

Container Orchestration with Kubernetes: A real- time experience

Vidyasagar Machupalli

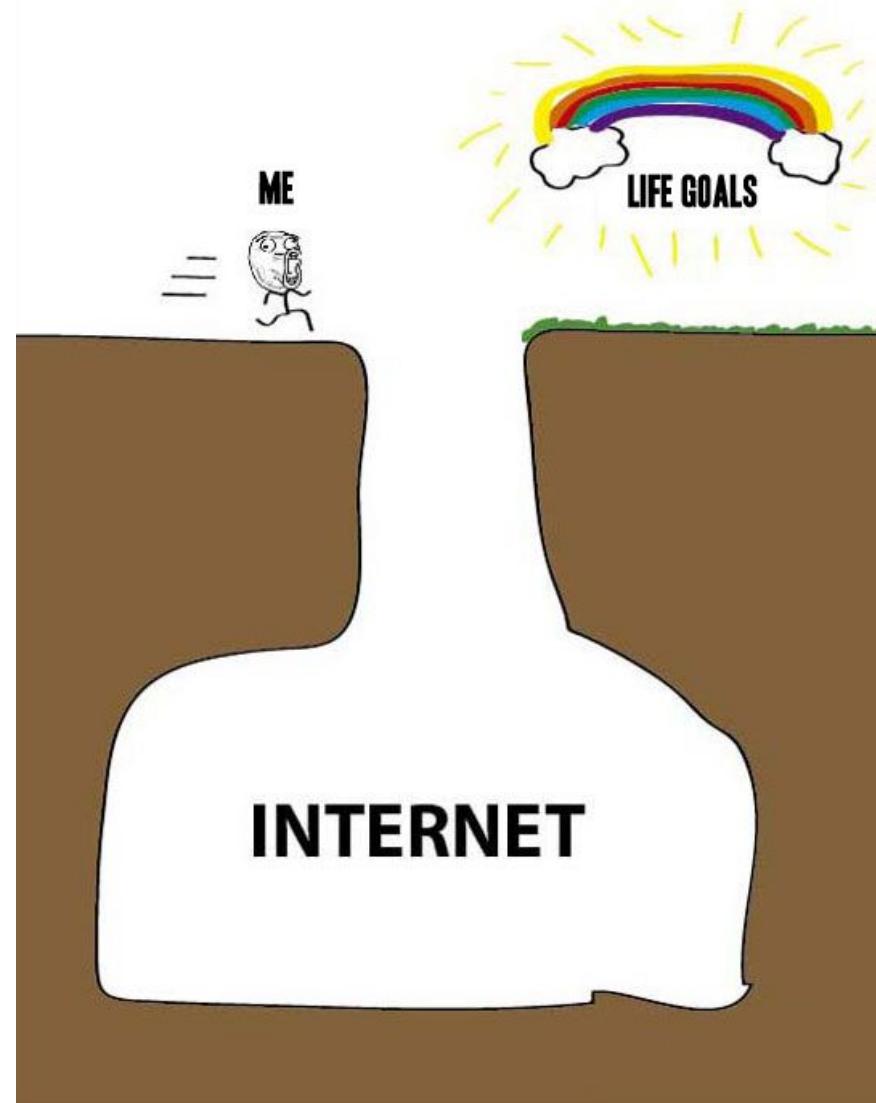
Technical Product Manager, IBM Cloud

<http://vmac.xyz> | @VidyasagarMSC

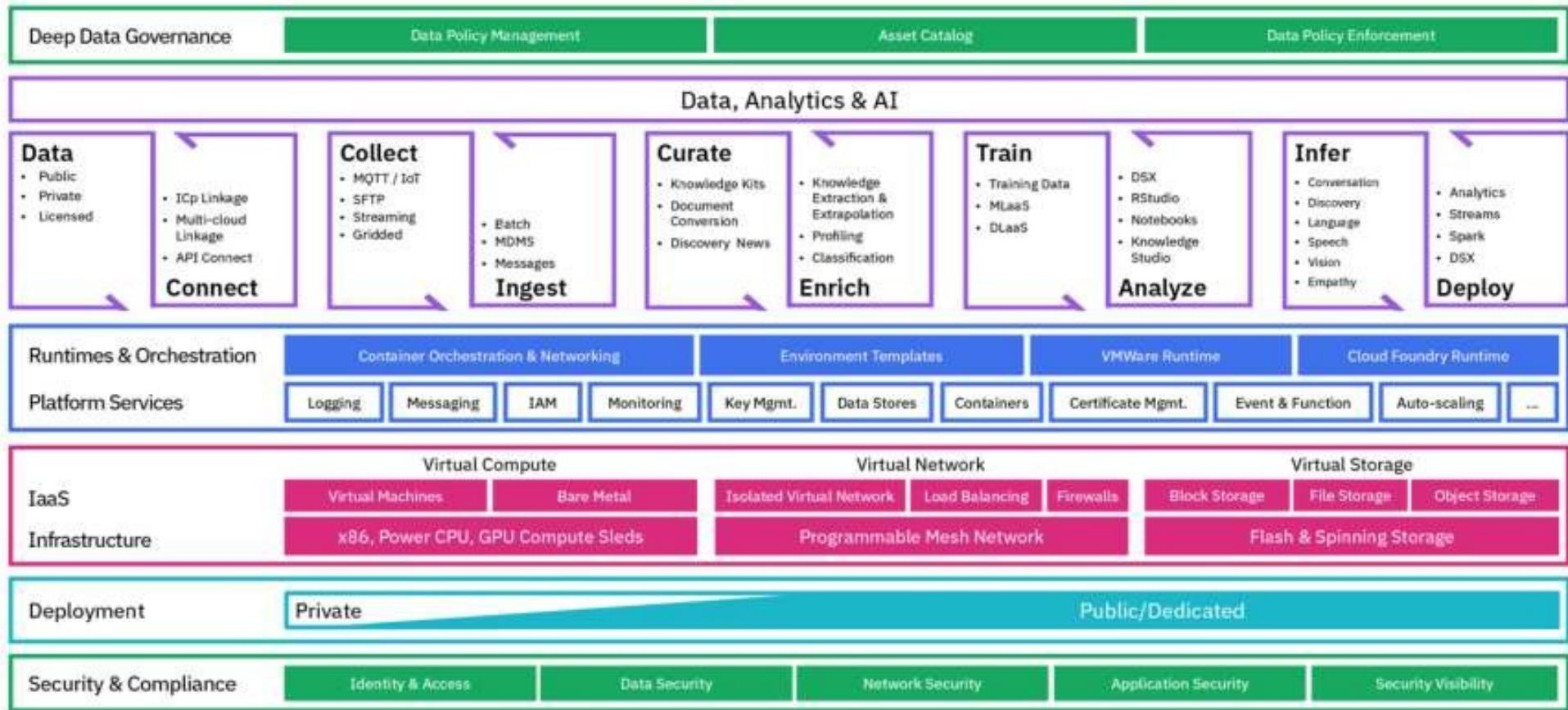


Prerequisites – A must have on your machine

- IBM Cloud UPGRADED account – <https://bluemix.net>
 - Script to install docker, kubectl, helm, bx cli and required plug-ins: <https://github.com/IBM-Cloud/ibm-cloud-developer-tools>
 - Open a terminal or command prompt and run
`bx login`
 - Follow the instructions
- `bx cs cluster-create mycluster`

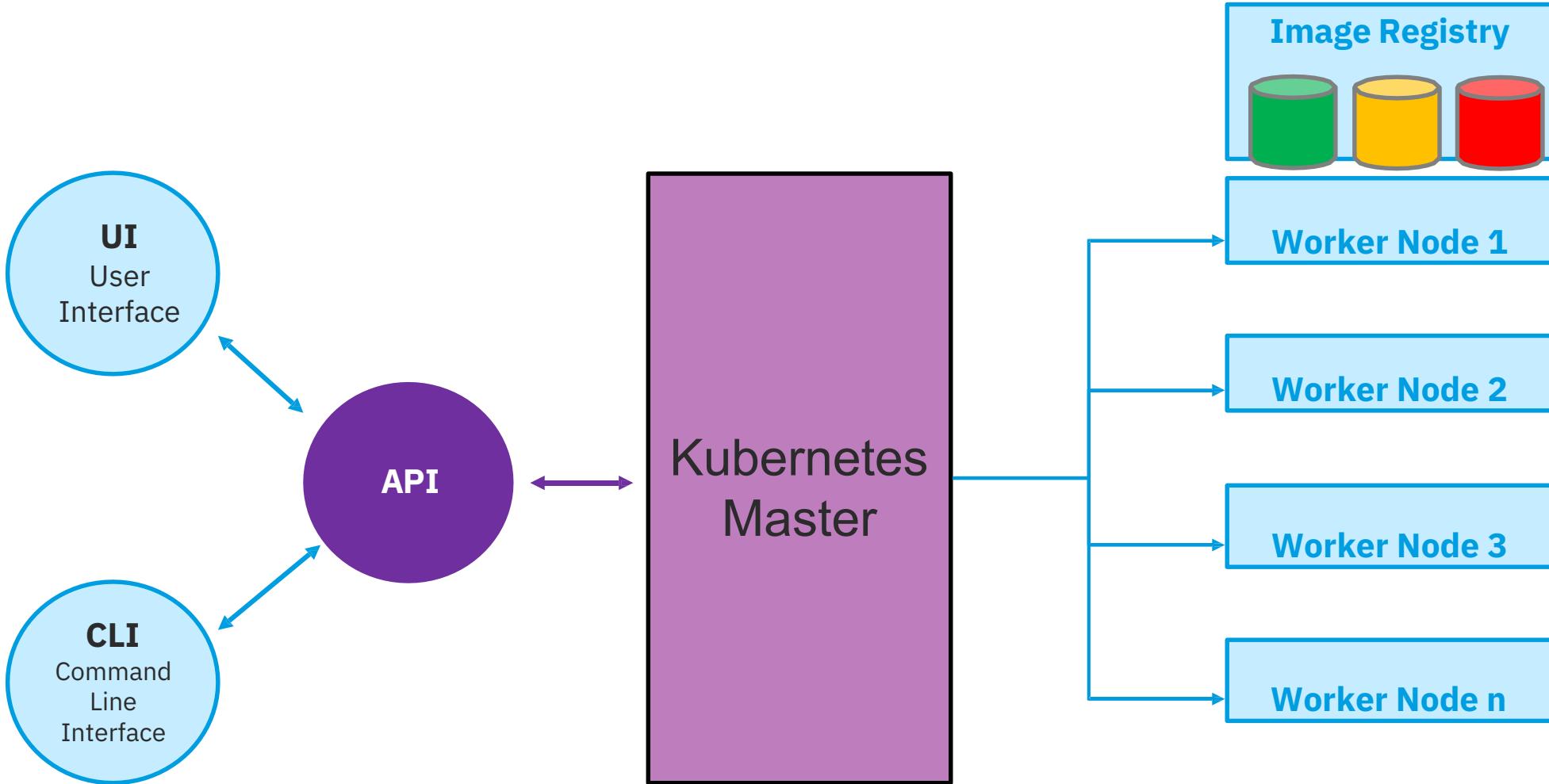


Intro to IBM Cloud

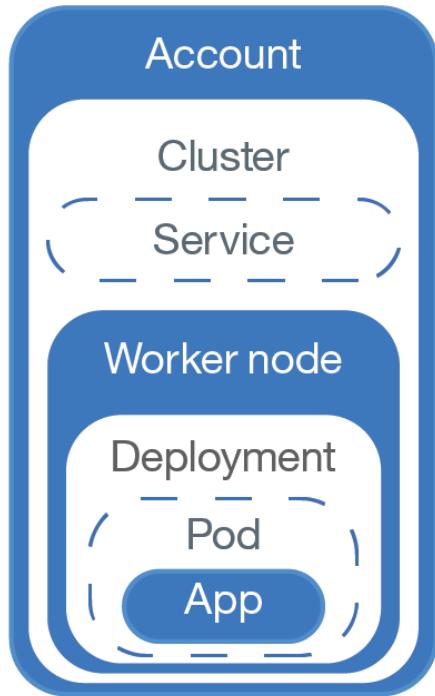


What is Kubernetes??

Kubernetes Architecture



Basic K8s concepts





Intelligent
Scheduling



Self-healing



Horizontal scaling



Service discovery & load balancing



Automated rollouts and rollbacks



Secret and configuration management



Cluster Management Capabilities



Simplified Cluster Management



Container Security & Privacy



Design Your Own Cluster



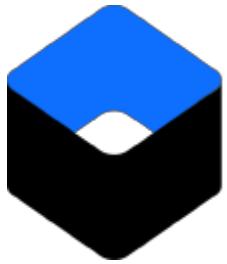
Leverages IBM Cloud & Watson



Native open-source Experience



Integrated Operational Tools



IBM Cloud
Container Service

A **managed Kubernetes service** providing an intuitive user experience with on-going cluster management. Built-in **security and isolation** to enable rapid delivery of apps, while leveraging IBM Cloud Services including Weather data, IoT, Analytics, or **AI capabilities with Watson**. Available in six IBM regions WW, including **20+ datacenters**.

<https://www.ibm.com/cloud/container-service>



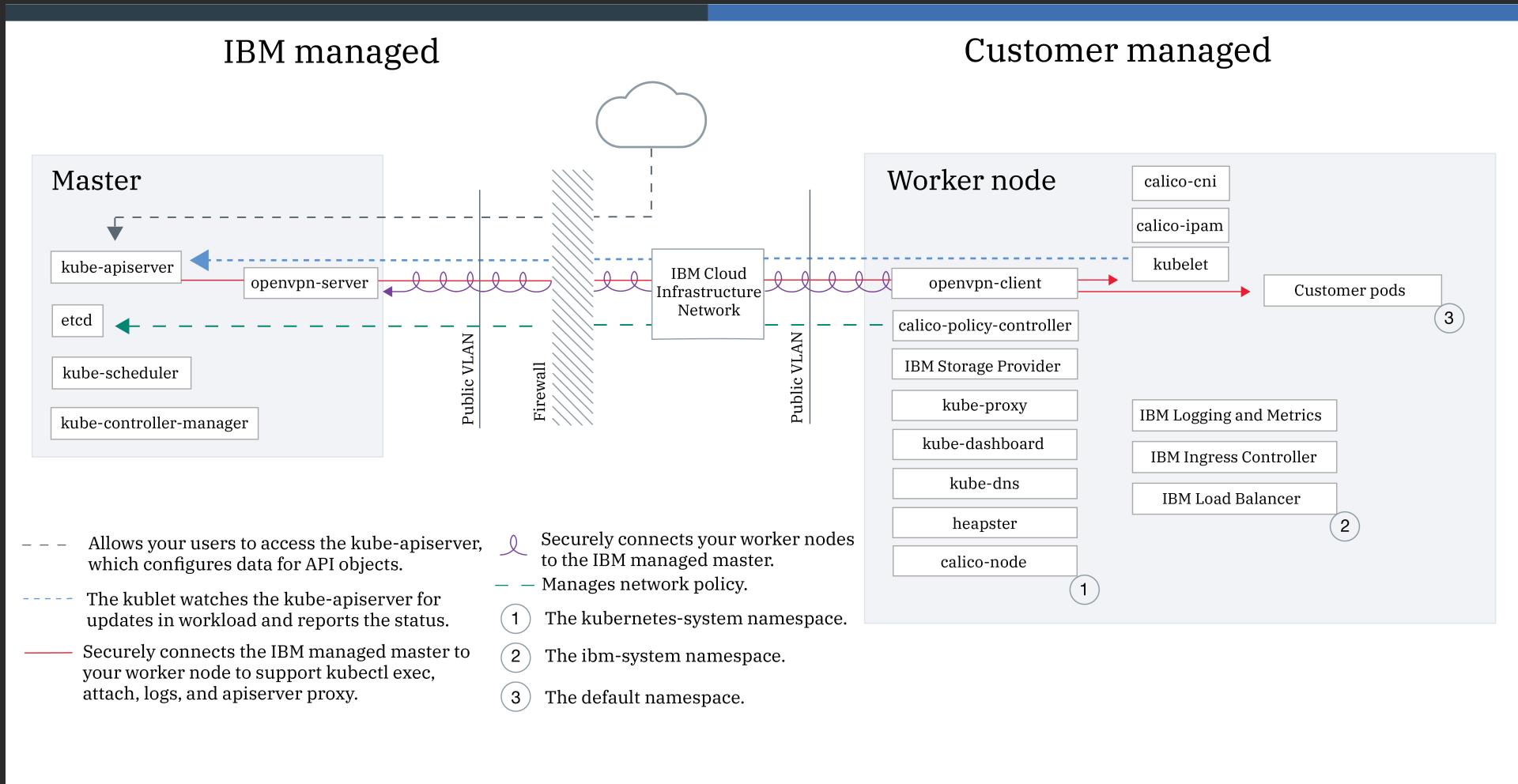
Datacenter Expansion - 6 IBM Cloud Regions, 20+ DCs



Region	Location	City
AP North	hkg02, tok02, sng01	Hong Kong, Tokyo, Singapore
AP South	mel01, syd01, syd04	Melbourne, Sydney
EU Central	ams03, fra02, par01, mil01	Amsterdam, Frankfurt, Paris
UK South	lon02, lon04	London
US East	tor01, wdc06, wdc07, mon01	Toronto, Washington, DC, Montreal
US South	dal10, dal12, dal13, hou01, sao01	Dallas, Sao Paulo

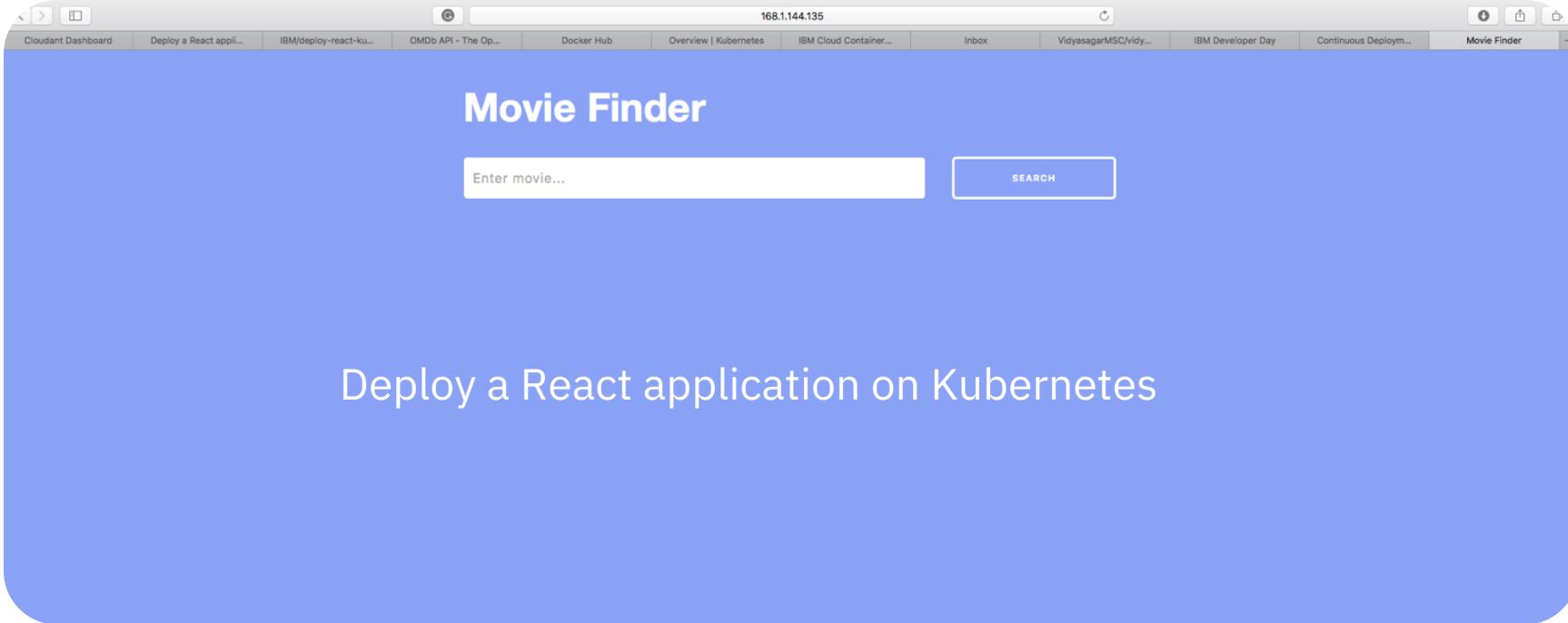
https://console.bluemix.net/docs/containers/cs_regions.html#region-and-locations

IBM Cloud Container Service architecture



https://console.bluemix.net/docs/containers/cs_tech.html#architecture

For this workshop....



<https://developer.ibm.com/code/patterns/deploy-a-react-application-on-kubernetes/>



Questions??

Raise your hand and we
are here to help you
SUCCEED



Let's do it....



Don't stop here

Solution Tutorials

LEARN

Solution tutorials

HOW TO

Deploy a secure web application across multiple regions

Deploy a scalable web application on Kubernetes

Analyze logs and monitor the health of Kubernetes applications

Continuous Deployment to Kubernetes

Accelerate delivery of static files using a CDN

PHP web application on a LAMP Stack

Deploy a LAMP stack using Terraform

Plan, create and update deployment environments

Use Virtual Servers to build highly available and scalable web app

Modern web application using MEAN stack

SQL Database for Cloud data



solution-tutorials x

Search documentation

IBM Cloud Docs / Solution Tutorials

Solution tutorials

Last Updated: 2018-04-19 | [Edit in GitHub](#)

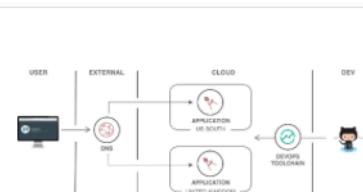
Learn how to build, deploy and scale real-world solutions on IBM Cloud. These guides provide step-by-step instructions on how to use IBM Cloud to implement common patterns based on best practices and proven technologies.

Websites and Web Apps

[Deploy a secure web application across multiple regions](#)

This tutorial is a walkthrough of how to create, secure, and deploy a web application across multiple regions using a continuous delivery pipeline.

[Cloud Foundry](#) [Node.js](#) [Continuous Delivery](#)



[Scalable web app on Kubernetes](#)

This tutorial is a walkthrough of how to scaffold a Java web application, run it locally in a container and then deploy it to a IBM Cloud Kubernetes cluster. Additionally, bind a custom domain, monitor the health of the environment and scale.

[Docker](#) [Kubernetes](#) [Container Service](#) [Container Registry](#)
[Java](#)



Table of contents

Websites and Web Apps

Mobile

Internet of Things

Chatbots

Identity and Access Management

Machine Learning & Analytics

<http://ibm.biz/solution-tutorials>



Istio - Connect, manage and
secure microservices at scale.
Run Istio on the IBM Cloud
Container Service.

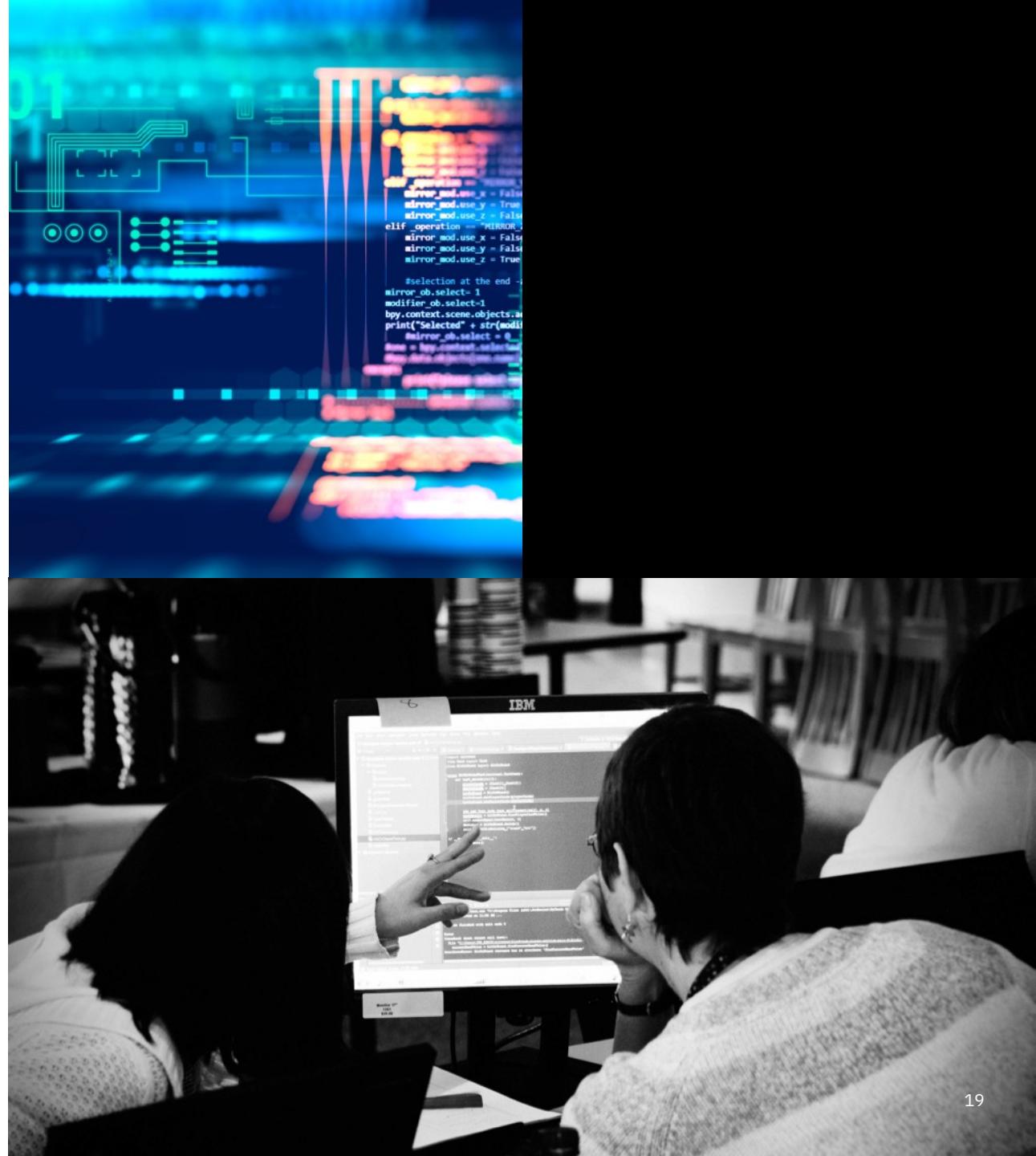
<https://www.ibm.com/cloud/info/istio>

Thank you

 twitter.com/VidyasagarMSC

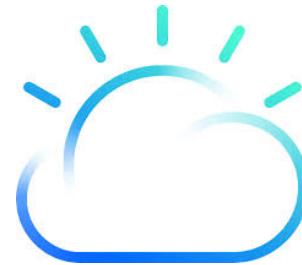
 github.com/VidyasagarMSC

 developer.ibm.com/code

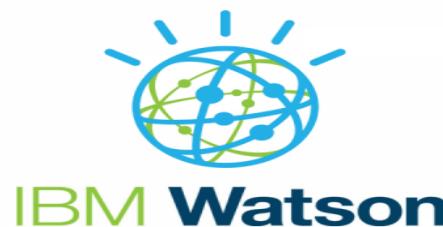




<https://developer.ibm.com/code/>



Signup for IBM Cloud
<https://bluemix.net>



<https://www.ibm.com/watson/products-services/>

Stay Connected and continue coding !



Code & instructions



<https://github.com/IBMDevConnect>
<https://github.com/IBM>
<https://github.com/IBM-Cloud>
<https://ibm-cloud.github.io/#/>
<http://ibm.github.io>
<https://github.com/watson-developer-cloud>
<https://github.com/ibm-bluemix-mobile-services>



developerWorks

<https://developer.ibm.com/in/>
<https://developer.ibm.com/tv/>



Recipes

<https://developer.ibm.com/recipes/>



Join our Slack team and stay in touch with the experts

<https://ibmdevconnect.slack.com>

Send in your request

<http://ibm.biz/slackrequest>



Apply for IBM Global Entrepreneur Program

<https://developer.ibm.com/startups>

Join our Meetup groups



Bangalore :

<https://www.meetup.com/IBMDevConnect-Bangalore>

Delhi / Gurugram / Noida :

<https://www.meetup.com/ibmcloudcosystem/>

Mumbai / Pune : <https://www.meetup.com/Cloud-Mumbai-Meetup/>

Hyderabad / Vishakapatnam:

<https://www.meetup.com/Hyderabad-Cognitive-with-Cloud>

