

# What Kind of Work Will Containers Do

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**Stateless:** Does not keep any changes or data

# Stateful vs Stateless

**0**



Stateless App



**Stateless:** Does not keep any changes or data

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# Stateful vs Stateless

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Stateful App



**Stateless:** Does not keep any changes or data

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# Stateful vs Stateless

Q: Are containers just for stateless apps and services?

A: Docker and containers can handle stateful and stateless workloads



# Containers and Modern Stateless Apps

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“Hypervisors revolutionized IT.”

**What are Containers module**



# Hypervisor Virtualization



Let us keep our existing apps

- Simple migrations
- Made life easy



Let us keep our existing apps

- We've still got our legacy apps

*donkeys years ago* = ages ago



# Containers

We *could* deploy some of our legacy apps directly inside of containers...



We get to develop apps that are:

- modern
- scalable
- self-healing
- portable

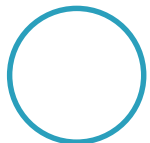
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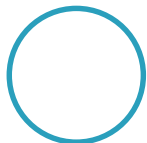




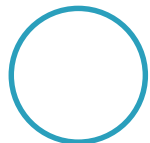
# Containers and **Modern Apps**



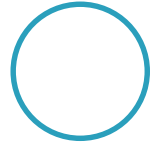
HTTP



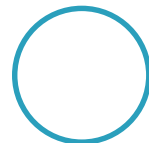
Search



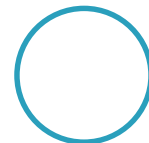
Auth



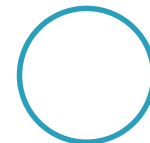
Load  
balancer



K/V store



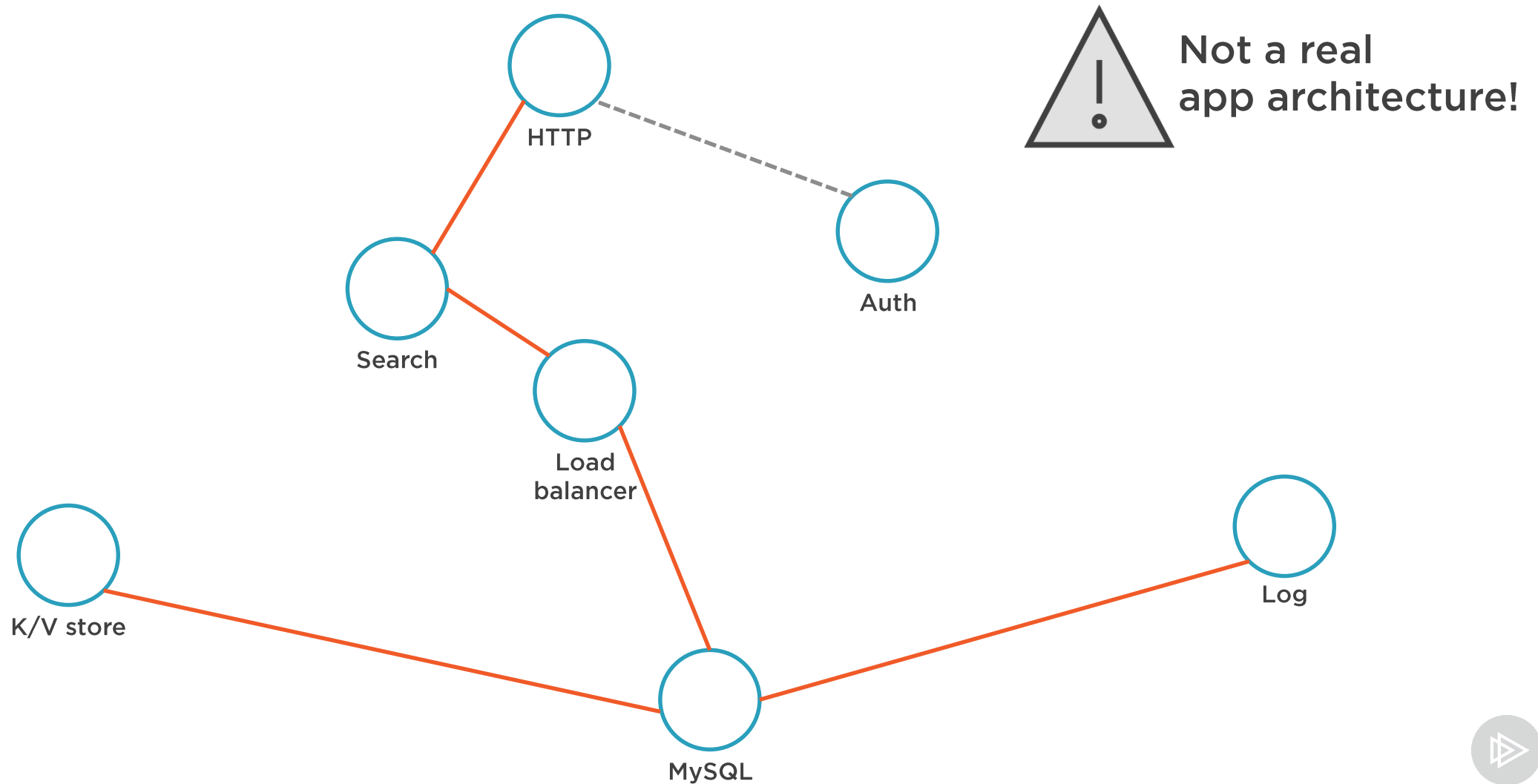
MySQL



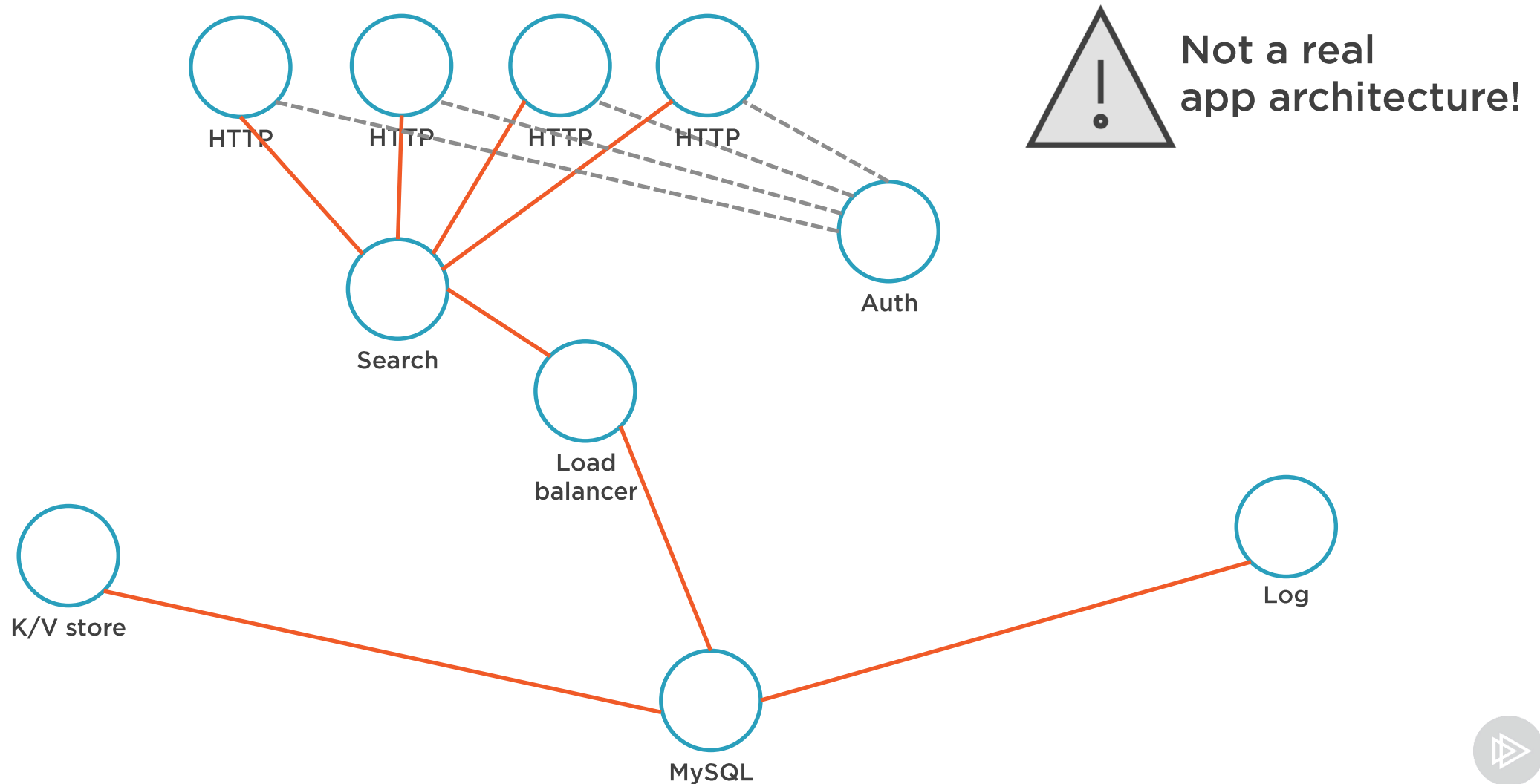
Log



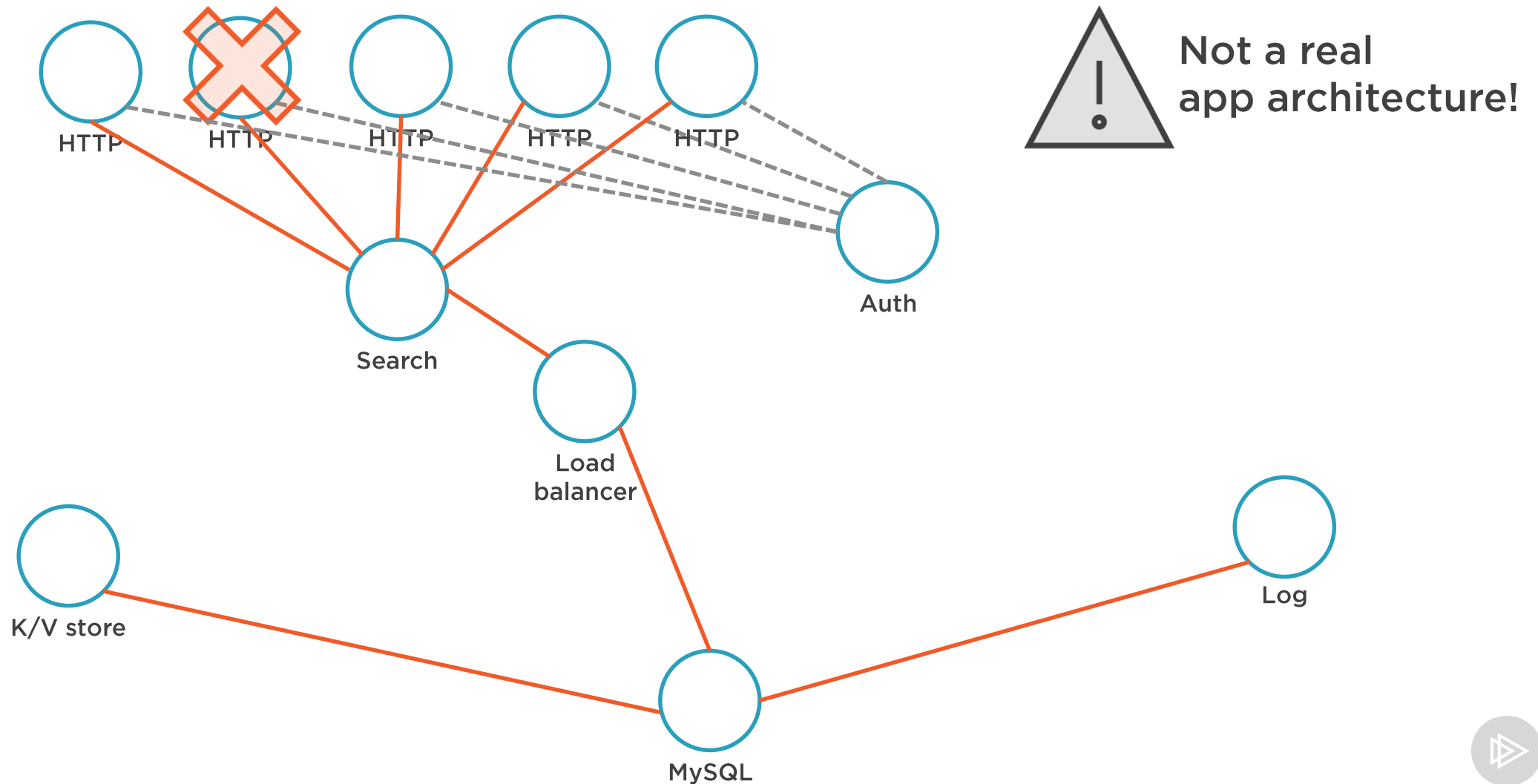
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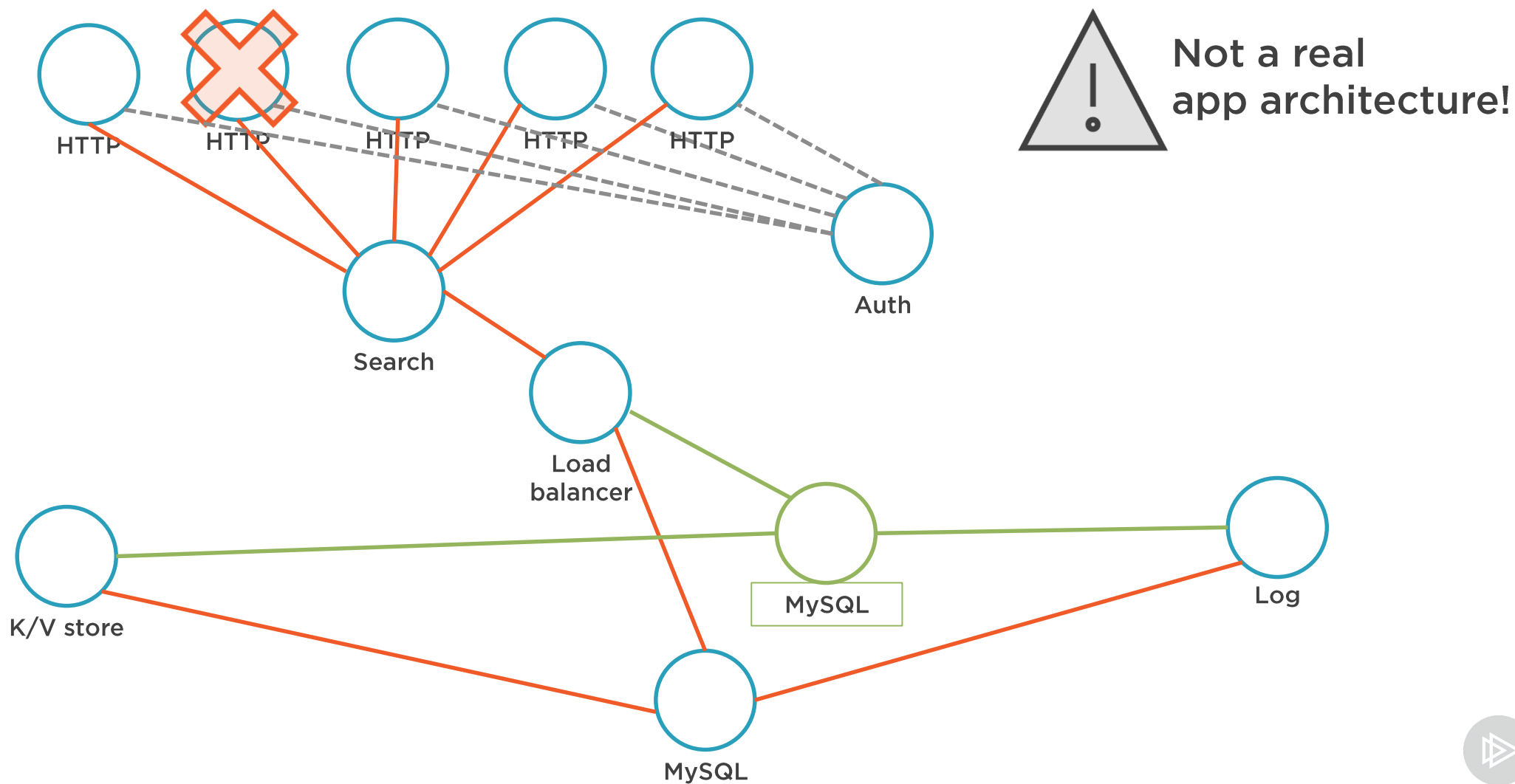
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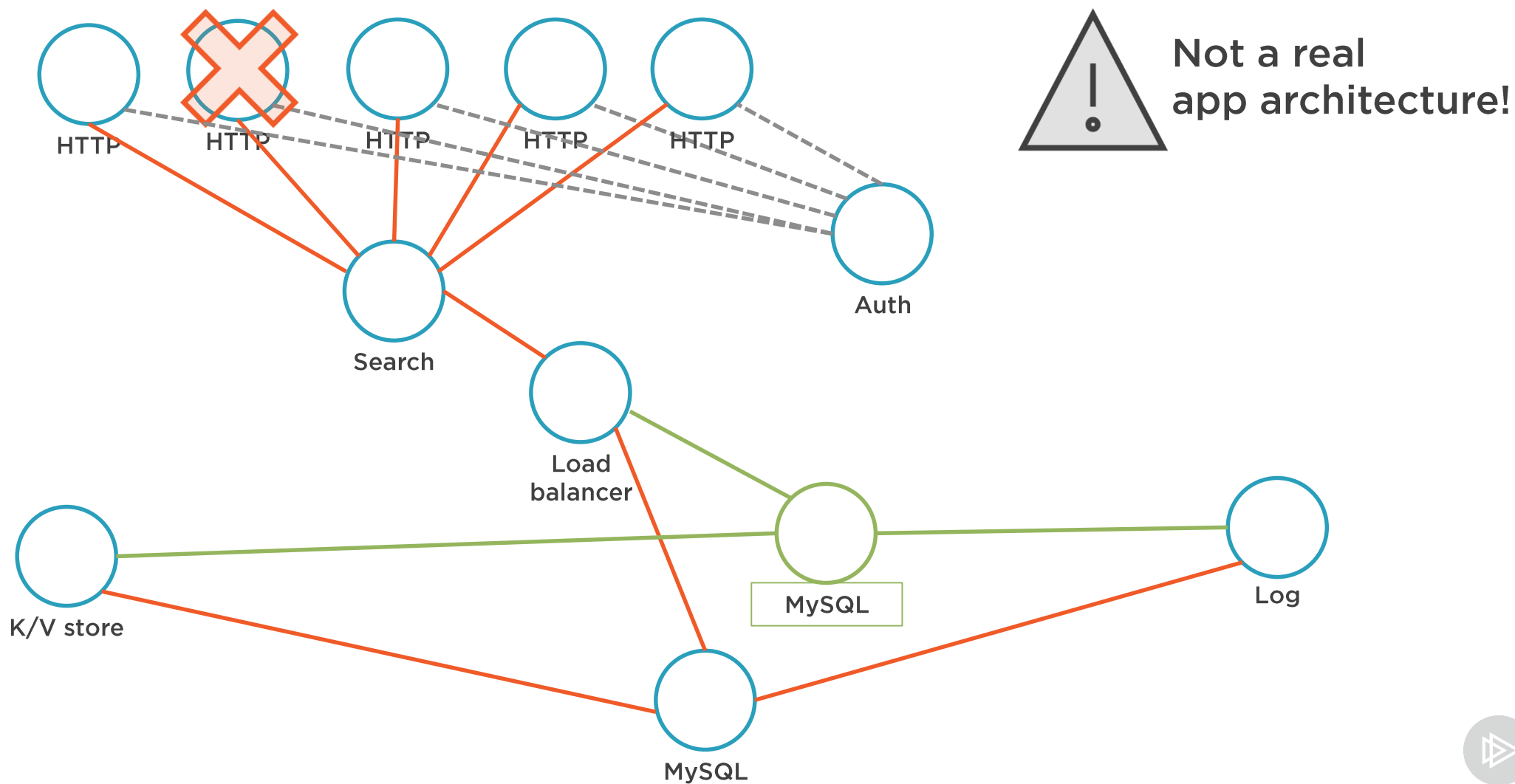
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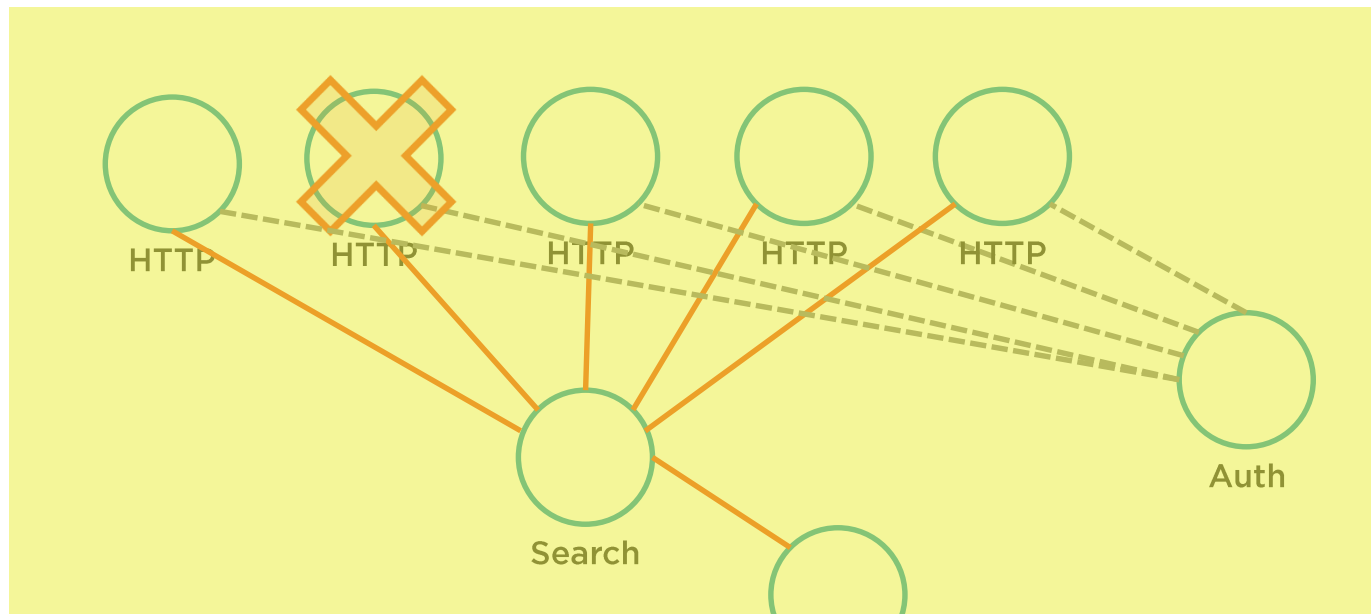
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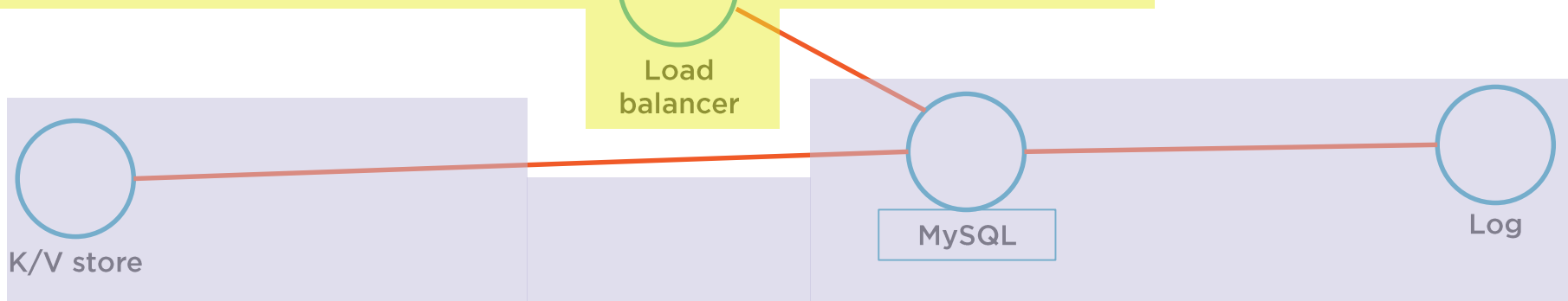
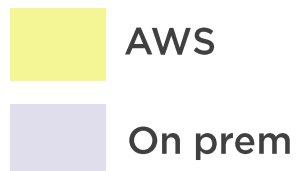
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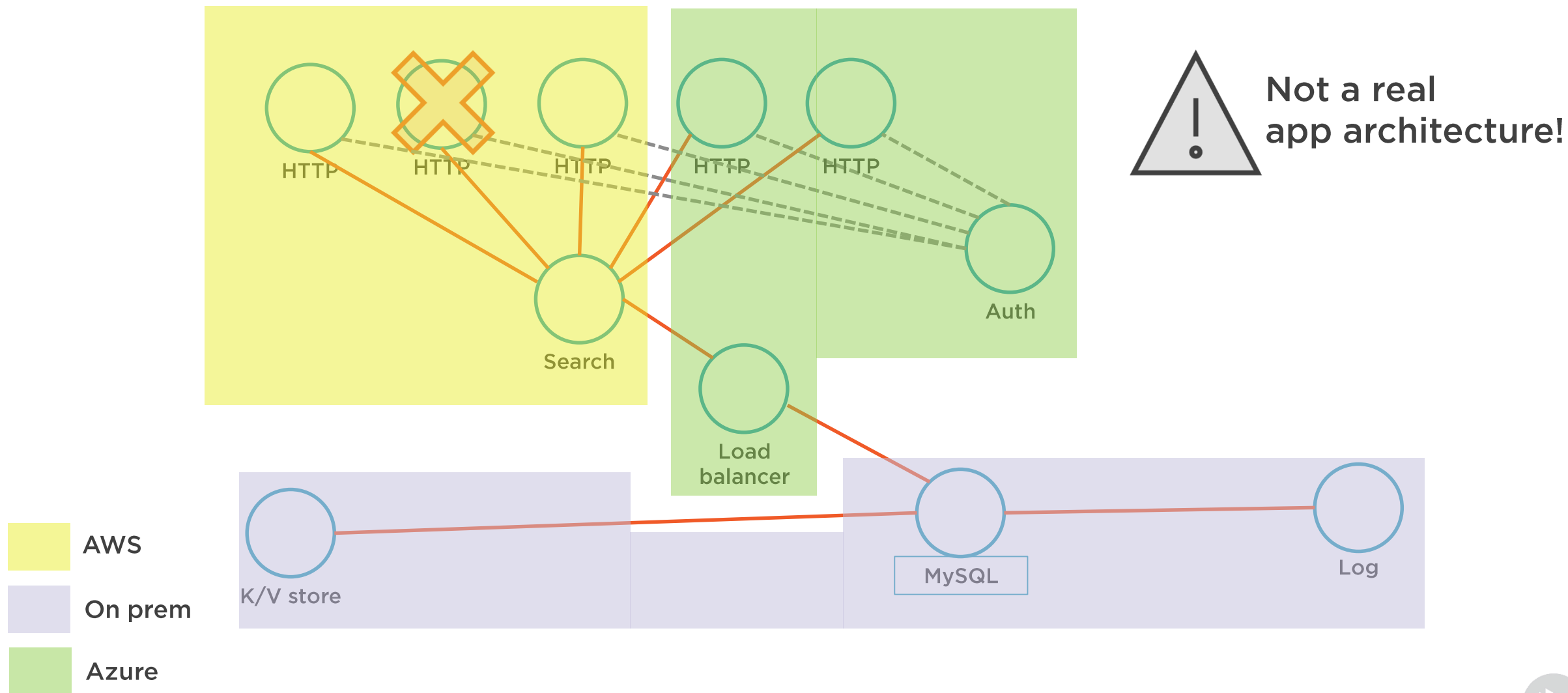
# Containers and Modern Apps



Not a real  
app architecture!



# Containers and Modern Apps





Containers are great at modern cloud-native apps

Far superior to Virtual Machines at this

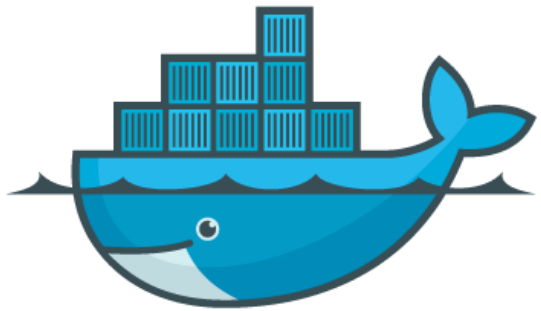


# Containers and Traditional Apps

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# Containers and Traditional Apps



docker

A lot of early messaging from Docker Inc. was about using containers for modern cloud-native apps

- This is where containers naturally excel
- It does not mean that containers cannot be used for traditional enterprise apps



# Most Popular Official Repos on Docker Hub

Rank	Repository	Stars
1	Ubuntu	2,007
2	Centos	1,164
3	Nginx	1,163
4	Redis	957
5	Node	891
6	Postgres	889
7	Mysql	885
8	Mongo	796
9	Debian	573
10	Jenkins	508

Table is based on number of stars rather than number of pulls.

Source:

<https://labsctl.io/docker-hub-top-10/>



# Summary

## Stateful or Stateless

Docker and containers  
work with both types

It's common to have both

## Stateful

The Docker storage  
backend is now pluggable

- Has lead to lots of plugins  
supporting portability of  
stateful containers (and  
their data)



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Stateful workloads are becoming  
first-class citizens in the Docker world



# Are containers just for stateless apps and services?

**No!** Containers do a great job with stateless and  
stateful



Coming Up Next...

Docker Hub  
and Container Registries

