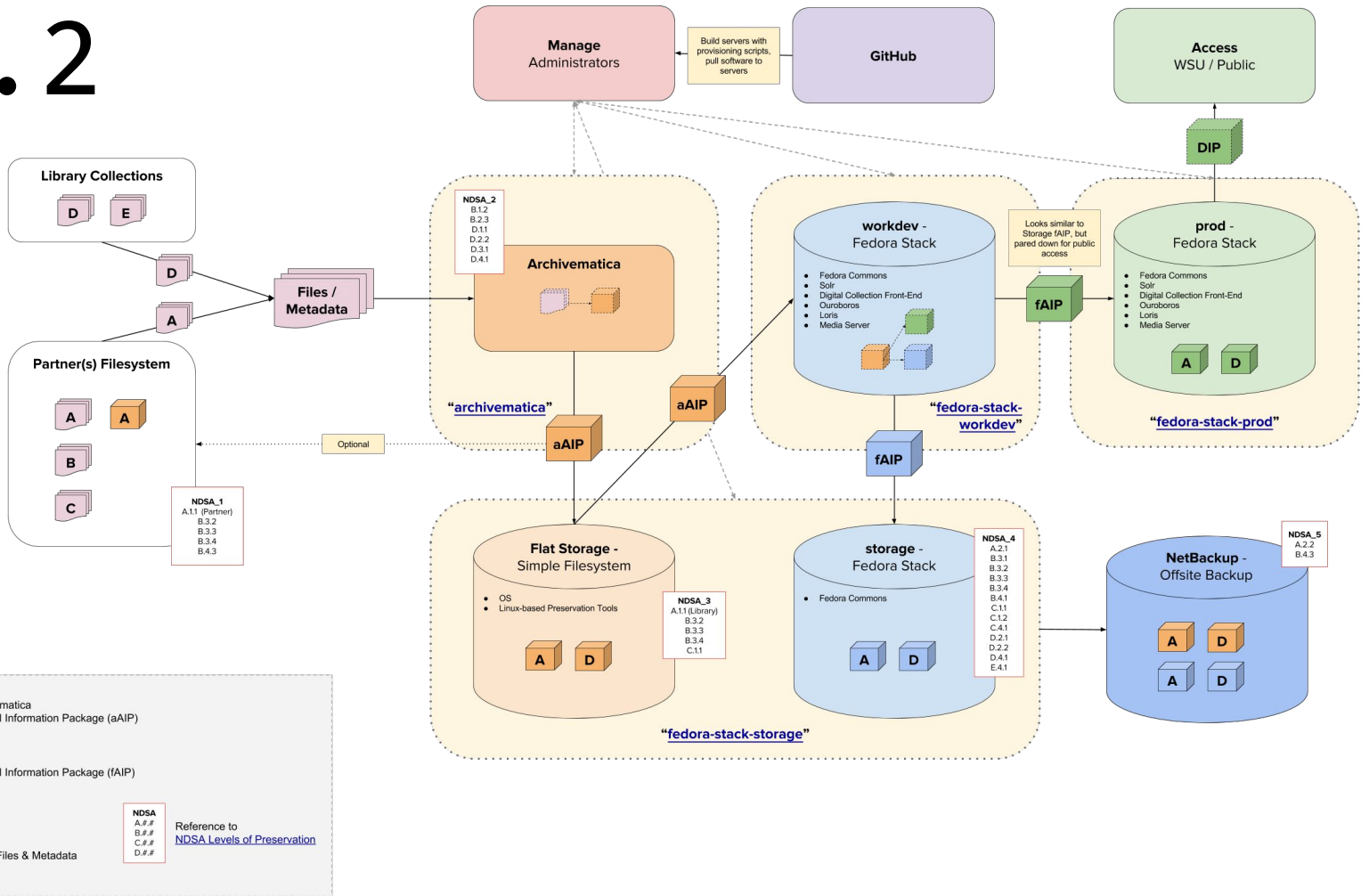
- focused on

[National Digital Stewardship Alliance \(NDSA\)](#)
[Levels of Preservation](#)

"NICHOLS, MR. & MRS. IVAN;
HILLSDALE COUNTY. PARENTS OF
TRIPLETS & THREE SETS OF TWINS."

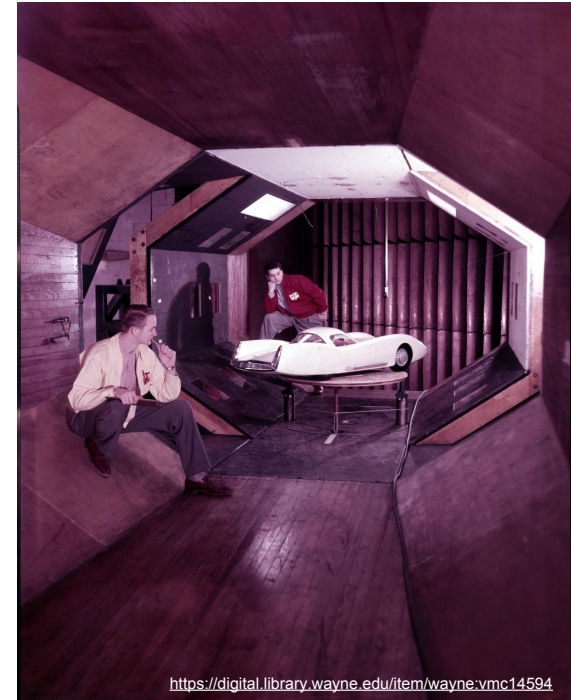


v. 2



create working prototype

- need a working, moving prototype
 - primary change was multiple servers
 - simulating multiple servers interacting was critical to dev.
 - inspire confidence in ourselves and others
- 80 / 20 rule
 - 80% would be straight-forward, take 20% of our time
 - 20% reveal unforeseen complexity, require unknown time



Part III: Server Swarm on a Budget with Vagrant



making
infrastructure
a reality

coming to grips with ...

**Spaghetti*
PALACE

DINING ROOM

BEER & WINE

SPAGHETTI PIZZA carry out 294-5222



getting things done with very little

Processed 1.5TB collection

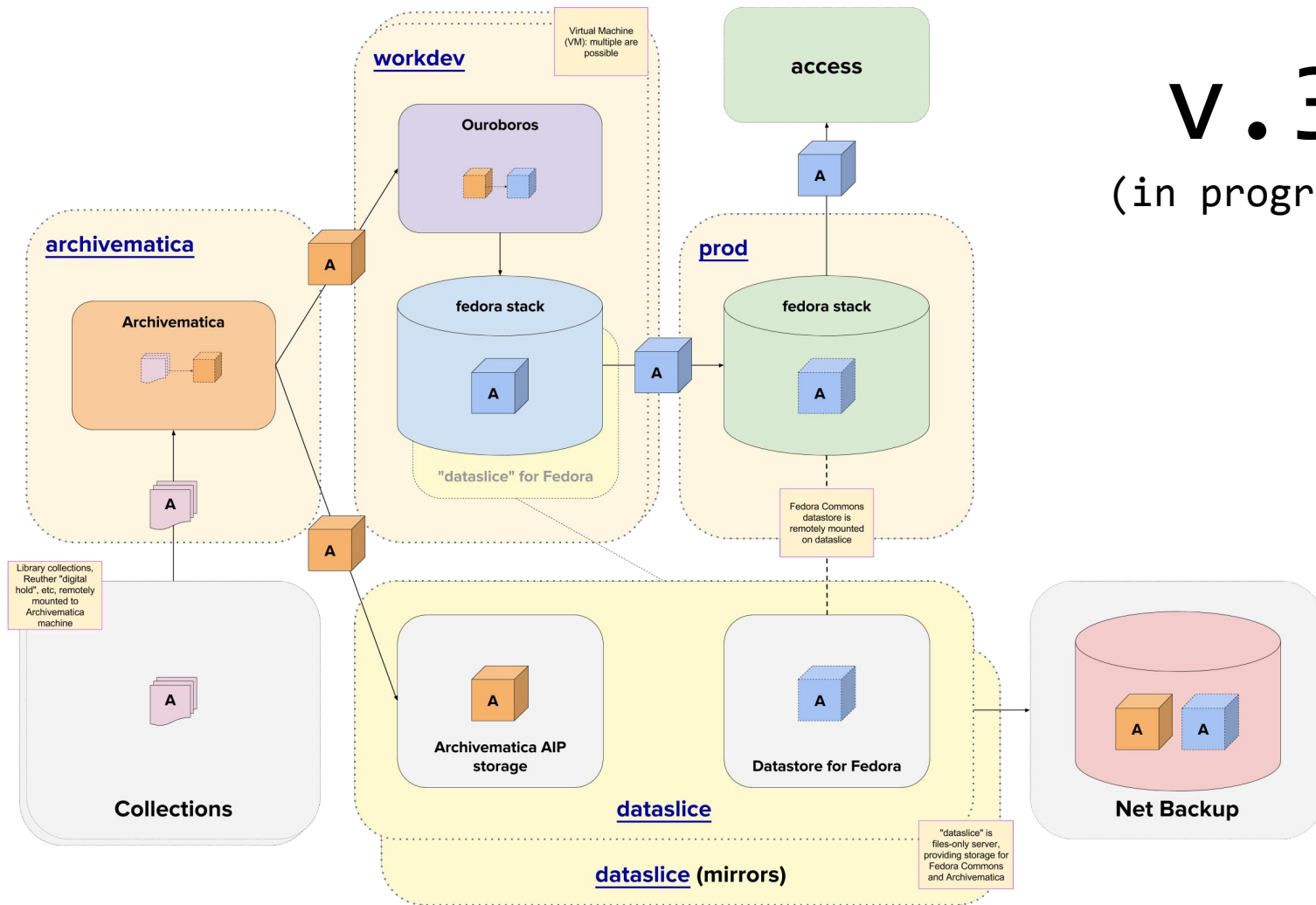
With small Virtual Machines
running on our local Mac
Desktops

VMs had 3GB of Memory/40GB
hard drives



v.3

(in progress)



questions?

Joshua Neds-Fox
@jnonfiction



Graham Hukill
@gshukill



Cole Hudson
@colehud



Digital Publishing Unit

Wayne State University
Libraries

Detroit, MI