


Izzy

Managing Macs at University Scale

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What do I mean by
University scale?

7,500 active systems

Most of Ann Arbor; except Engineering*, Ross, and Law

UM-Dearborn

Detroit Center

Michigan Medicine - in pilot

600 packages

Most automatically detected, built, and put into testing

Run-rate of 25 updates a week

Central support, local control

We provide the tools, packages, and troubleshooting

Local IT has the ability to manage their systems

Licensing is tied to each unit

Nine versions of macOS in nine years

OS X Lion (10.7) through macOS Catalina (10.15)

In-place upgrades began with 10.8 Mountain Lion

2010

(pretty terrible)

2010

Most departments are hand-building Macs if they bother at all

Campus Computing Sites managed through `radmind`

LSA used a bare-metal tool called "Simple NetInstall"

- Hacked-up Apple NetInstall
- Packages updated twice a year, lot of XML and testing
- Front-end app to create local accounts and tattoo some department data into the built system

2010

Most initial loads were “heavy”, “just in case”

Adding an app after building required a support visit

No way to update an app. Hope they self-update, or wait for the system to get retired

Apple Remote Desktop ruled 80% of the time

2011

10.7's codesigning effectively ends SNI

Started considering replacements for SNI

LSA had a Windows build system called WLMS

Some experience with RedHat's "channels" and "packages"

Brian Cors tells me about a new project called Munki

2011-06-23 Initial commit

Minimum Viable Product

- One long page of systems
- Barely working account provisioning
- Manually provisioned access
- Packages and hostname

2011-06-23 Initial commit

Initial decisions still live on

- 6-hexdigit pairing codes
- Organization > Group > System structure
- Catalogs and Packages
- Policy driven versus sequence driven

2012: the 1.0

Around 1,000 systems managed

Includes some non-LSA units, for *reasons*

Bare-metal deployment "IzzyBoot"

Policy Domain framework

MCommunity for access

End User Computing

Team grows to three!

IzzyStor, a backup tool

Active Directory binding

FileVault management

End User Computing

Big scale-up: 5,000 systems

App is automatically deployed git and unit tested

Everything moves to Docker

Search engine

ServiceLink integration

~~HipChat~~ Slack bot

Izzy as a Service

Official service offering for our platform

Technologies

Rails 5

Redis, ElasticSearch, and Aurora MySQL

AWS Kubernetes and Docker

Package CDN (nginx caching)

Jamf Pro MDM

Looking Forward

Thank You