DEVNEXUS™

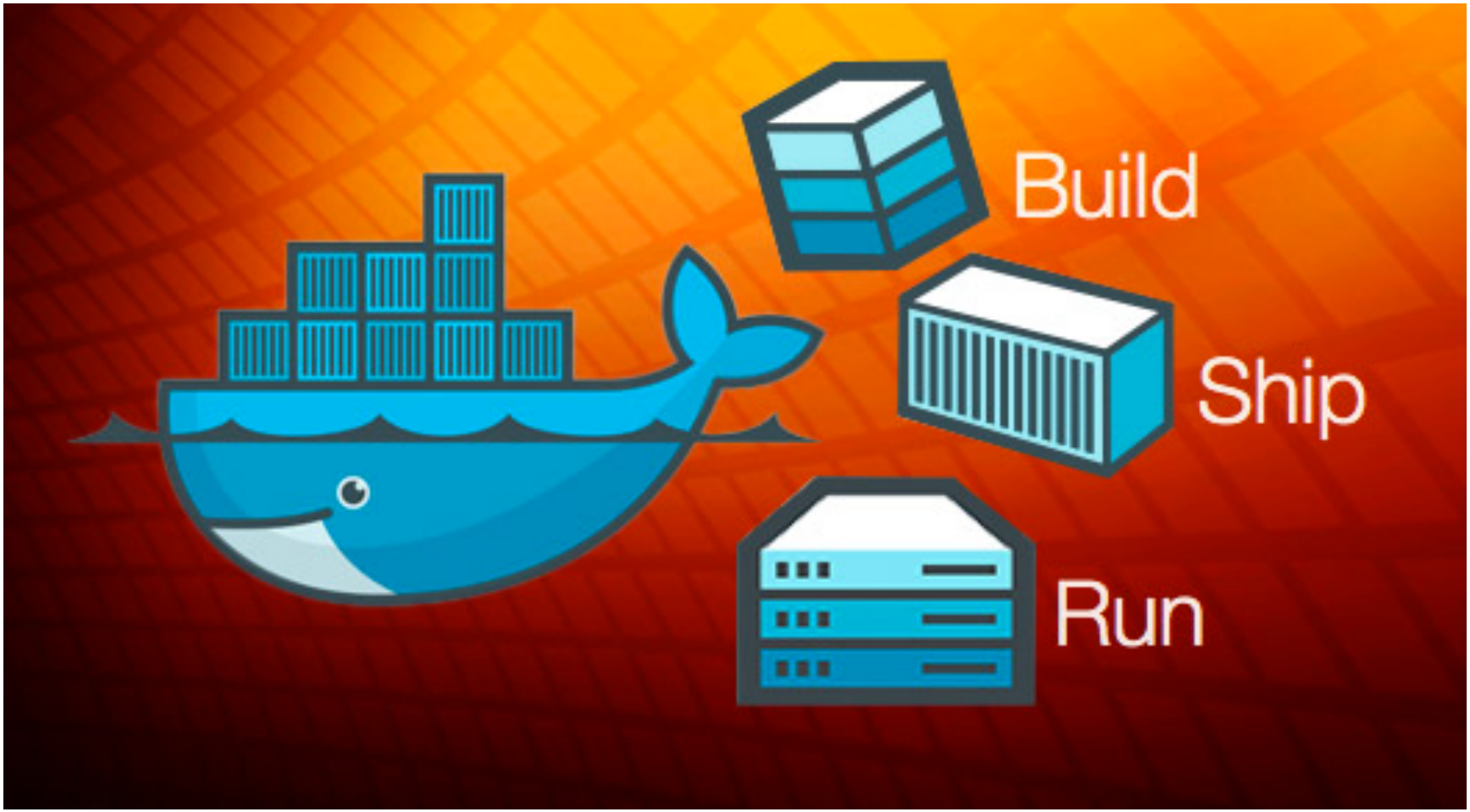
Zero Downtime Deployments with World Class PaaS

Veer Muchandi
PaaS Architect/Evangelist
Red Hat Inc.
 veer@redhat.com
@VeerMuchandi

What makes up World Class PaaS?

Containerizing Applications

Docker has become ubiquitous container format. Everyone likes docker for ease of building, shipping and running containers.



Host OS that supports Containers

Container Runtime and Packaging

Container Host, Security, Management

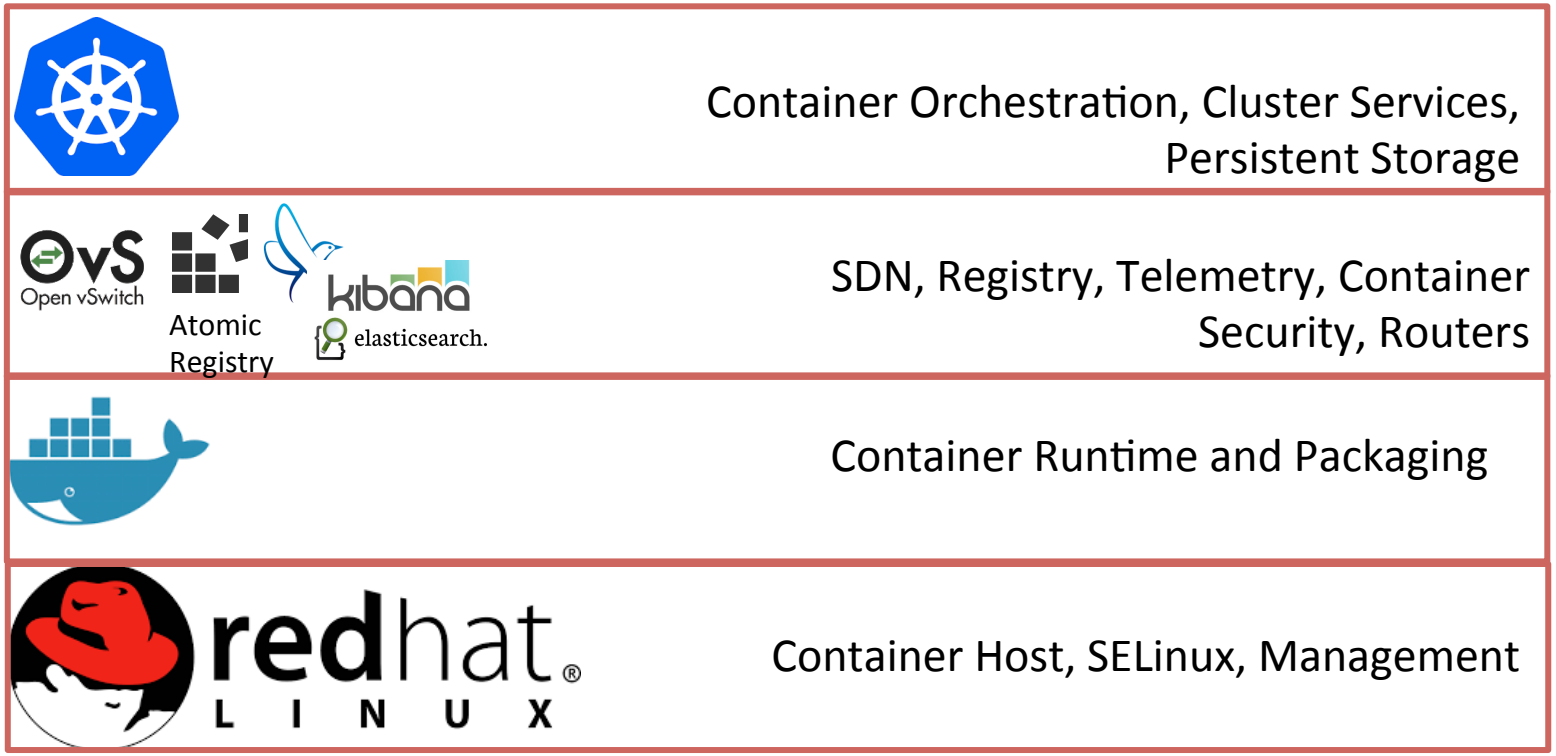
Orchestration Engine

Container Orchestration, Cluster Services, Persistent Storage

Container Runtime and Packaging

Container Host, SELinux, Management

Missing Pieces for Enterprise Consumption



Certified Docker Images and Partner Network

+ many more

Certified Docker Images

Container Orchestration, Cluster Services, Persistent Storage

SDN, Registry, Telemetry, Container Security, Routers

Container Runtime and Packaging

Container Host, SELinux, Management

DevOps, UI/IDE Integration Automation

Build & Deployment Automation, Service Catalog, App Lifecycle Mgmt, User Experience, Enforcing Quotas, Resource Limits, Authentication/Authorization

+ many more

Certified Docker Images

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And that's what we call a World Class PaaS

Build & Deployment Automation, Service Catalog, App Lifecycle Mgmt, User Experience, Enforcing Quotas, Resource Limits, Authentication/Authorization

+ many more

Certified Docker Images

Container Orchestration, Cluster Services, Persistent Storage

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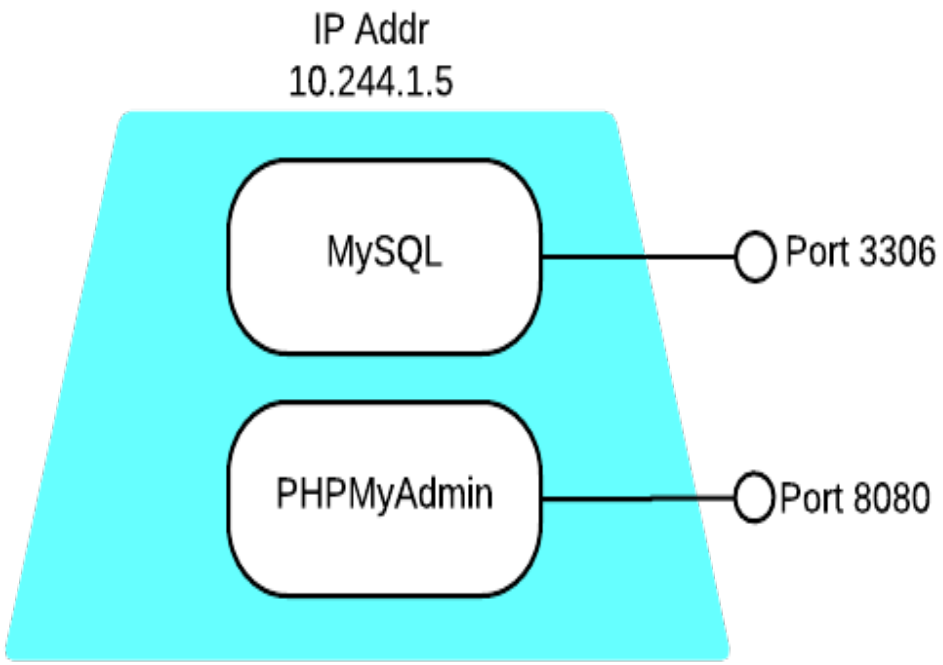
OPENSHIFT V3 CONCEPTS

A single pod with two containers each exposing a port on pod's IP address

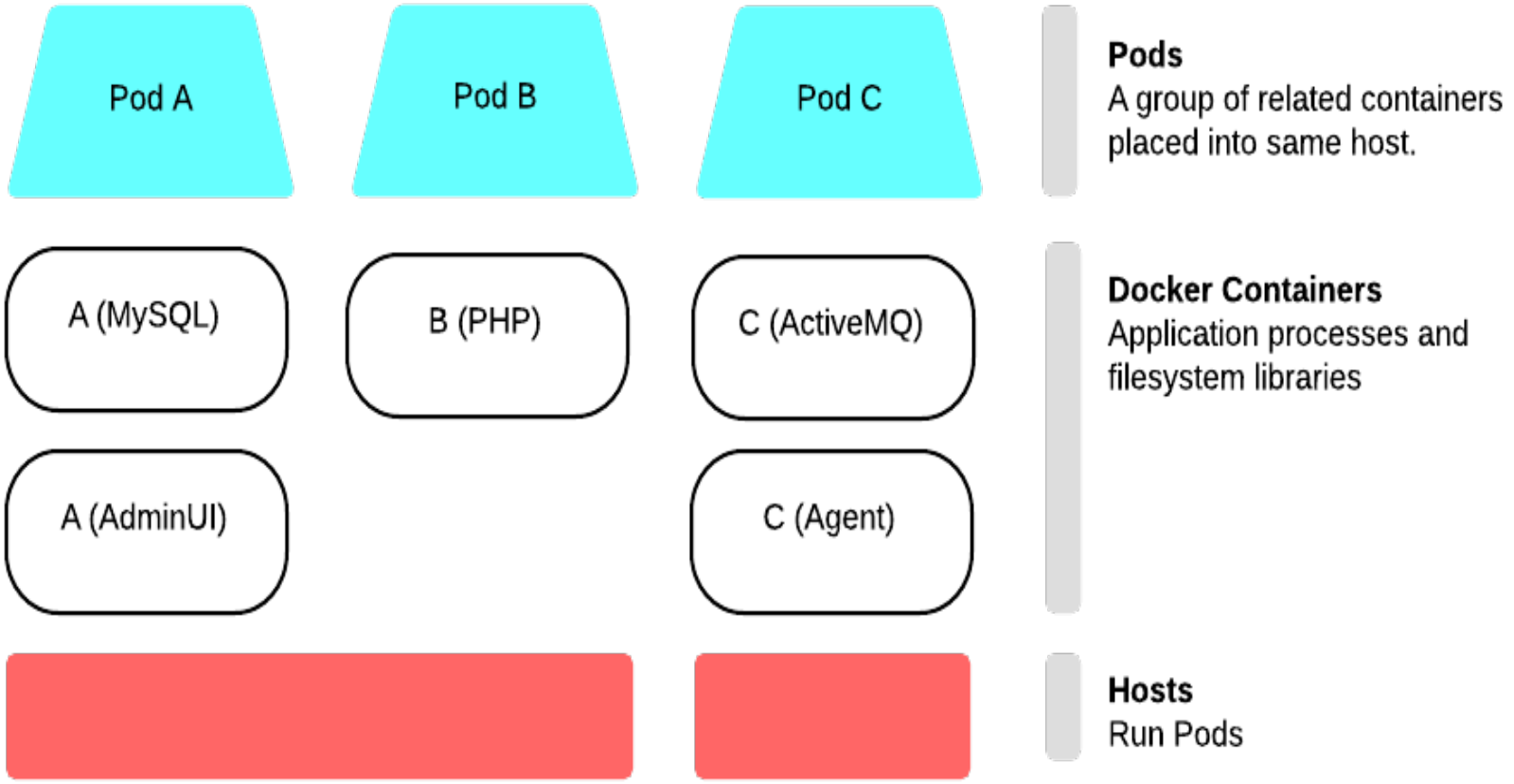


Pod Networking
Each Pod has a single IP address. All containers within the pod share
the same IP and port space.

Shared Ports
Each container must share pod ports. No conflicts allowed

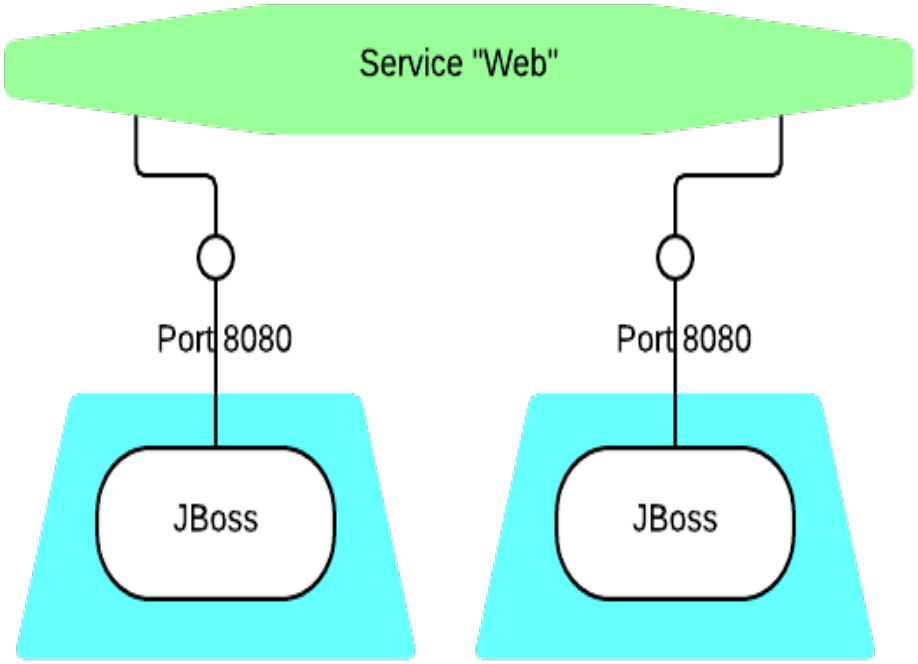
OPENSHIFT V3 CONCEPTS

Three different pods each running a set of related containers



OPENSHIFT V3 CONCEPTS

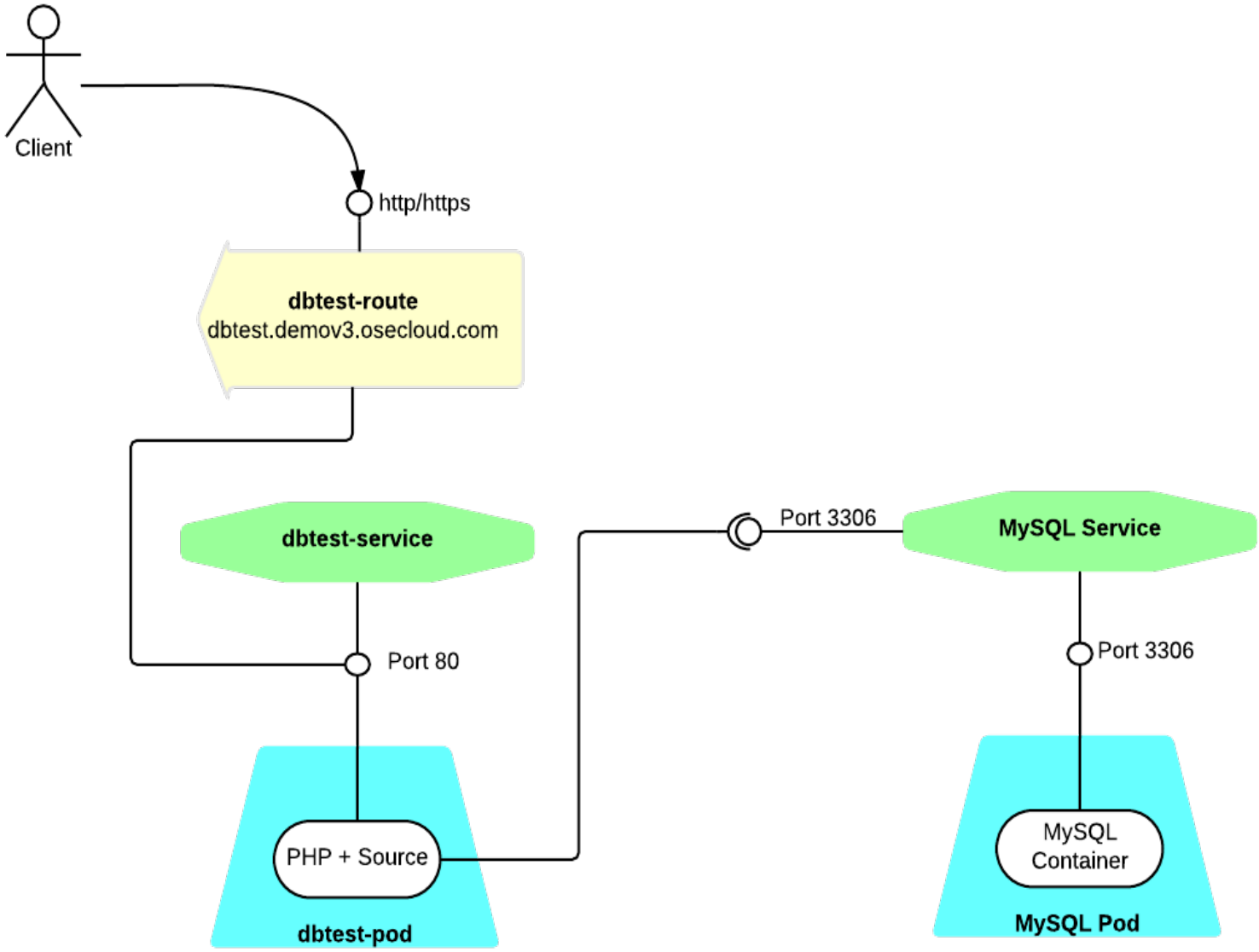
Multiple instances of a single pod are load balanced and accessed via a Service



Services balance Pods
A Service is an IP:Port that provides balanced access across a group of pods. Services are available inside the OpenShift environment, but are not public-facing.

Replication Controllers ensure availability
An RC ensures that N copies of a pod exist at all times. Automated manipulation of RCs is how OpenShift achieves autoscaling.

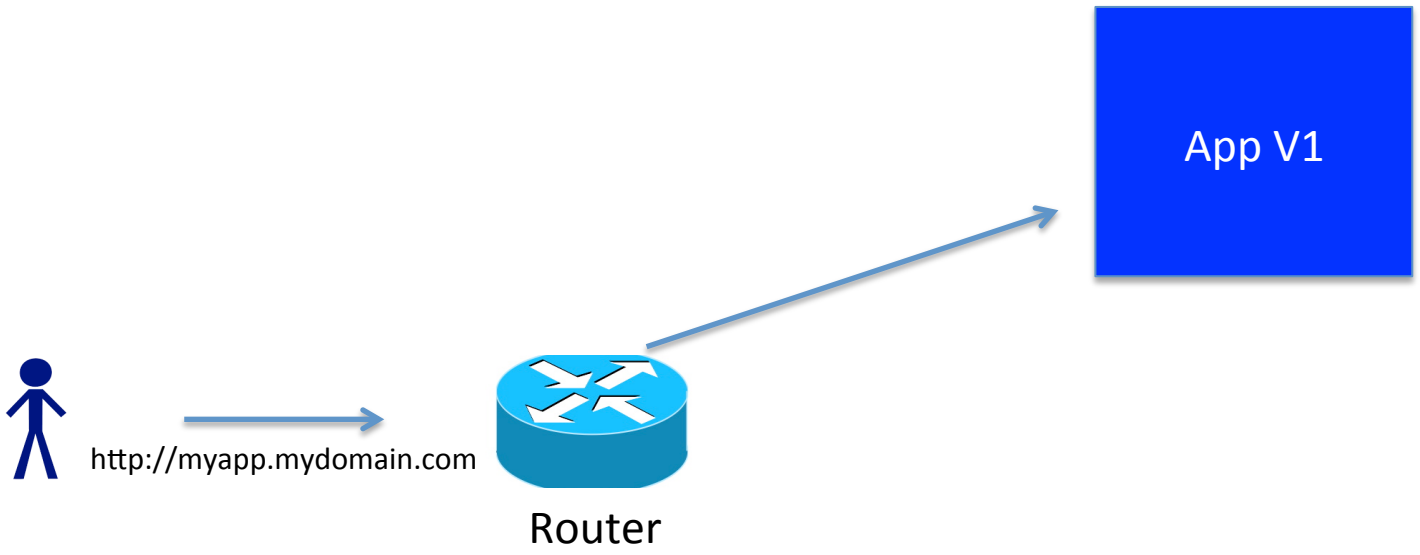
EXAMPLE: PHP APPLICATION INTERACTING WITH MYSQL DATABASE



Strategies for Zero Downtime Deployments

Blue Green Deployments

Blue Green Deployments



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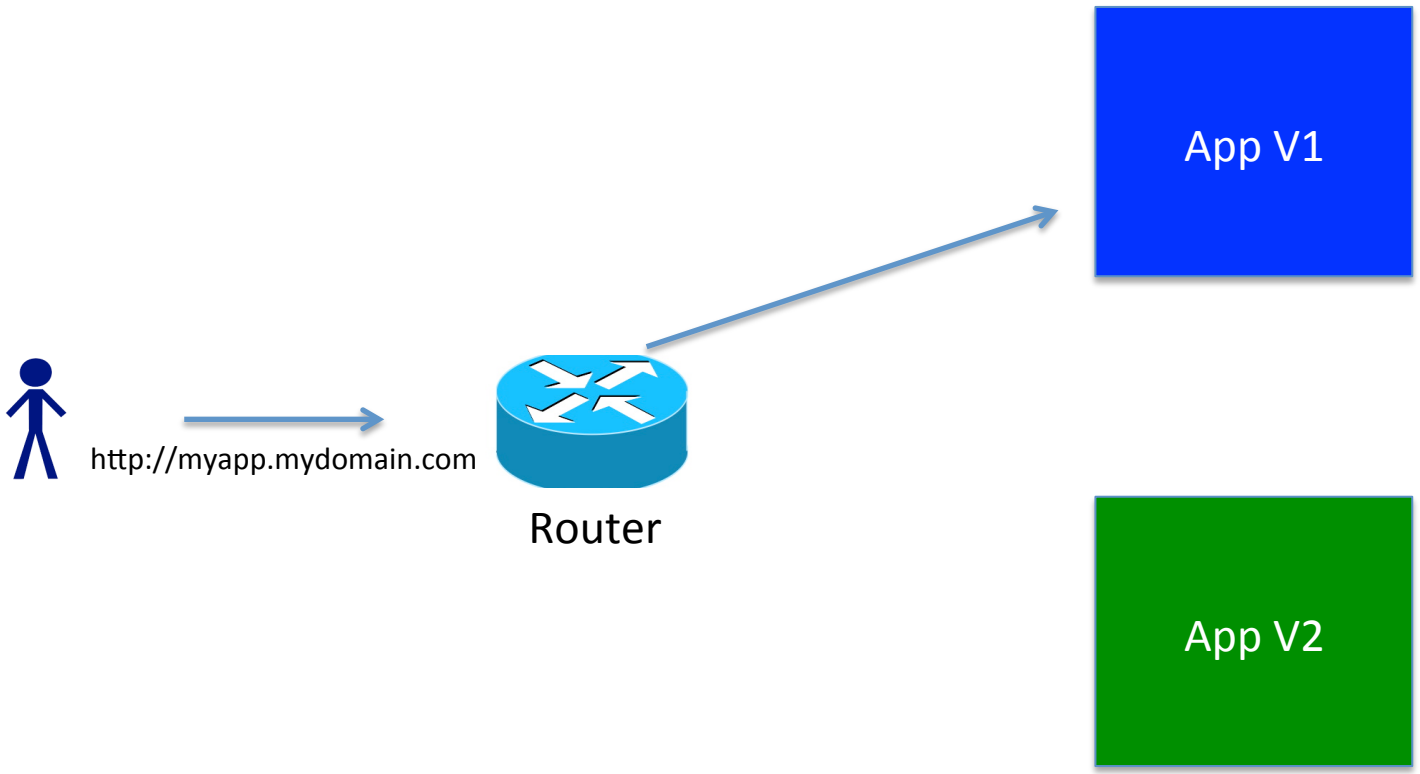

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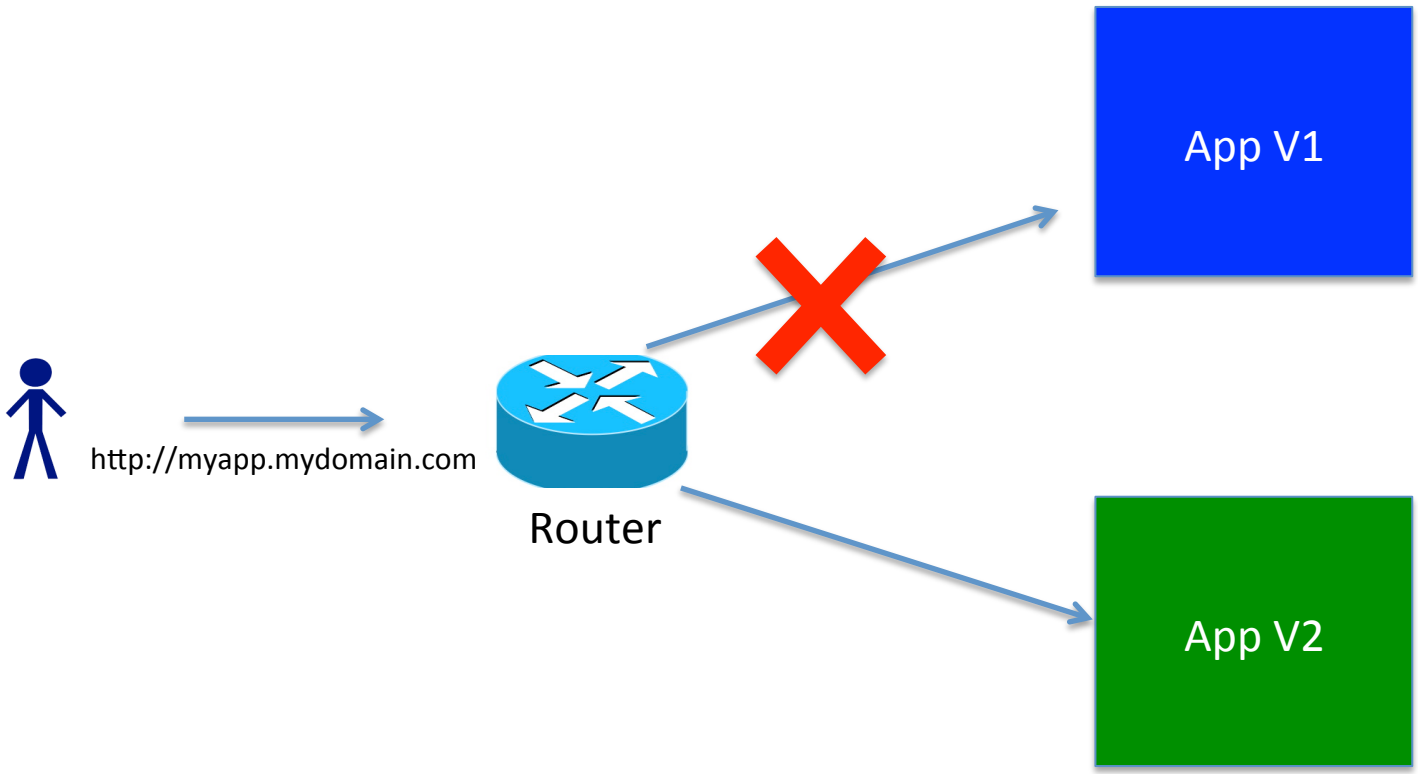

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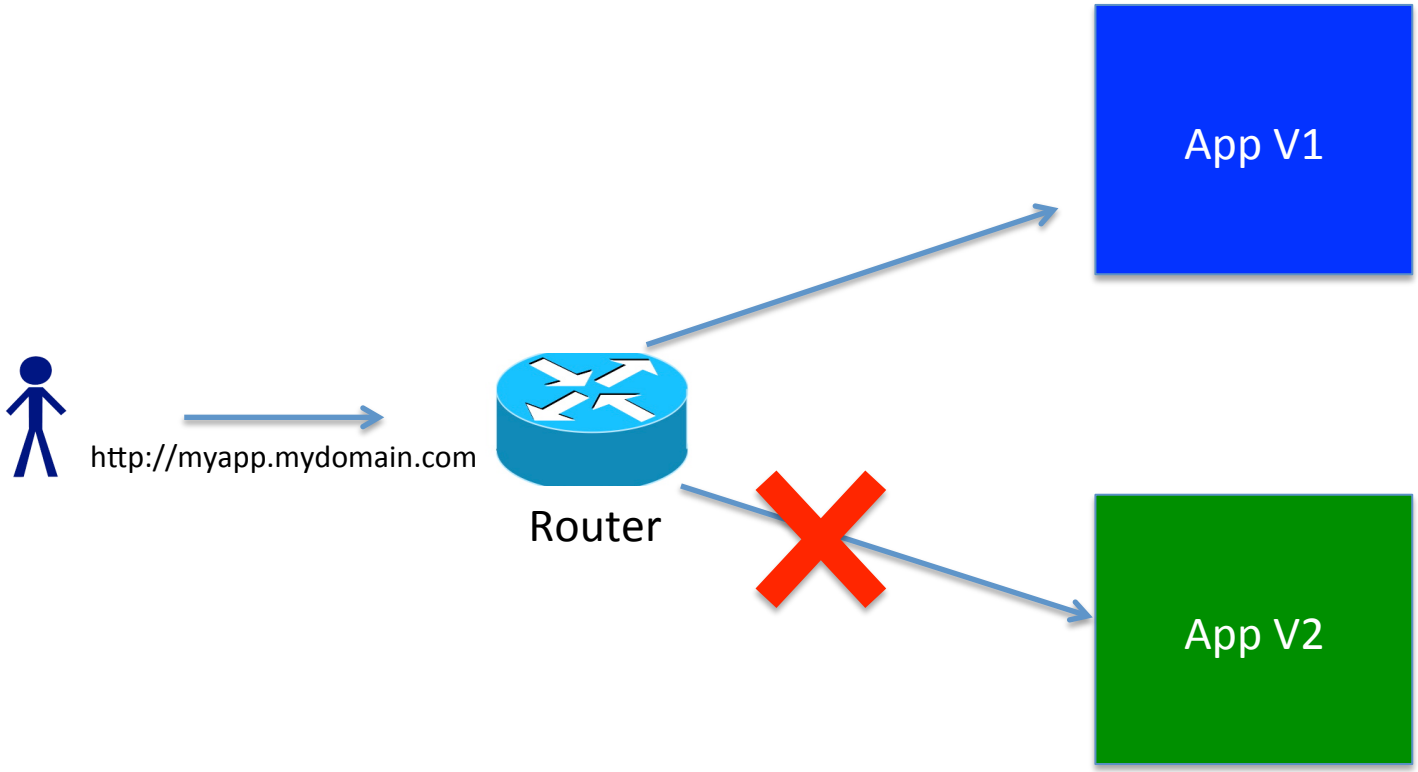

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AB Deployments

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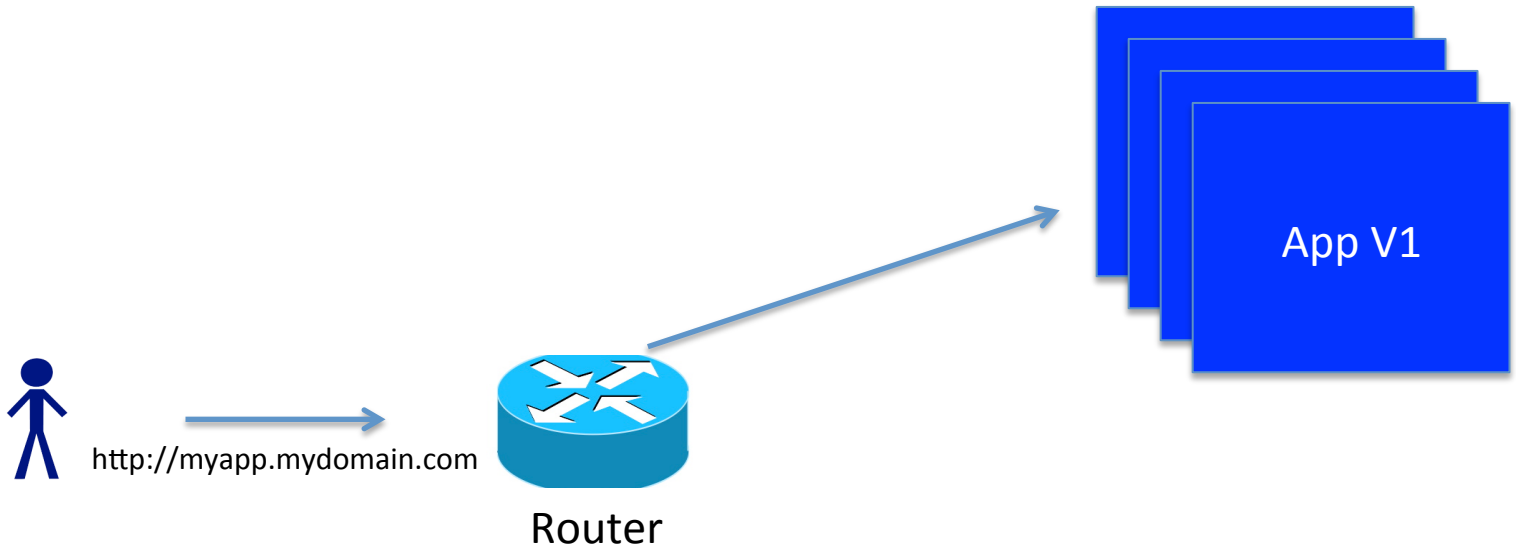

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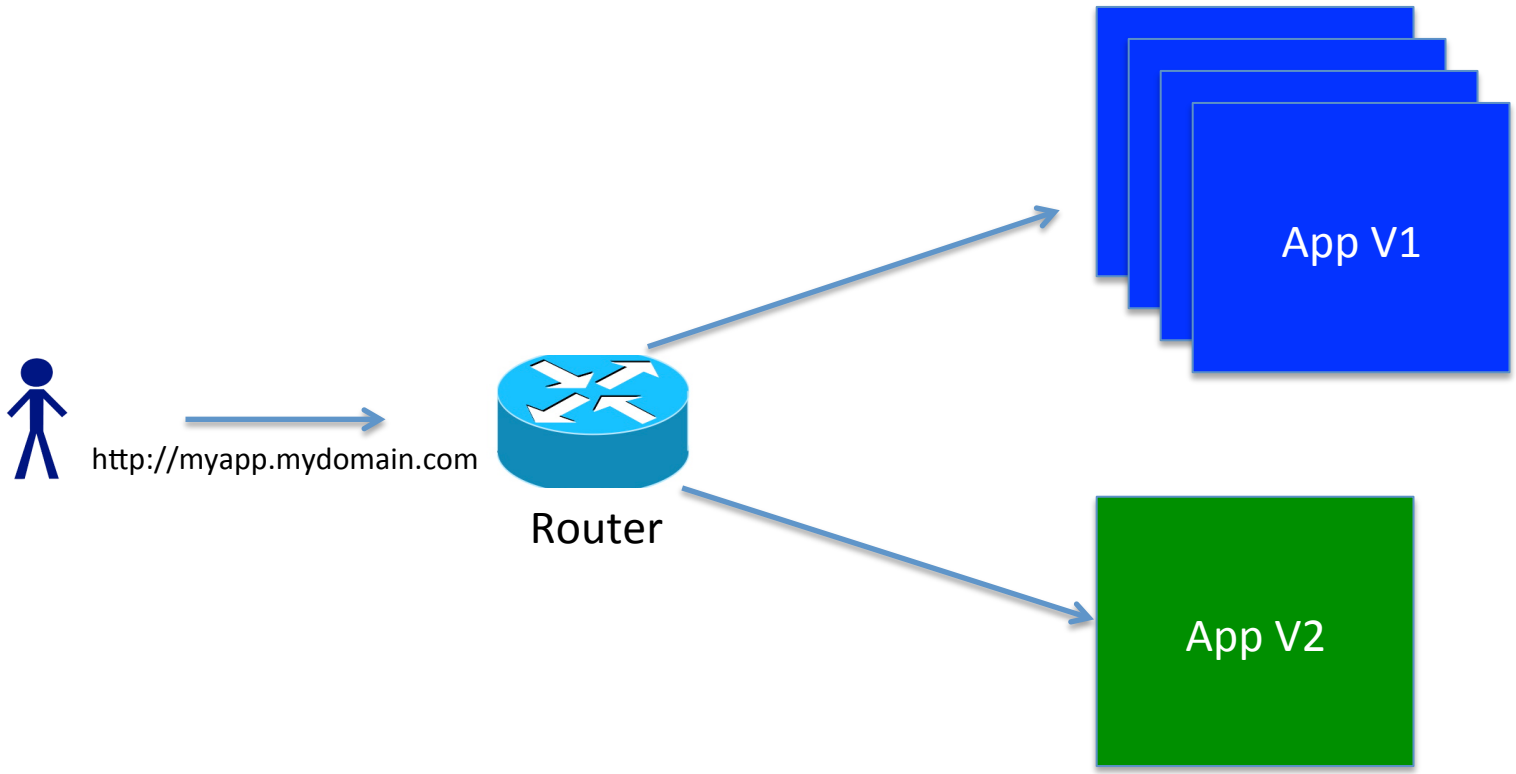

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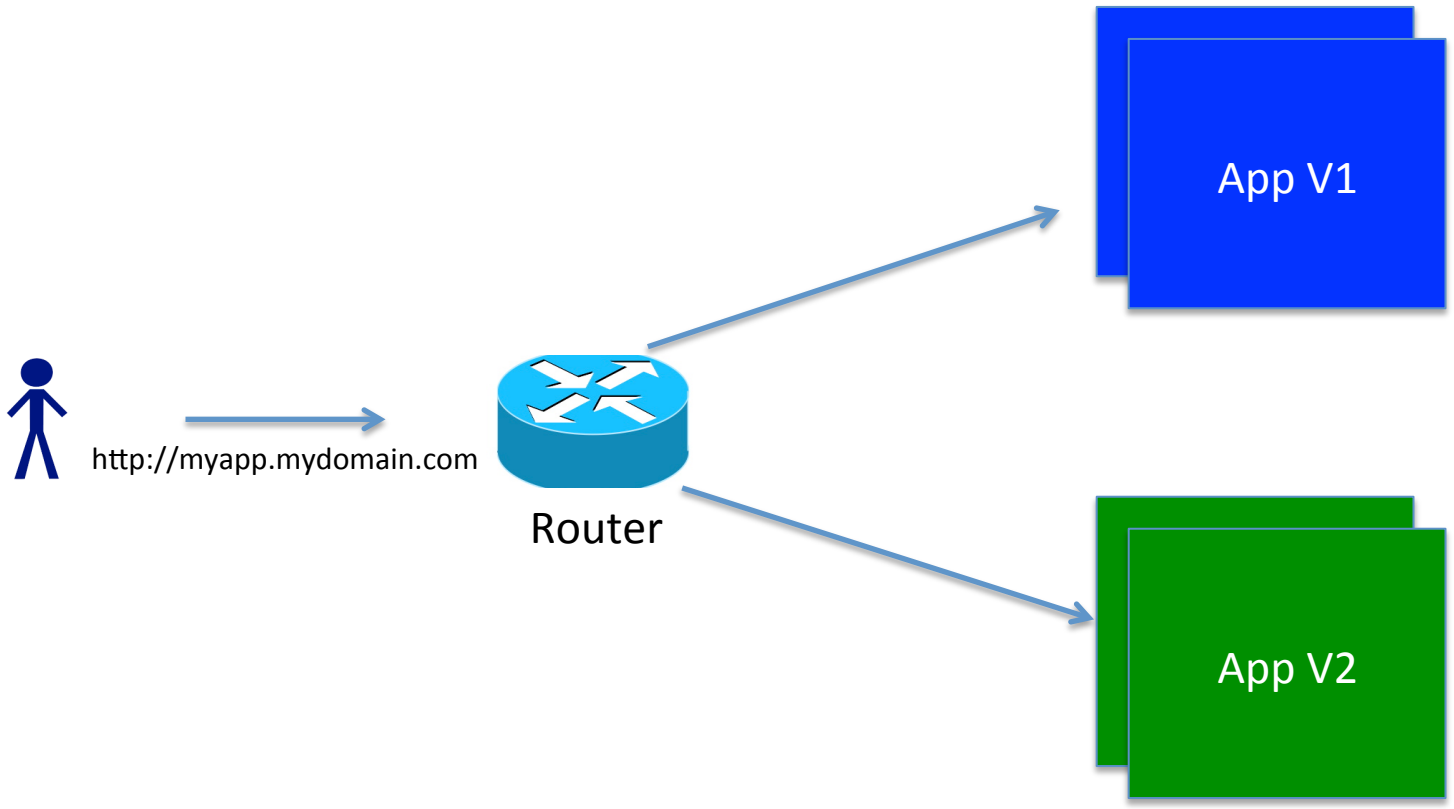

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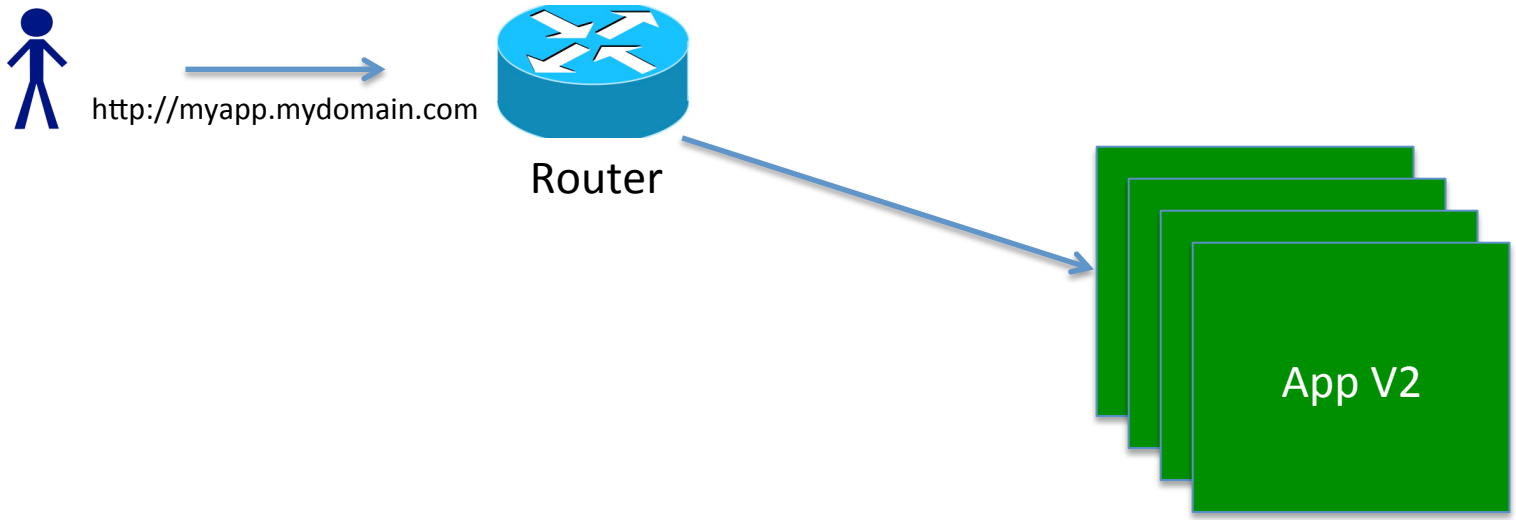
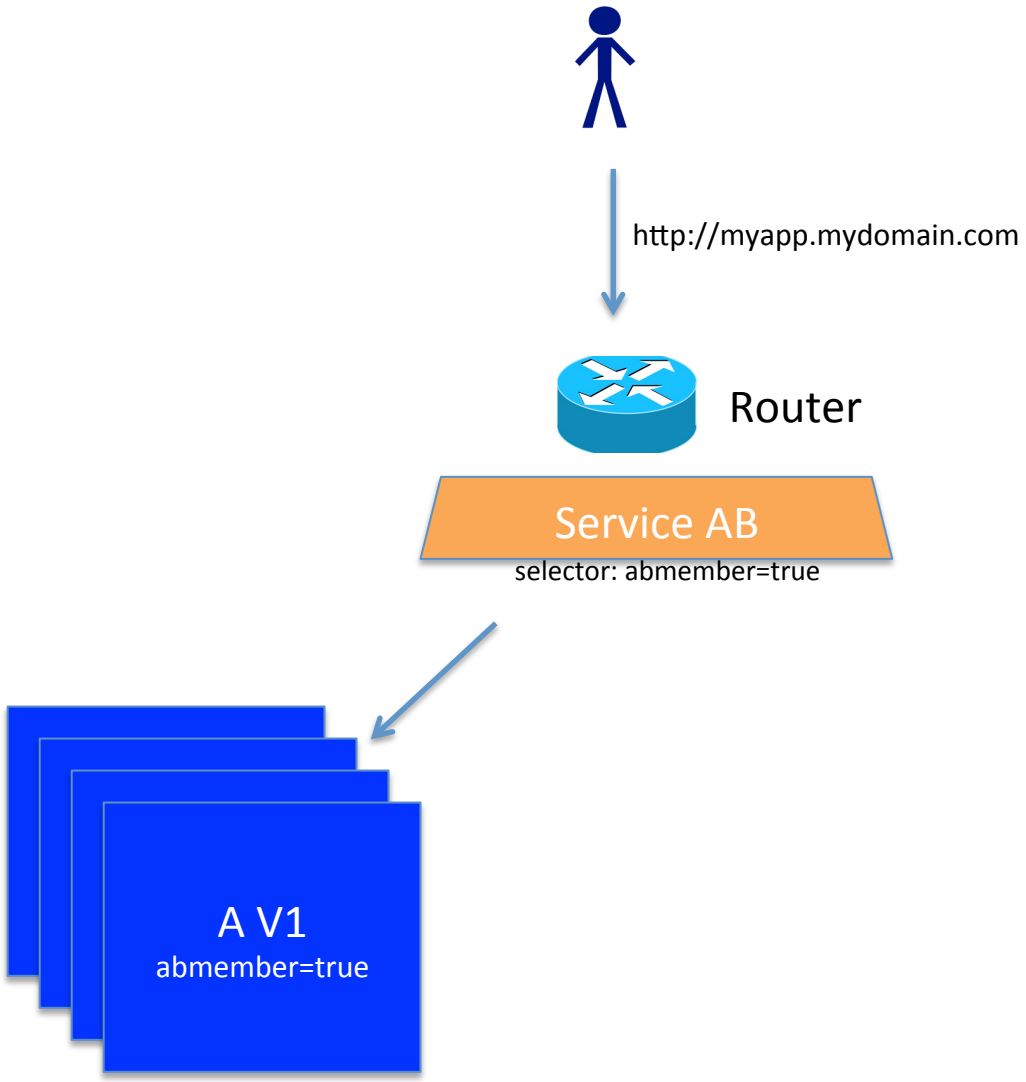


AB Deployment in OpenShift



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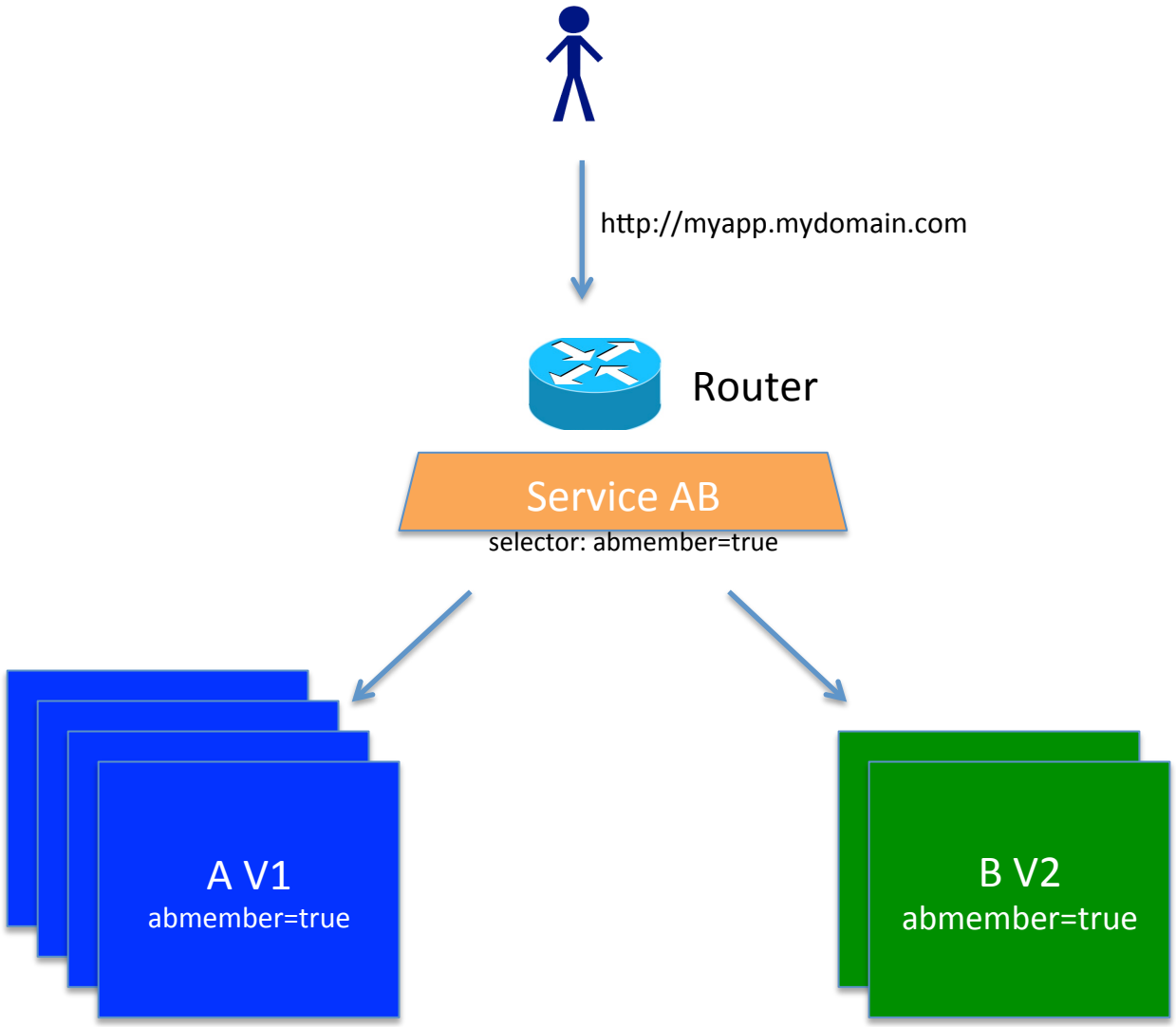

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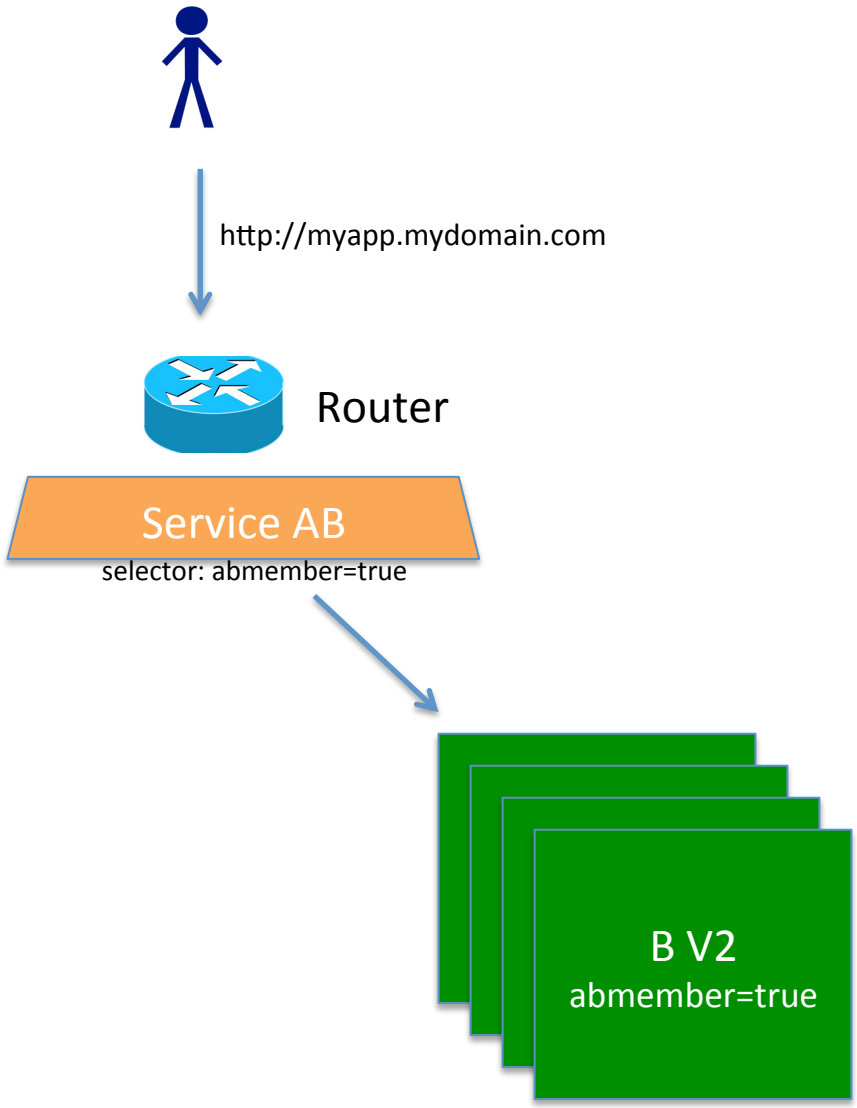

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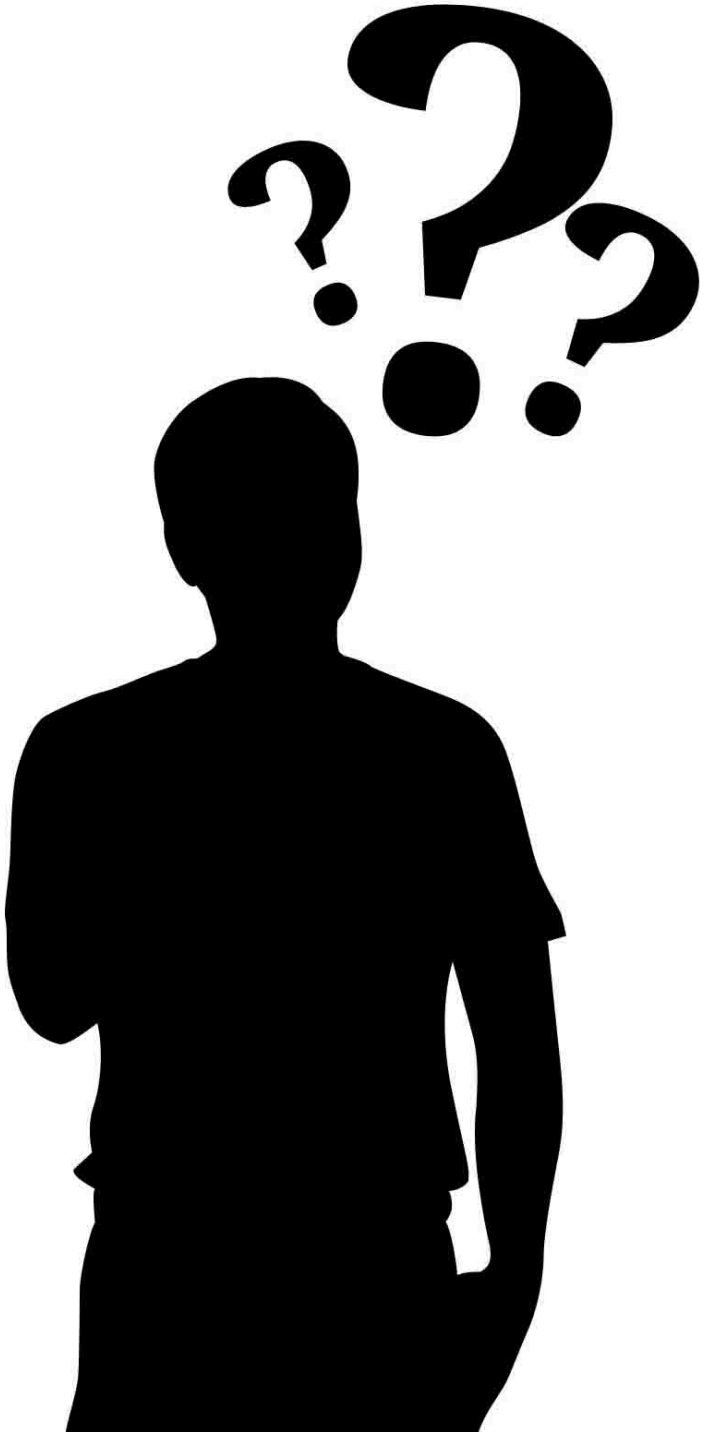

Thank You

Veer Muchandi
PaaS Architect/Evangelist
Red Hat Inc.
veer@redhat.com
@VeerMuchandi