

The Virtues of Total
Management or:
*How I Learned to Stop Worrying
and Love Radmind*

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The Job

- Software Developer
- UNIX guy
- No end users

The *Actual* Job

- Software Developer, System Administrator, Help Desk, Application Expert, Problem Solver
- Unix, Windows, AIX, Linux
- Many end users
- The new guy

The Year of the Laptop

- Mac OS X
- Mobile office
- SubEthaEdit

Diversity

- Hardware and Machine Classes
- User Needs and expectations
- Locations and Network

The Worry

Support

- Complexity
- Troubleshooting
- Not My Job

Security

- Untrusted Wires
- Untrusted Users
- Automated

User Buy in

- Administrator access
- Application selection
- Minimal interference

Observations

- Some users *need* admin access
- Commonalities
- Easy trouble shooting

Existing Solutions

NetBoot

- Pull
- Image Based
- MAC address access control

NetInstall

- Pull
- Apple package based
- Automated software installations

ARD 2

- Push
- Apple package based
- Password access control
- AES encryption

Radmind

- Pull
- File level maintenance
- Network optimized
- TLS certificates

Apple Packages

- Installation only
- Unverifiable
- Not universal



Ideal Solution

Client initiated updates

- Minimal interruption
- User retains control
- Hardware provisioning

Security

- No passwords
- End to end encryption
- Authentication and Authorization

Total Management

- Manage every filesystem object
- Return system to a baseline
- Allow for exceptions

Deployment

NetRestore & NetBoot

- Initial image
- Speed
- Single image



RadWeb & Radmind

- User Configuration
- Certificate Creation
- System Update



ARD 2.0

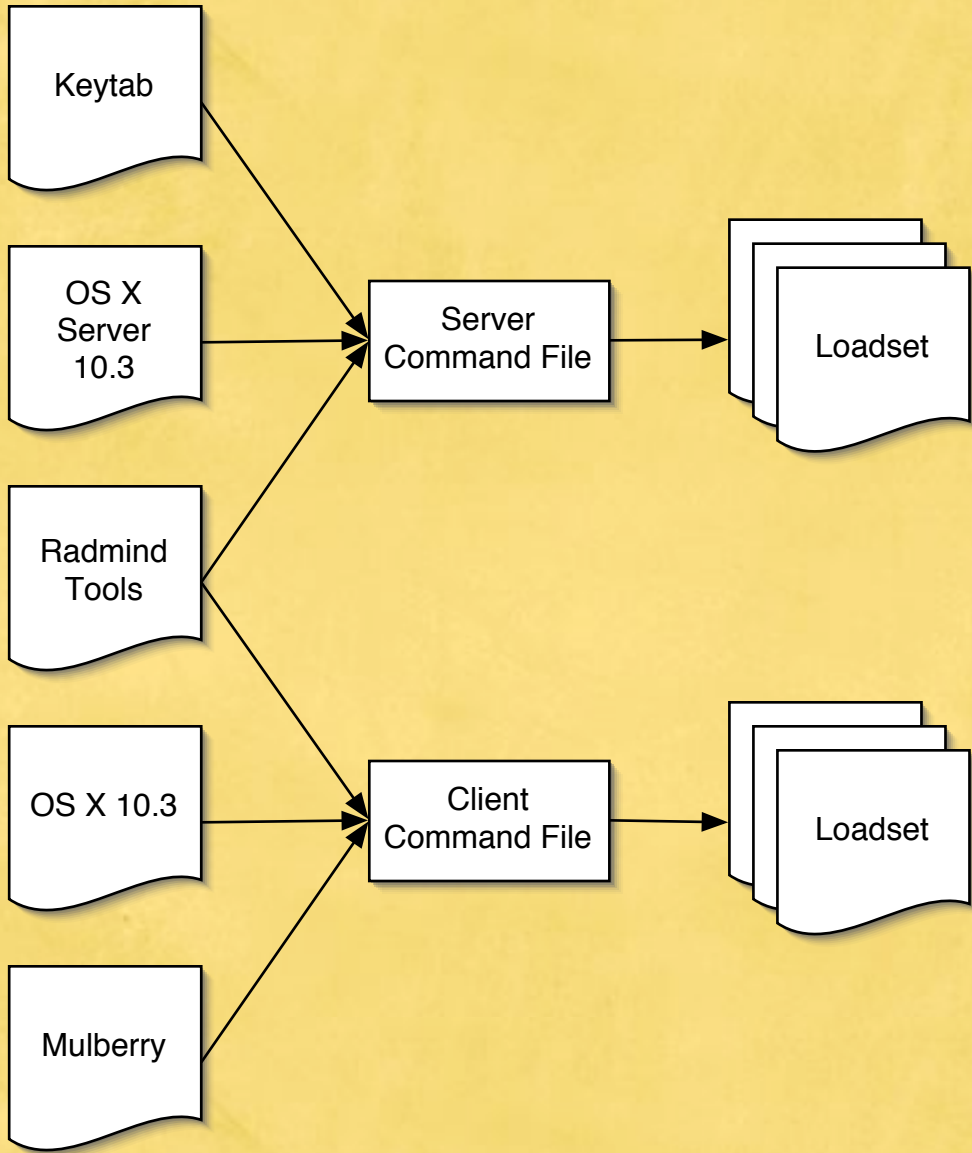
- Direct Client Support
- Remote Access
- Hardware Analysis

User Buy-in

- All users can have admin access
- Updates can be automatic or user initiated
- User selects applications

Sharing

- Each client gets a unique certificate
- Common configurations are stored in shared base
- Applications separated from OS



New Client

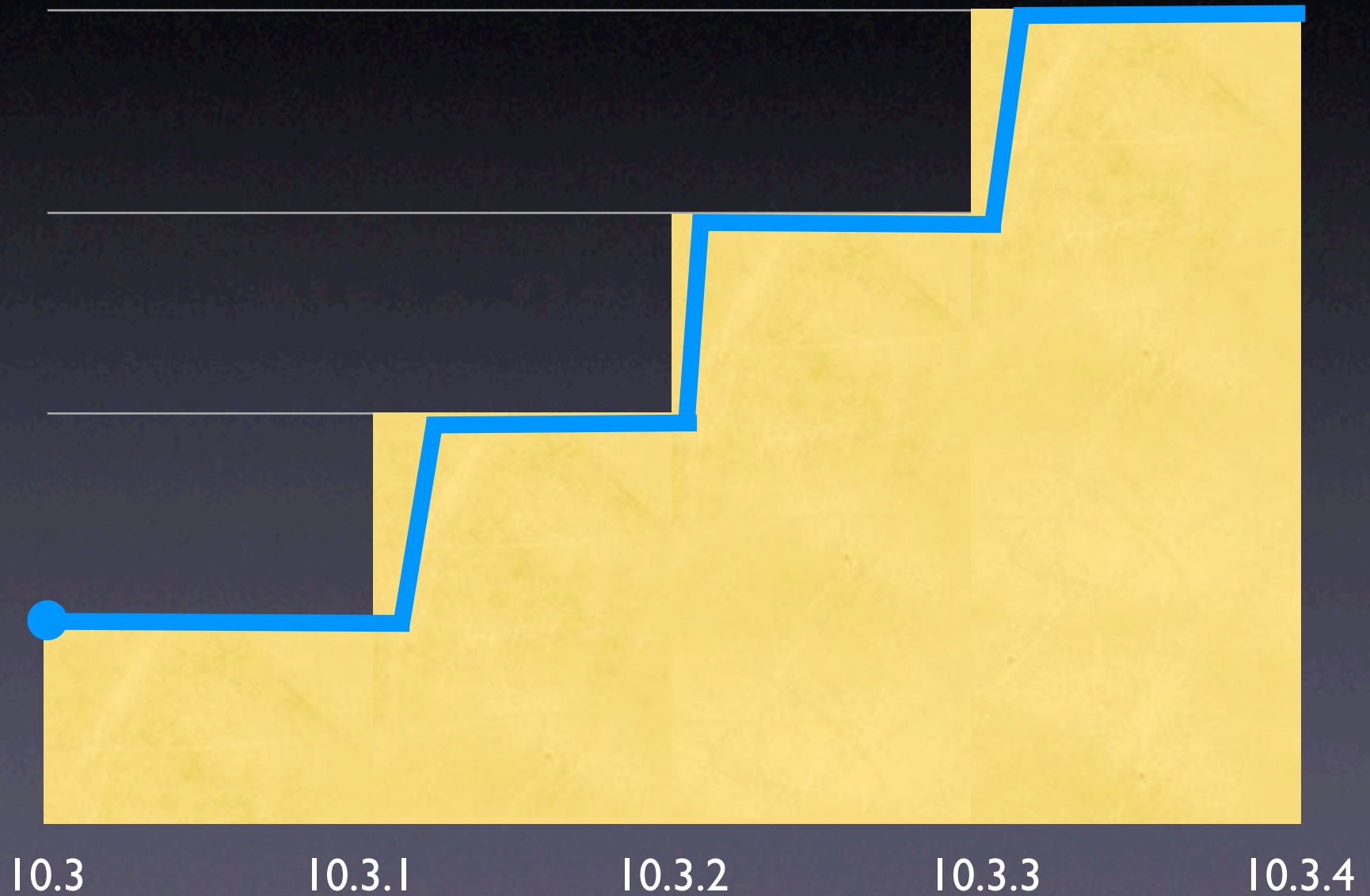
- Bootstrap
- Select software
- Install certificate
- Run Radmind

New Client Demo

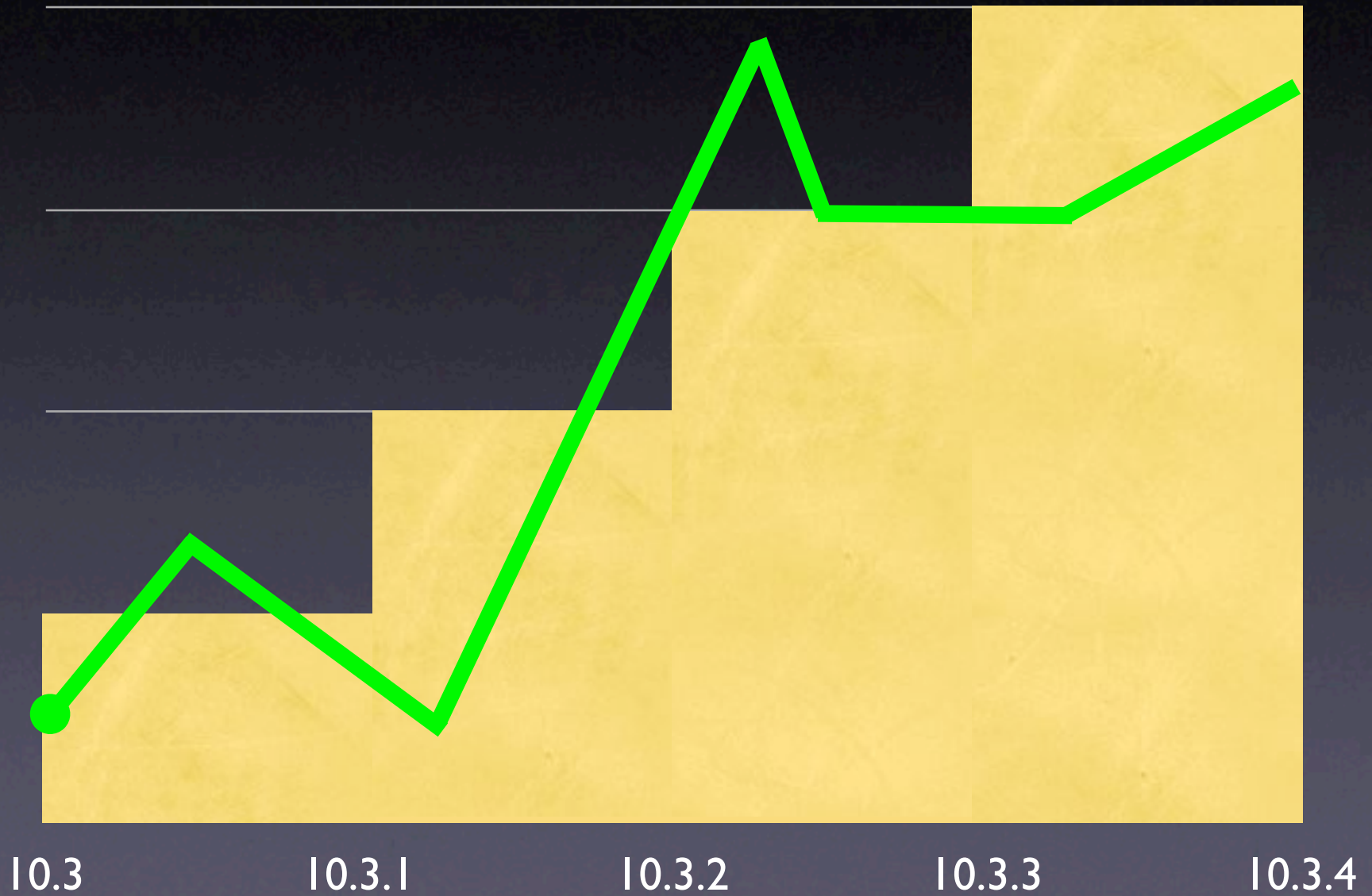
Update Process

- Check server for new policy description
- Compare filesystem to policy
- Modify filesystem to match policy

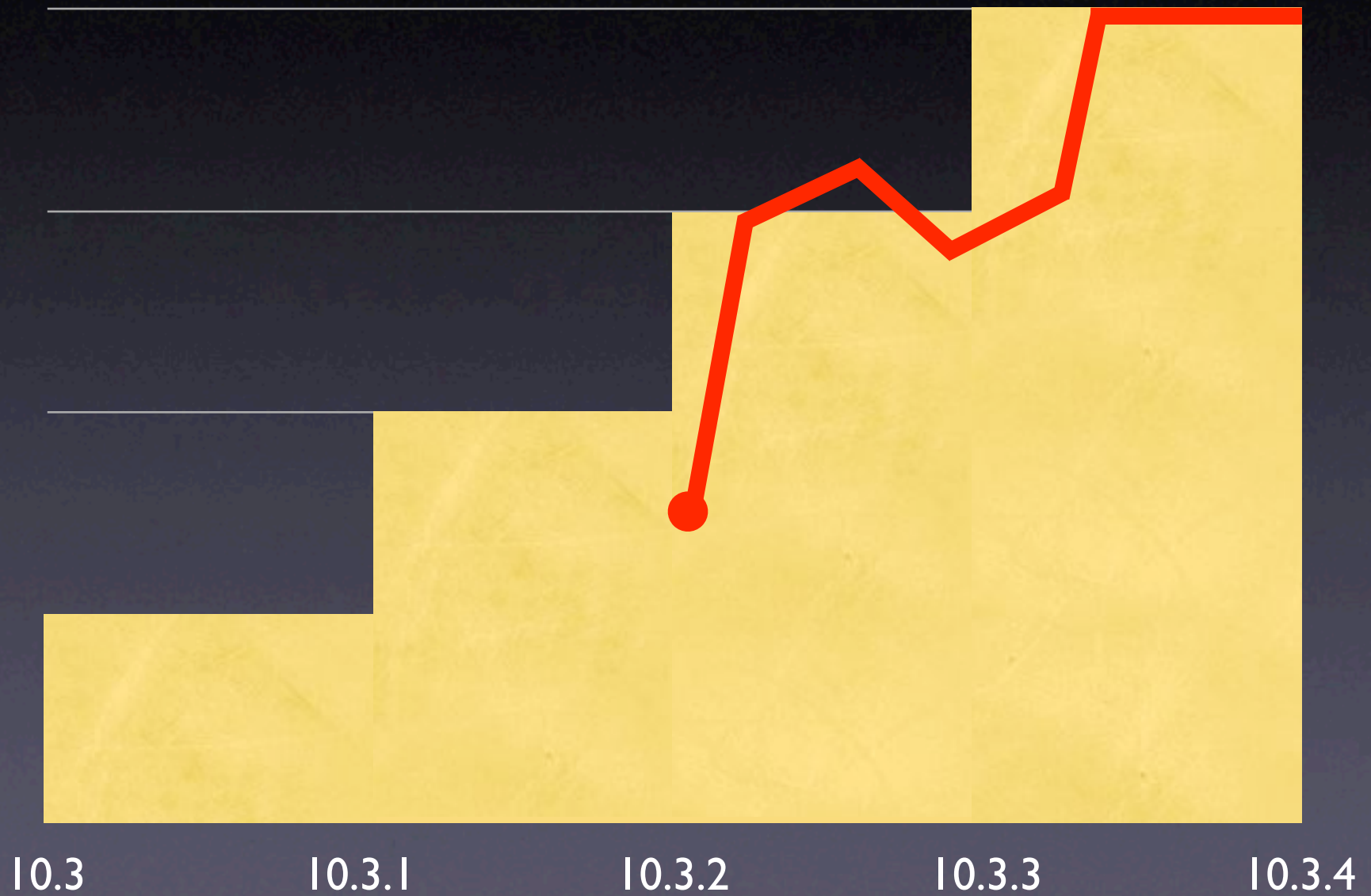
Automatic Updates



Power User



New Hardware



Update Demo

Benefits

- “I just want it to work”
- “I might break things”
- “I’m too good for that”

Benefits

- No need to redo factory load
- Allows user to install custom applications
- Easy way to select and install applications
- No difference between managing clusters, desktops and laptops

Future Work

- Windows Port
- Further network optimizations
- Package translation
- Radmind 2.0?

More Information

- <http://radmind.org>
- radmind@umich.edu
- <http://macenterprise.org>
- <http://bombich.com>

Q & A