



# **Kubernetes:** **A Gateway Drug** **for Vendor Lock-In**

**Ernesto Garbarino**

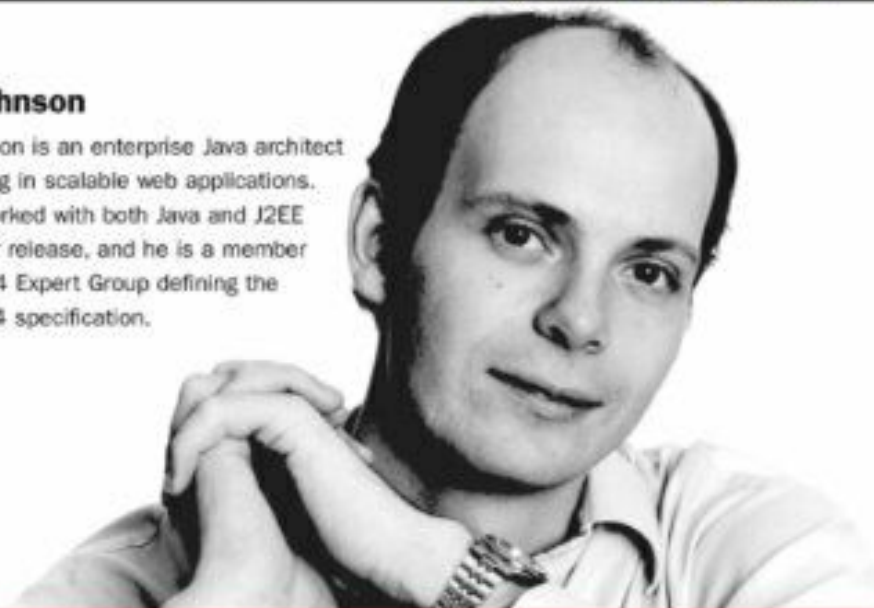






### Rod Johnson

Rod Johnson is an enterprise Java architect specializing in scalable web applications. He has worked with both Java and J2EE since their release, and he is a member of JSR 154 Expert Group defining the Servlet 2.4 specification.



# expert one-on-one **J2EE™ Design and Development**





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# Apex Developer Guide



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## Contents

Apex Developer Guide

Getting Started with Apex

Introducing Apex

What is Apex?

Understanding Apex Core  
Concepts

When Should I Use Apex?

How Does Apex Work?

Developing Code in the Cloud

What's New?

Apex Development Process

Apex Quick Start

Writing Apex

Running Apex

Debugging, Testing, and Deploying  
Apex

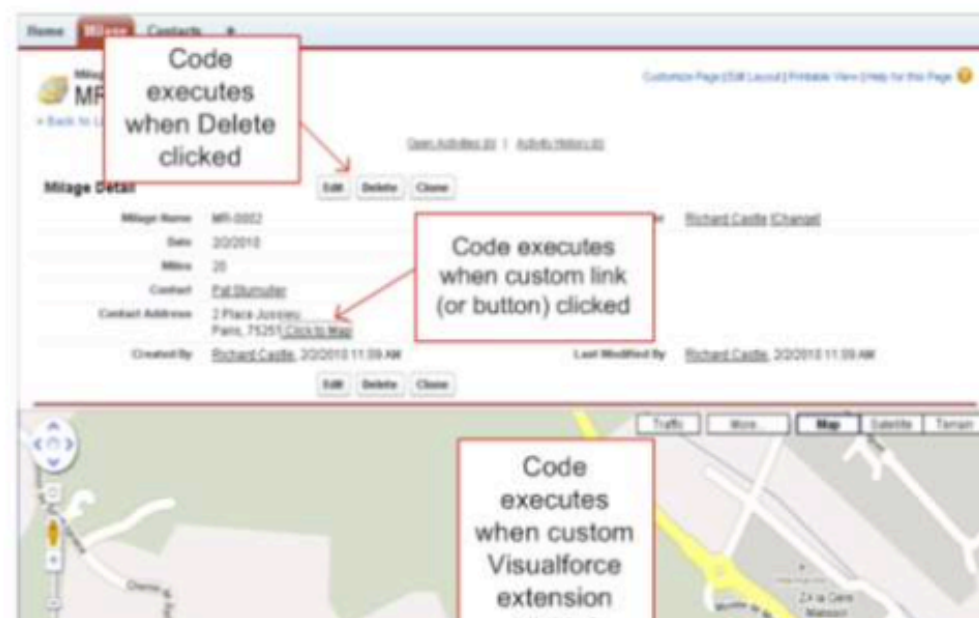
## What is Apex?

Apex is a strongly typed, object-oriented programming language that allows developers to execute flow and transaction control statements on Salesforce servers in conjunction with calls to the API. Using syntax that looks like Java and acts like database stored procedures, Apex enables developers to add business logic to most system events, including button clicks, related record updates, and Visualforce pages. Apex code can be initiated by Web service requests and from triggers on objects.

Available in: Salesforce Classic ([not available in all orgs](#)) and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

You can add Apex to most system events.



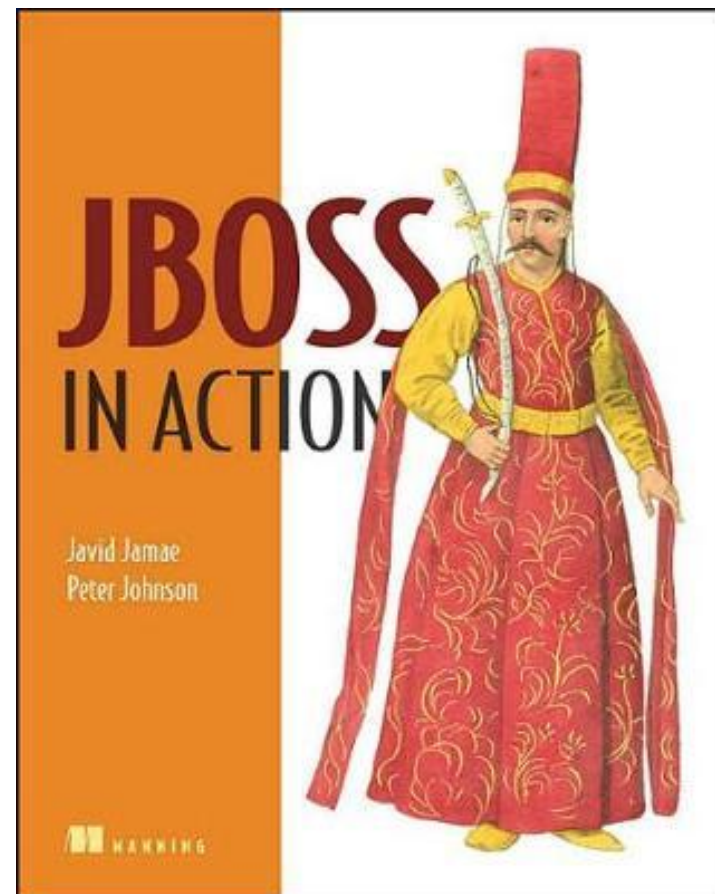
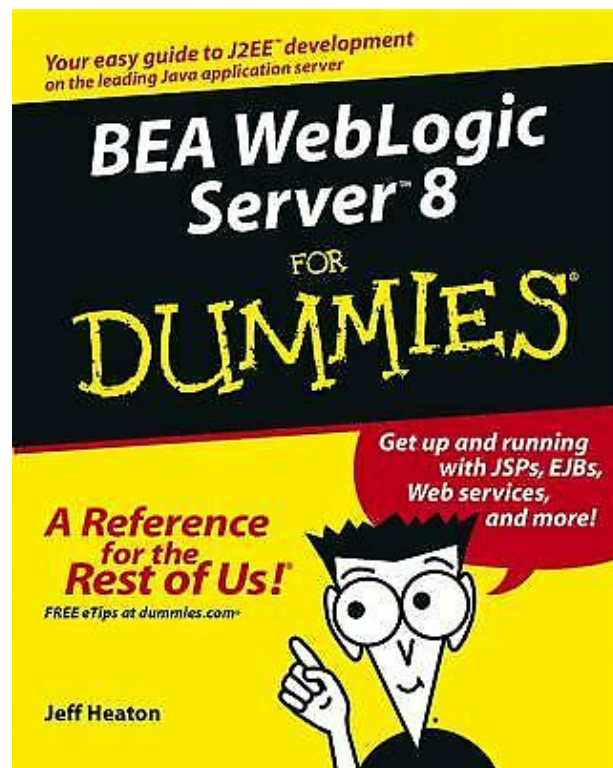
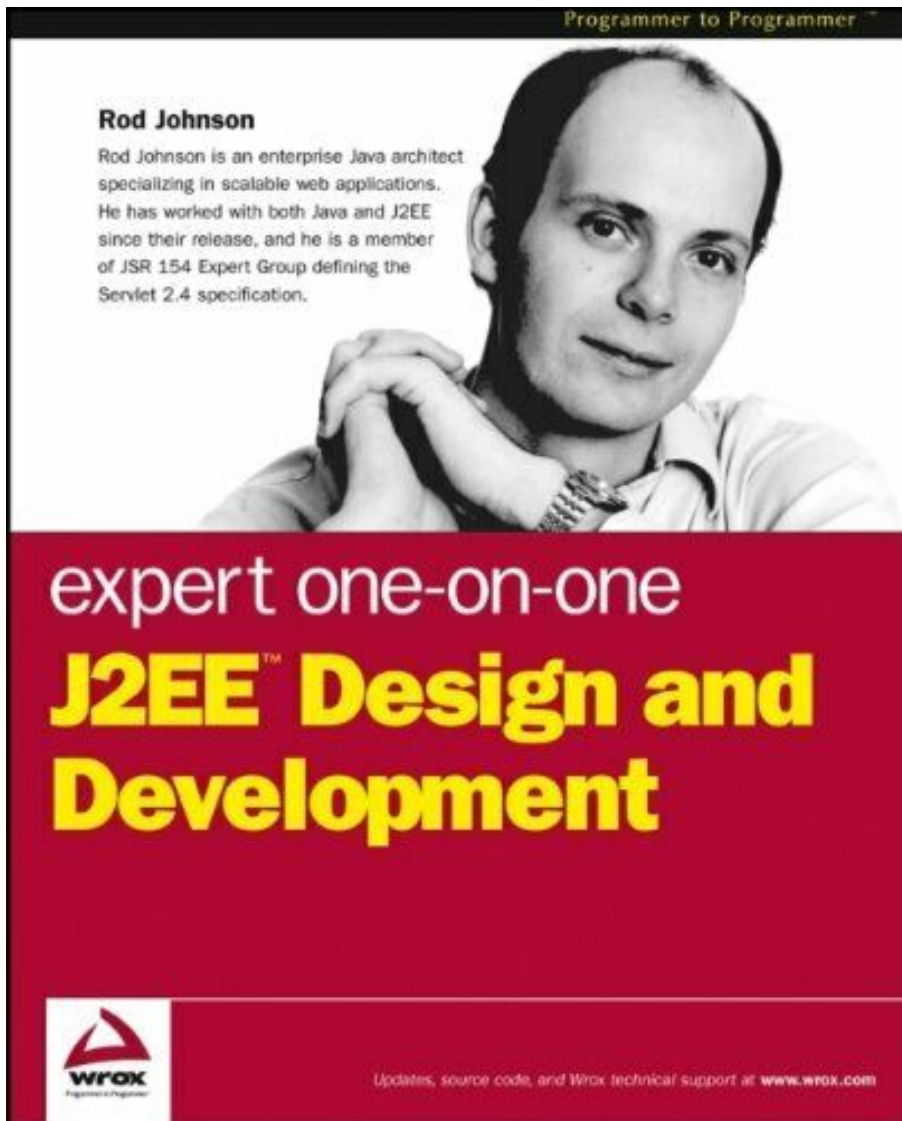


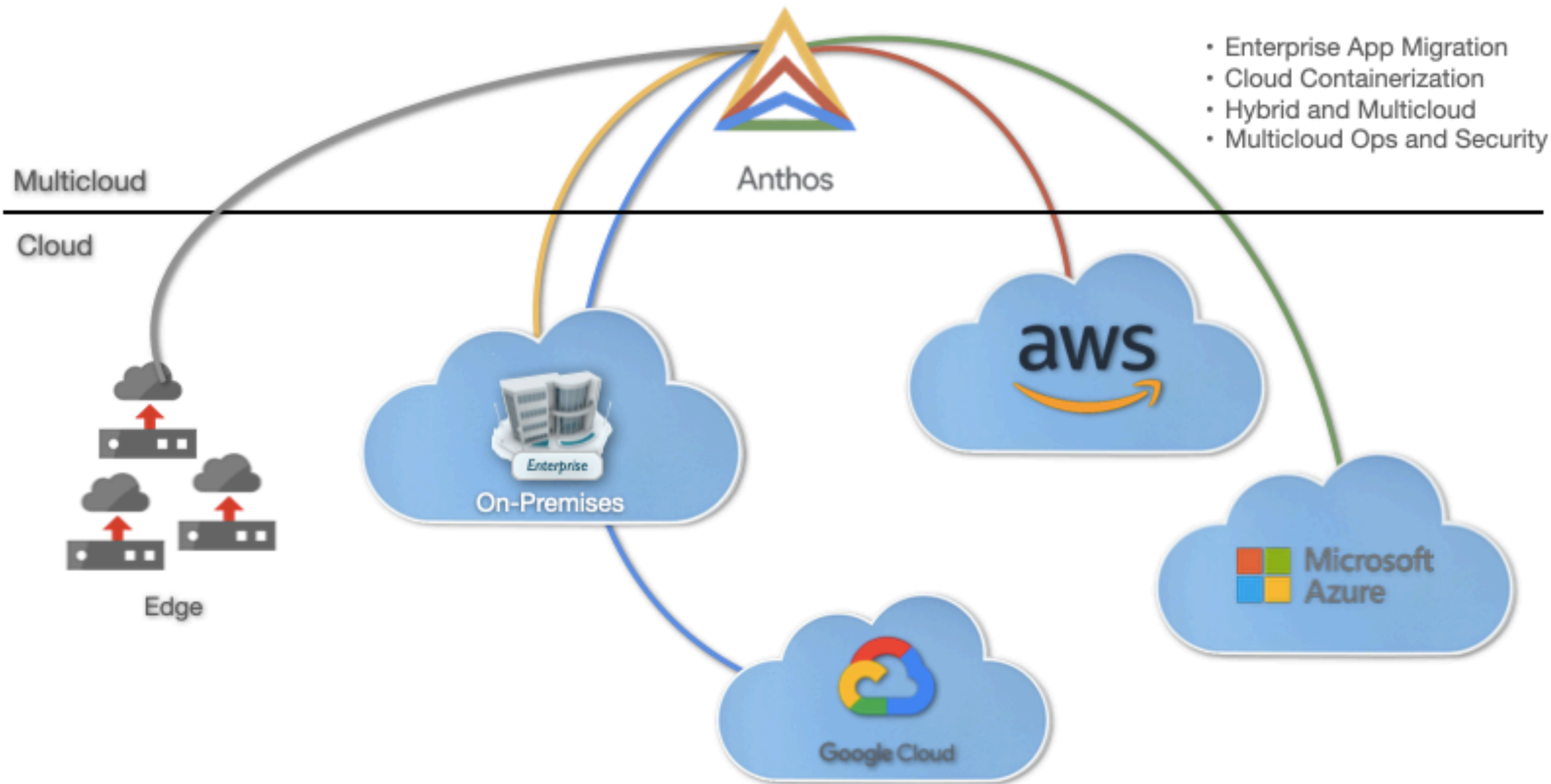












From <http://zdnet.com/blog/hinchcliffe> on  by Dion Hinchcliffe













# Amazon Elastic Kubernetes Service

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Filter by title

Azure Kubernetes Service (AKS)

- > Overview
- > Quickstarts
  - > Deploy an AKS Cluster

## Azure Kubernetes Service (AKS)

AKS allows you to quickly deploy a production ready Kubernetes cluster in Azure. Learn how to use AKS with these quickstarts, tutorials, and samples.

About Azure

Deploy an AKS cluster

Develop and debug

Google Kubernetes Engine (GKE)

JUMP TO

## Google Kubernetes Engine

Secured and managed Kubernetes service with four-way auto scaling and multi-cluster support.

New customers get \$300 in free credits to spend on Google Cloud during the first 90 days. All customers get one zonal cluster per month for free, not charged against your credits.

Go to console





# THE TWELVE FACTORS

## I. Codebase

One codebase tracked in revision control, many deploys

## II. Dependencies

Explicitly declare and isolate dependencies

## III. Config

Store config in the environment

## IV. Backing services

Treat backing services as attached resources

## V. Build, release, run

Strictly separate build and run stages

## VI. Processes

Execute the app as one or more stateless processes

## VII. Port binding

Export services via port binding

## VIII. Concurrency

Scale out via the process model

## IX. Disposability

Maximize robustness with fast startup and graceful shutdown

## X. Dev/prod parity

Keep development, staging, and production as similar as possible

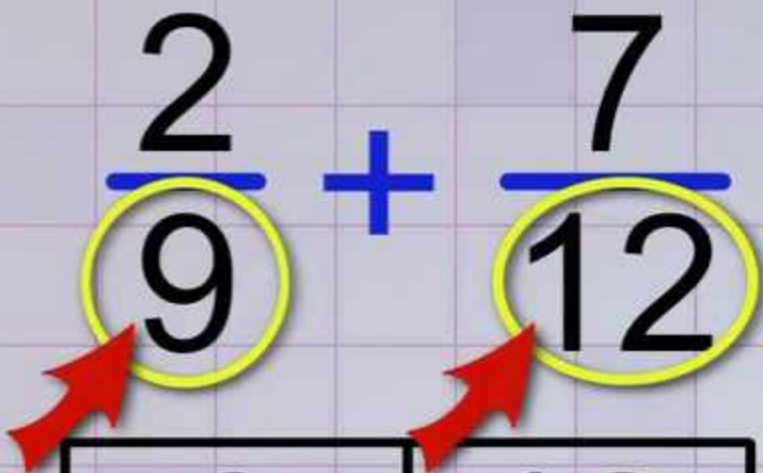
## XI. Logs

Treat logs as event streams

## XII. Admin processes

Run admin/management tasks as one-off processes



$$\frac{2}{9} + \frac{7}{12}$$


1×	9	12
2×	18	24
3×	27	36
4×	36	



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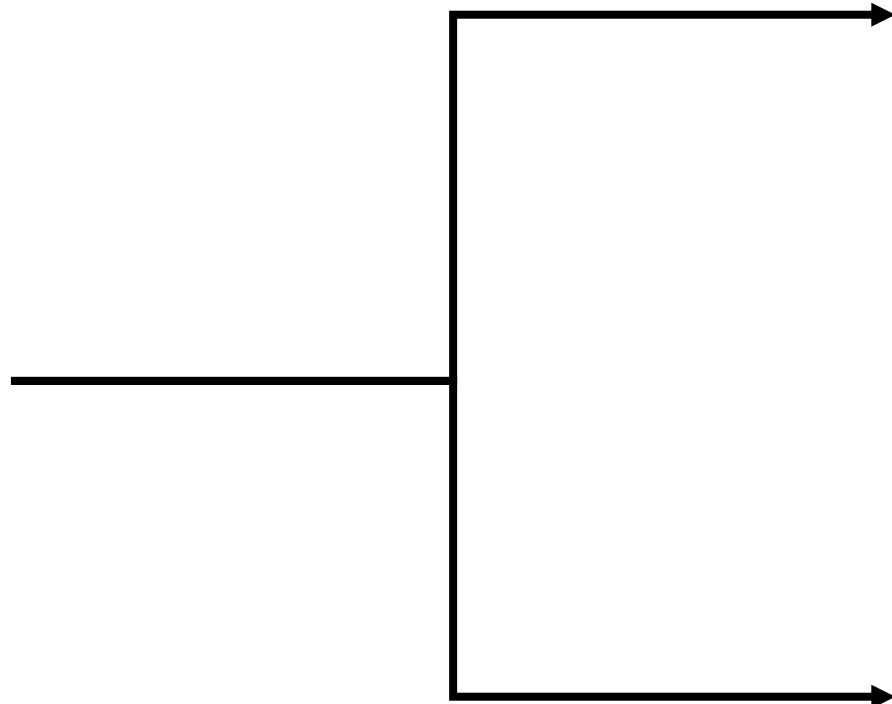


**One Kubernetes Vendor  
Multiple Clouds**

**My Cloud's  
Managed Kubernetes**



**?**



VMware Tanzu



Amazon EKS





One Kubernetes Vendor  
Multiple Clouds

My Cloud's  
Managed Kubernetes



**2.\* Kubernetes Platforms**



VMware Tanzu



Amazon EKS





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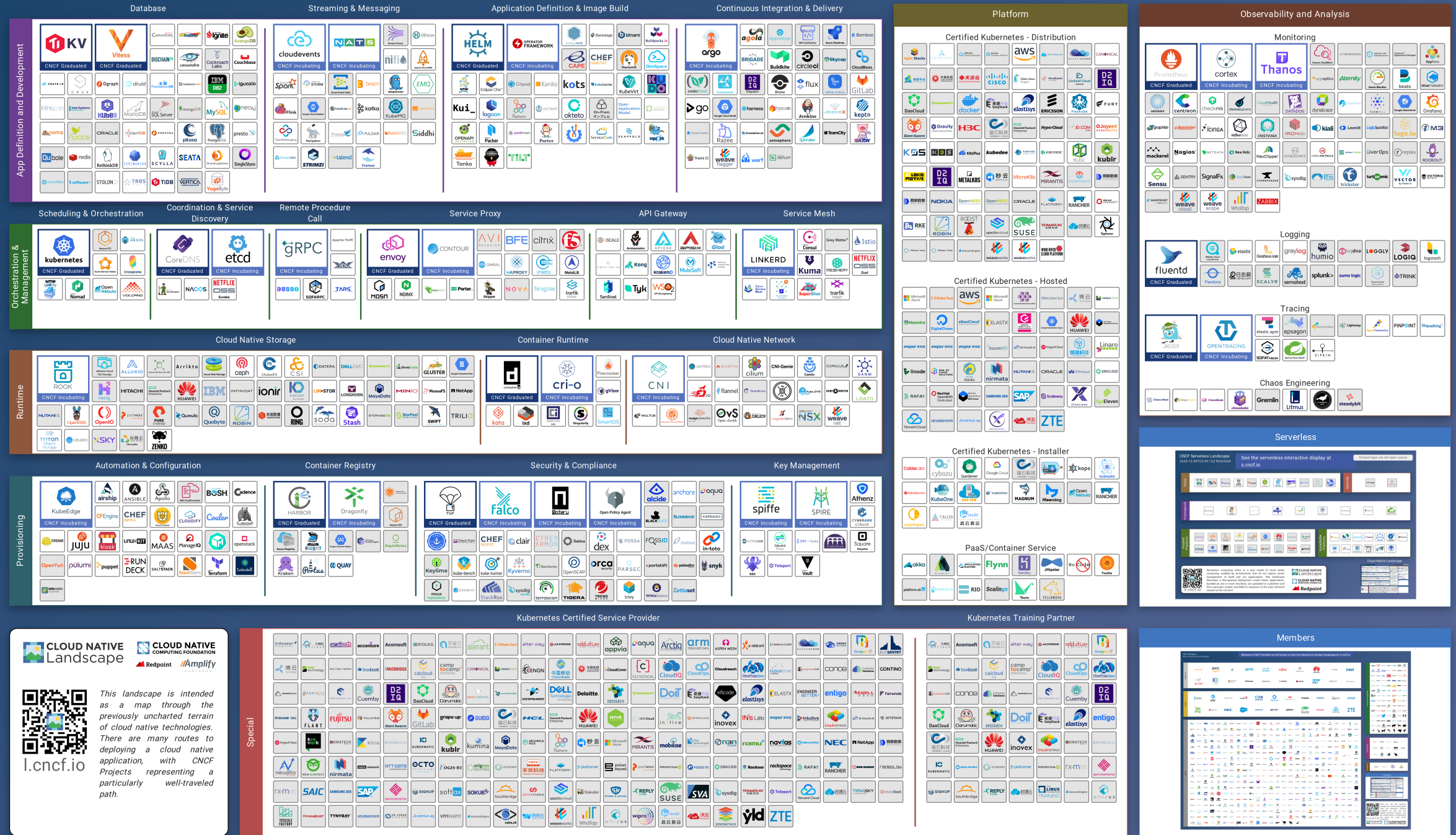
**dynatrace**

**splunk**>



**DATADOG**



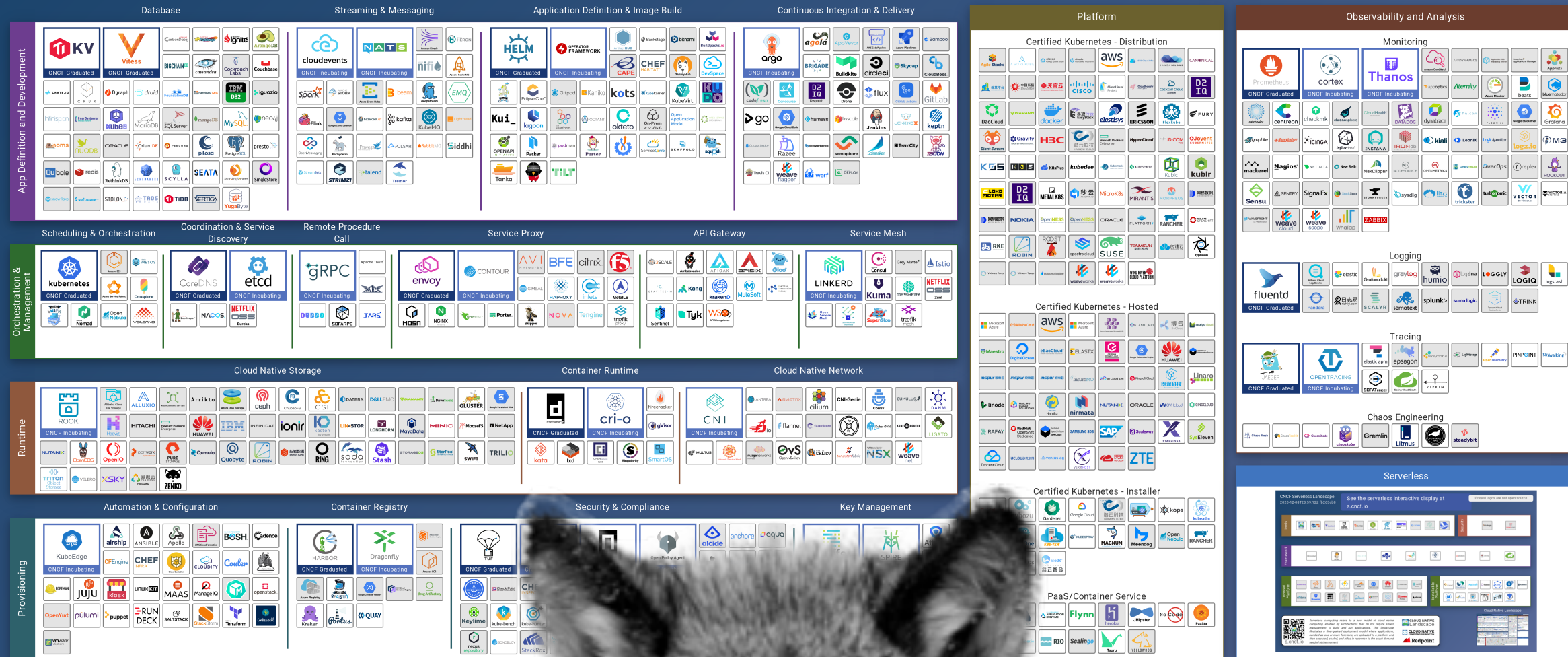






**GHOSTBUSTERS**

**555-2368**



**CLOUD NATIVE Landscape**

**CLOUD NATIVE COMPUTING FOUNDATION**

**Redpoint Amplify**

**l.cncf.io**

This landscape is intended as a map through the previously uncharted terrain of cloud native technologies. There are many routes to deploying a cloud native application, with CNCF Projects representing a particularly well-traveled path.

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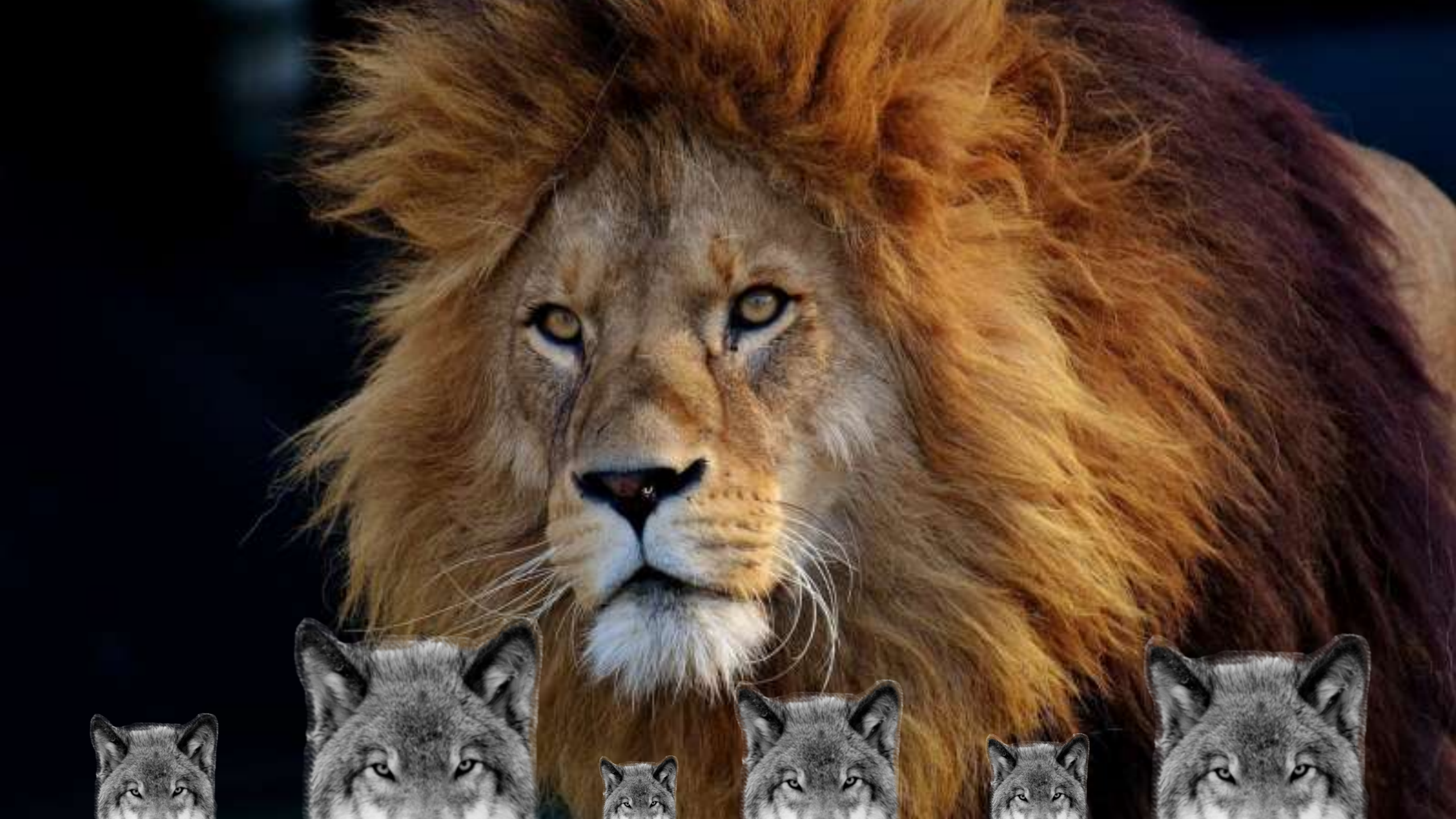


# Serverless

**“Servers are an increasingly useless abstraction. Useful to infrastructure engineers, but not to app developers”**

**Charity Majors  
CloudNative London 2018**







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Former HSBC boss sees parallels between pre-2008 banks and the technology firms on which society has become hooked

By James Cook and Morgan Meaker

30 November 2020 • 6:28pm

    |  5

We're making the same mistakes with Big Tech as we made with banks during the 2008 financial crisis - and



















← **I/O Glue Code**

← **Immutable  
Functions  
(Business Logic)**



← **Flask**   **Boto3**

← **Vendor-Agnostic**  
**Intellectual Property**

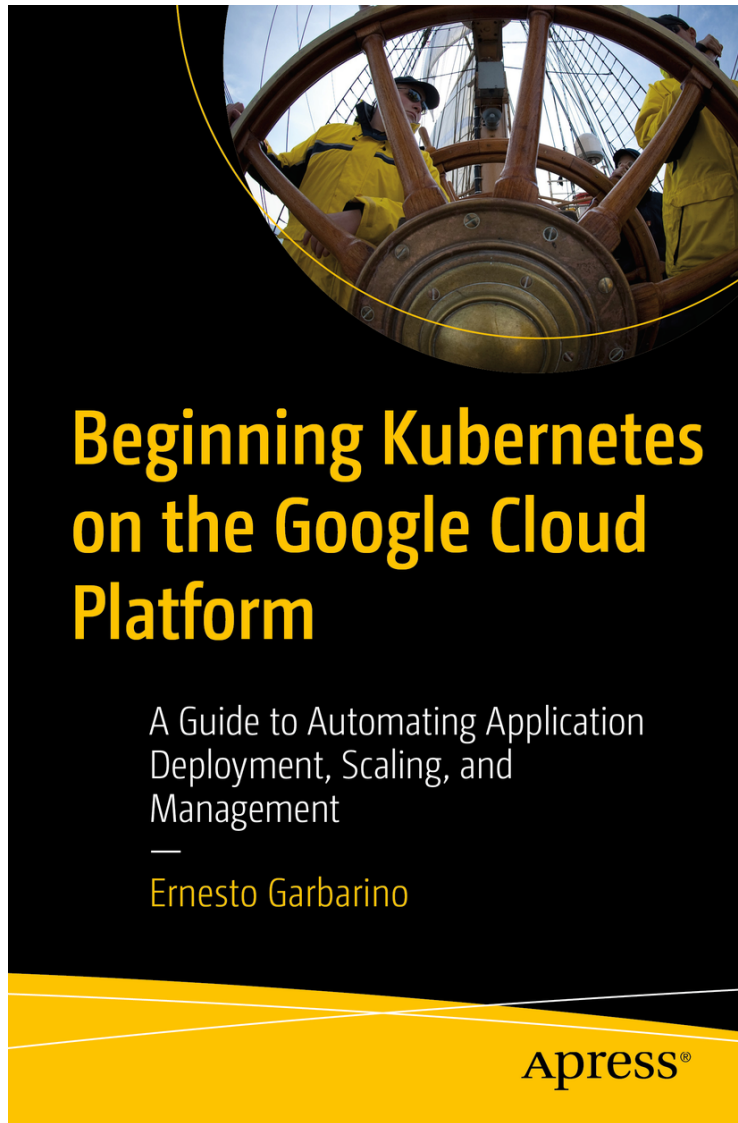




**Anti lock-In is a “solution”  
that I buy from a vendor**



**Sound architectural  
principles**



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