BRING CLOUD ON-PREMISE WITH A KUBERNETES-NATIVE INFRASTRUCTURE

Abhinav Joshi
Sr. Principal Product Marketing Manager
Cloud Platforms
abhjoshi@redhat.com
@abhinav_josh

Keith Basil
Sr. Principal Product Manager
Cloud Platforms
kbasil@redhat.com
@noslzzp

May 9, 2019

Abhinav Joshi

personal

- Traveller, Raleigh is home, wanted to be an Architect, ended up in Chemicals & then IT.

professional - 18+ yrs

- Red Hat
- VMware, NetApp, Cisco, GSIs

blended

skype/twitter/github/irc, life:
https://www.linkedin.com/in/abhinavjoshi/

Keith Basil

personal

- Virginia hare scrambler, plays chess..

professional

- Red Hat
- Cloudscaling, Time Warner Cable, FederalCloud.com, Cisco and a couple of startups

blended

skype/twitter/github/irc/.com, life: **noslzzp**

AGENDA

1. Business and IT Goals and Challenges
2. Open Hybrid Cloud
3. Kubernetes-native infrastructure
    a. Concept
    b. Use Cases
    c. Value and differentiation
4. Summary

BUSINESS GOALS

INNOVATE FASTER

ACHIEVE MISSION OBJECTIVES

IMPROVE CUSTOMER SATISFACTION

GROW REVENUE

REDUCE COSTS

PROTECT THE REPUTATION

I.T. AND APP DEV GOALS

DELIVER INNOVATIVE
SOFTWARE APPS

“CLOUD-LIKE”
AGILITY AND SIMPLICITY,
ANYWHERE

SECURITY & COMPLIANCE

REDUCE TCO

ON-PREMISE I.T. AND APP DEV CHALLENGES

SLOW AND REACTIVE

HIGH COSTS

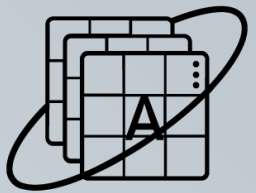
COMPLEX LEGACY OPERATIONS

REACTIVE SECURITY

PEOPLE & PROCESS

HOW DO I.T. AND DEVELOPERS MOVE FORWARD?

Build a DevOps culture

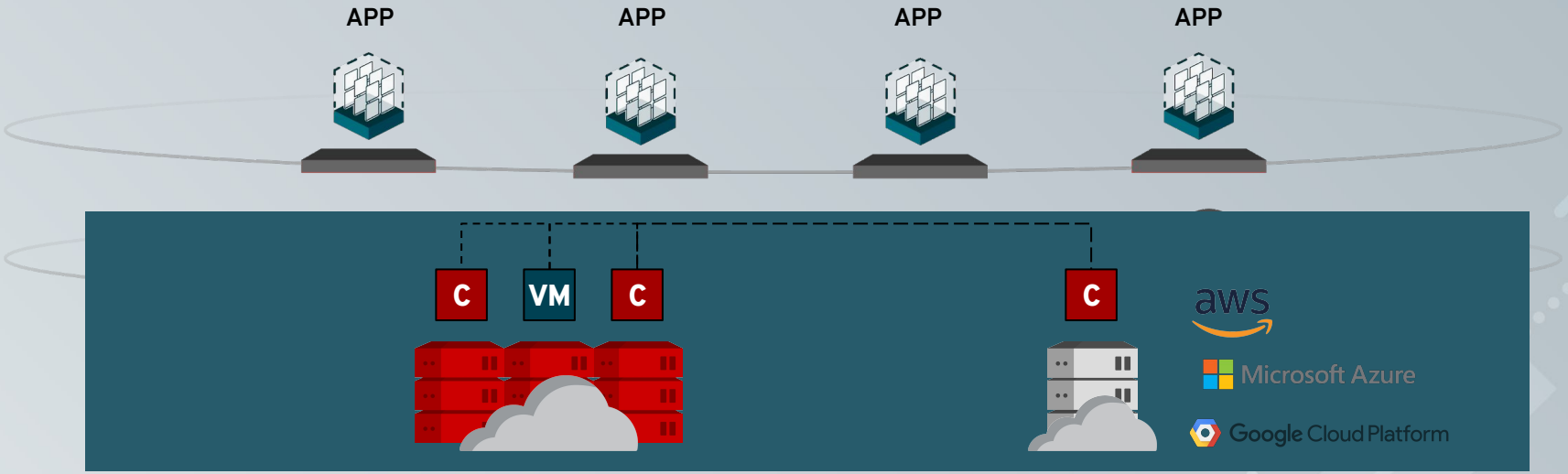


Move to cloud-native app dev

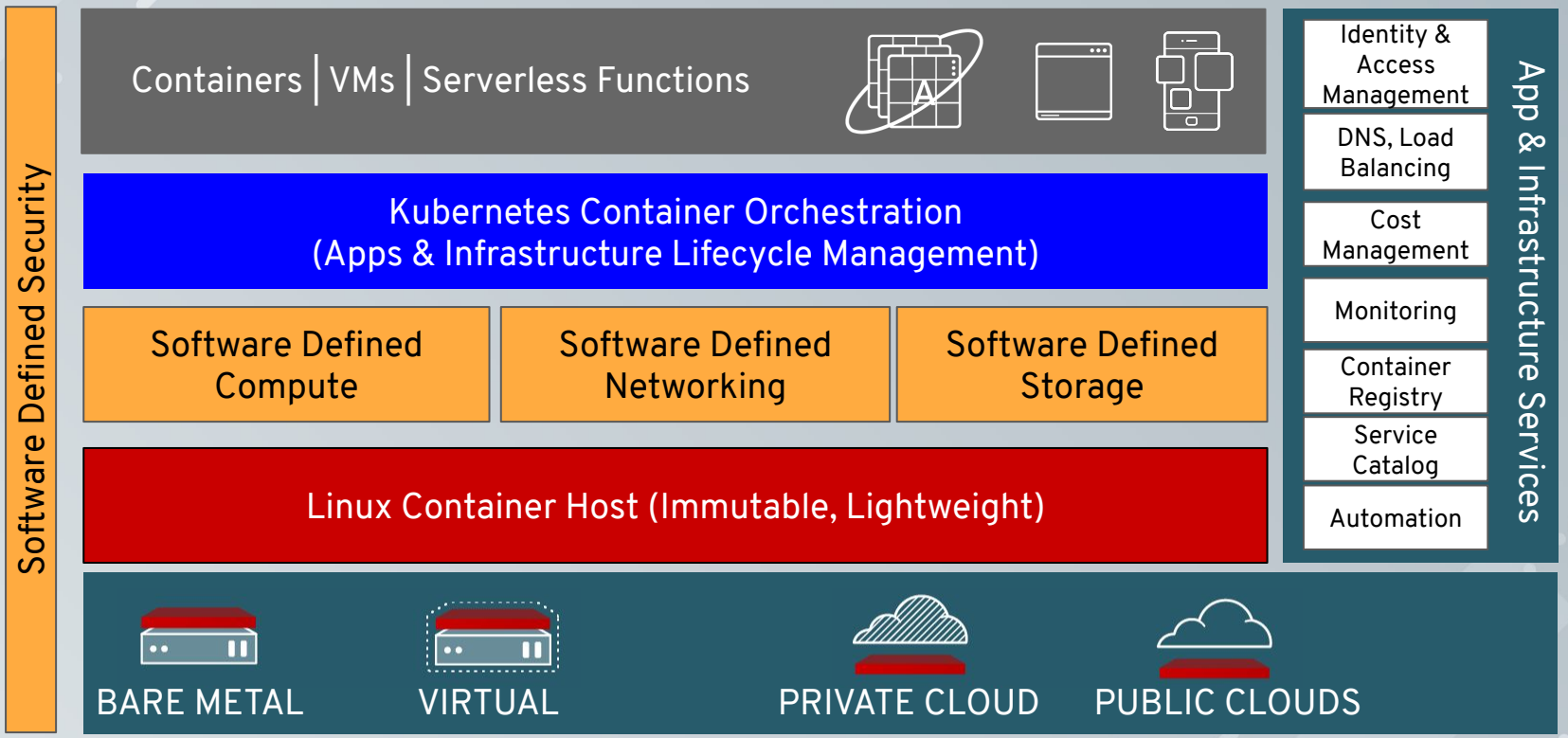
Operationalize a secure, hybrid cloud

KUBERNETES POWERED OPEN HYBRID CLOUD

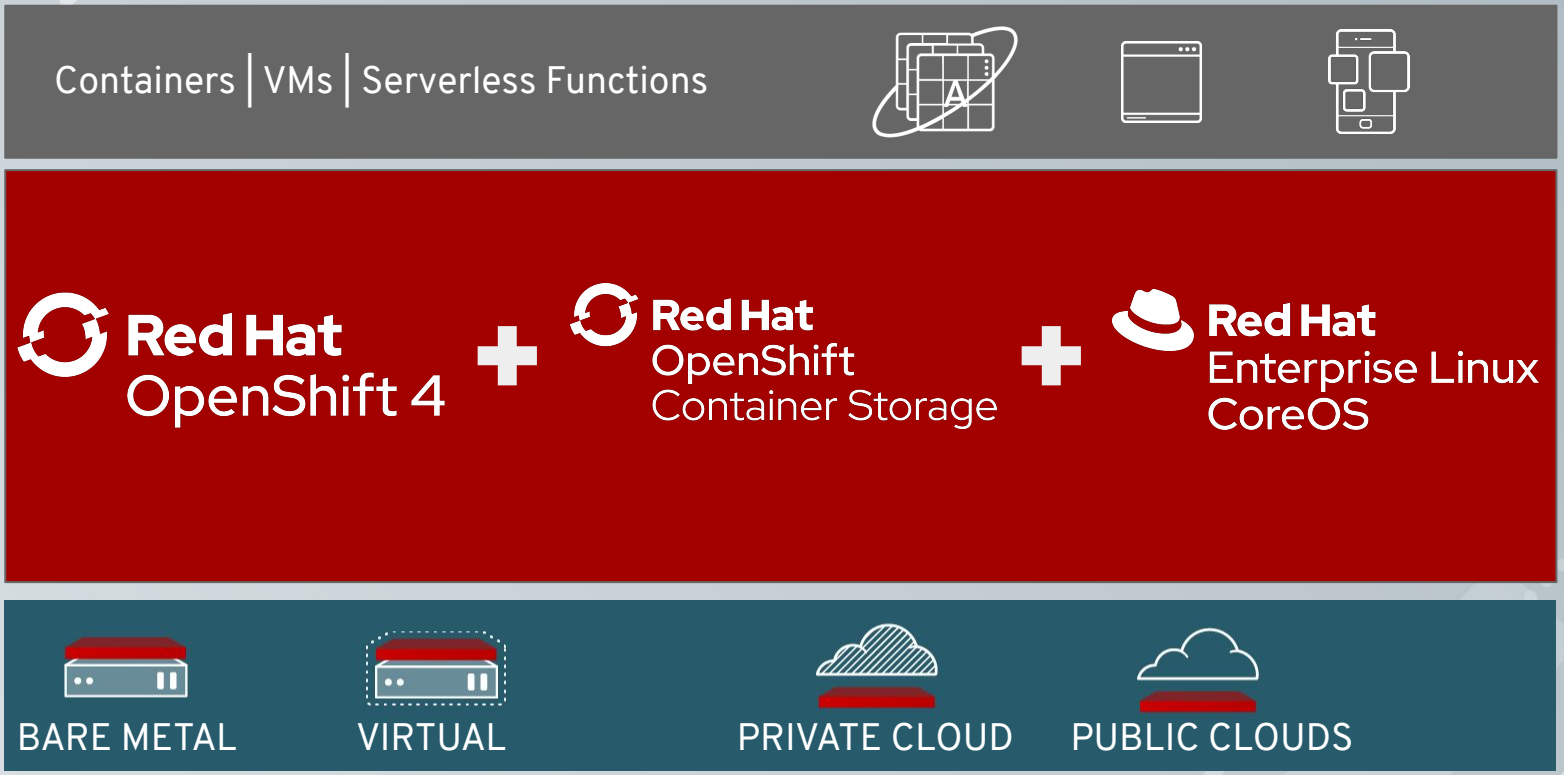
Gives developers the freedom to innovate faster across on-premise and public clouds



FUNCTIONAL ARCHITECTURE



RED HAT MAKES OPEN HYBRID CLOUD REAL



TOP BRANDS ARE REALIZING BUSINESS VALUE WITH RED HAT OPEN HYBRID CLOUD

OpenShift on AWS, & Private Cloud

Increased application development throughput by a factor of

10x

from 20 to 200 changes a day

Hilton

OpenShift on AWS

Improved

Time to Market

by speeding development time from

months to days

OpenShift on AWS, Azure, & Private Cloud

Launched a new cloud platform in

10 days

and cut development time for new services and APIs by

50%

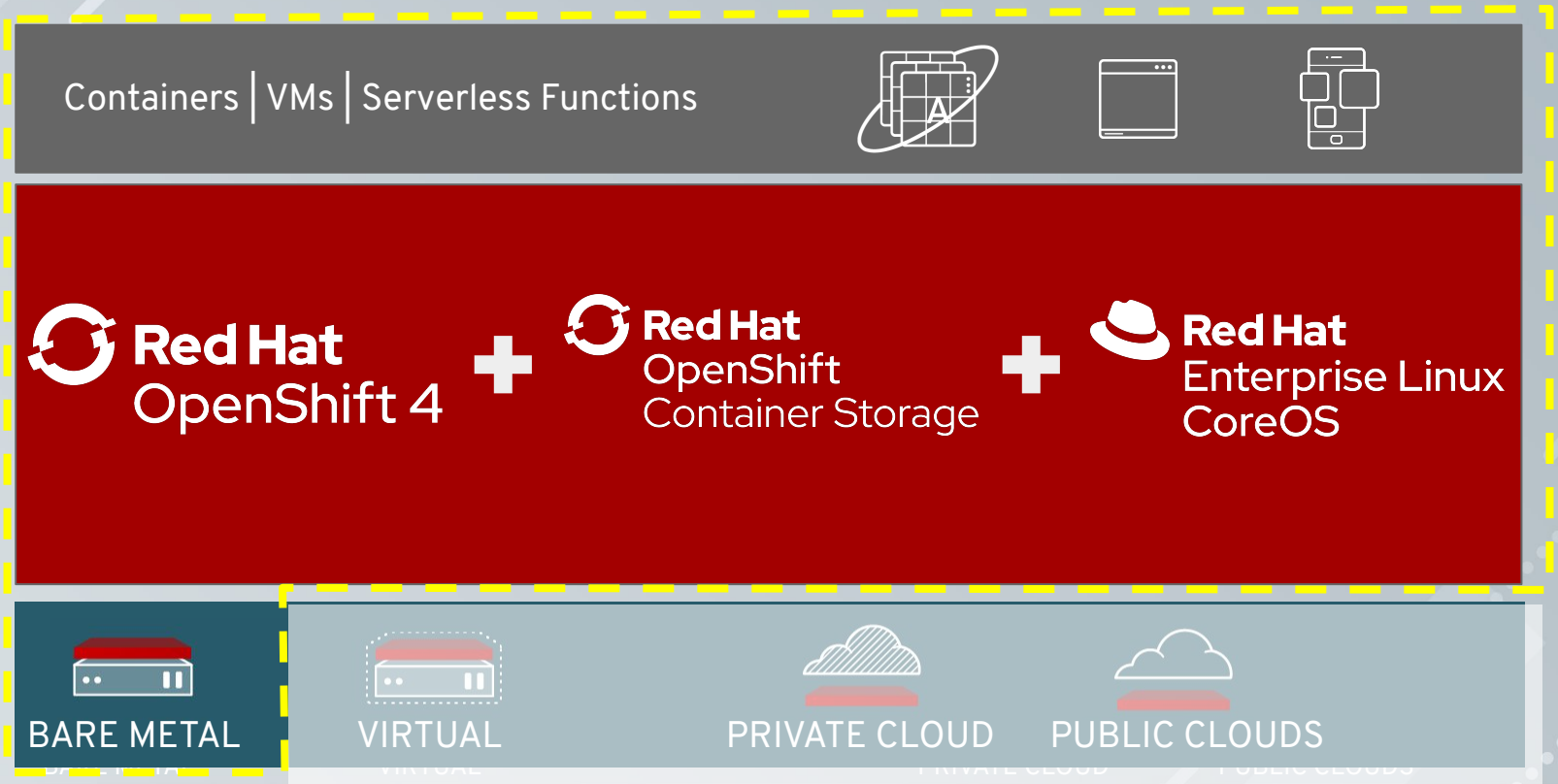
CUSTOMER FEEDBACK...

- Apps and data ON-PREMISE for various reasons (e.g. compliance, performance, etc.)
- Need Containers, Serverless Functions, and VMs
- Don’t want to pay for the expensive hypervisor tax & the associated complexity

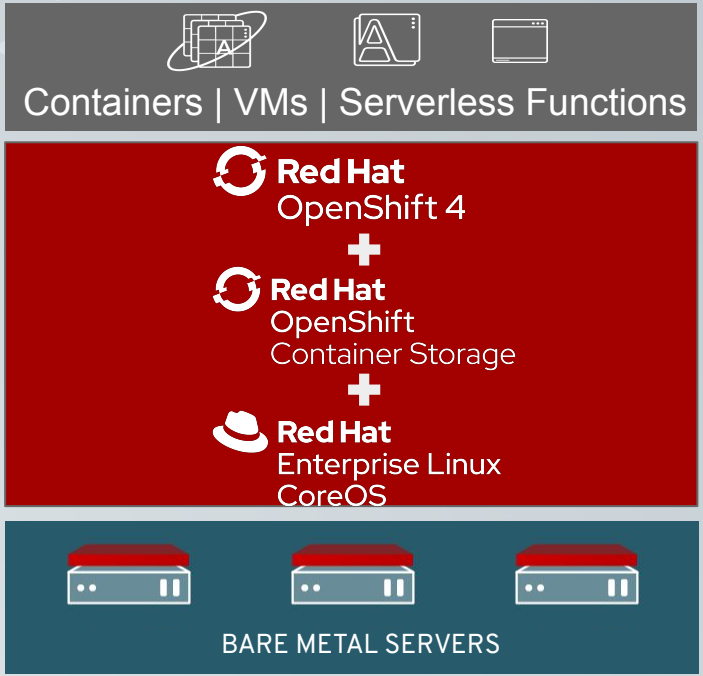
CUSTOMER FEEDBACK...

- Cloud Agility & Simplicity for both Infrastructure & Apps
- Granular security

KUBERNETES-NATIVE INFRASTRUCTURE CONCEPT IS THE ANSWER...

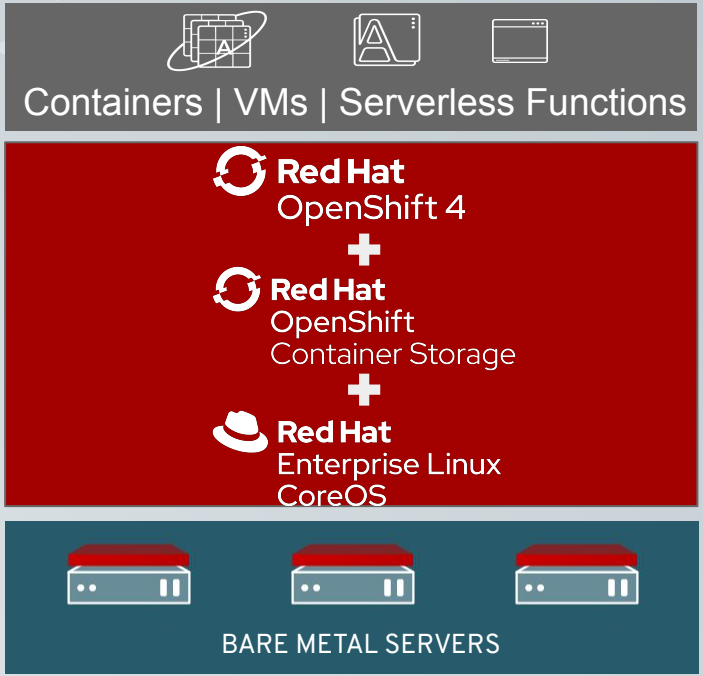


KUBERNETES-NATIVE INFRASTRUCTURE CONCEPT OVERVIEW



- Enterprise open source software stack on opinionated bare metal configurations
- Delivered through OpenShift
- **Kubernetes** as the single control hub for apps and infrastructure lifecycle management:
  - Containers, functions, and VMs
  - Compute, network, storage, etc.

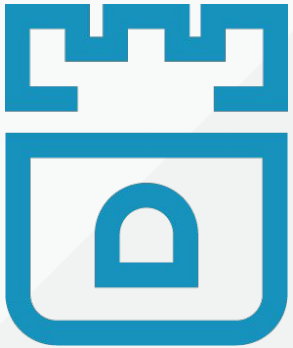
KUBERNETES-NATIVE INFRASTRUCTURE CONCEPT OVERVIEW



- Kubernetes Operators to automate the Day 1-2 ops for both apps & infrastructure
- RHEL CoreOS as the immutable, lightweight OS with “over the air updates”

OPEN SOURCE TECHNOLOGIES IN USE

Kubernetes Operators Framework

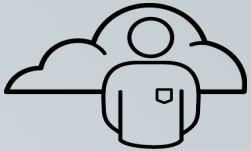


Rook

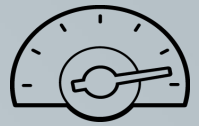
KubeVirt

redhat.

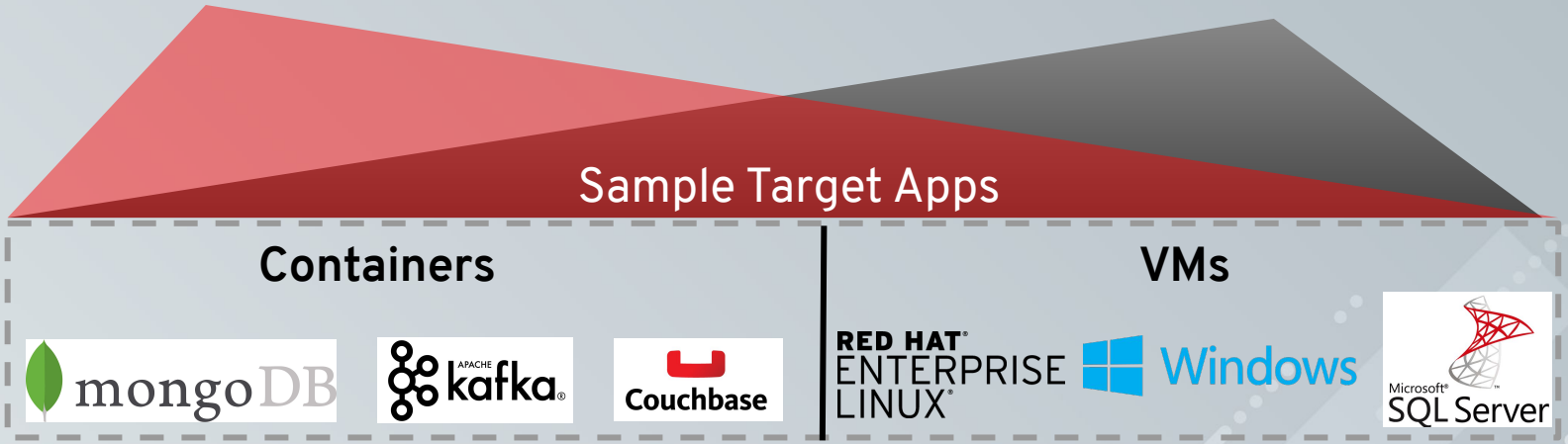
INITIAL TARGET USE CASES



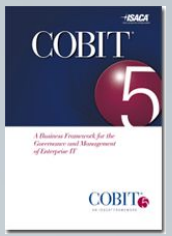
Developer Cloud
(Web & mobile app dev)



Latency sensitive
applications

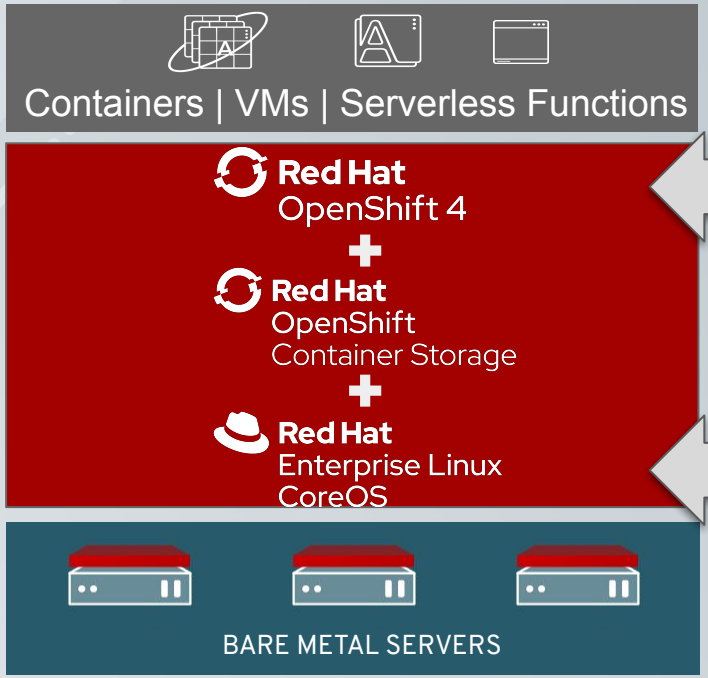


A COMPLIANCE DRIVEN APPROACH



All trademarks, service marks, trade names, trade dress, product names and logos appearing on the site are the property of their respective owners.

Security Approaches and Influences in KNI



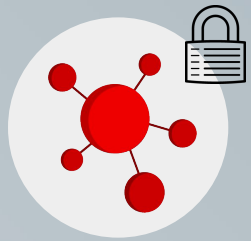
- Compliance as code
  - Compliance and remediation as a software process
  - Essential for immutable system and container images
- Security Automation
  - Required to maintain security in complex architectures
- Zero Trust philosophies
  - Enables policy driven security contexts for devices, identities and applications

Kubernetes-native infrastructure concept can help operationalize the Open Hybrid Cloud vision, and enable business innovation.

BENEFITS TO I.T. AND APP DEV

Simplify, accelerate, and achieve cost efficiency with IT operations

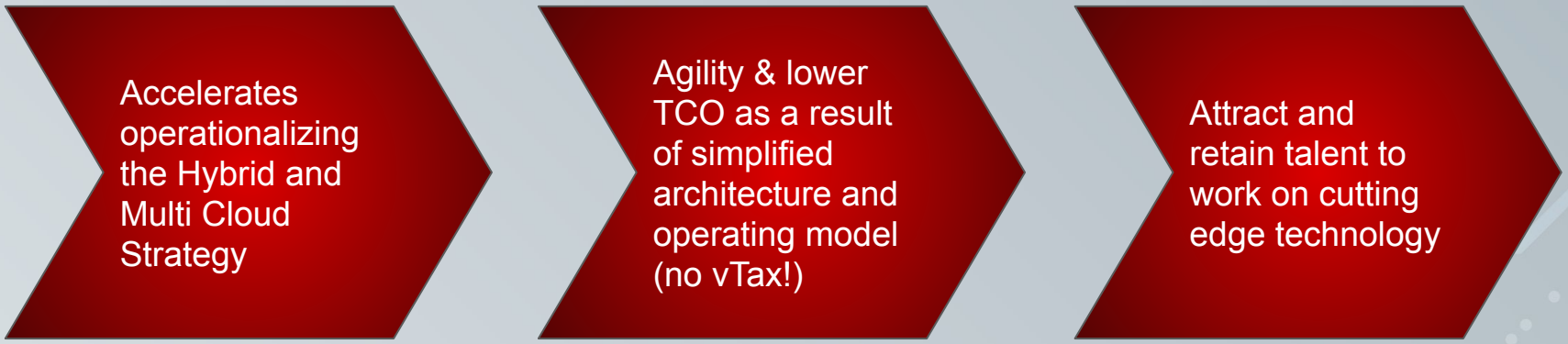
Faster time to value by accelerating application development



Enable “cloud-like” experience, on-premise

Security & Compliance

THE DIFFERENTIATION…



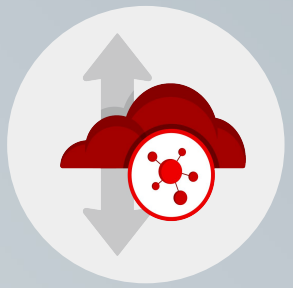
WANT TO DIVE DEEPER?

3:15PM - 4PM; May 9th

“A Kubernetes-native infrastructure deep dive”

SUMMARY

IT & App Dev agility & simplicity is key to business innovation



Kubernetes-native infrastructure can help achieve agility, simplicity, and attract talent, while ensuring security and cost efficiency

Please contact your Red Hat sales team so we can have a focused discussion on your needs

RED HAT SUMMIT

THANK YOU

linkedin.com/company/Red-Hat

facebook.com/RedHatinc

youtube.com/user/RedHatVideos

twitter.com/RedHat