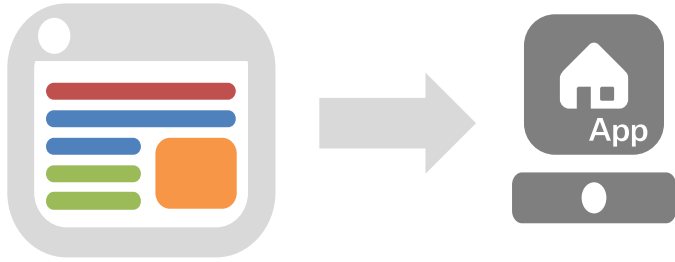


# Pushing the DevOps Envelope

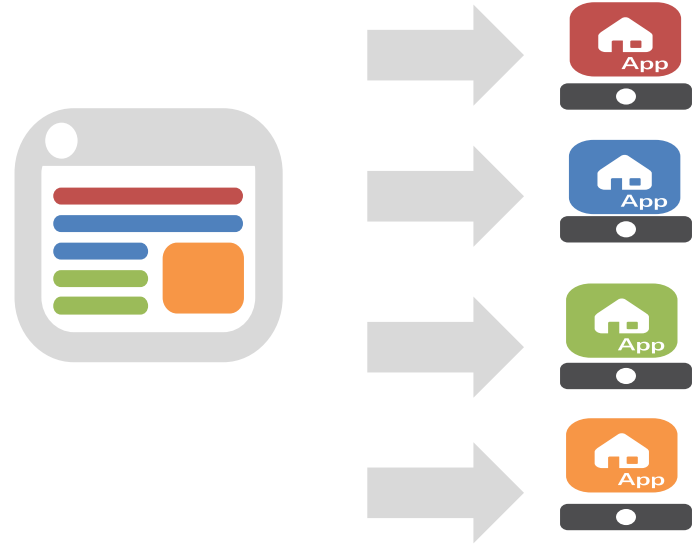
How Microservices Architecture is  
Expanding DevOps to the Network

Lori MacVittie  
Principal Technical Evangelist | F5  
@Imacvittie

# What is (are?) microservices?

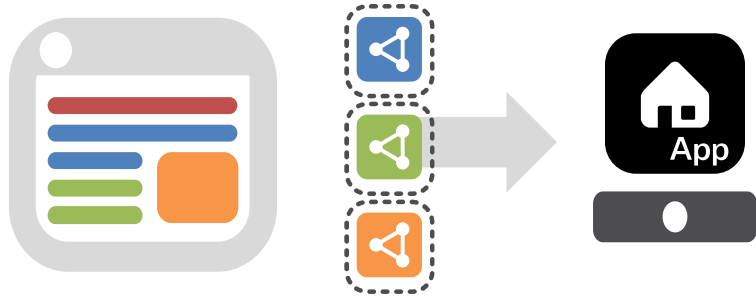


*MONOLITHIC*

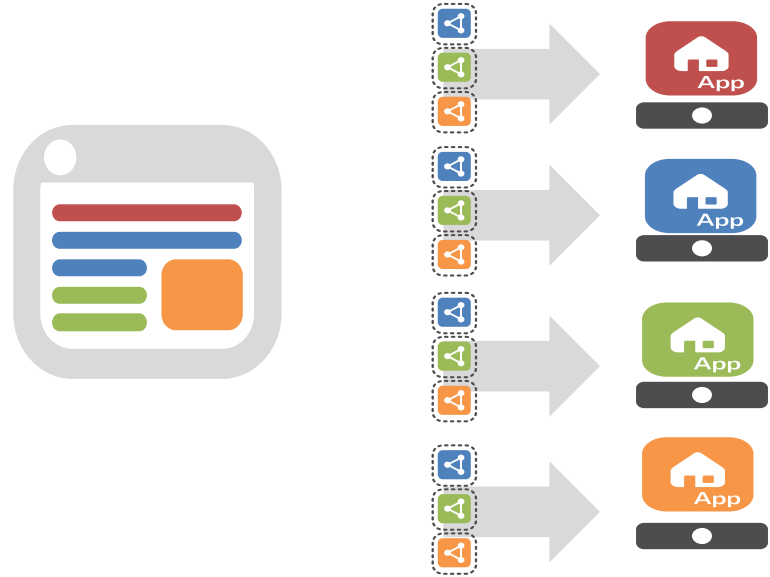


*MICROSERVICES*

# So?

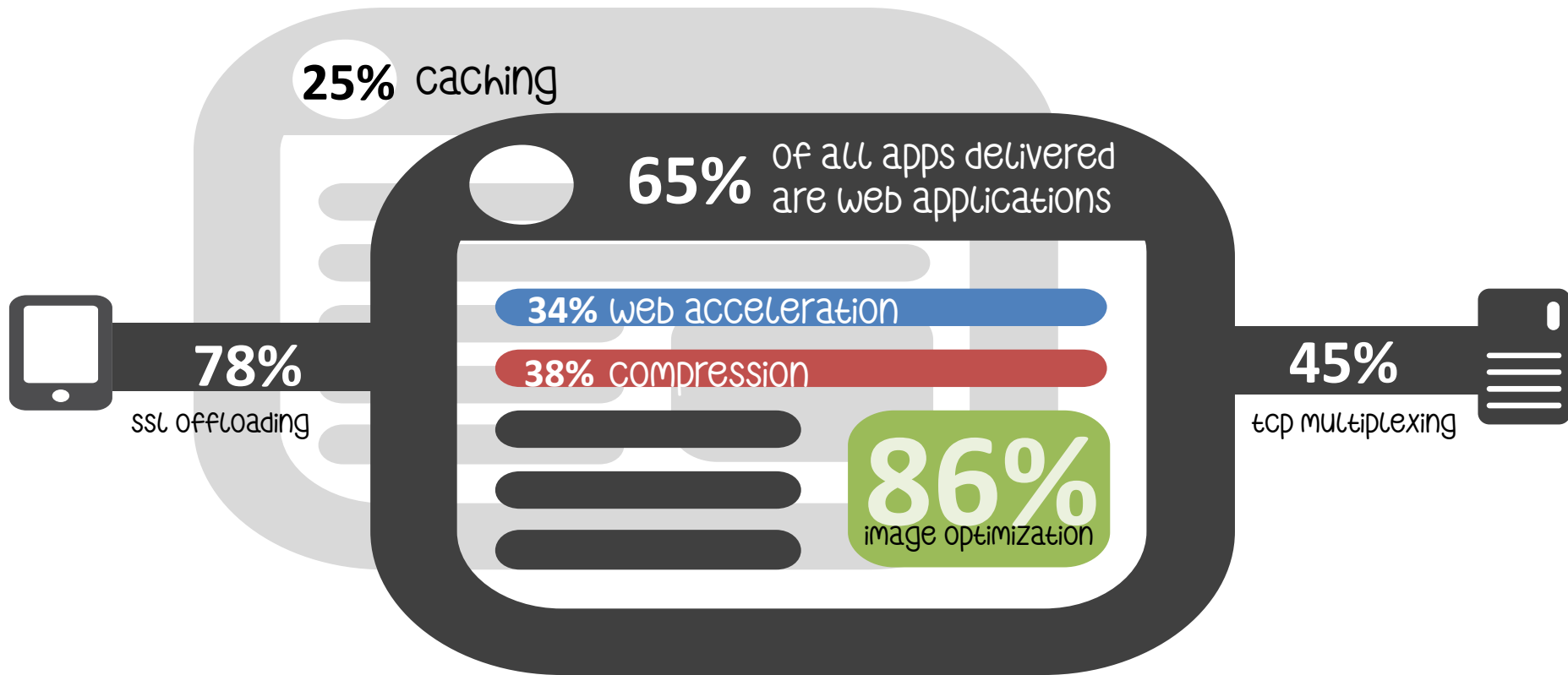


One set of services



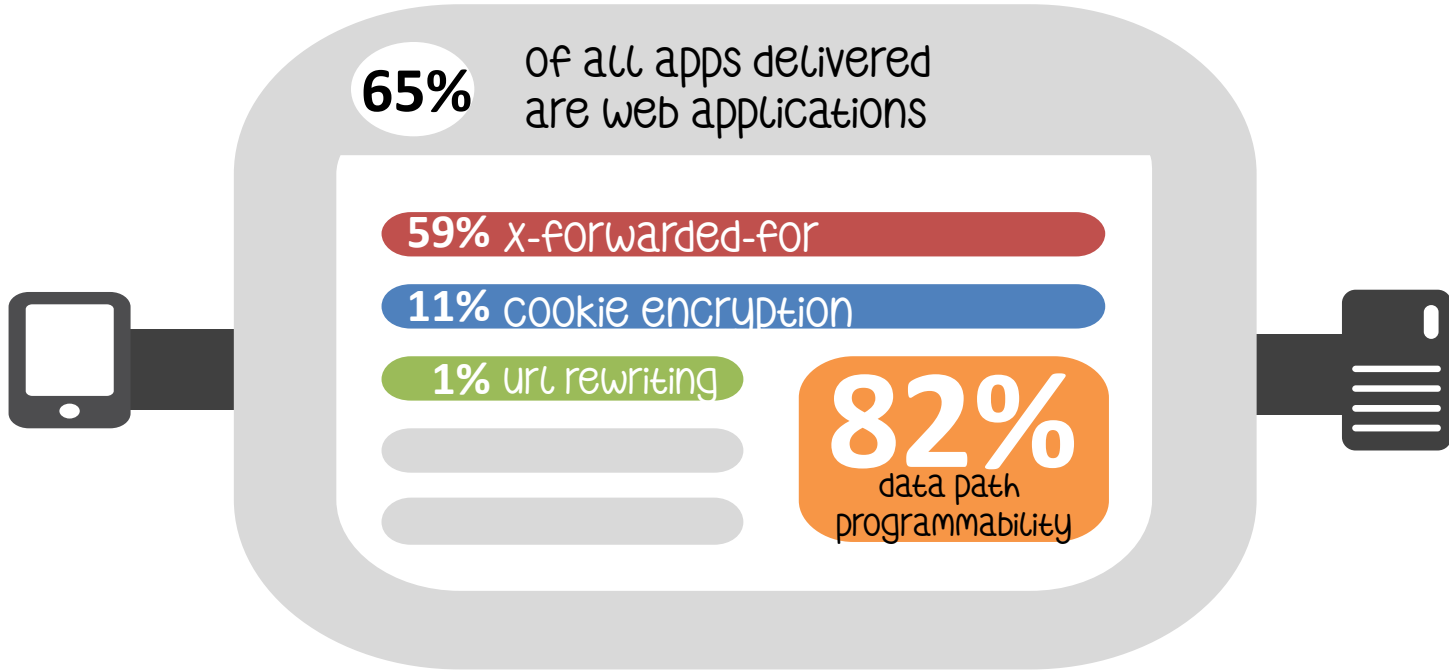
Many sets of services

# What services?



SOURCE: F5 iHealth Mar 2015

# What other services?



# Some of those services are

In the app



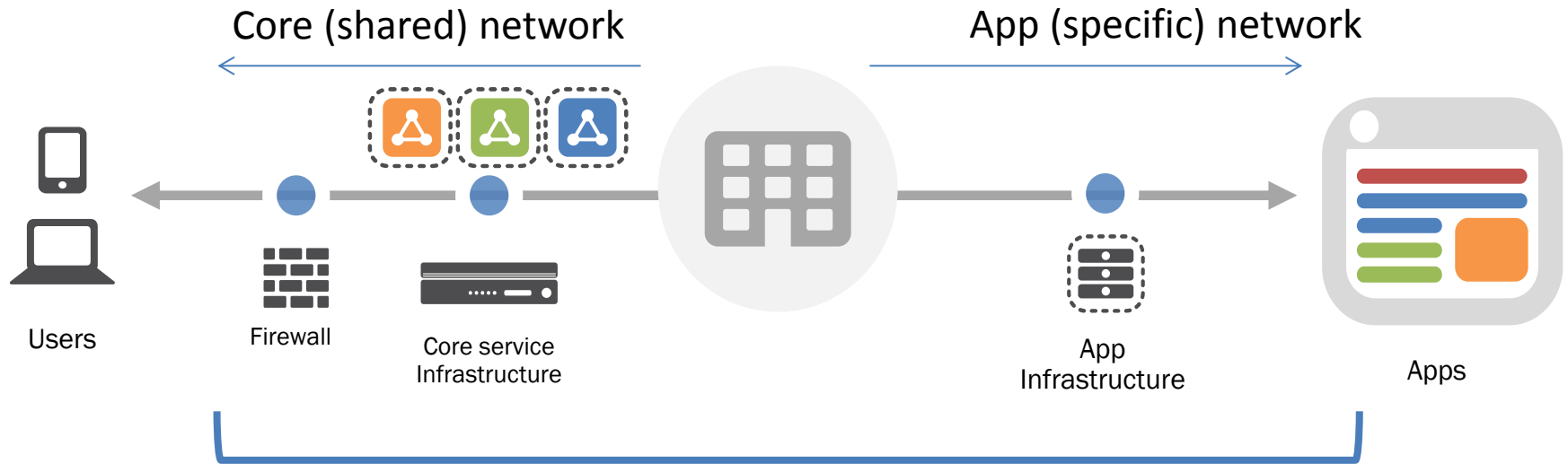
Cookie encryption  
compression

In the network



caching  
URL rewriting  
load balancing  
Cookie encryption  
compression

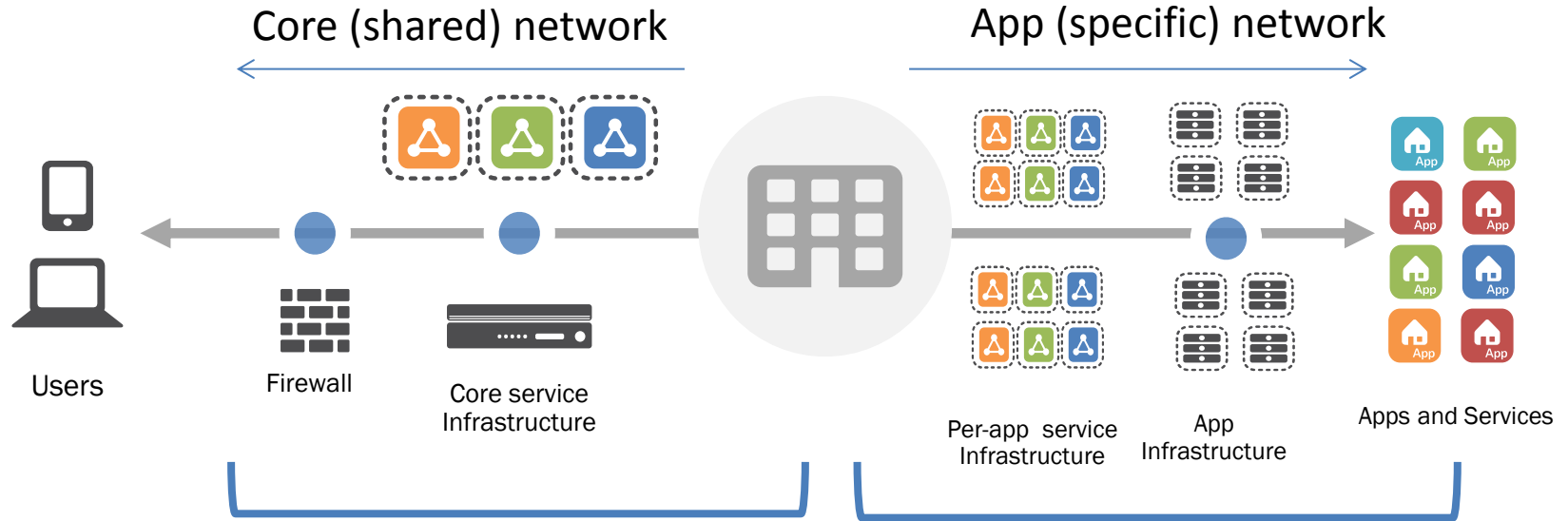
# Monolithic Service Architecture



- Low rate of change
- High cost of change
- Low tolerance for disruption

**PRIORITY: RELIABILITY**

# Microservice Architecture



- Low rate of change
- High cost of change
- Low tolerance for disruption

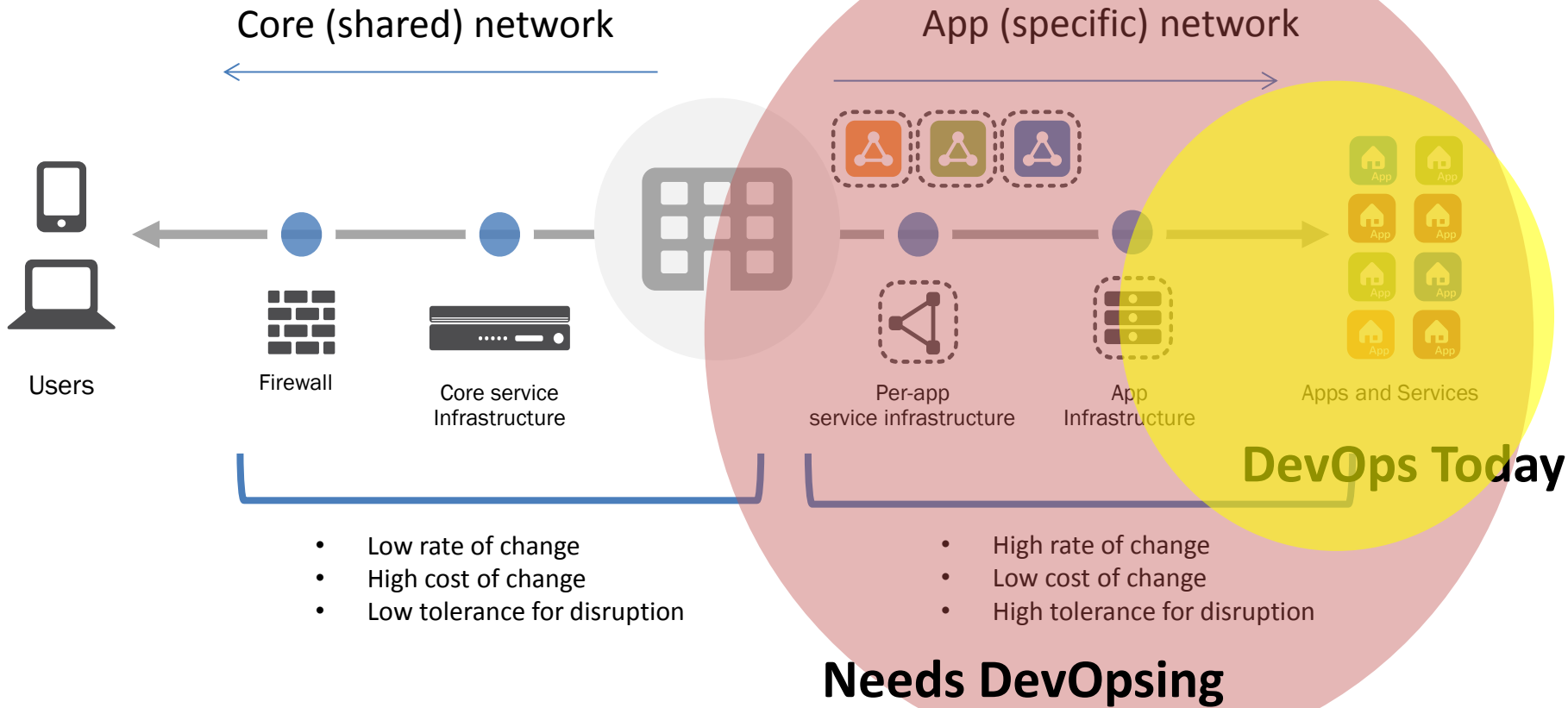
**PRIORITY: RELIABILITY**

- High rate of change
- Low cost of change
- High tolerance for disruption

**PRIORITY: AGILITY**



# Microservice Architecture



# Some services in need of DevOps are

In the network



caching

URL rewriting

load balancing

Cookie encryption

compression

# Which is a problem because



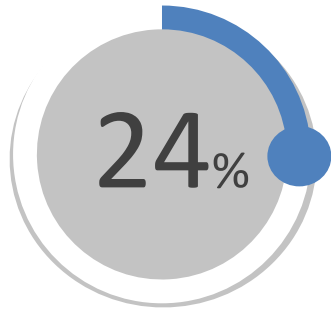
**44** Organizations citing biggest challenge to application deployments is time to provision **NETWORK** services.

PERCENT

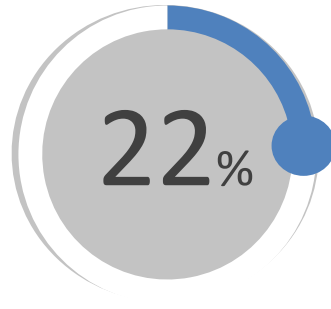
**43** of IT professionals surveyed say that once an application completes the dev process, it takes a **week or more** to move into production; for 14% of those, it's a **month or more**.

PERCENT

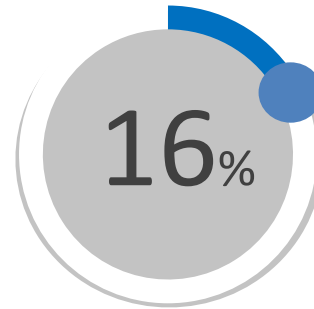
# Why is that?



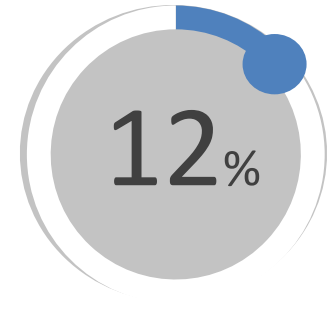
NETWORK  
CHANGES ARE  
SLOW



CHANGES CAUSE  
SERVICE  
DISRUPTION

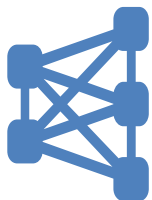


APPLICATION  
CHANGES  
REQUIRE  
NETWORK  
CHANGES



HARD TO  
MANAGE  
CHANGES TO THE  
NETWORK

# Because



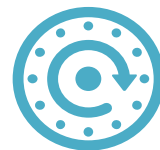
High Network  
Complexity

+



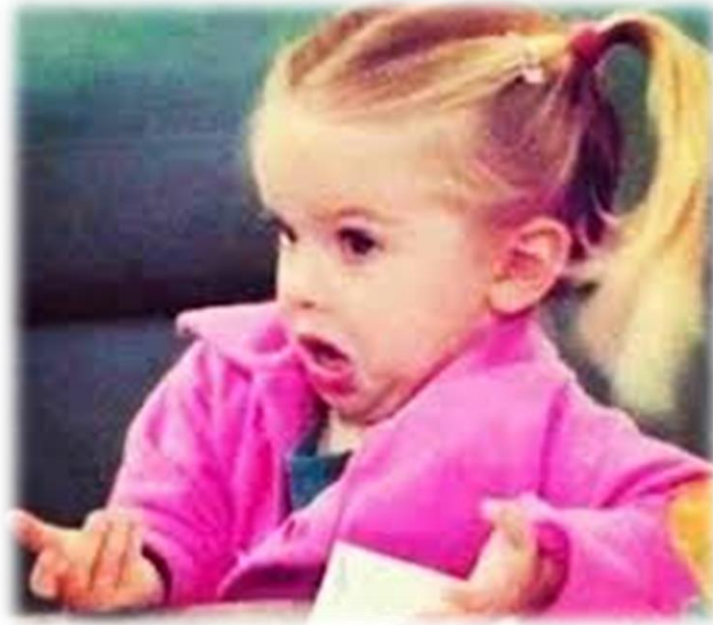
Lots of boxes

=



Lengthy deployment  
processes

# How do we fix that?



# DevOps the Network Things

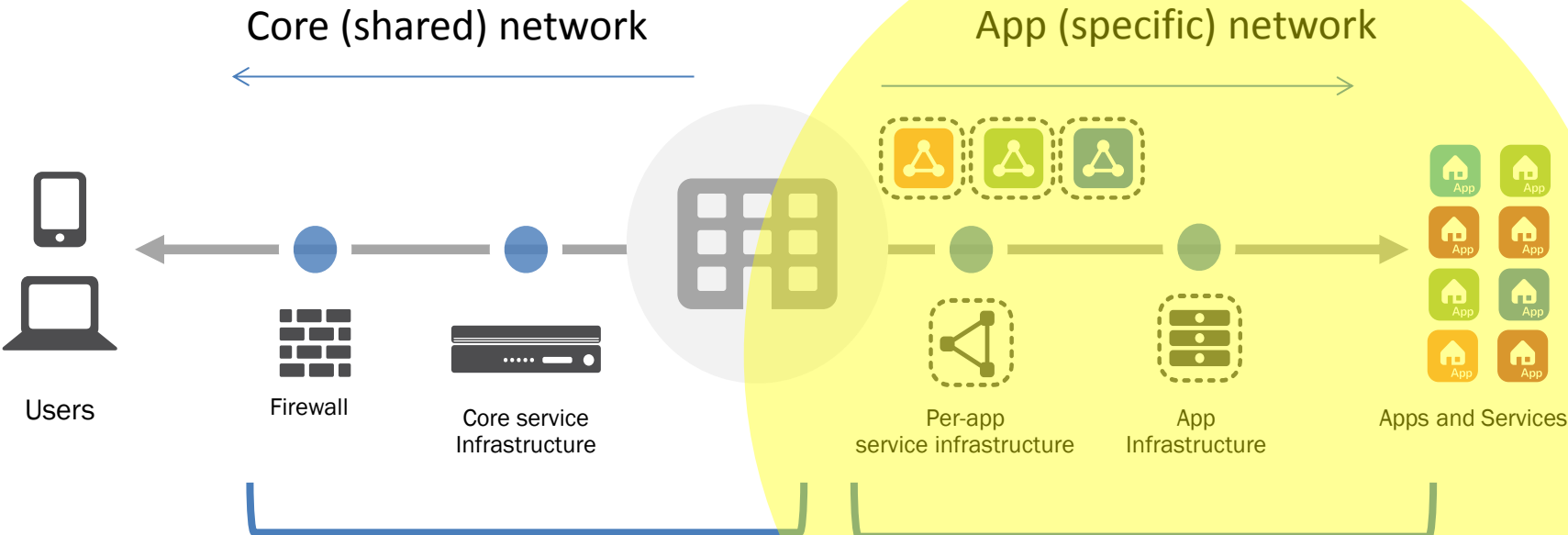


# DevOps the Network Things

- Frictionless software
- Per Application deployment
- Scale Out software-only
- Low-cost / No-cost
- APIs, SDKs and community
- Integration with tools (Puppet/Chef)



# DevOpsing the network leads to a microservices-friendly environment



- Low rate of change
- High cost of change
- Low tolerance for disruption

- High rate of change
- Low cost of change
- High tolerance for disruption

# Thank You

@Imacvittie

