RANCHER®

Run Kubernetes Everywhere™

Mike Friesenegger
Solutions Architect, Global IBM partnership

June 11, 2021

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THE FUTURE OF KUBERNETES

> *76% of enterprises will standardize on Kubernetes within 3 years*

JAY LAYMAN
Principal Analyst
451 Research

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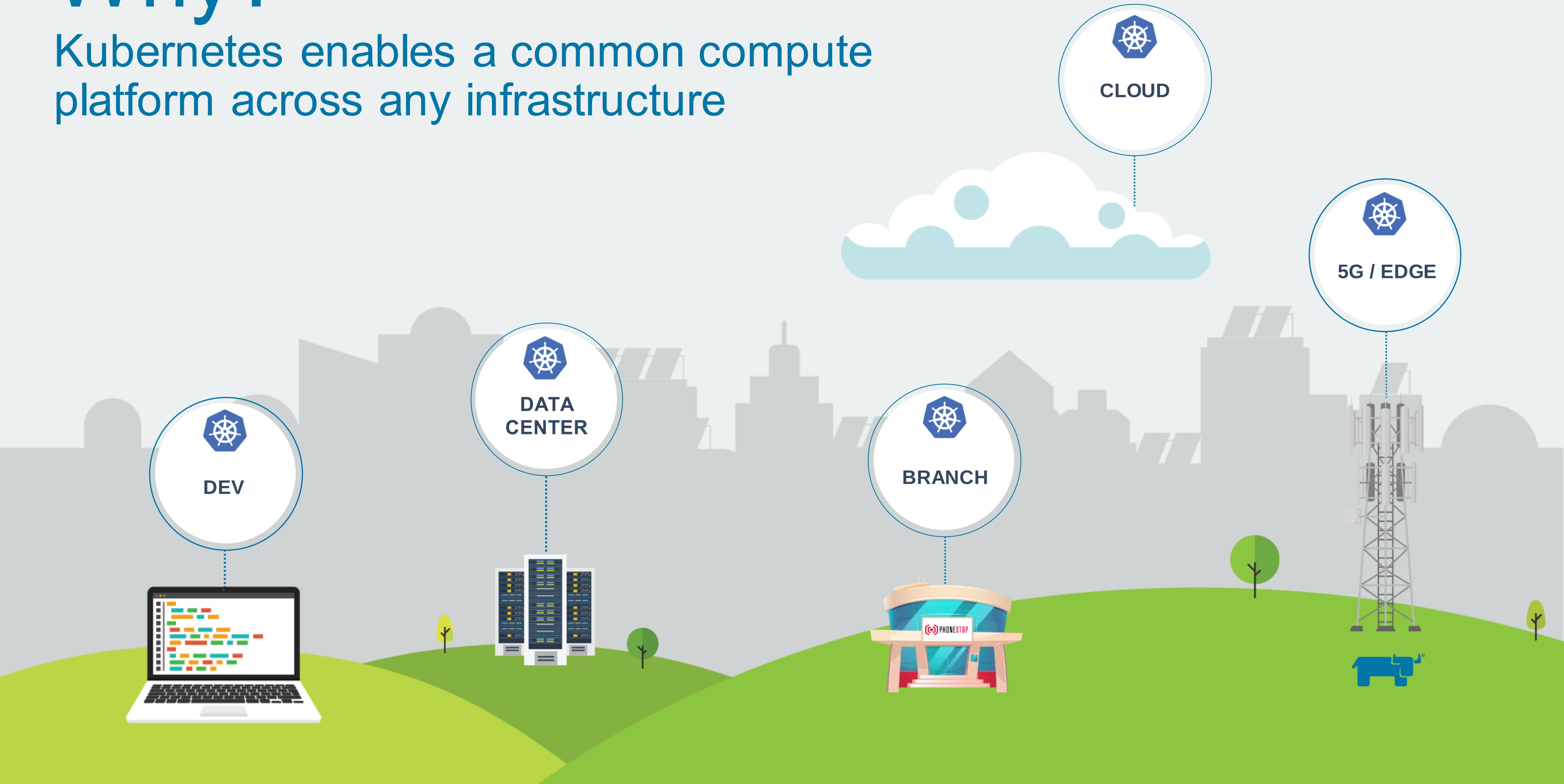
Rancher Kubernetes Engine Demonstration

Why?

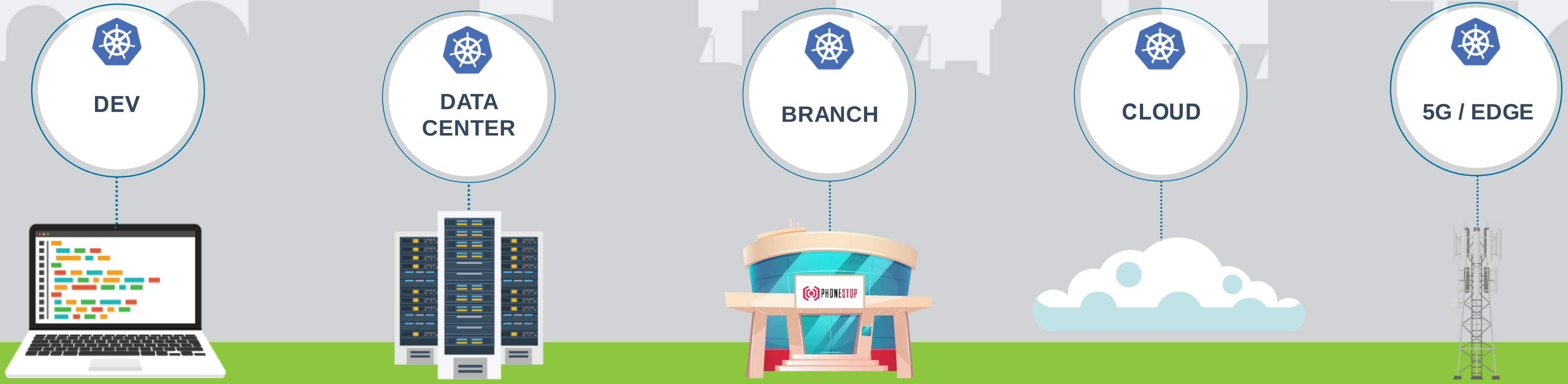
Kubernetes enables a common compute platform across any infrastructure


CLOUD
5G / EDGE
DATA CENTER
DEV
BRANCH
PHONESTOP

And a consistent set of infrastructure capabilities

- ✓ Common API & Packaging
- ✓ Health Checks/HA
- ✓ Load Balancing
- ✓ Overlay Networking
- ✓ Network Security Policies

- ✓ Backup and Recovery
- ✓ Autoscaling
- ✓ Service Discovery
- ✓ Networking
- ✓ RBAC & Access Control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Wrap-up the Rancher Kubernetes Engine Demonstration

Organizations can realize key benefits by unifying operations with Kubernetes

1. Consistently deliver a high level of reliability on any infrastructure
2. Improve DevOps efficiency with standardized automation
3. Ensure enforcement of security policies on any infrastructure

But! Kubernetes can create overhead and risk

Kubernetes clusters are typically deployed:

1 Without central visibility

2 Without consistent security policies

3 And must be managed independently

What’s required to unleash the power of Kubernetes?

Containerized App 1

Containerized App 2

Containerized App 3

Centralized Management

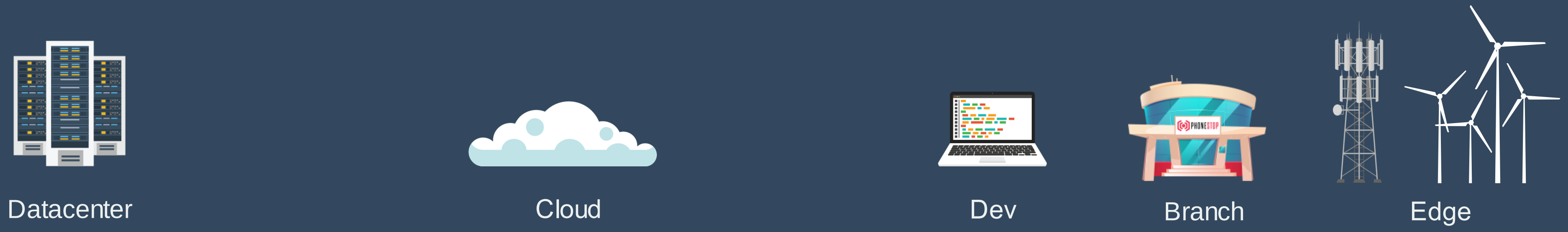
Platform Services (Build & Run)

Security, Authentication, Policy Enforcement and Governance (Secure)

Consistent Cluster Operations (Run & Manage)

Certified Kubernetes Distributions

Run Certified Kubernetes from Dev to Edge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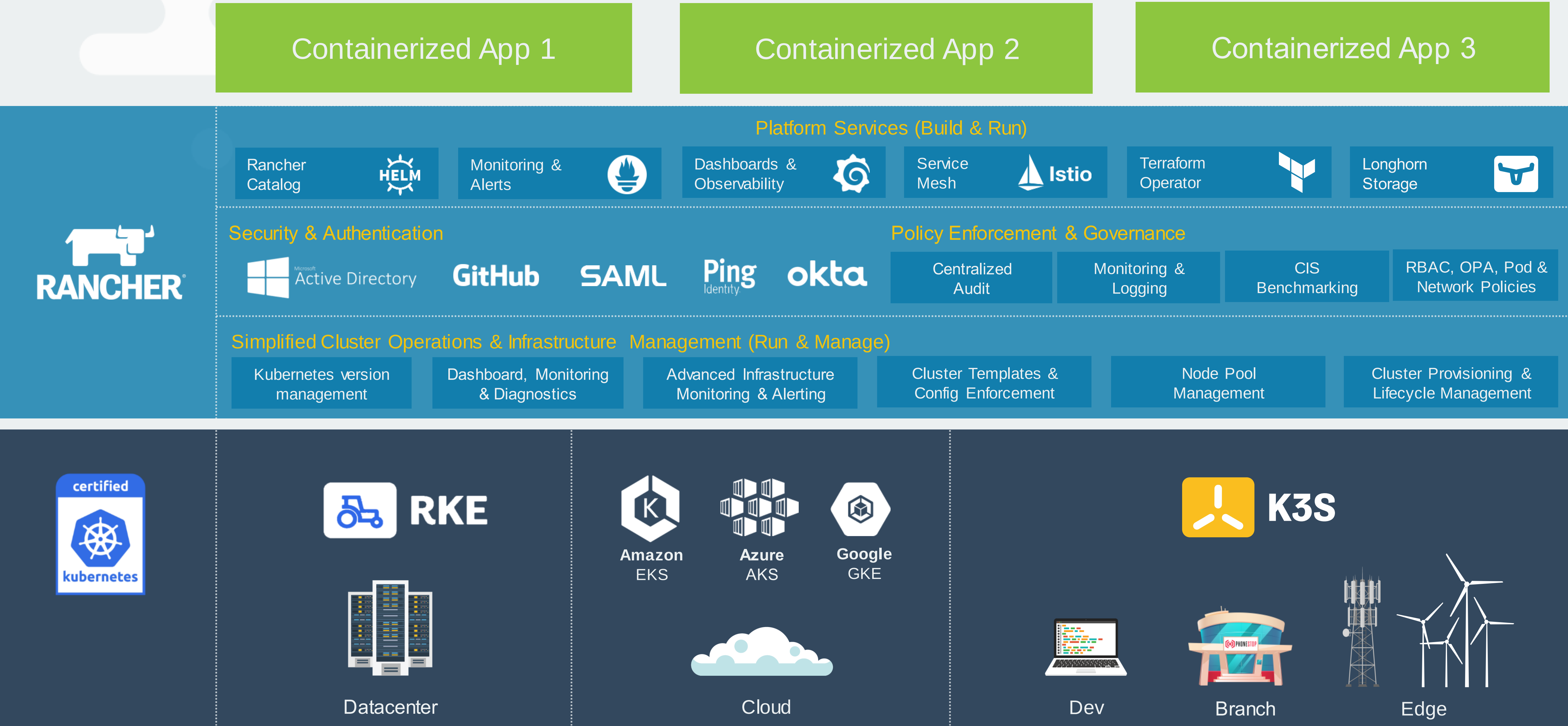
Rancher enables production quality Kubernetes everywhere



Containerized App 1

Containerized App 2

Containerized App 3

RANCHER

Platform Services (Build & Run)

- Rancher Catalog
- Monitoring & Alerts
- Dashboards & Observability
- Service Mesh — Istio
- Terraform Operator
- Longhorn Storage

Security & Authentication

Microsoft Active Directory

GitHub

SAML

Ping Identity

okta

Policy Enforcement & Governance

- Centralized Audit
- Monitoring & Logging
- CIS Benchmarking
- RBAC, OPA, Pod & Network Policies

Simplified Cluster Operations & Infrastructure Management (Run & Manage)

- Kubernetes version management
- Dashboard, Monitoring & Diagnostics
- Advanced Infrastructure Monitoring & Alerting
- Cluster Templates & Config Enforcement
- Node Pool Management
- Cluster Provisioning & Lifecycle Management

certified kubernetes

RKE

Datacenter

Amazon EKS

Azure AKS

Google GKE

Cloud

K3S

Dev

Branch

Edge

Products & Projects

COMMERCIALLY SUPPORTED PRODUCTS

RANCHER®

Flagship product - world's most popular Kubernetes Management platform

RKE

A CNCF-certified Kubernetes distribution that runs entirely within Docker containers

K3S

A CNCF-certified, Lightweight Kubernetes distribution. Easy to install, half the memory, all in a binary less than 100MB

LONGHORN

Highly available persistent block storage for microservices-based, stateful applications

HOSTED RANCHER SERVICE

Hosted Rancher control plane available to 99.9% uptime SLA. Add-on to Platinum subscription

FLEET

Deploy & manage thousands to millions of clusters at the network edge

OPEN SOURCE PROJECTS

RIO

Securely build, test, deploy, scale and version stateless app in any K8s cluster

K3OS

Simplifies Kubernetes operations in low-resource computing environments

SUBMARINER

Built to connect overlay networks of different Kubernetes clusters

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Putting it all together

ITOps

Provisions Kubernetes, Maintains Central Control & Visibility

Cluster-as-a-Service

Namespace-as-a-Service

- Scope Capacity
- Delegate Administration
- Apply Access and Security Policies

Resources

Leverage Kubernetes Shared Services

Ecosystem Catalog

redis kafka mongoDB hadoop Spark
elasticsearch splunk> aqua Twistlock PostgreSQL

App Packaging

HELM OPERATOR FRAMEWORK

Logging

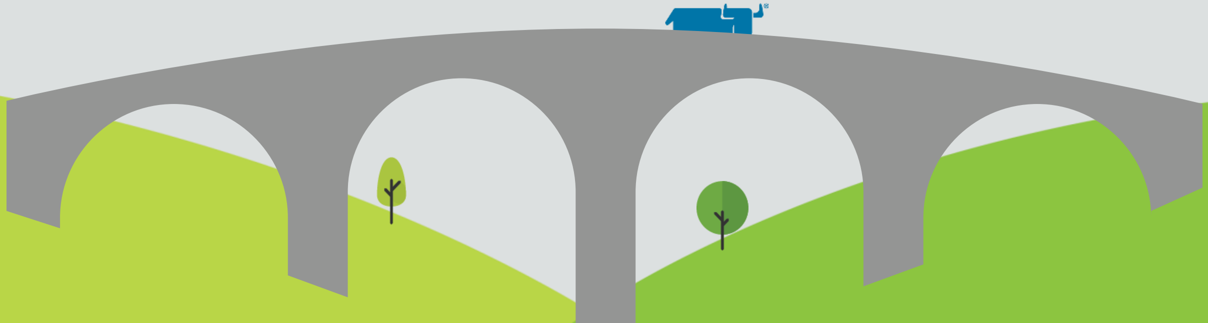
fluentd

Monitoring & Alerting

Prometheus Grafana

Service Mesh

Istio



DevOps

Realizes Advanced Capabilities With Kubernetes

Continuous Delivery

Canary, Blue/Green Deployments

Reactive Autoscaling

Automate DNS & Load Balancing

SSL and Certificate Management

Secret Management

Rancher’s Unique Approach

It's a multi-cluster world

Kubernetes distributions are commoditized

Value is in Kubernetes management

‘Open’ approach to open source

Leading companies everywhere use Rancher

FINANCIAL SERVICES

- Fidelity Investments
- American Express
- OCC
- ICBC
- Markel
- absa
- iag
- Putnam Investments
- Baillie Gifford
- usbank
- KPMG
- 中国平安 PING AN
- pwc
- Great Eastern A member of the OCBC Group
- Elliott
- Raymond James
- Aviva
- MSCI
- Elavon
- IPC
- WWK
- Apex America's Favorite Factor
- Munich RE
- TSB
- Lloyds Banking Group
- Marsh & McLennan Companies
- TAB bank
- billtrust
- DRW
- Cuscal

TECHNOLOGY

- intel
- NVIDIA
- arm
- cisco
- Zillow
- Equinix
- SEL
- Qualcomm
- Teradata
- bmc
- Optiv
- Fujitsu
- Blue Origin
- Wowza media systems
- Infosys
- ExLibris a ProQuest Company
- Sophos
- ca technologies
- Samsung
- Axon
- Maritz CX
- servicenow
- playtech source of success
- ABAX
- Secureworks

MEDIA & ENTERTAINMENT

- Disney
- Fox Sports
- nielsen
- CNN
- dish
- PlayStation
- sky
- sky bet
- sling television
- Ziff Davis
- DStv
- CNTV 中国网络电视台 CHINA NETWORK TELEVISION

HEALTHCARE

- NHS
- Pfizer
- Genentech A Member of the Roche Group
- Johnson & Johnson
- Cerner
- illumina
- Invitae
- invisalign
- hhmi Howard Hughes Medical Institute
- Centene Corporation
- CVS Health
- imagia
- Merck
- IHME Measuring what matters

GOVERNMENT

- Lockheed Martin
- Raytheon
- New York City Department of Sanitation
- Australian Government Department of Defence
- State of Wisconsin Department of Corrections
- USDA
- Tatts Group
- Science & Technology Facilities Council
- UK Research and Innovation
- National Energy Research Scientific Computing Center
- DB Bahn
- Argonne National Laboratory
- Booz | Allen | Hamilton
- NOAA
- Ontario Ministry of Community and Social Services / Ministère des Services sociaux et communautaires
- MIT Lincoln Laboratory
- NERSC
- U.S. Air Force
- BAE Systems
- NREL National Renewable Energy Laboratory

RETAIL & MANUFACTURING

- BASF We create chemistry
- CORT
- tyco
- Honeywell
- DuPont
- SAIC
- Pioneer
- Schlumberger
- Westfield
- coop
- Signet Jewelers
- cencosud
- RioTinto
- NOV
- Digi-Key Corporation
- Sherwin-Williams
- Schneider Electric
- Thales Digital Factory
- Michelin
- DFS
- T Galleria
- Hasbro
- Tudor
- Siemens
- Edeka
- Goldwind

TELECOM & MSPS

- Charter Communications
- Cox
- Comcast
- NTT
- IIJ Internet Initiative Japan
- Bell
- Telstra
- 中国电信 China Telecom
- Viasat
- kpn
- dimension data
- Crown Castle
- windstream
- Zitcom
- T-Mobile
- KSAT
- Deutsche Telekom
- DXC.technology

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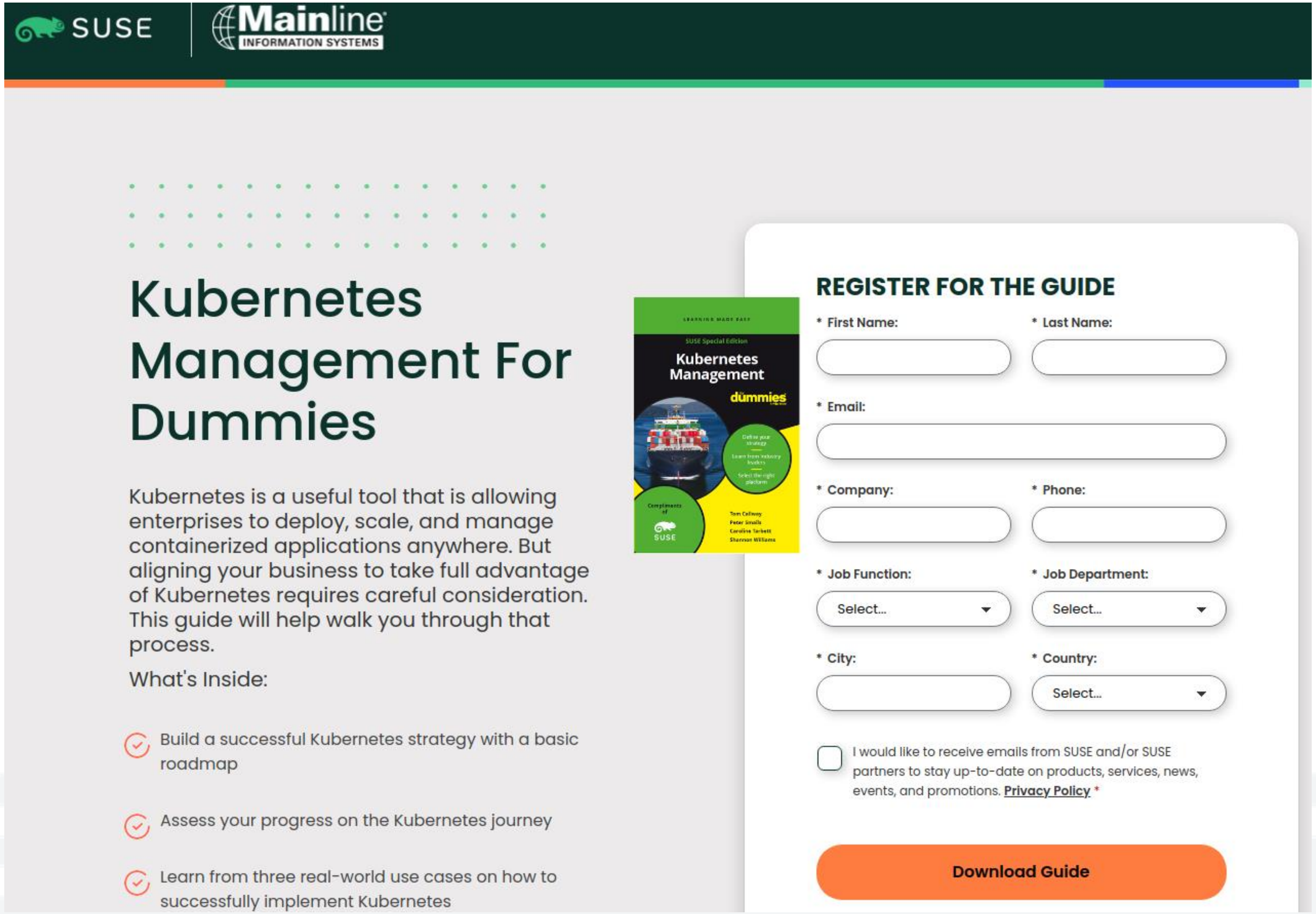
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Kubernetes Management For Dummies

Kubernetes is a useful tool that is allowing enterprises to deploy, scale, and manage containerized applications anywhere. But aligning your business to take full advantage of Kubernetes requires careful consideration. This guide will help walk you through that process.

What's Inside:

- Build a successful Kubernetes strategy with a basic roadmap
- Assess your progress on the Kubernetes journey
- Learn from three real-world use cases on how to successfully implement Kubernetes

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Rancher Cluster Management Demonstration

Questions?