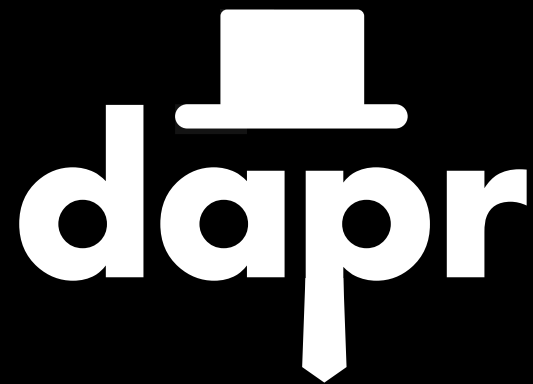




Portable Multi-cloud Microservices with Dapr



Nilesh Gule @nileshgule



devtron



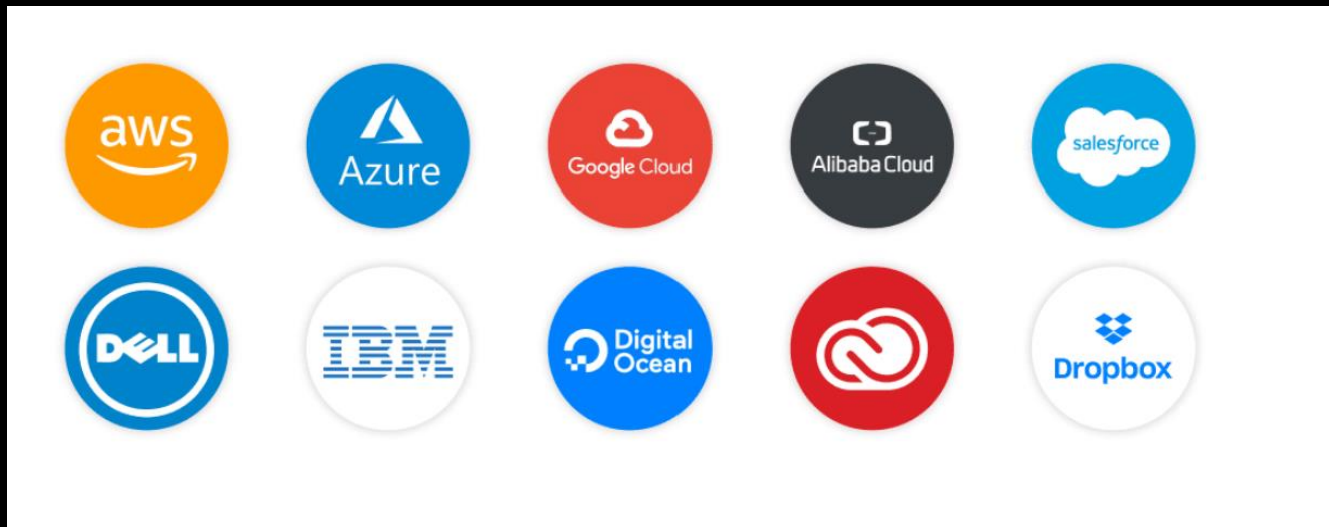
\$whoami

```
{  
  "name" : "Nilesh Gule",  
  "website" : "https://www.HandsOnArchitect.com",  
  "github" : "https://GitHub.com/NileshGule",  
  "twitter" : "@nileshgule",  
  "linkedin" : "https://www.linkedin.com/in/nileshgule",  
  "YouTube" : "https://www.YouTube.com/@nilesh-gule",  
  "likes" : "Technical Evangelism, Cricket",  
  "co-organizer" : "Azure Singapore UG"  
}
```





Top 10 Cloud providers



Benefits of using Cloud Technologies

- ✓ **Cost:** Saves money for upfront costs for hardware and software
- ✓ **Speed:** self-serve, pay as you go
- ✓ **Scalability:** based on different parameters
- ✓ **Security:** policies, technologies, and controls to protect app, data and infra
- ✓ **Reliable:** HA & DR capabilities

Cloud Native Apps

Cloud Computing

Specifically designed to take advantage of innovations in cloud computing

Scaling

Integrate easily with respective cloud architectures, taking advantage of clouds resources and scaling capabilities

Infrastructure Innovations

Take advantage of innovations in infrastructure driven by cloud computing

Cloud native platforms

Run apps in cloud providers datacenter and on cloud native platforms on-premise



Multi-cloud



Datacenter



Edge

Features of Cloud Native Apps



Microservices

Purpose driven modular components



Containerized

Lightweight, self-contained



API driven

Loosely coupled, integrates using open standards



Resilient

Self healing, recovers faster from failure



Scalable

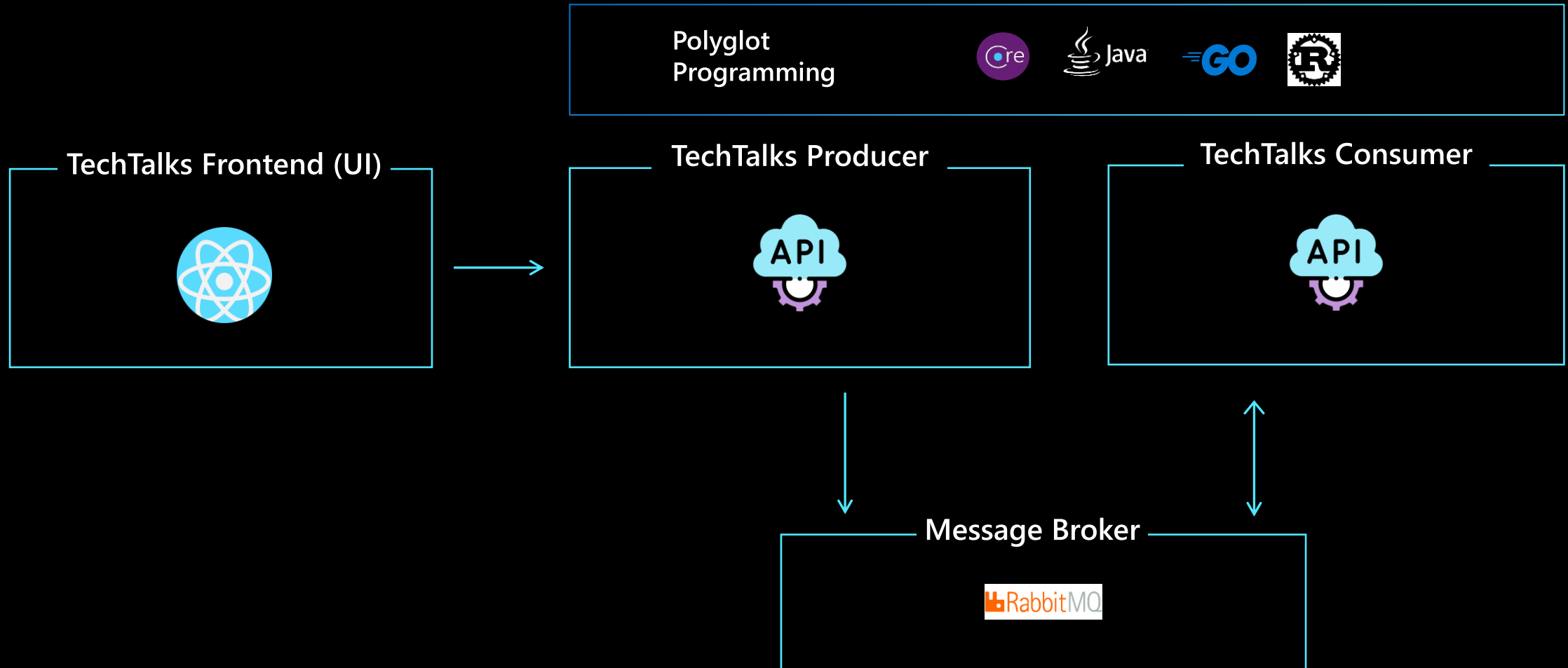
Cost optimized to run with right sized resources



Automation

Automates everything CI CD, Infrastructure as Code (IaC), GitOps

TechTalks Application Architecture



Dapr overview



HTTP API

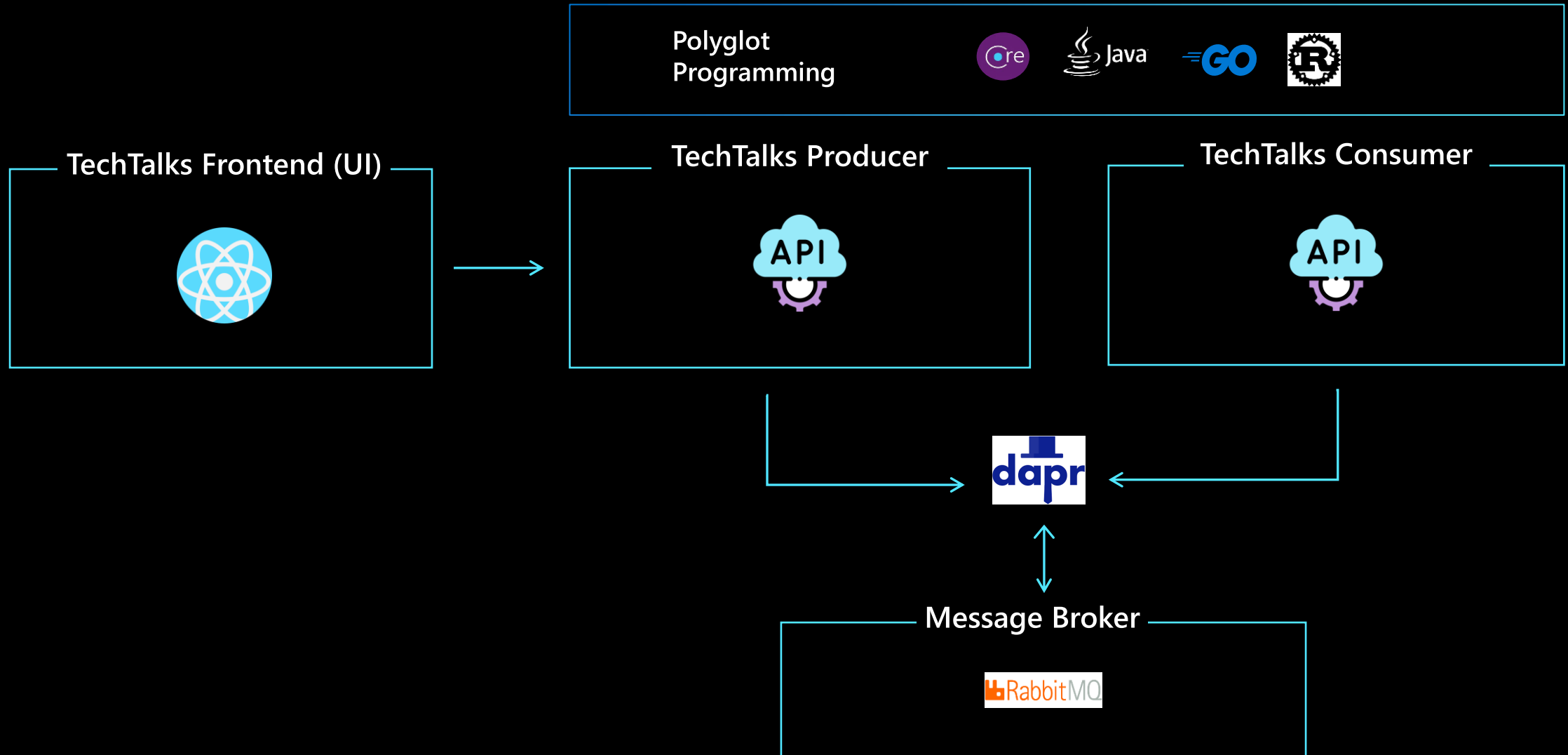
gRPC API



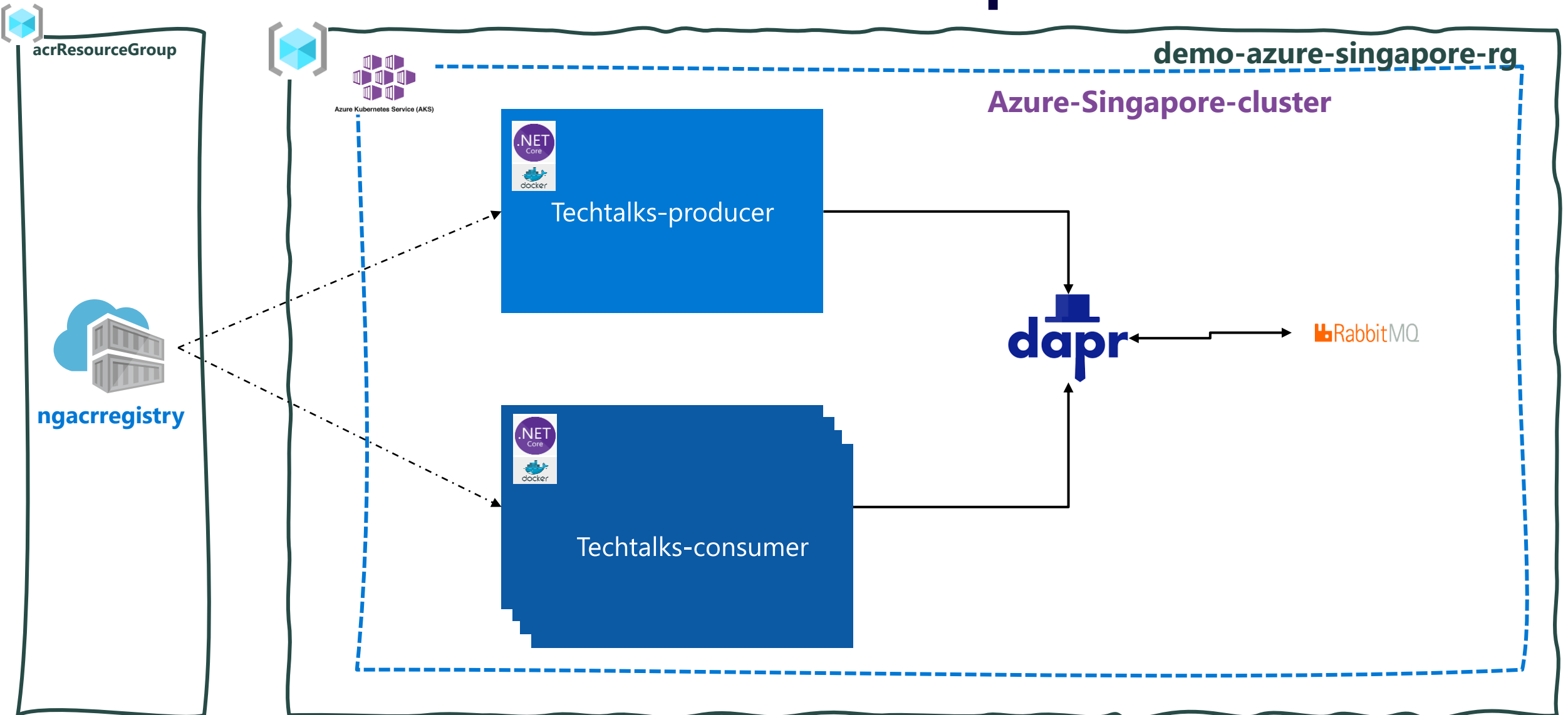
Any cloud or edge infrastructure



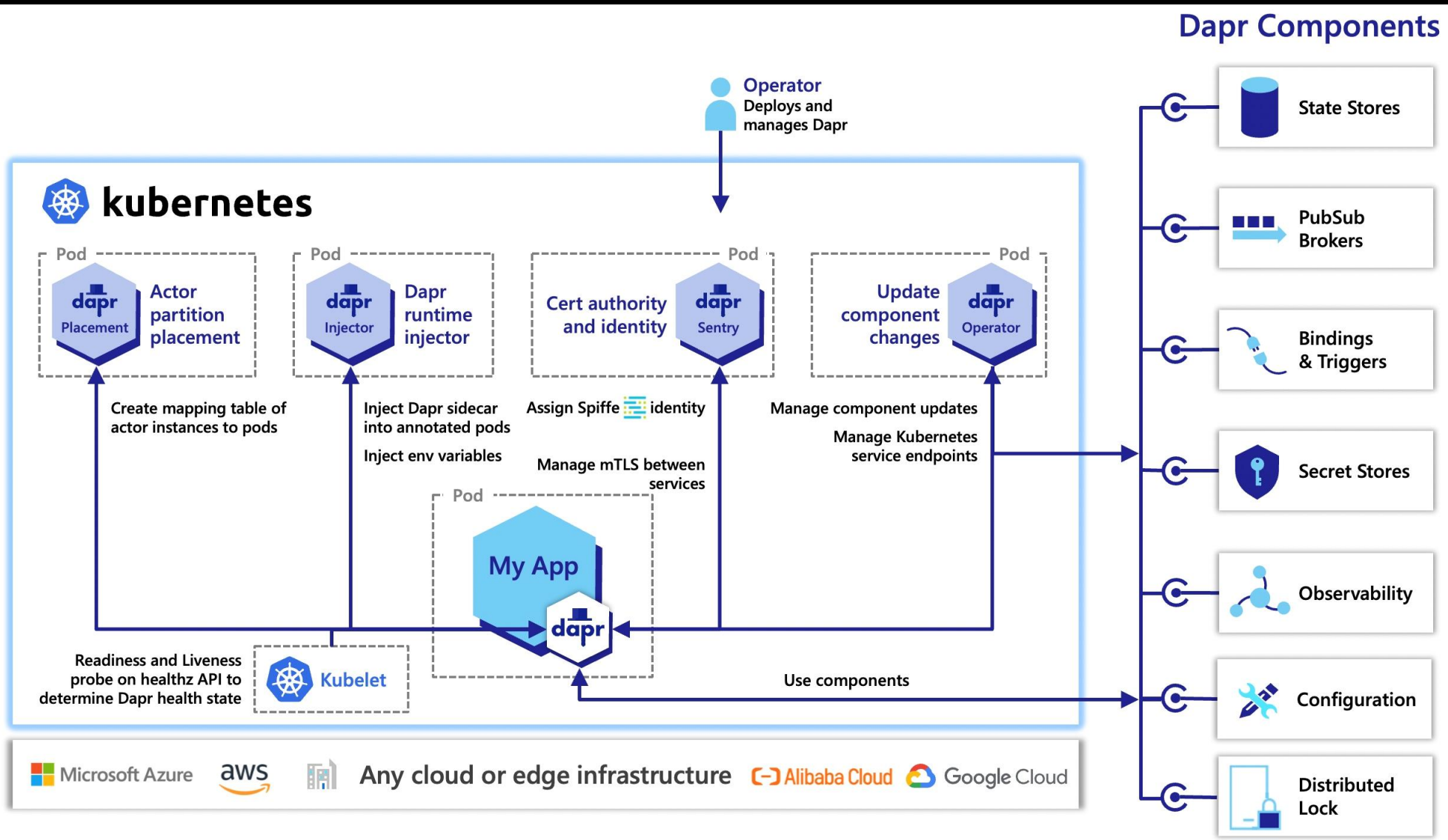
TechTalks Application Architecture



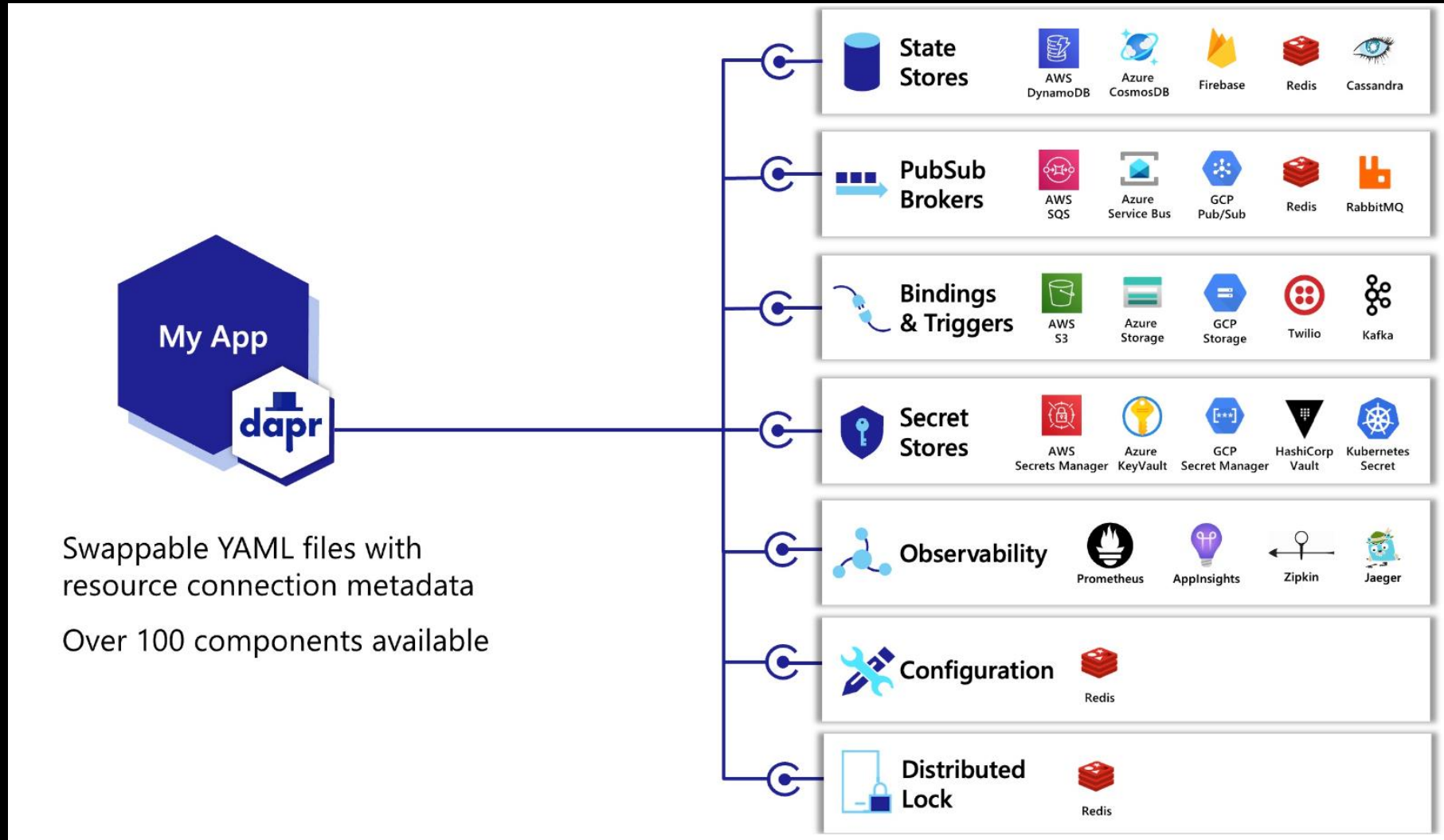
TechTalks with Dapr



Dapr Kubernetes cluster



Dapr Components



Why use Dapr



- Any language, any framework, anywhere
- Building blocks for cloud and edge
- Multiple hosting environments
- Language specific SDKs
 - C++, Go, Java, JavaScript, .NET, PHP, Python, Rust
- Frameworks
 - ASP.NET Core, Spring Boot, Flask, Express
- Designed for operations

Summary

Key benefits of Dapr

- Dapr tries to simplify the Microservices development and deployment
- Dapr Components help to extract underlying functionality and provides abstractions
- Best practices related to cloud native applications
- Build portable app to deploy on local laptop, public cloud (Azure / AWS), Private Cloud / PaaS (OpenShift), Hybrid cloud, multi cloud scenarios etc.
- Make app portable to run in serverless as well as managed cloud services
- Implement observability features to monitor apps



References

<https://dapr.io/>

[Dapr Publish and Subscribe](#)

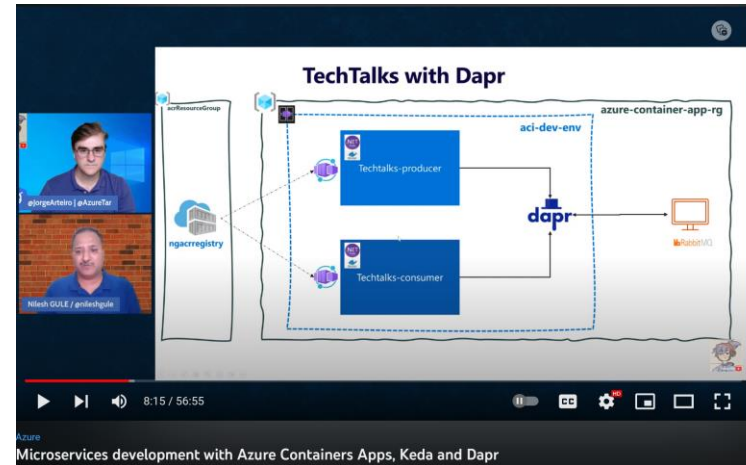
[Dapr Secrets management](#)

[Dapr in local environment](#)

[Dapr on Kubernetes](#)

[Dapr Quickstarts](#)

[Serverless - Dapr and Azure Container Apps](#)



Cloud Native Ninja

Nilesh Gule - 1 / 4



Cloud Native Ninja Kickstart

Nilesh Gule



Cloud Native Ninja getting started with Containers | PT1

Nilesh Gule



Cloud Native Ninja Distributed Microservices with Dapr | PT2

Nilesh Gule



Cloud Native Ninja Containerize .NET Apps | PT3

Nilesh Gule

<https://www.youtube.com/@nilesh-gule>

Containerize Apps Resources



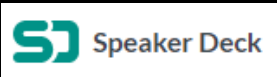
Cloud Native Ninja GitHub repo: <https://github.com/NileshGule/cloud-native-ninja>



Slides



Slideshare: <https://www.slideshare.net/nileshgule/>



Speaker Deck: <https://speakerdeck.com/nileshgule/>



<https://bit.ly/youtube-nileshgule>



Nilesh Gule

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*"Code with Passion and
Strive for Excellence"*





Q&A