

# COMPONENT-BASED DESIGN SYSTEM AND DEVELOPMENT

Tereza Novotná **September 18**  
Dávid Halász **Brno**

# Dávid Halász

- Software Engineer @Red Hat
- Works on ManageIQ mostly in Ruby
- Used to be the maintainer of PatternFly Sass
- Self-proclaimed JavaScript hater
- Passionate guitarist and ukulele player



@halaszdavid



# Tereza Novotná

- Interaction Designer @RedHatUXD
- Oversees designs for ManagelQ, Foreman and other projects
- Lived 7 years in North Carolina
- Loves working with people and bringing human perspective to technology.
- Enjoys running and traveling



@terezanovotna\_





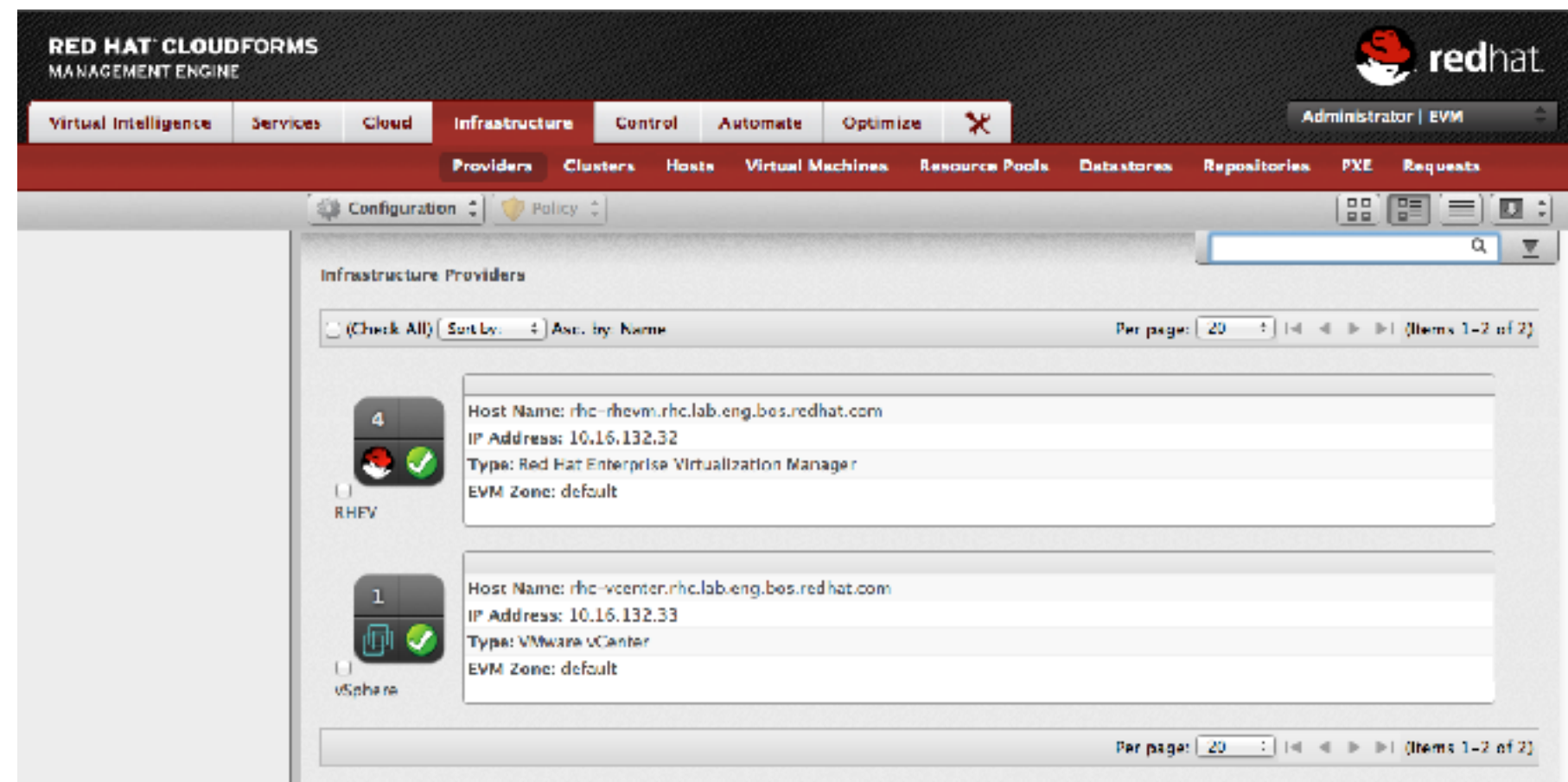
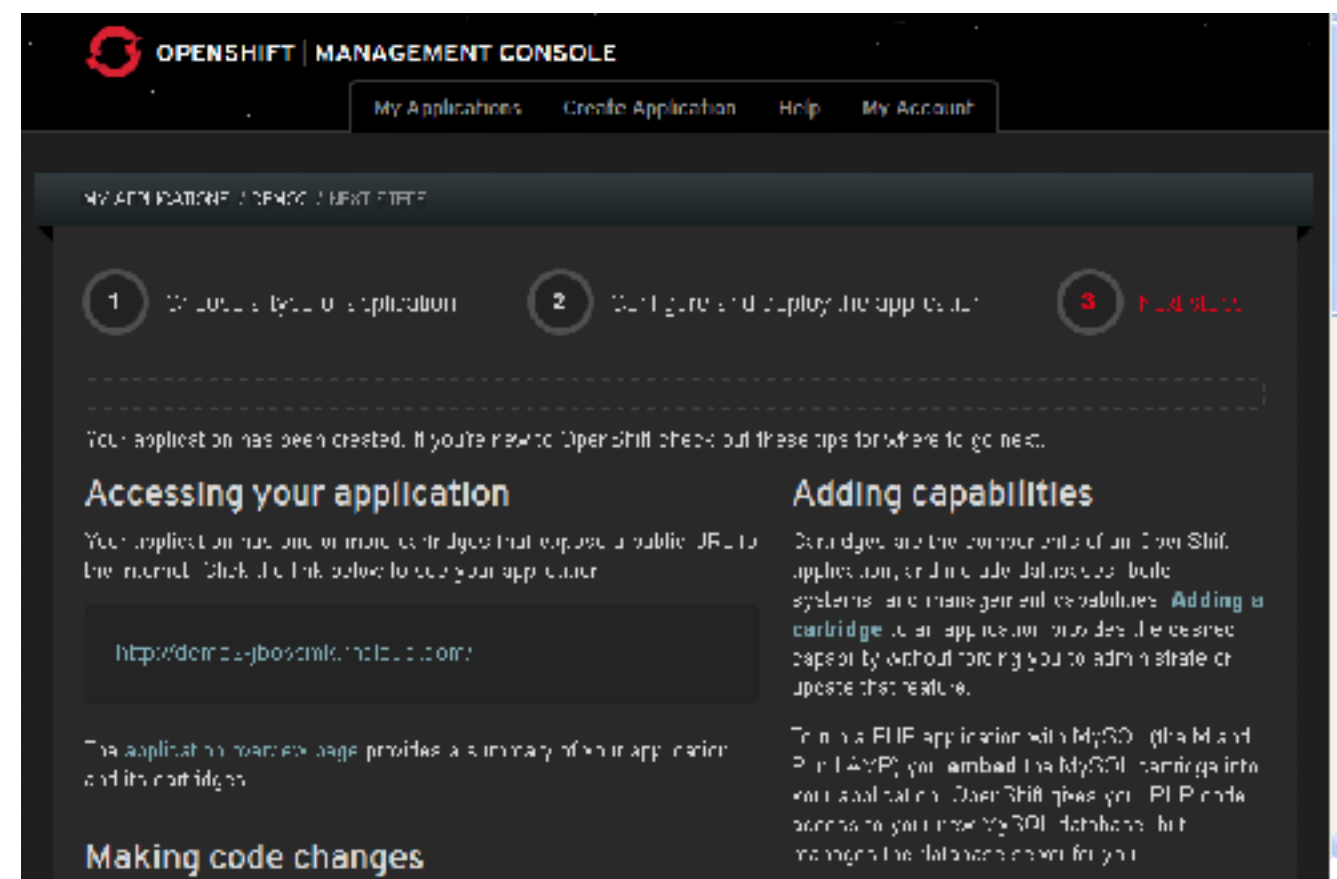
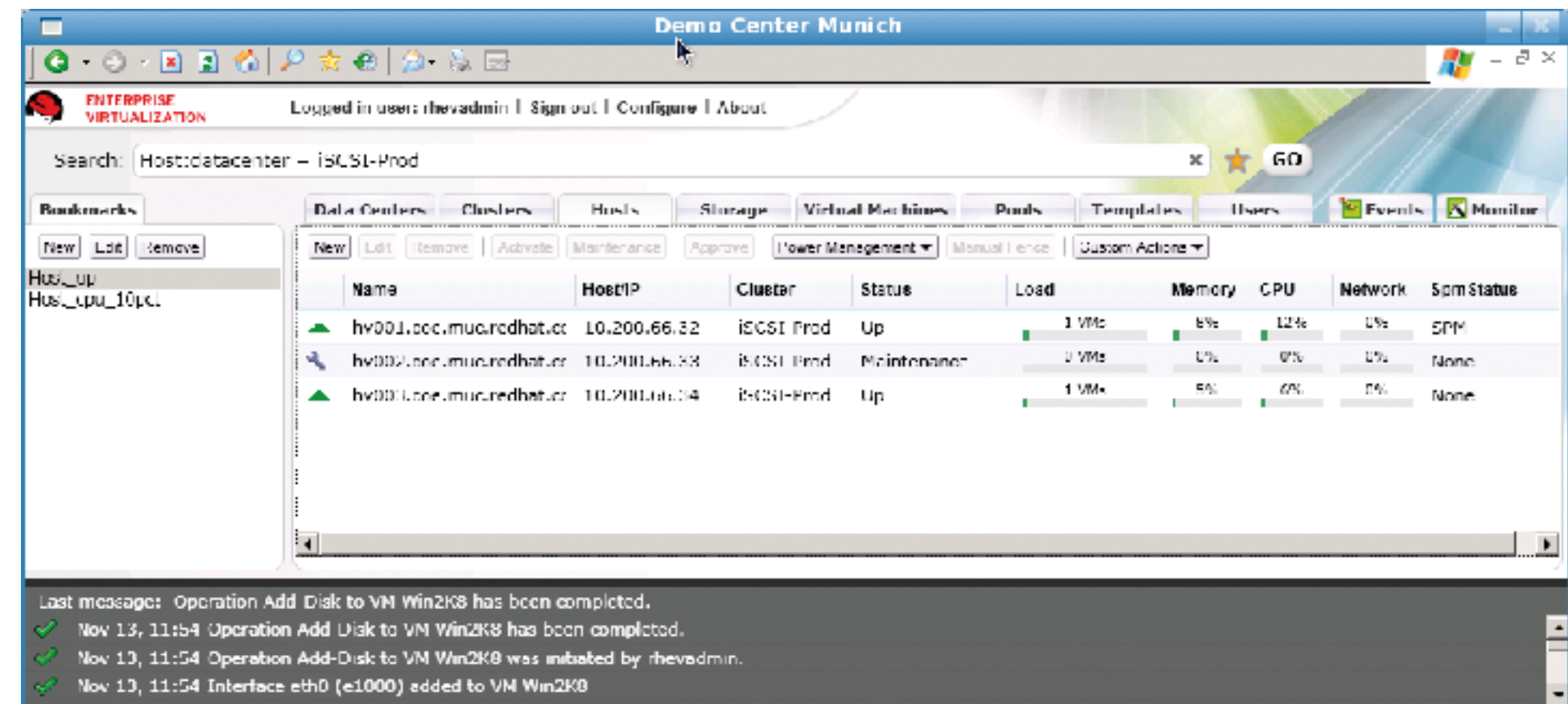
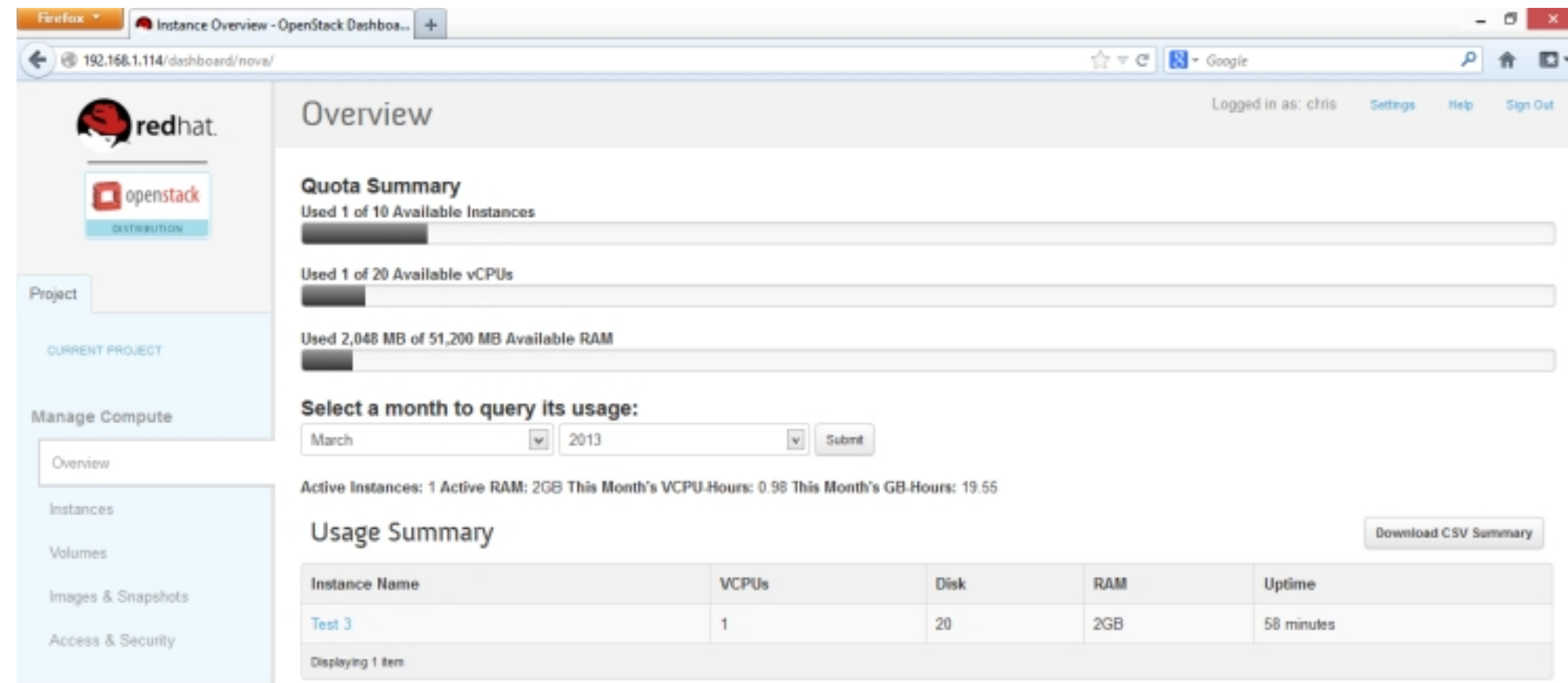
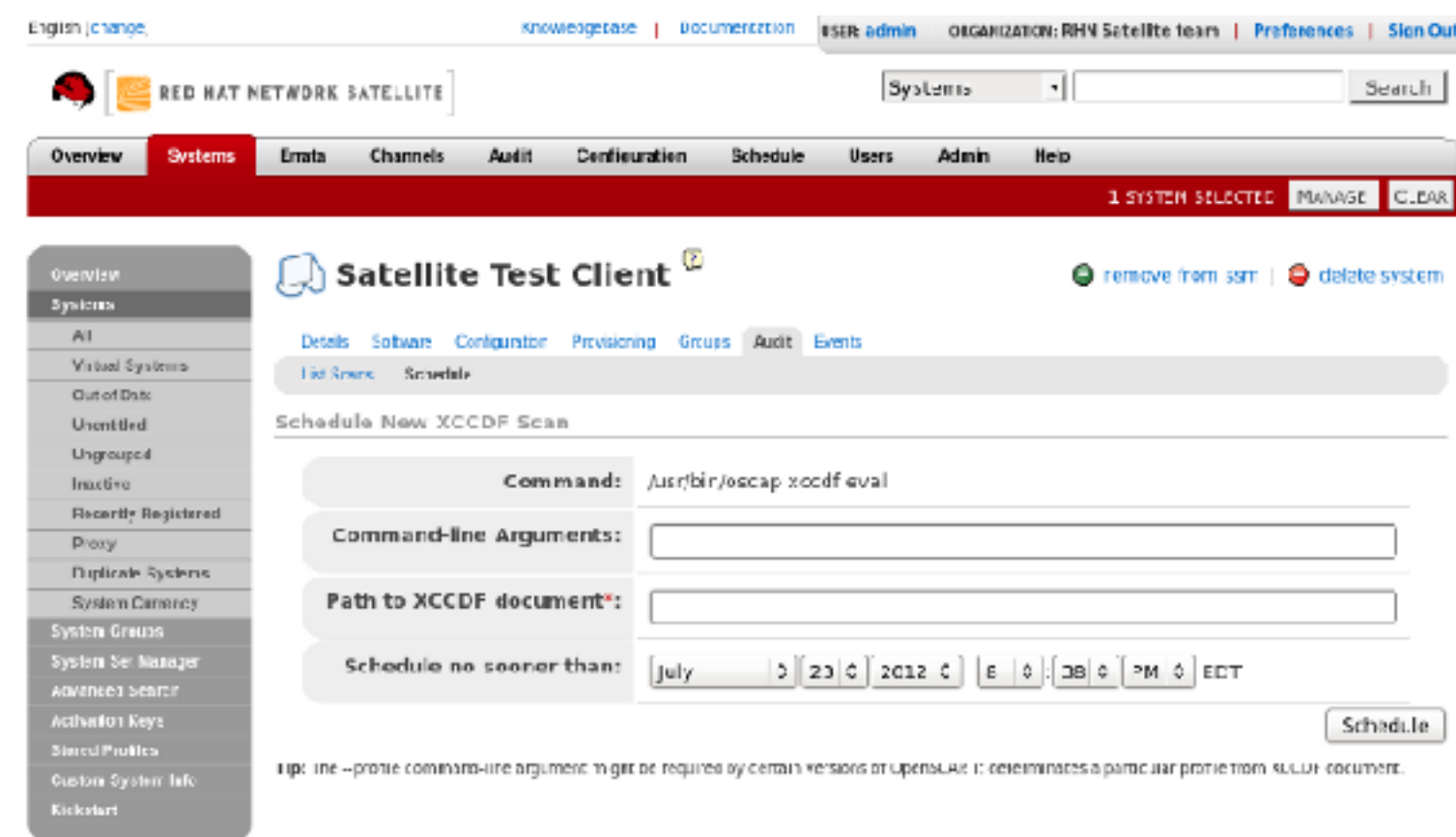
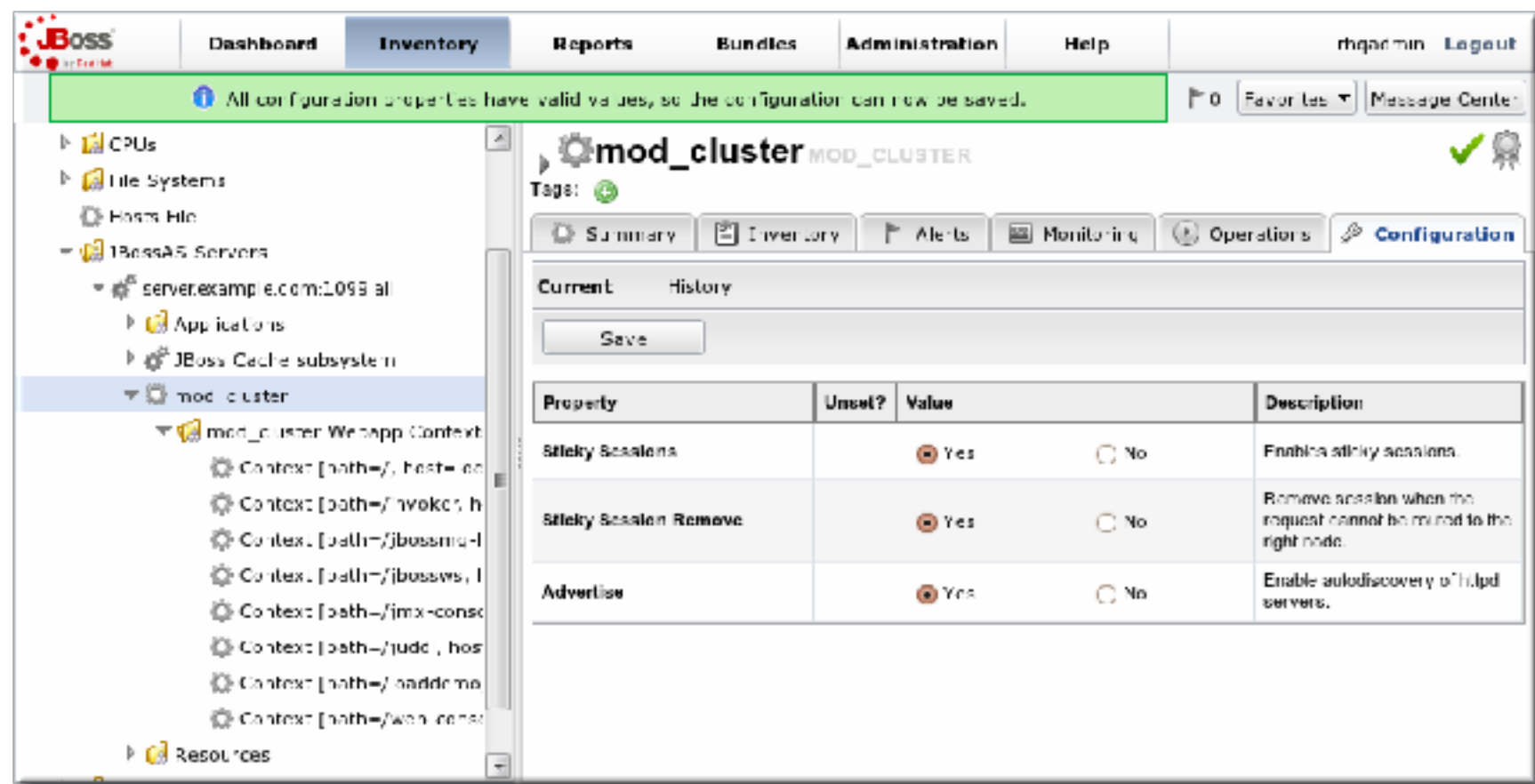
redhat.®



# Over 40 different products

**They all looked different**









2013



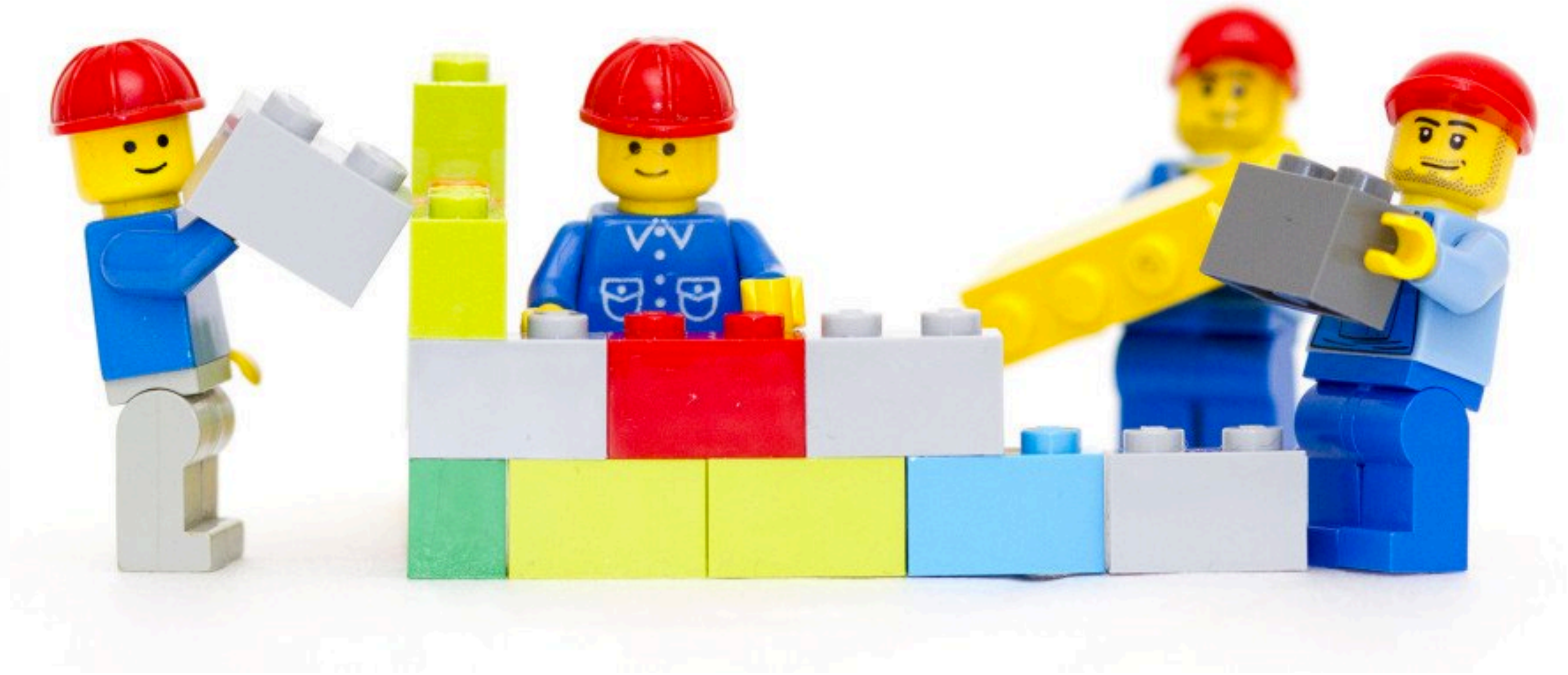
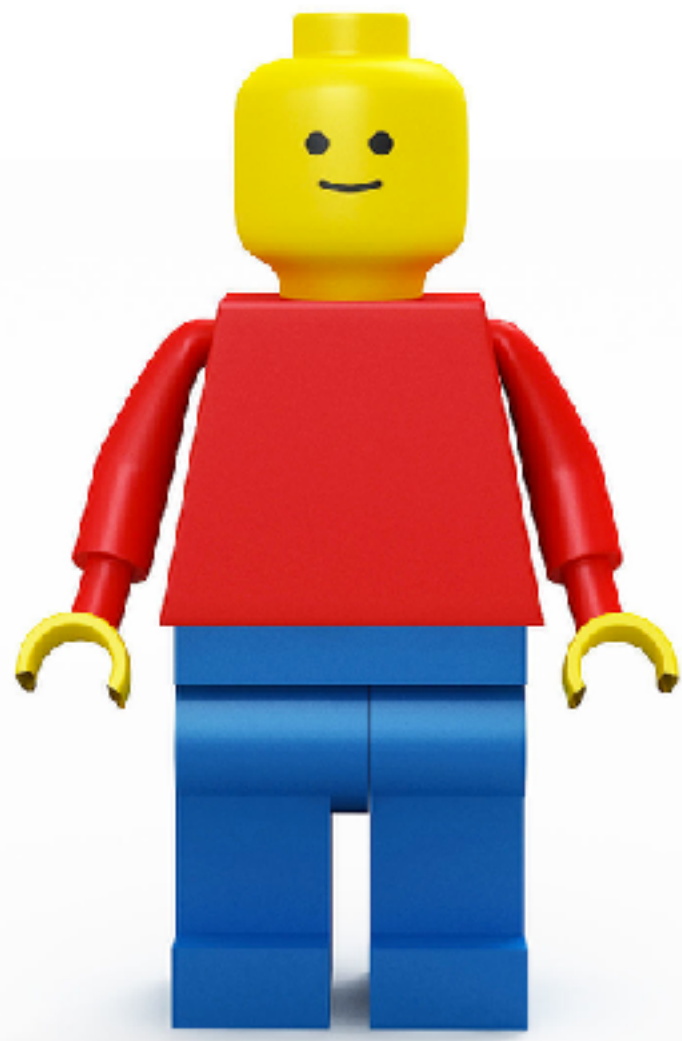
# UXD











# Need of a design system



consistency

# consistency

/kən'sist(ə)nsi/ 

*noun*

1. consistent behaviour or treatment.

"the consistency of measurement techniques"

*synonyms:* evenness, steadiness, **stability**, **constancy**, **regularity**, **uniformity**, **equilibrium**, **unity**,  
orderliness, lack of change, lack of deviation; dependability, **reliability**

"the downward trend in consumption shows a remarkable degree of consistency"

Modal Title

✕

Field One

Field Two

Field Three

Cancel

Save



Modal Title

×

Field One

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Cancel

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Modal Title

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Field One

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# THE WHY?

- Improve consistency
- Increase usability
- Reduce time and cost to market
- Share best practices with the community



# What is a design system?


**Rules, constrains, and  
principles** implemented in  
design and code.






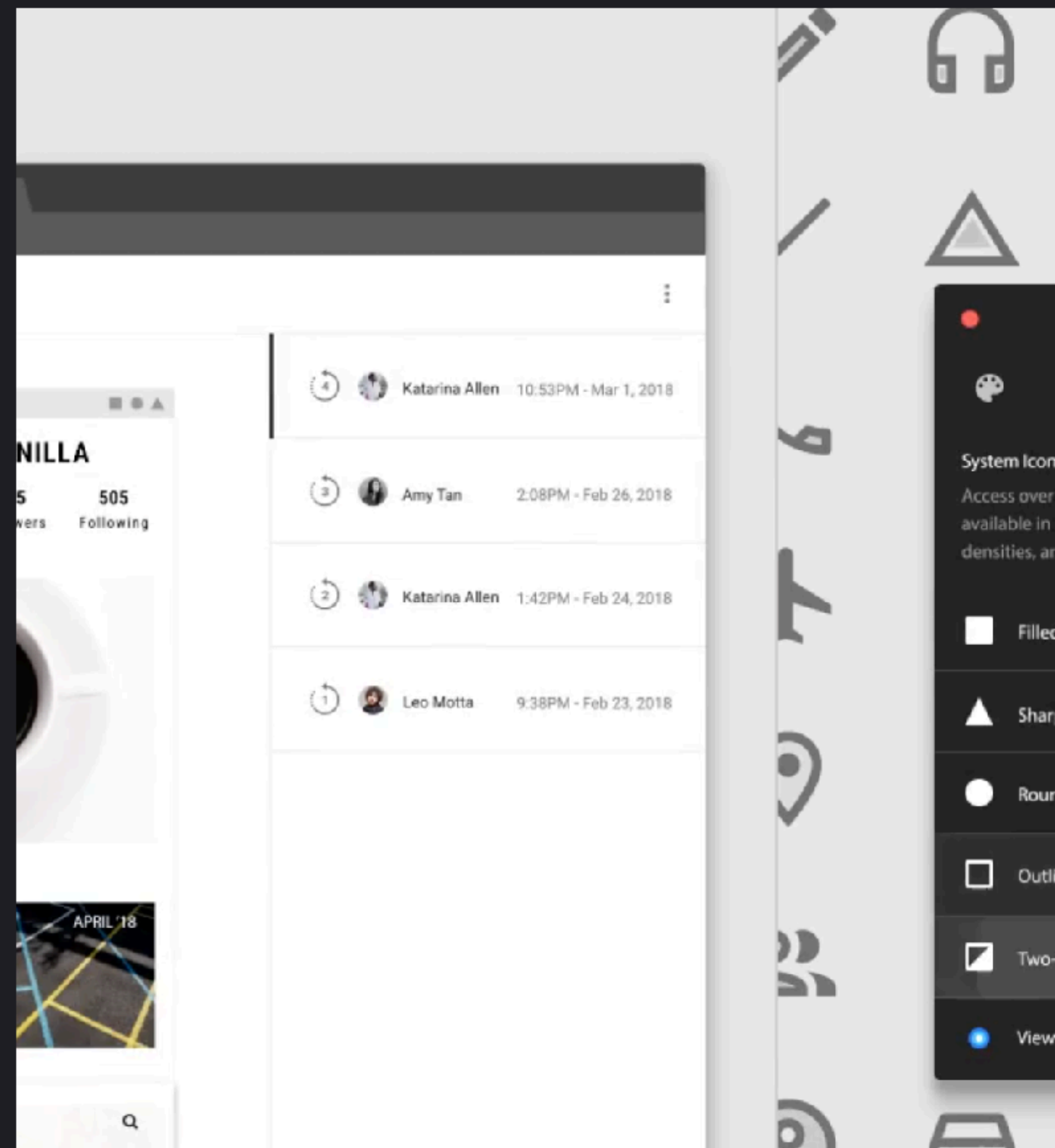
Make beautiful products, faster.  
Material is a design system –  
backed by open-source code – that  
helps teams build digital experiences

 Design flexibly

 Develop across platforms

 Collaborate seamlessly

Design and build faster with new tools that make  
it easy to customize Material and share work  
across teams.





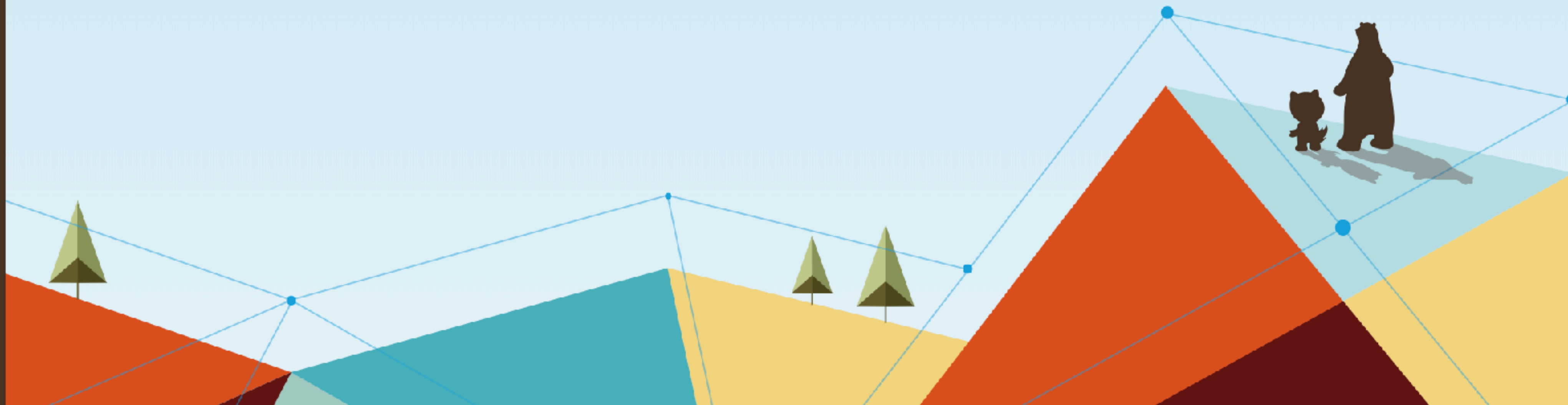


# LIGHTNING DESIGN SYSTEM

Create the world's best enterprise app experiences.

GET STARTED

Current release: [Winter '19 \(SLDS 2.7.0\)](#) | [Archives](#)



***“Design system acts as a connective tissue that brings the portfolio together.”***



# Meet PatternFly



PATTERNFLY

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[Pattern Library](#)

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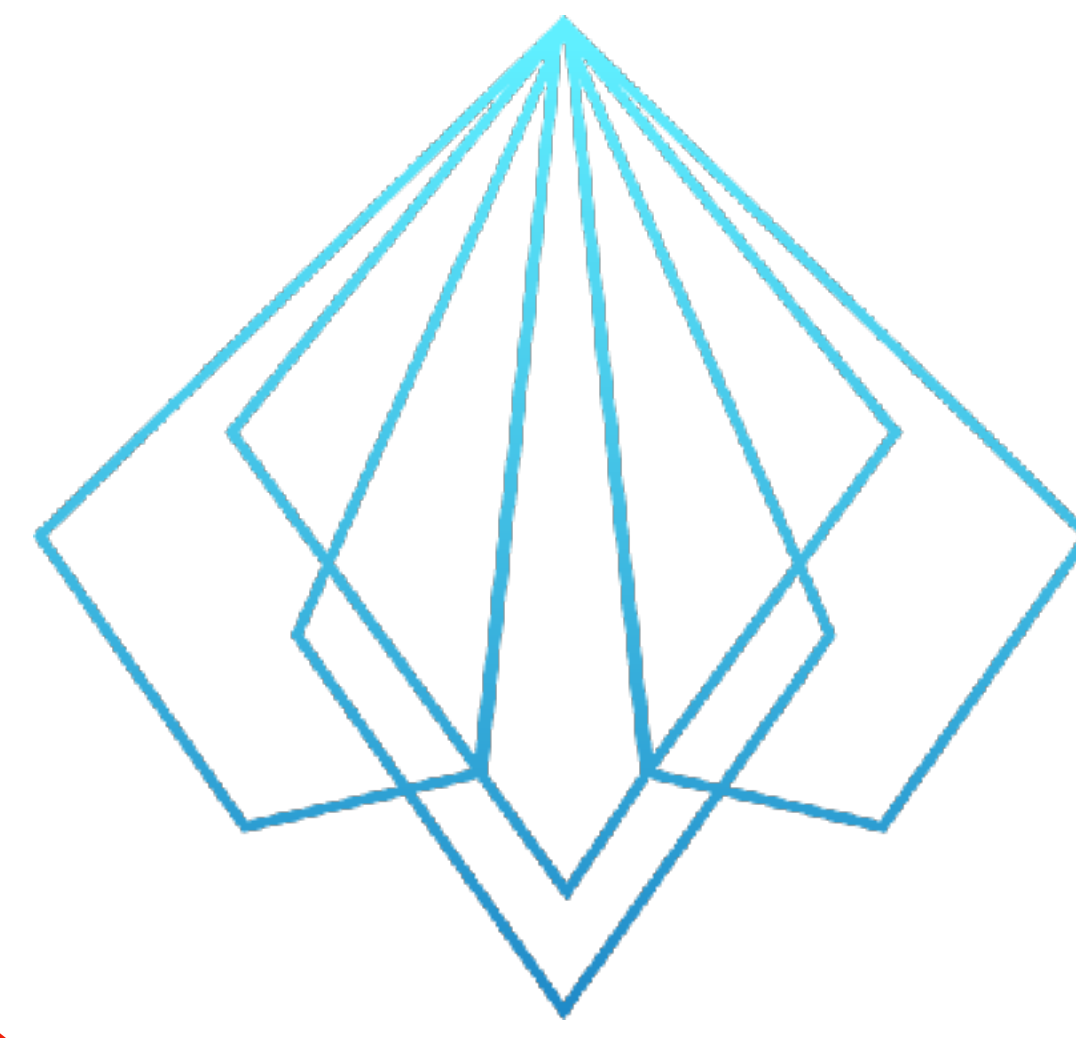


# PatternFly

A community of designers and developers collaborating to build a UI framework  
for enterprise web applications.

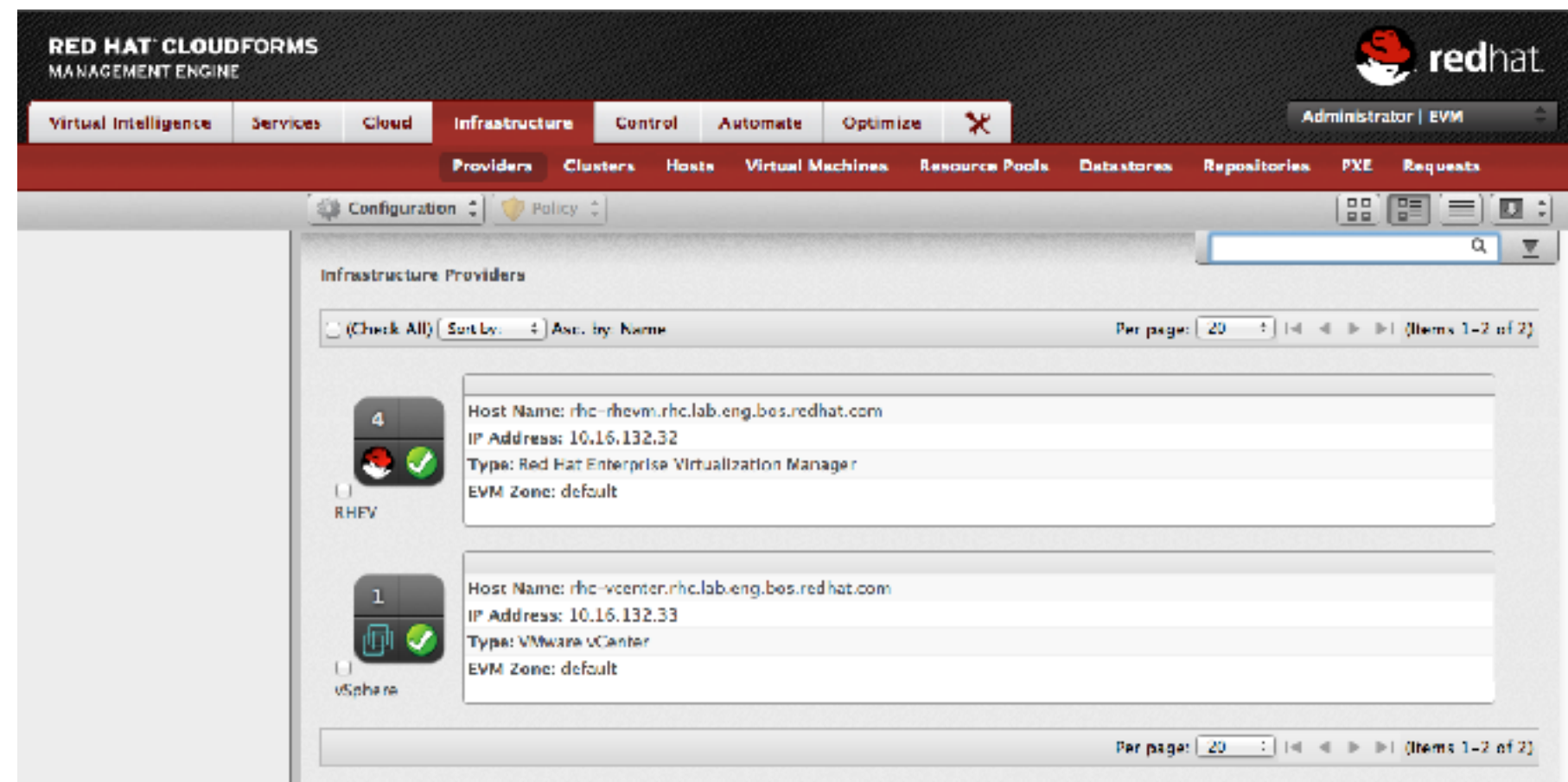
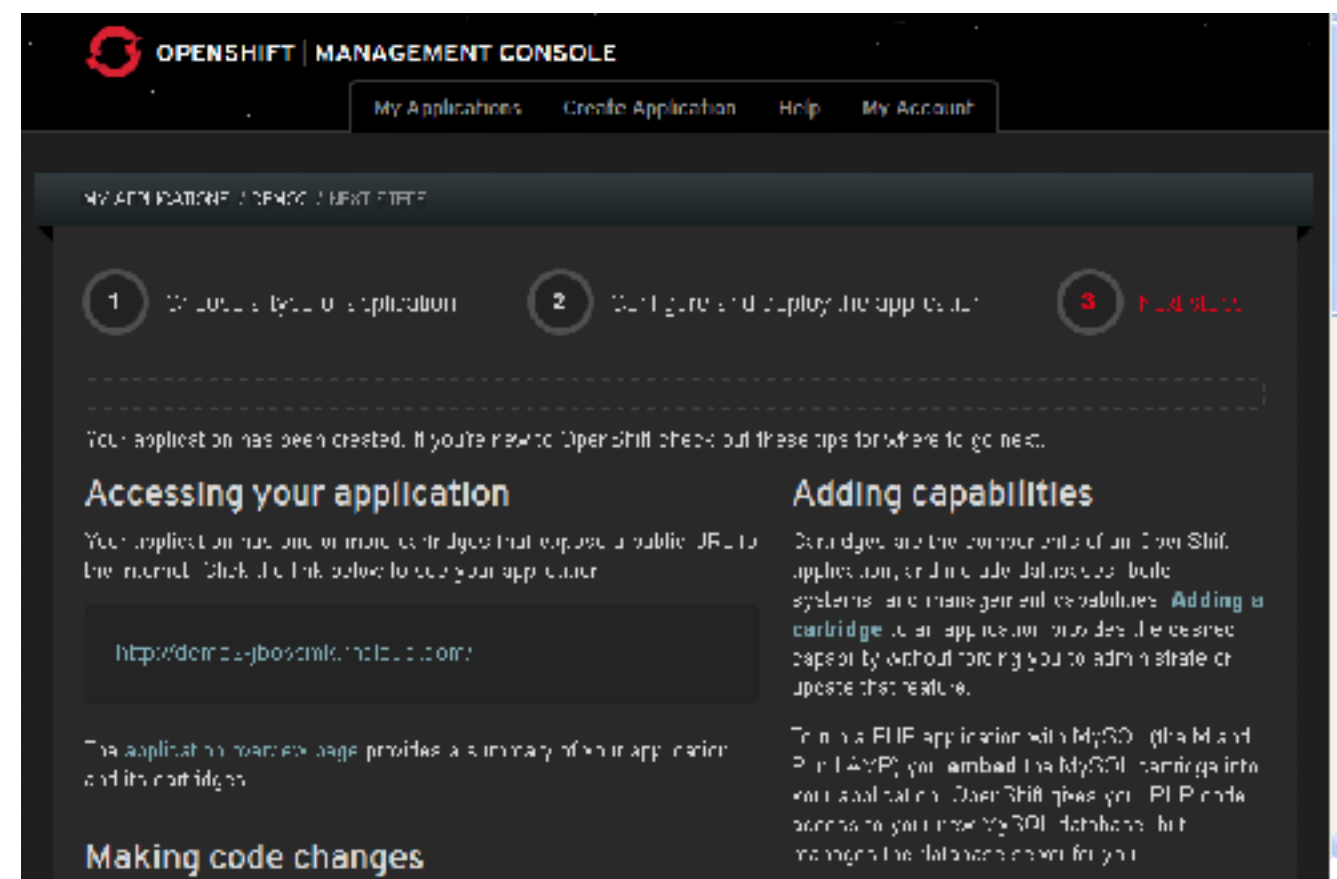
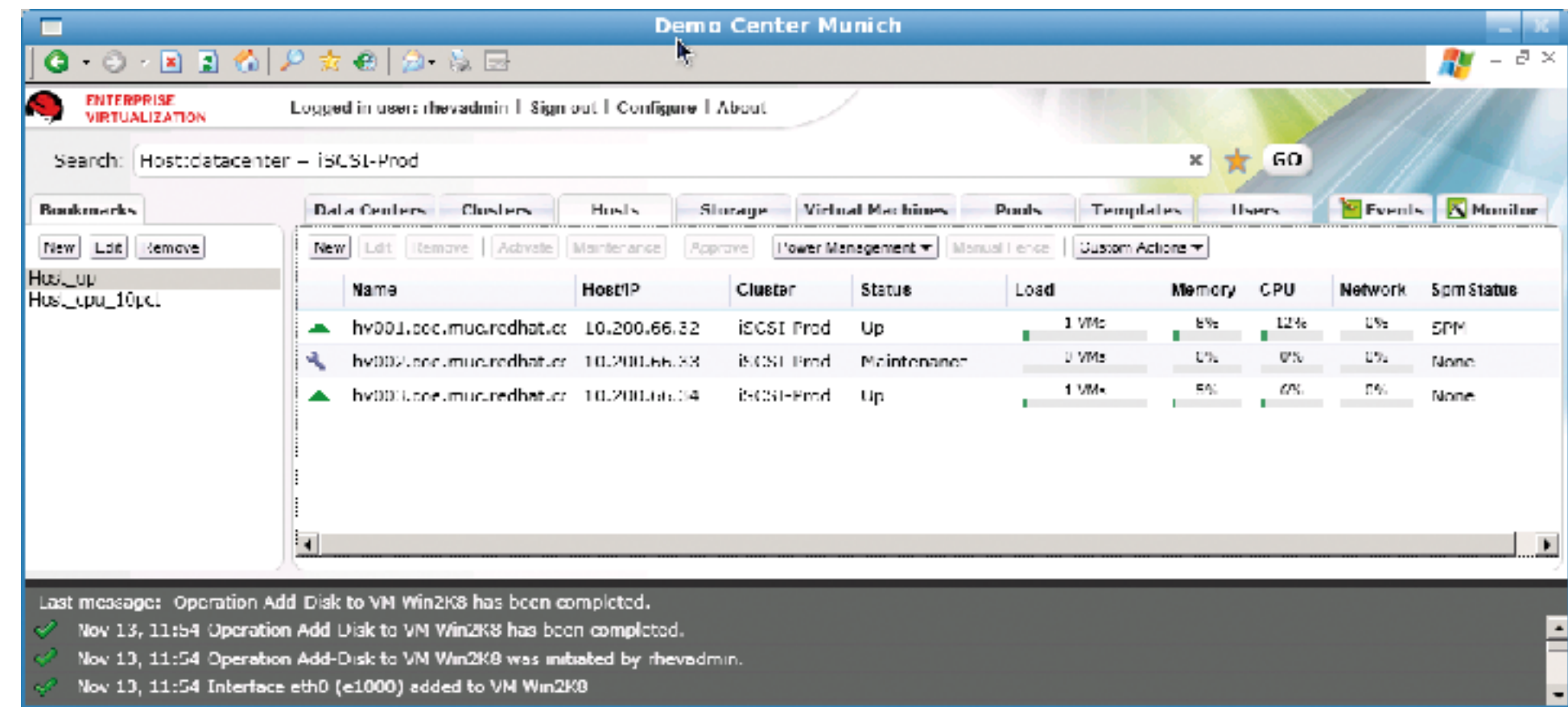
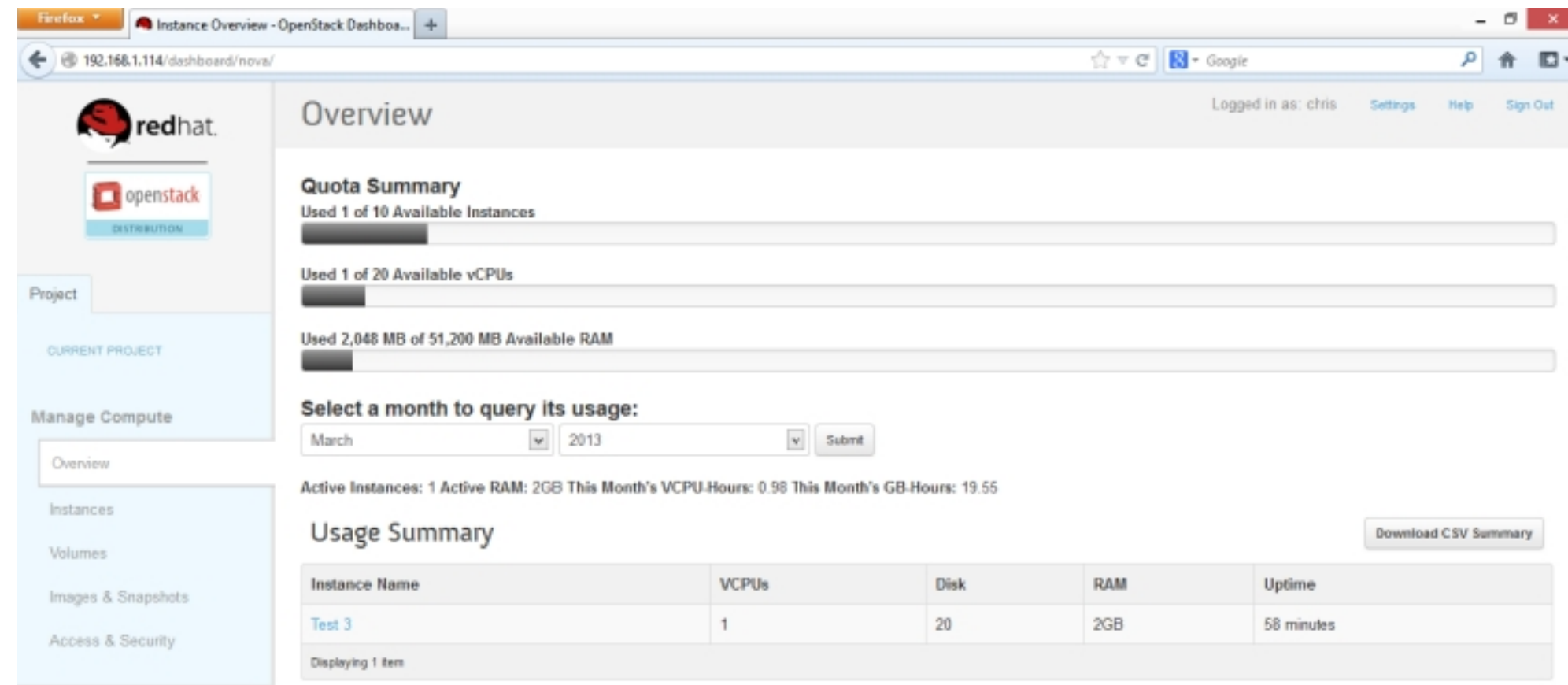
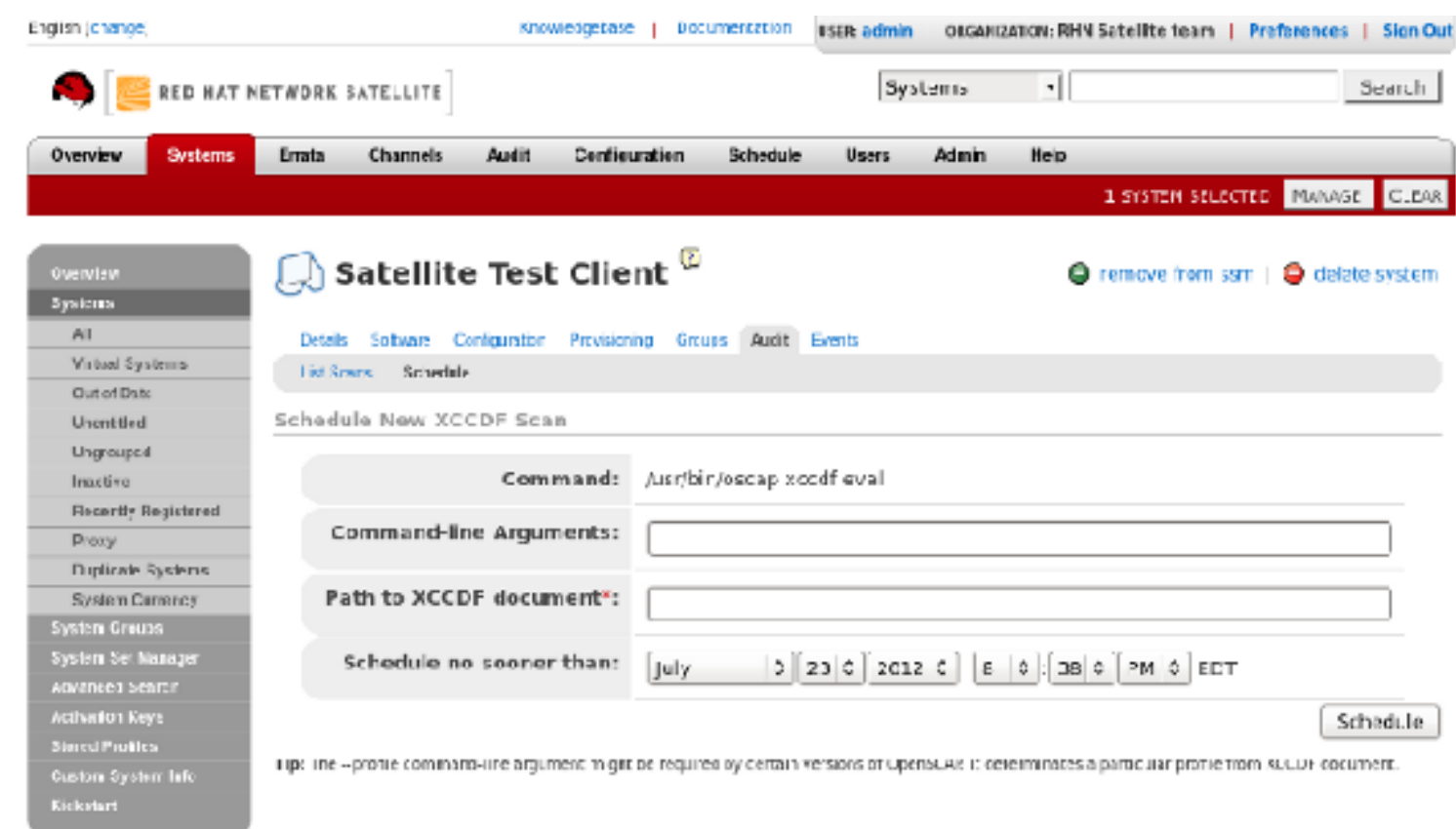
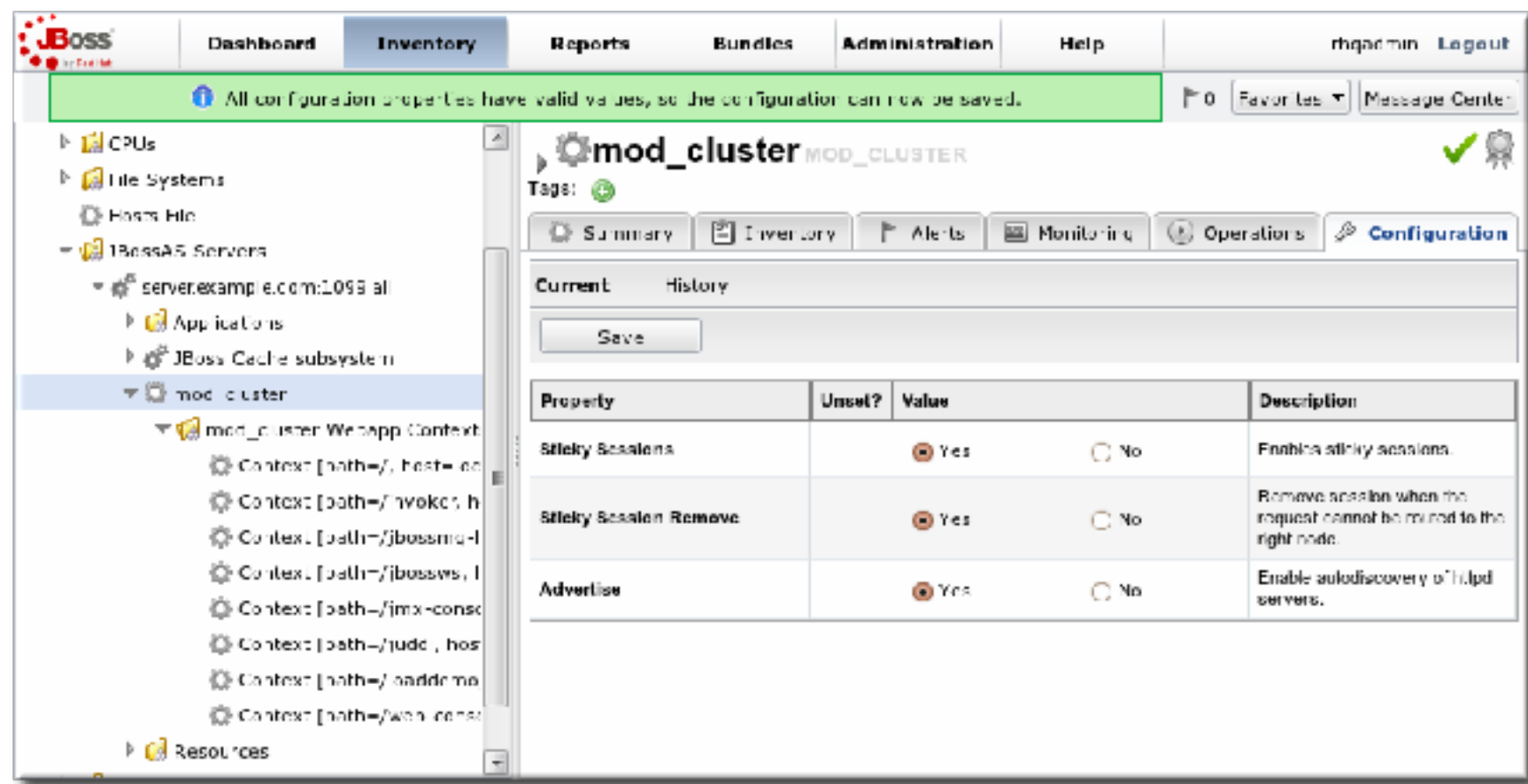
Version 3.53.0

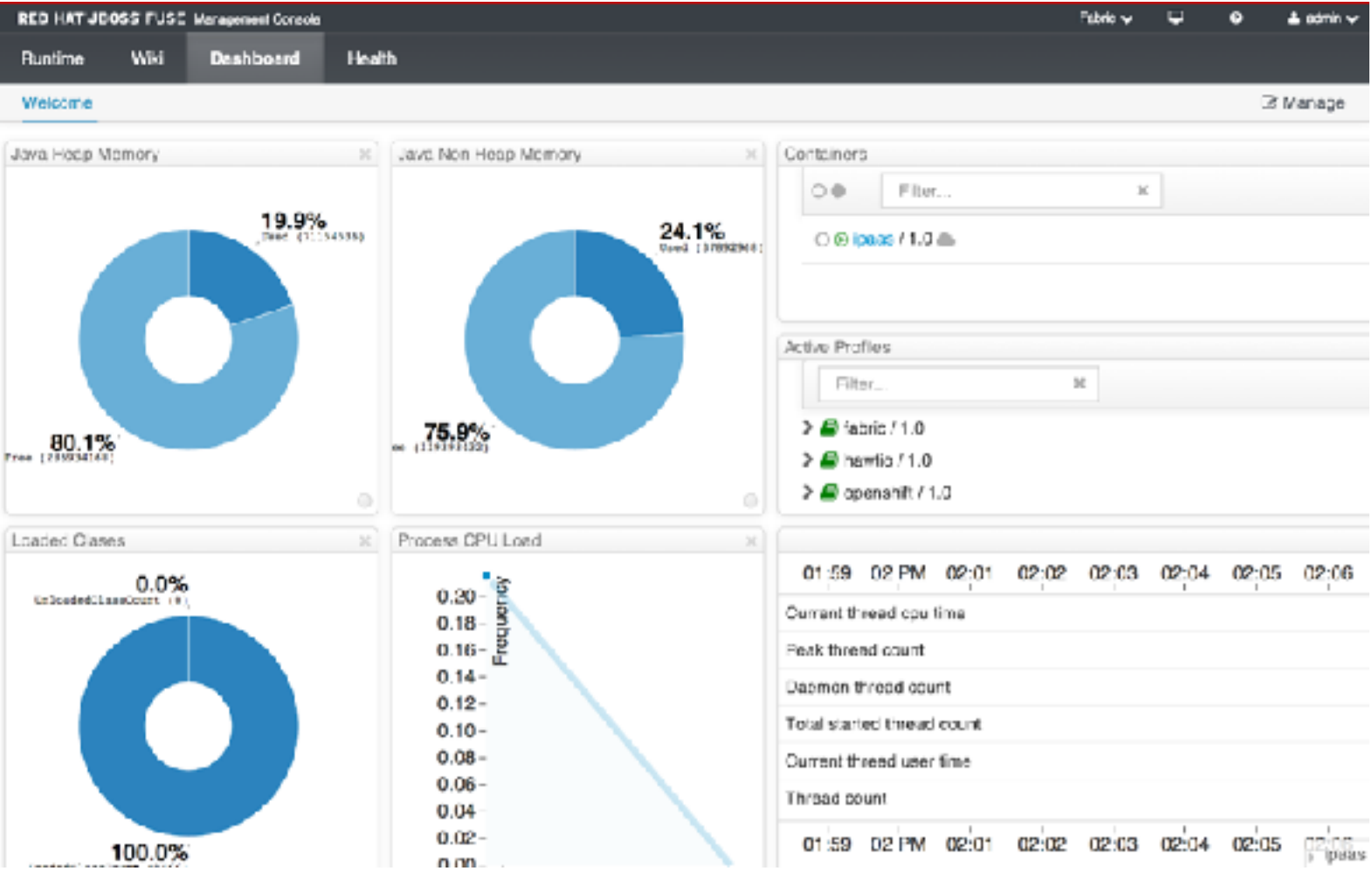




# The first success







RED HAT IDENTITY MANAGEMENT

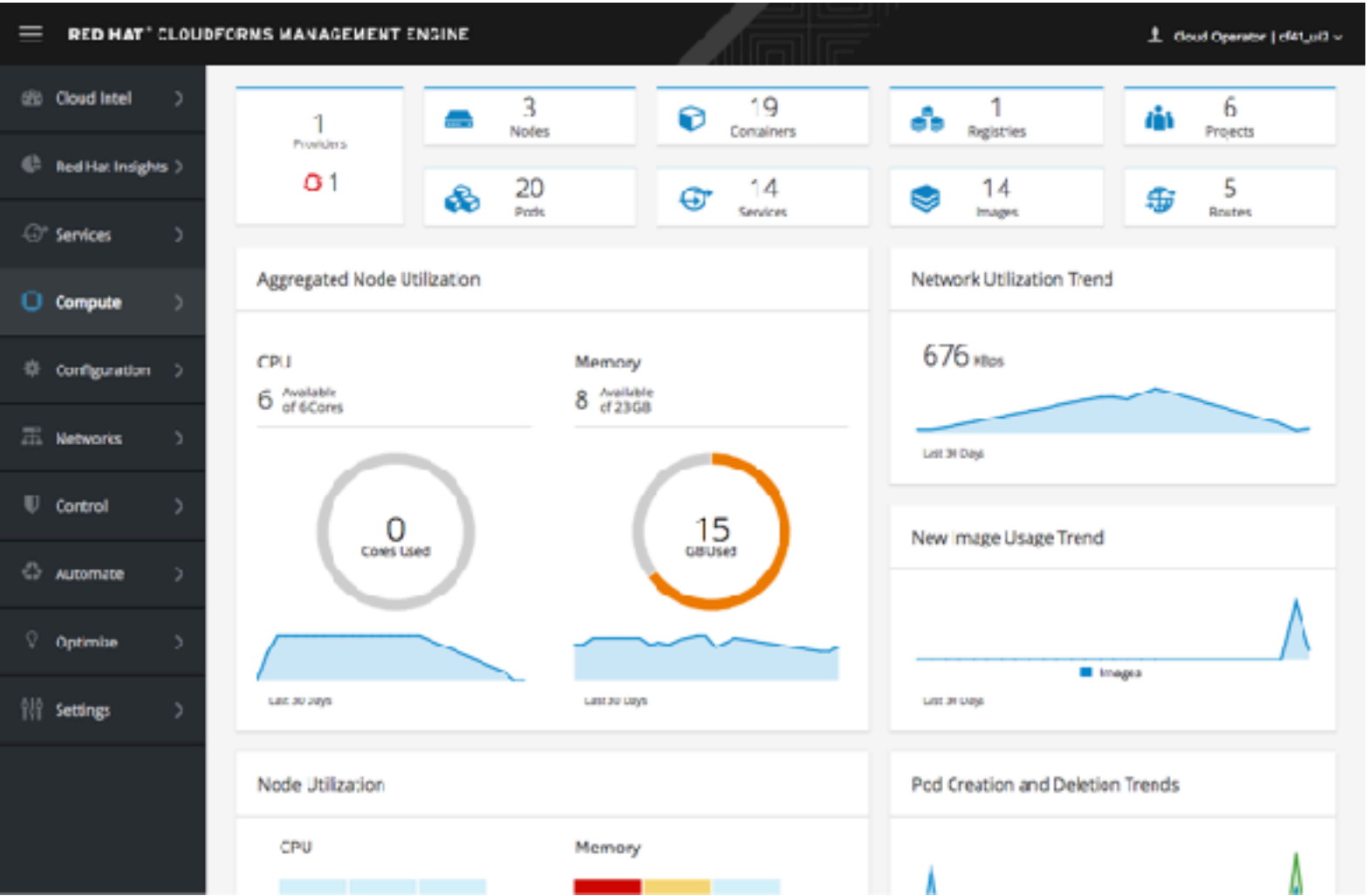
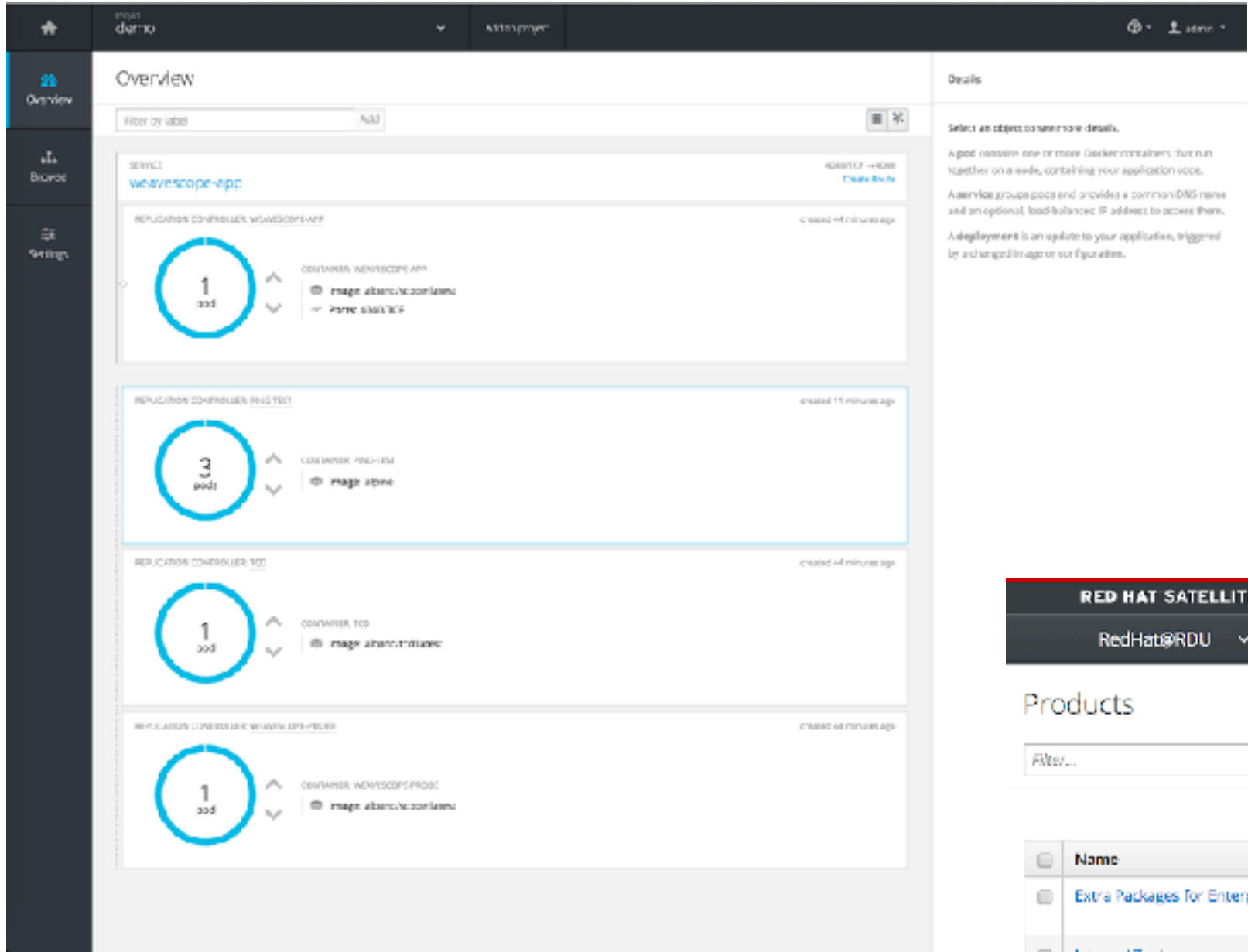
Red Hat Access Administrator

Identity Policy Authentication Network Services IPA Server

Users User Groups Hosts Host Groups Netgroups Services Automember

Active users

User login	First name	Last name	Status	UID	Email address
admin	Administrator	Administrator	Enabled	1890500000	



RED HAT SATELLITE

Red Hat Access Roxanne Hoover

RedHat@RDU Monitor Content Containers Hosts Configure Infrastructure Red Hat Insights Administer

Products

Name	Description	Sync Status	Sync Plan	Repositories
Extra Packages for Enterprise Linux	Extra Packages for Enterprise Linux	Last synced about 13 hours ago. 1 successfully synced repository.	Daily Sync (daily)	1
Internal Tools		Never synced	None	1
Jenkins	Jenkins	Last synced 5 months ago. 1 repository syncs have errors.	None	1
OVAL Data		Last synced about 5 hours ago. 1 successfully synced repository.	Daily (daily)	1
Puppet Forge	Modules from Puppet Forge	Last synced about 13 hours ago. 1 successfully synced repository.	Daily Sync (daily)	1
Red Hat Enterprise Linux Server		Last synced 5 months ago. 4 successfully synced repositories.	Daily Sync (daily)	5

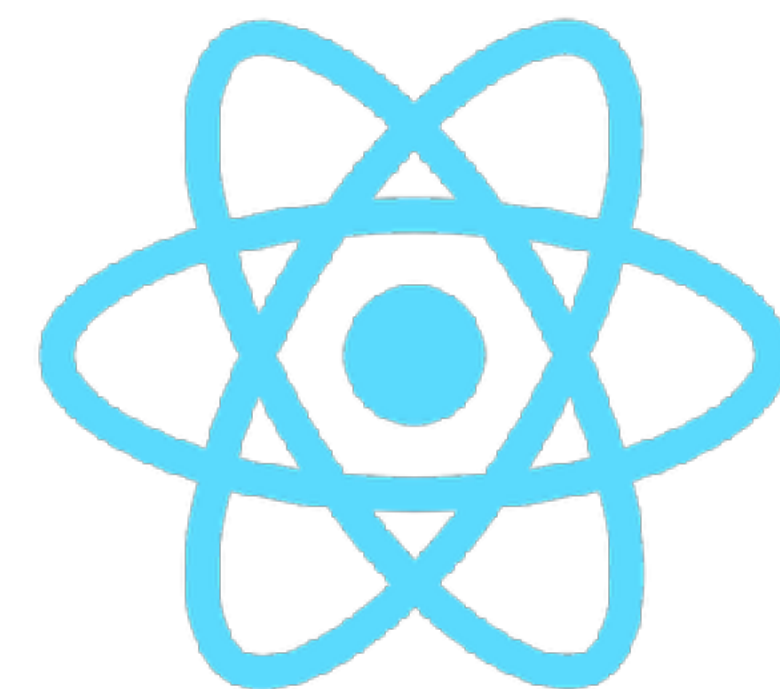
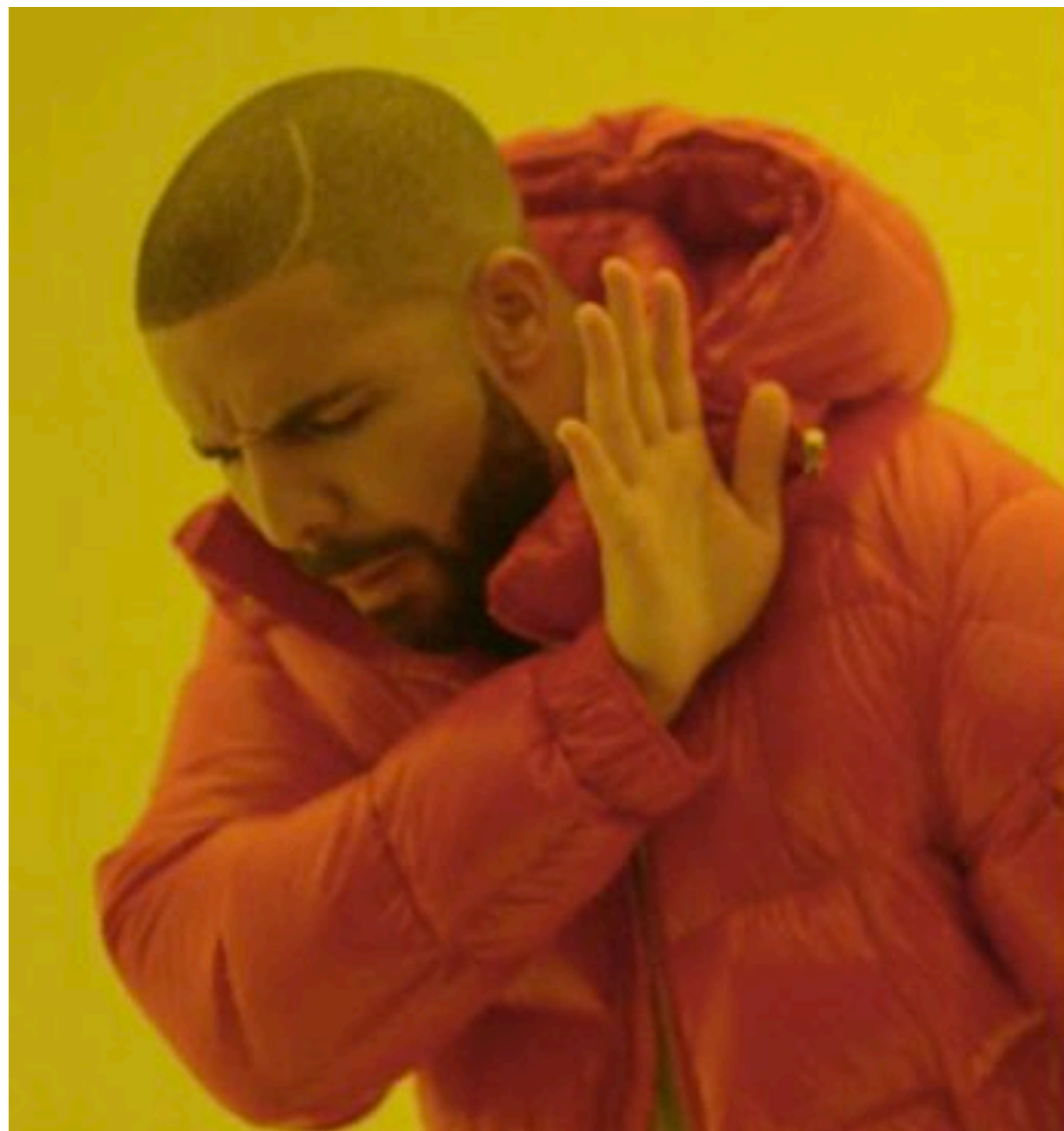






# Frontend Libraries

**The problem was  
that our engineers started using these libraries  
and we didn't have support,  
so our engineers ignored PatternFly.**

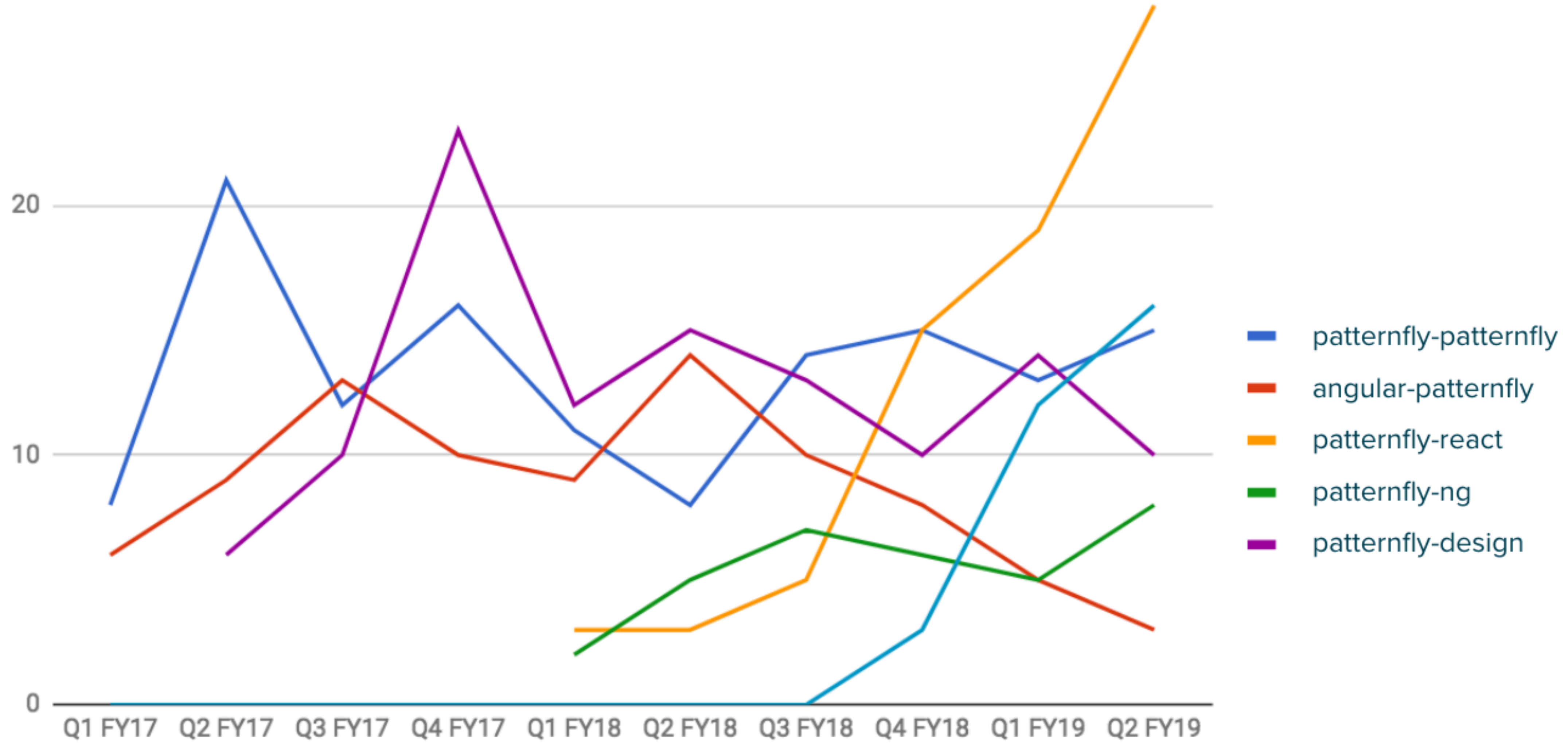




# INCONSISTENCY



**INCONSISTENCY**





# We learned

**We need a universal solution**

# HOW STANDARDS PROLIFERATE:

(SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC.)

SITUATION:  
THERE ARE  
14 COMPETING  
STANDARDS.

14?! RIDICULOUS!  
WE NEED TO DEVELOP  
ONE UNIVERSAL STANDARD  
THAT COVERS EVERYONE'S  
USE CASES.



SOON:

SITUATION:  
THERE ARE  
15 COMPETING  
STANDARDS.



# Modularity

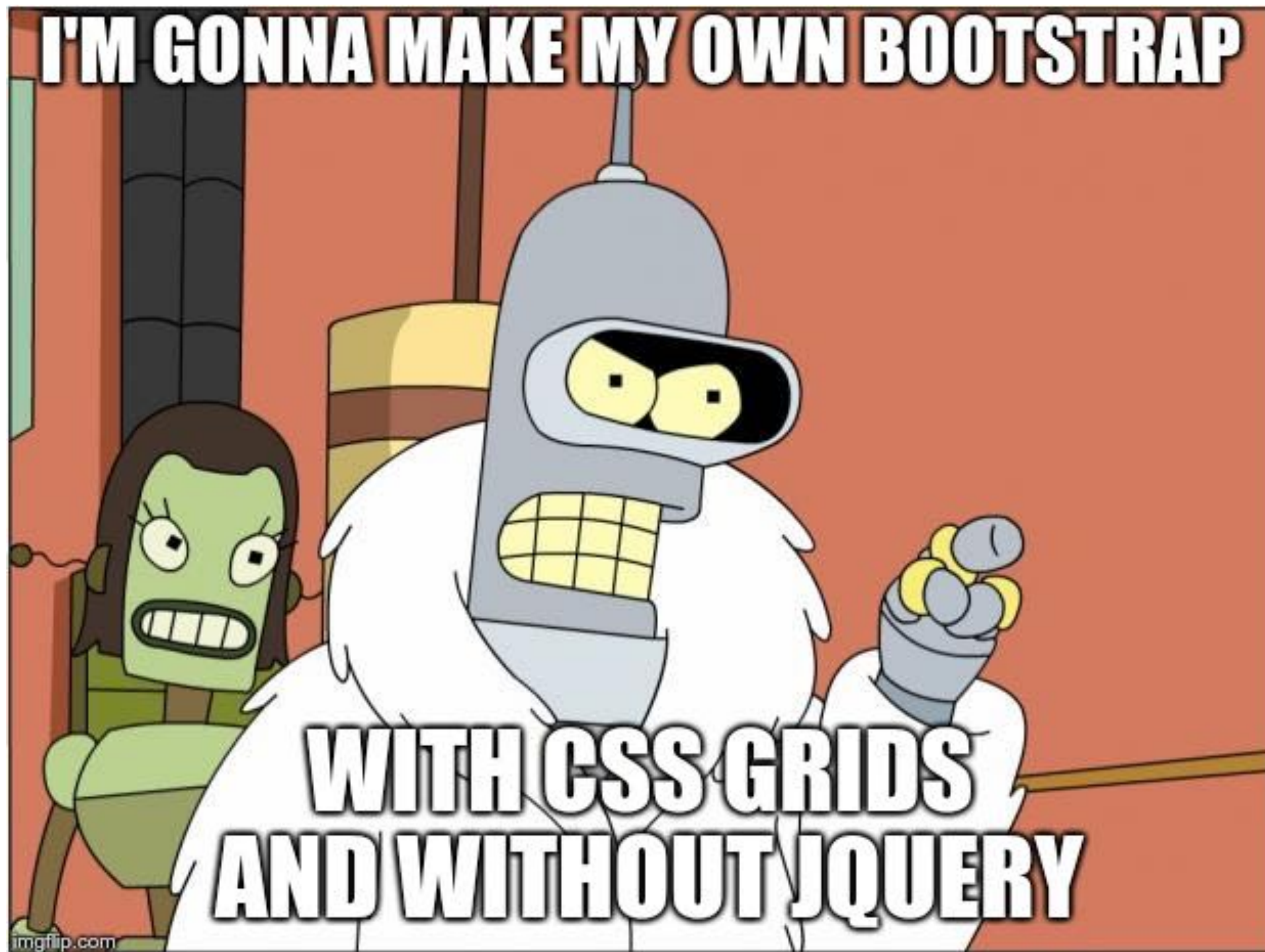
We <3 Components

- Remove any JavaScript from the core repo
- Split up PatternFly to very small components
- Each component acts as a mini-library
- Use only one framework to implement them -> React
- It can coexist with other frameworks to ease transition

# Bootstrap?



# We no longer need Bootstrap



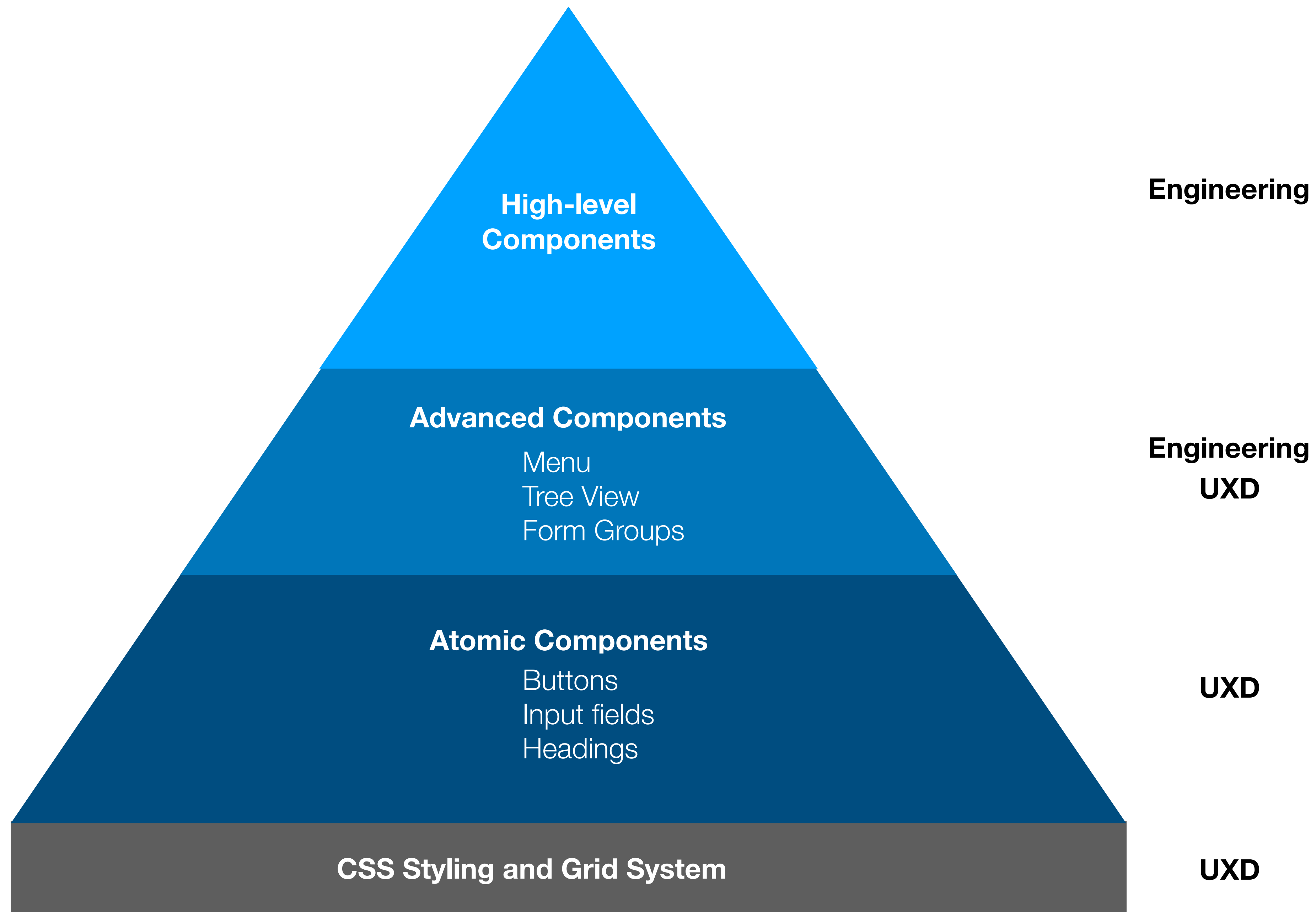






# Meet **PatternFly** Next

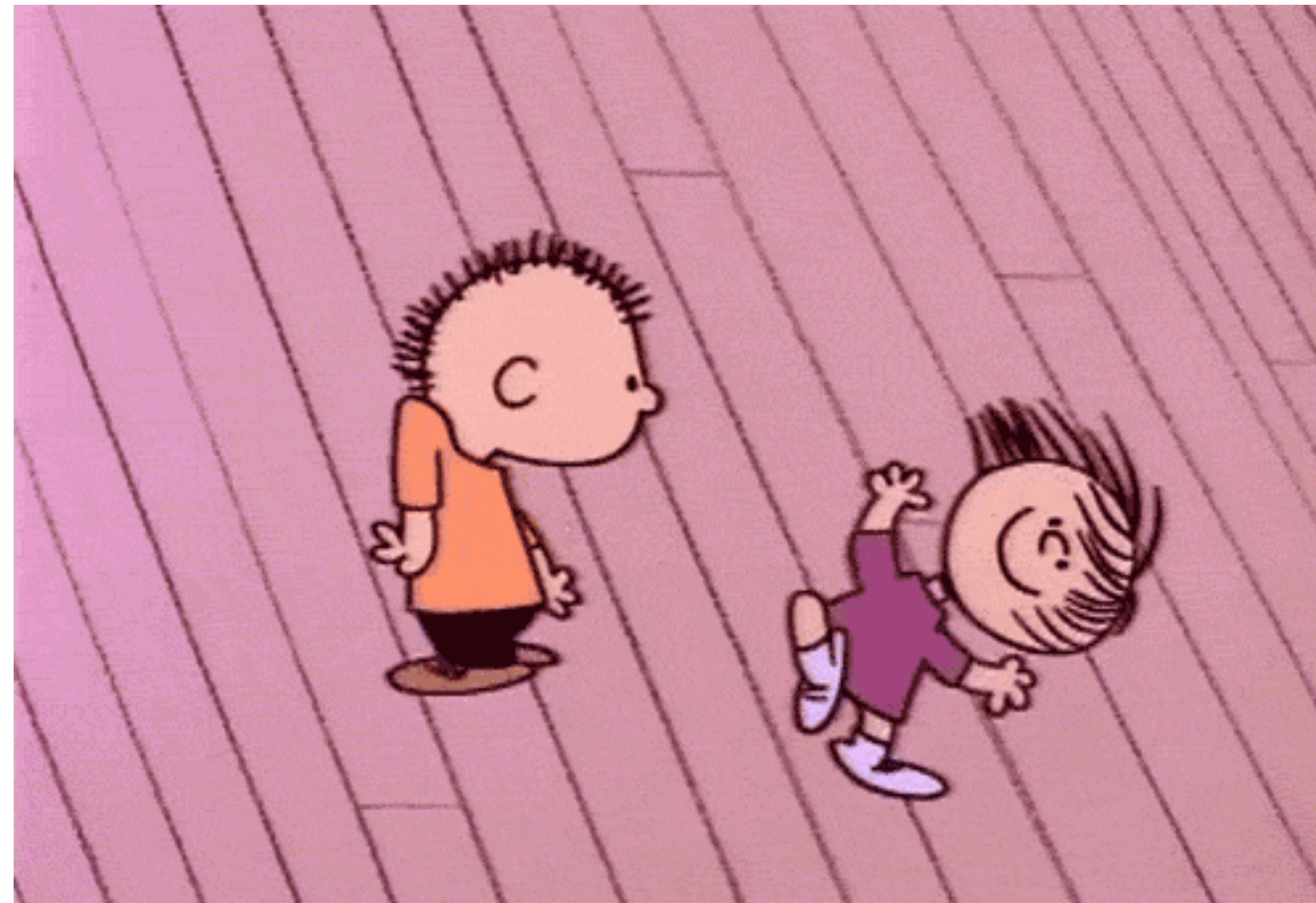
PF4

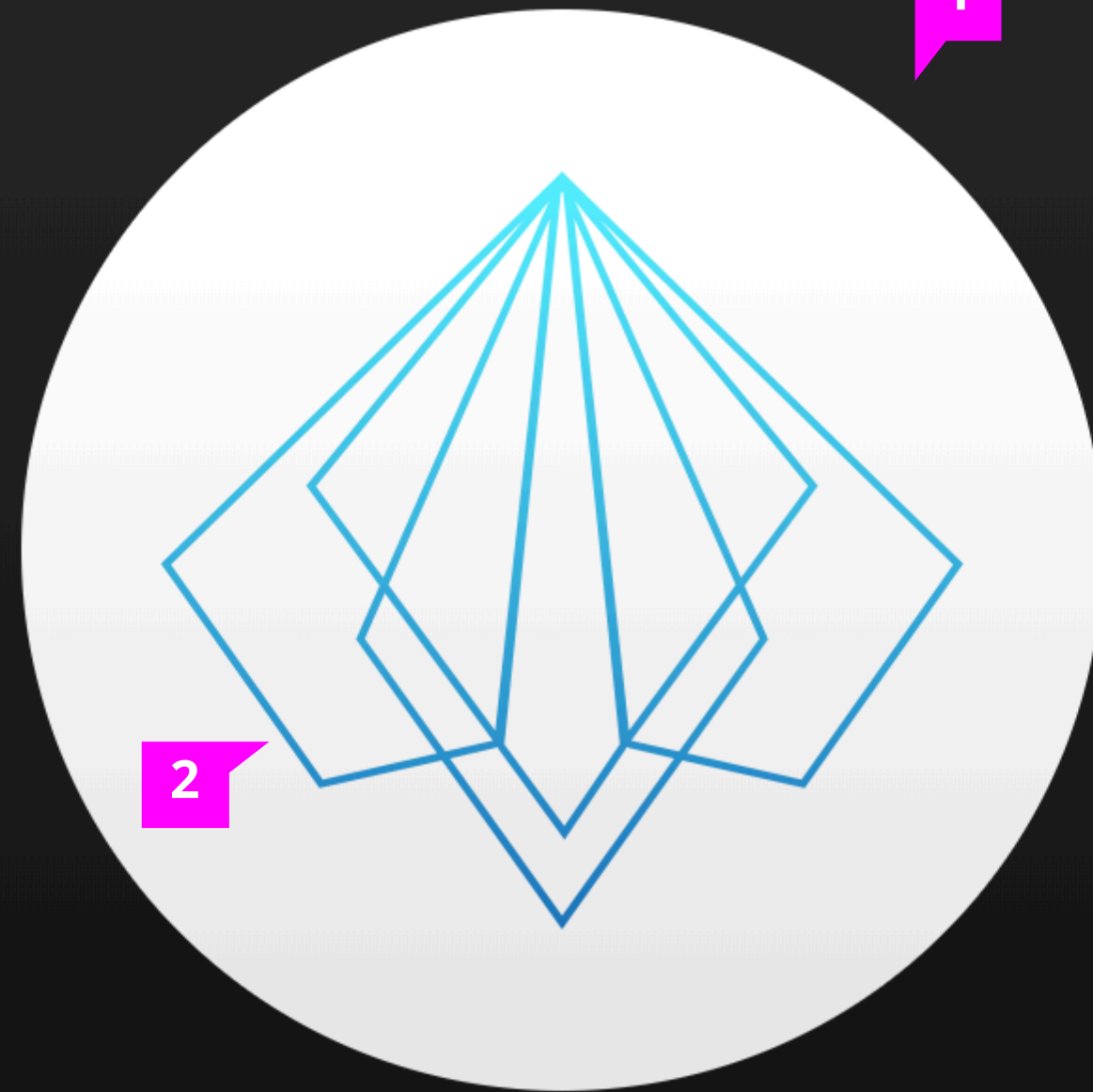


**This is how we**  
collaborate.



# It's *fun* to work with each other.





Font: Open Sans  
Size: 14  
**Weight: Bold**  
Color: White

Markup  
Color: FF00FF

# PatternFly

A community of designers and developers collaborating to build a UI framework for enterprise web applications.

55

“Consistency is one of the most powerful usability principles: when things always behave the same, users don’t have to worry about what will happen.”

**Jakob Nielsen**



Hey there is a problem! Yeah this is really messed up and you should [know about it.](#)

There might be a problem here! We are not really sure, but [it might be bad.](#)

Great job! This is really working out [great](#) for us.

This is some general information. You should [know about this.](#)

Hey there is a problem! Yeah this is really messed up and you should [know about it.](#)

X

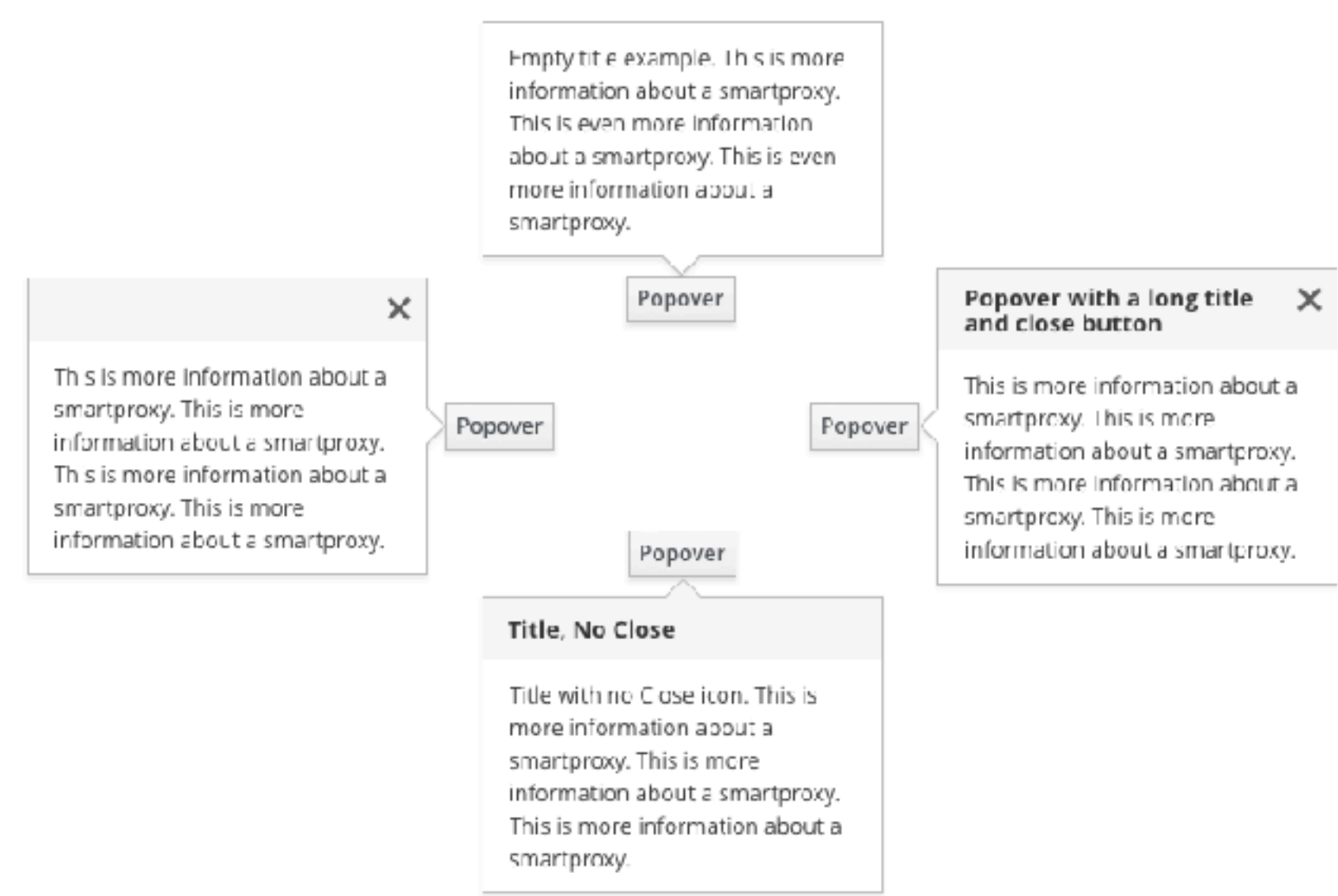
424242424242

DefaultSuccessDangerWarningPrimaryInfo

Added Datasources TestDS

Modified Datasources ExampleDS

Clear Messages



# RED HAT® CLOUDFORMS MANAGEMENT ENGINE

Username

Password

[Update password](#)

[Log In](#)

Region: Region 0

Zone: default

Appliance: cfme-5.9.1.2-TE12





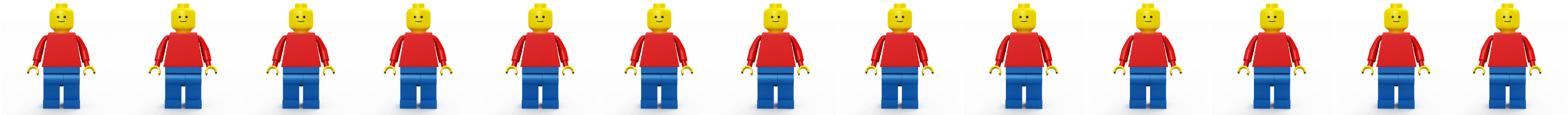
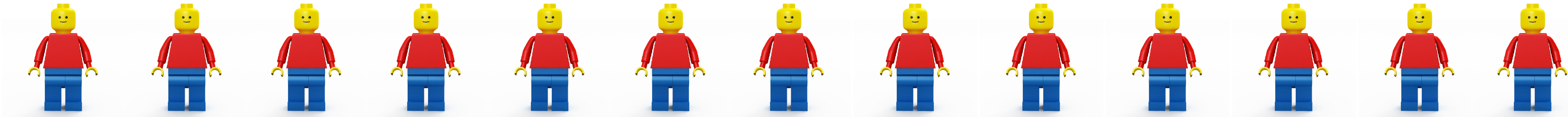
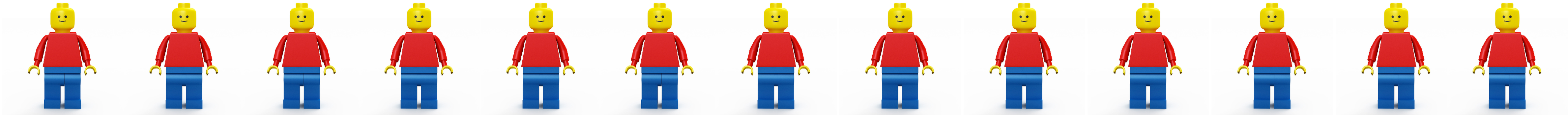
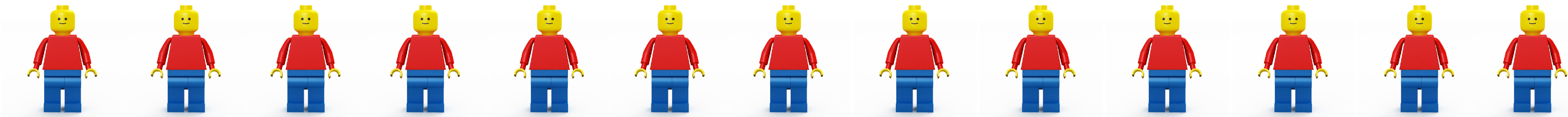
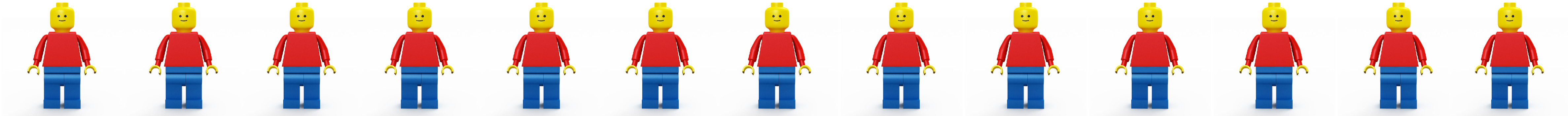
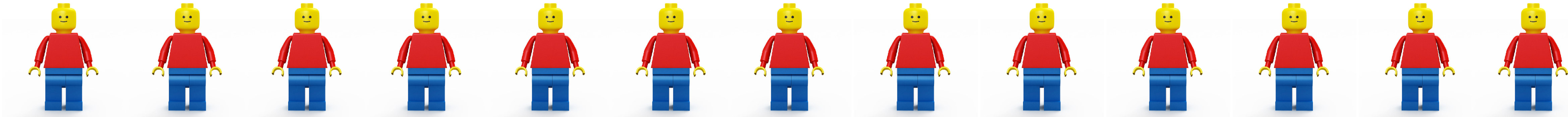
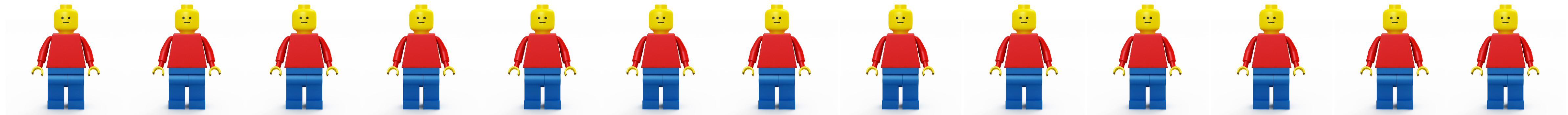




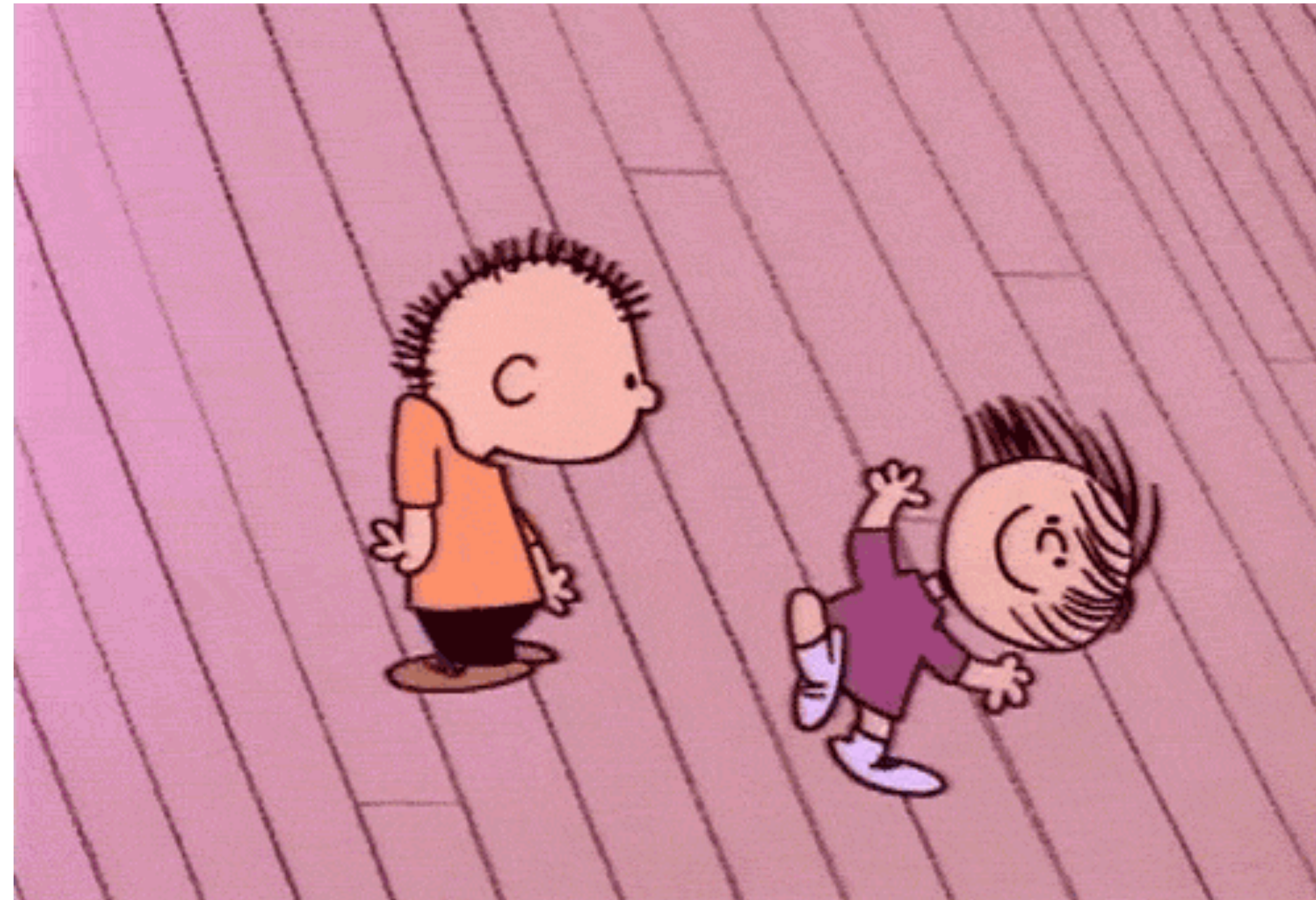


# UXD





It's *fun* to work with each other.



# Design + Engineer **teamwork**



*“Systems are build to change.”*

# Thank you.



# Thank you.



## Q&A

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