The Future of Microblogging

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Idea

The human race needs a way to share every aspect of one's life at all times.

If you're not sharing your pictures and words with the entire world, then what's even the point?

Twitter is good, but not good enough. Tweets are wordy and cumbersome.

Problem

Need a **simple, distributed, scalable** system to allow for constant microblogging and social validation.

Sharing pictures and text **at all times**

Deliver an infrastructure that can manage **high traffic usage** and scale to **large numbers of users**

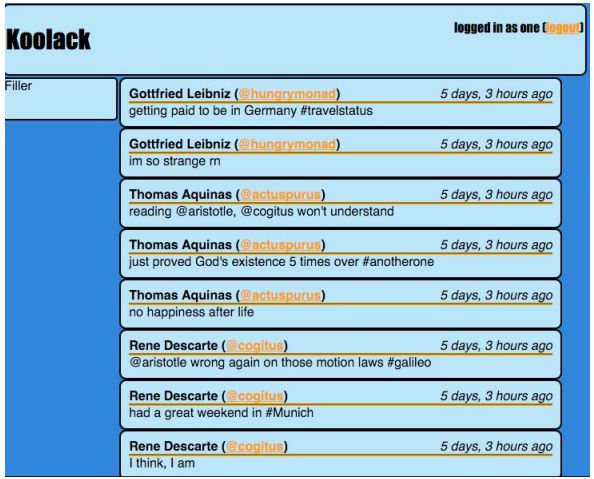
Koolack

Microblogging all the time, even right now.

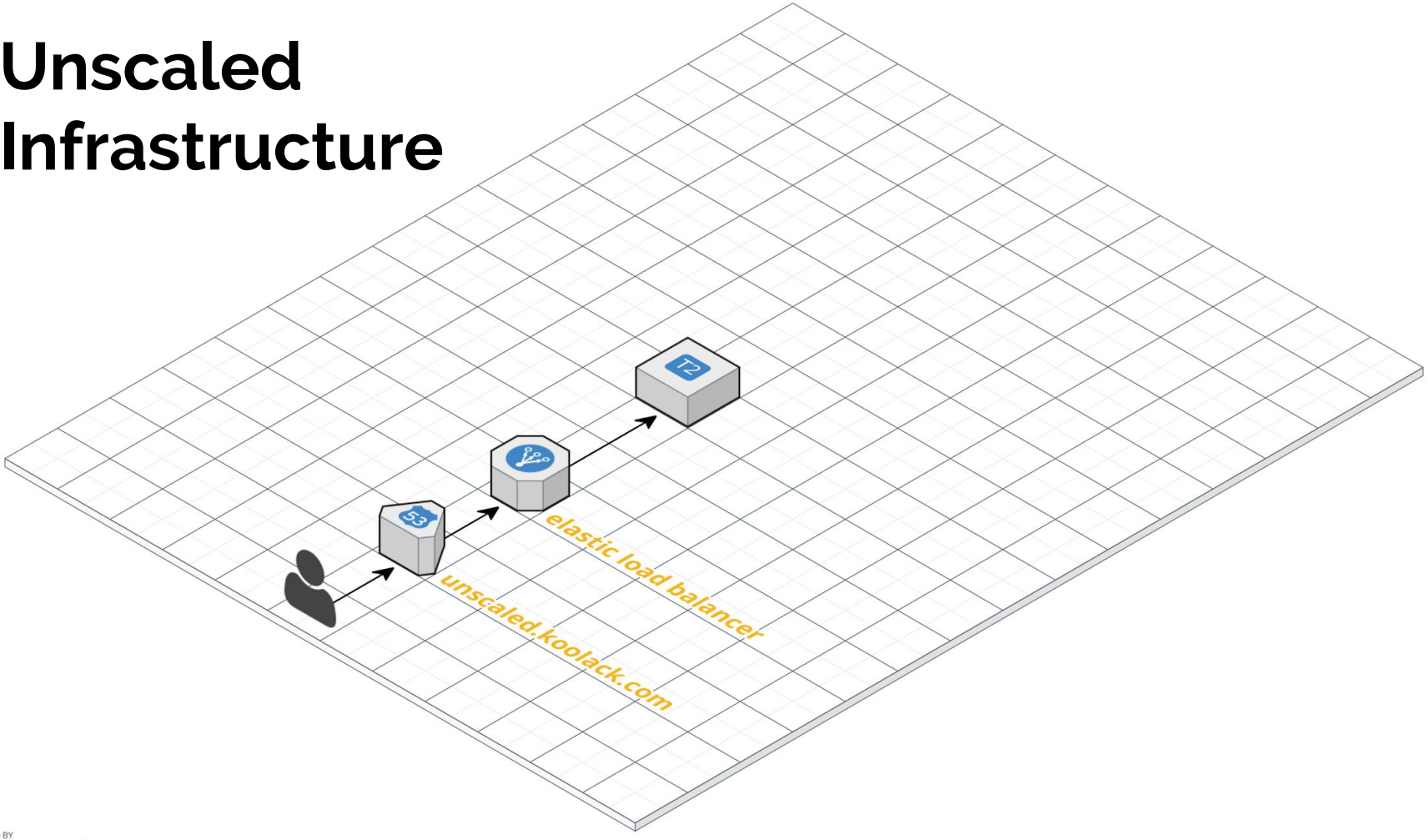
Koolack

Microblogging service - Twitter, but with dynamics and synergy

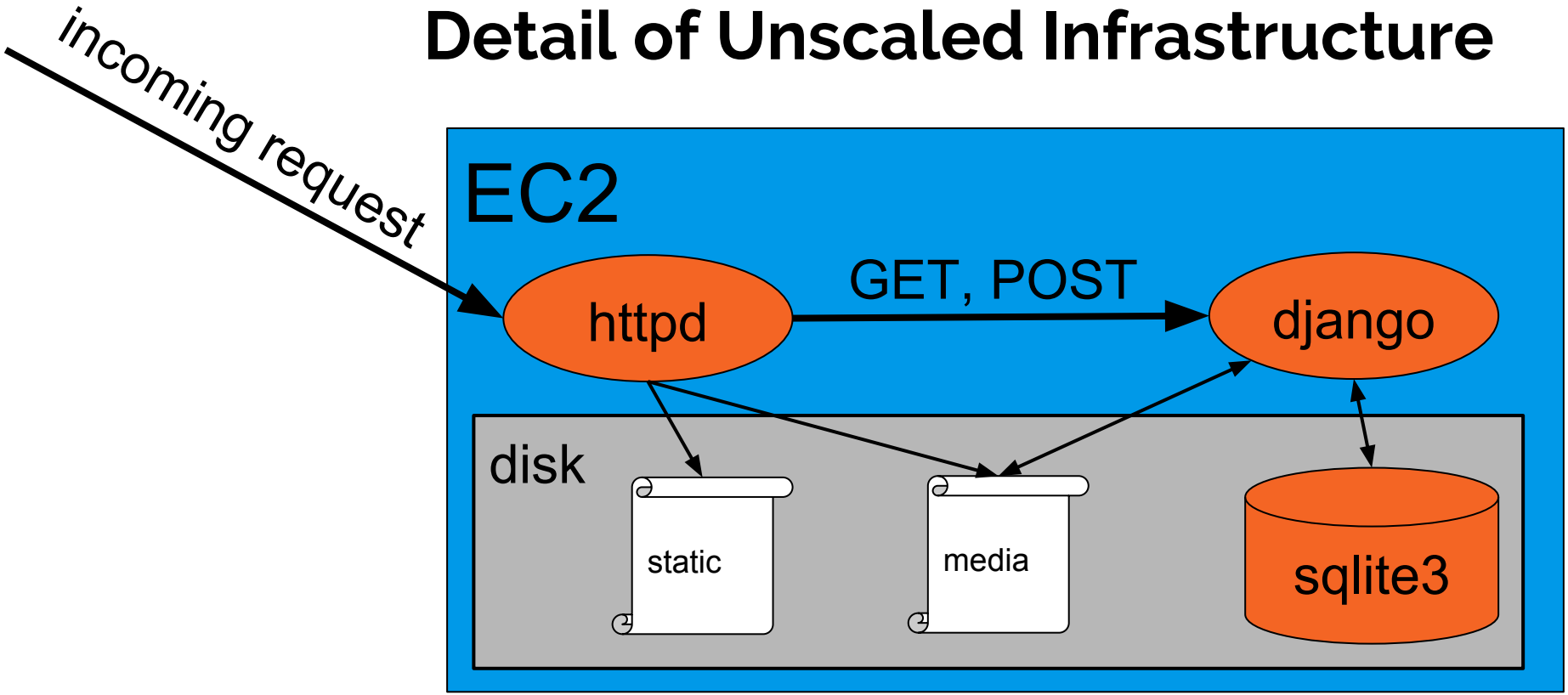
Users post Kools, can follow/unfollow other users, and can “ack” others’ Kools



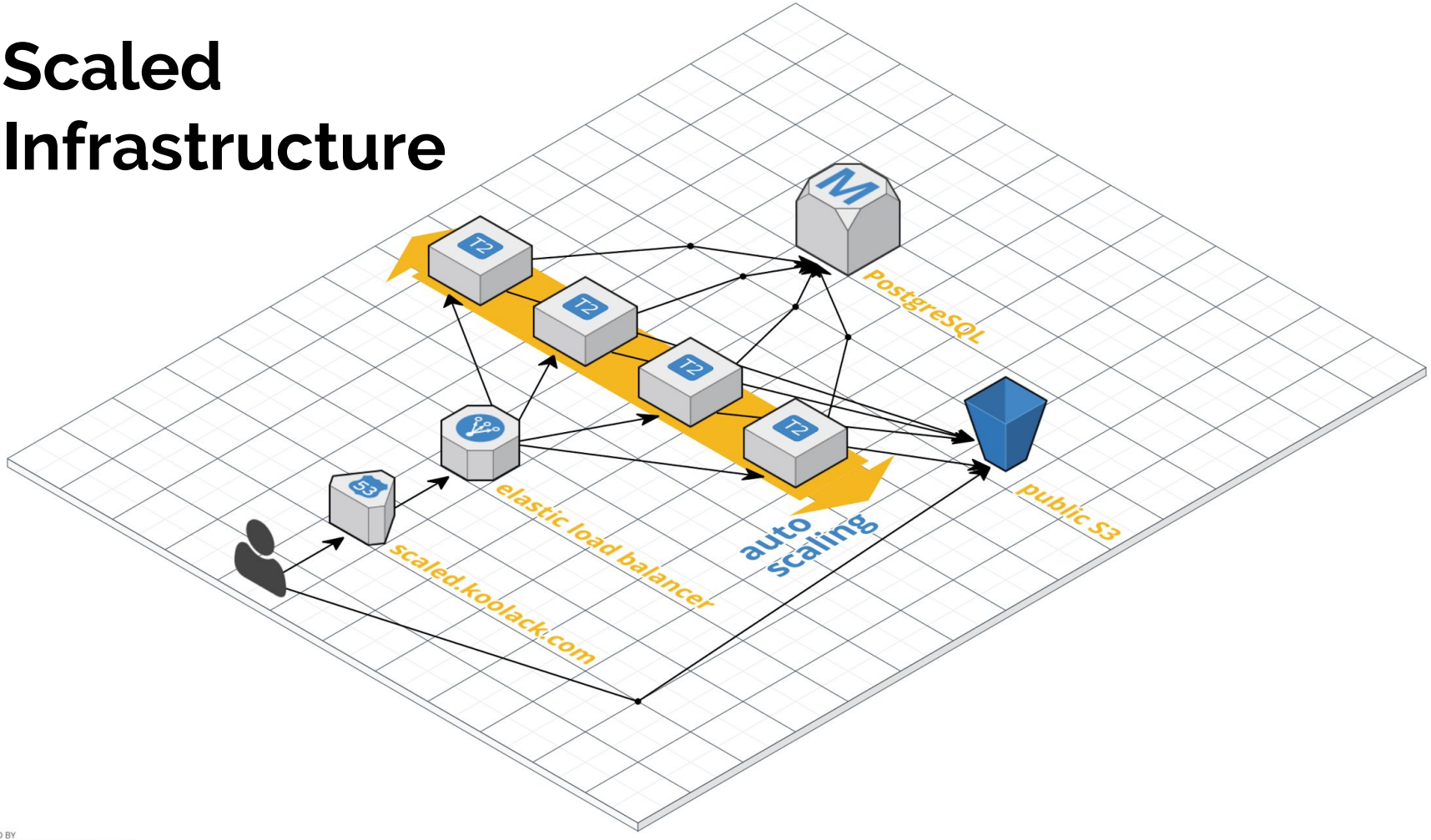
Unscaled Infrastructure



Detail of Unscaled Infrastructure



Scaled Infrastructure



Django ORM with NoSQL?

SQL	Django API
SELECT * FROM kools WHERE id = 12343	my_kool = Kool.objects.get(id=12343)
SELECT author FROM kools WHERE id = 12343	my_author = my_kool.author
UPDATE kools SET content = ‘updated content’ WHERE id = 12343	my_kool.content = ‘updated content’ my_kool.save()
SELECT * FROM kools, follows WHERE kools.author = follows.followee AND follows.follower = ‘username’	Kool.objects.filter(author__followed_by=my_author)

Attack methodology

Use PhantomJS to test high traffic

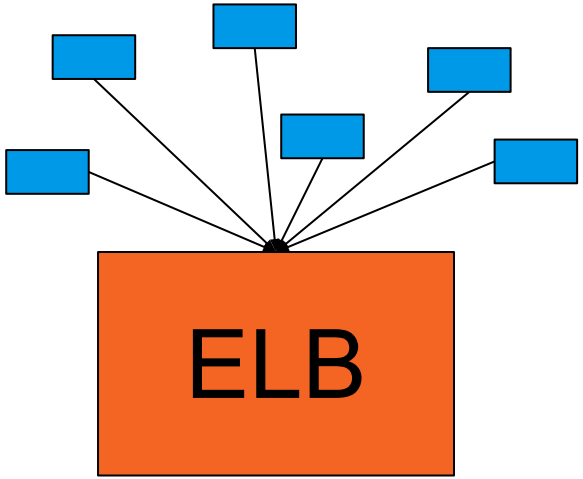
Create scripts that automate standard user processes

Randomize elements of these scripts and run them simultaneously and/or subsequently

Use internal testing features to measure performance on scaled vs unscaled

Performance Metrics

- client-side performance or server-side performance?
- Elastic Load Balancing + Amazon CloudWatch = metrics!
- req/s measures overall performance
- increase number of clients until req/s reaches limit
- Elastic Beanstalk to add more EC2



One more thing...

Future plans

Neaten up interface - aesthetic and functional purpose

Finalize scaling

Complete testing