Permit to Cloud:

Land with confidence in Azure

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Mike Benkovich

- Enterprise Cloud Architect & **Consultant**
- Live in **Minneapolis**
- Founder of **Imagine Technologies**, Inc.
- Developing Courses for **LinkedIn** Learning
- Blog www.benkoTIPS.com
- Follow @mbenko on **Twitter**
- Send me **Feedback**! mike@benko.com
- Azure **Office Hours** on Fridays! https://bit.ly/BnkAzHrs

Azure Office Hour Fridays

@MikeBenkovich 05/04/2021 BenkoTIPS

Thinking about going to Cloud? I've been consulting around Azure for the last 8 years since I left Microsoft where I helped launch it in 2009. I want to offer my support, so I'm starting a thing called Azure Office Hours on Fridays, where anyone can block out 15 minutes to chat about anything Azure.

1. Find a time that works - https://bit.ly/BnkAzHrs
2. Let me know what you want to talk about
3. Let's chat!

I speak at conferences and have LinkedIn learning courses on Azure and DevOps including templating, compute, storage, messaging, networking and governance topics.

My calendar is open. Let's connect!

0 Comments

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Takeaways from today

How to go from **Idea** to **Cloud** App

Discover **Visual Studio** tools to build **Connected** Apps

Use **Resource Group** projects to manage cloud **access**!

Enable Continuous **Value** with **DevOps**

Blueprints create **Landing Zones** with **Cloud Governance**

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What is the “Cloud Journey”

An **Application** is an Idea

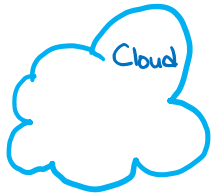
Data

Code

+ Infrastructure

= Application

Cloud Application



- Runs in a cloud datacenter
- Managed on virtual hardware
- Monitored
- Configurable
- Scalable

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I've got an idea!

My kids graduating...

Need guidance!
- Hard to be everywhere
- Words of wisdom help

Mobile Friendly

Reuse API Economy?

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The Dad App

Web Application
- Mobile friendly
- ASP.NET Core Web App
- Calls API for Joke

Configuration

Monitored

Keep it simple!
- Use existing tools
- Click to deploy
- Manage in Portal

https://askdad.benkotips.com

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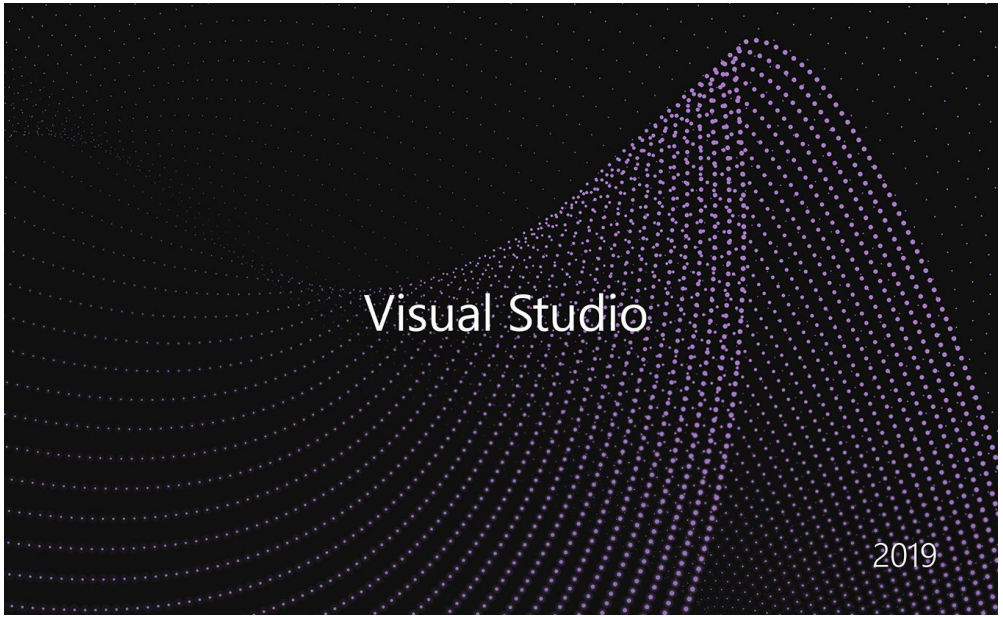
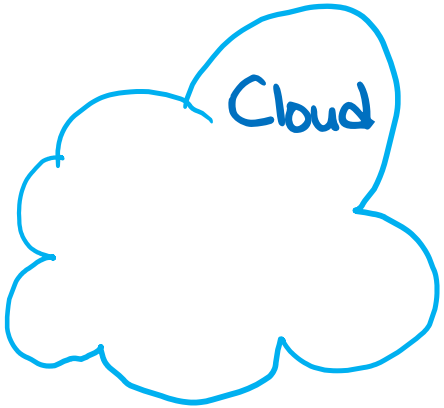
Dad App Base Code



Permit to Build

I've got an app, where should I run it?



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Cloud or On Premises?

On Premises

- Hardware Concerns
- Capacity
- Timeframe
- Capital Costs
- Security

Cloud

- On-demand provisioning
- Time savings
- Pay for use
- Choice of Services
- Maturity of platform

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Cloud App

What Compute should I use?

How do I Publish?

How do I do configuration & Settings?

Monitoring?

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To Deploy to Azure...

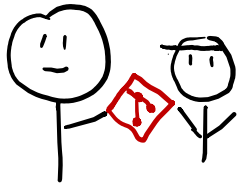
TODO:

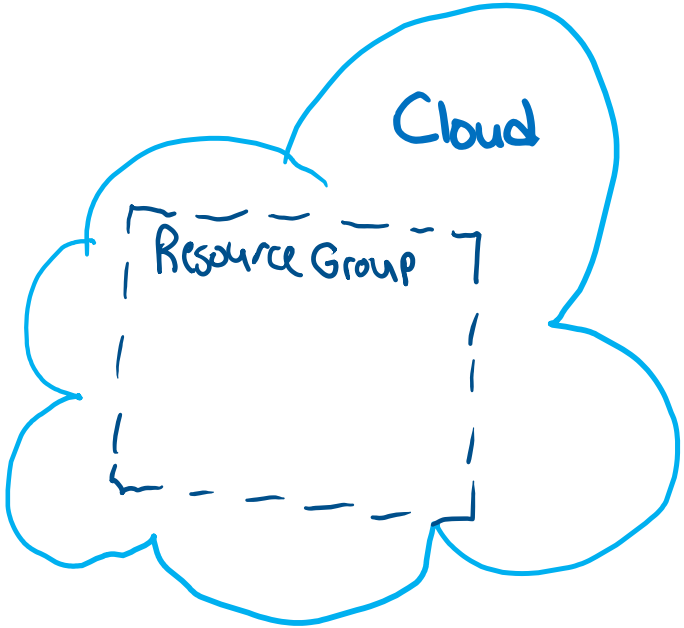
My **Code**

An **Azure** Subscription

Create **Resource Group**

Give access to **Developer**





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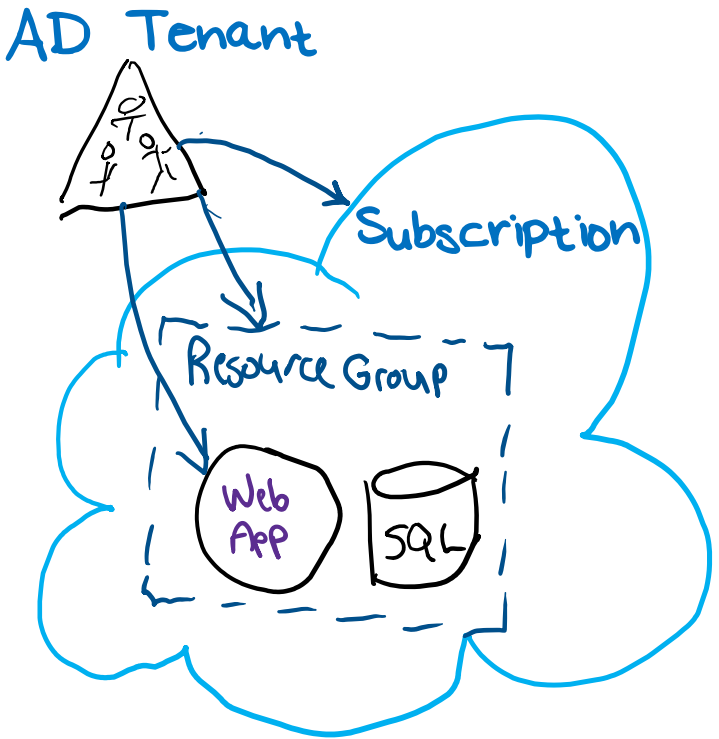
Role Based Access to Azure

RBAC – Role Based Access Control

User in **Azure Active Directory Tenant**

Organized in Management Groups

- Tenant
  - Subscriptions
    - Resource Groups
      - Resources



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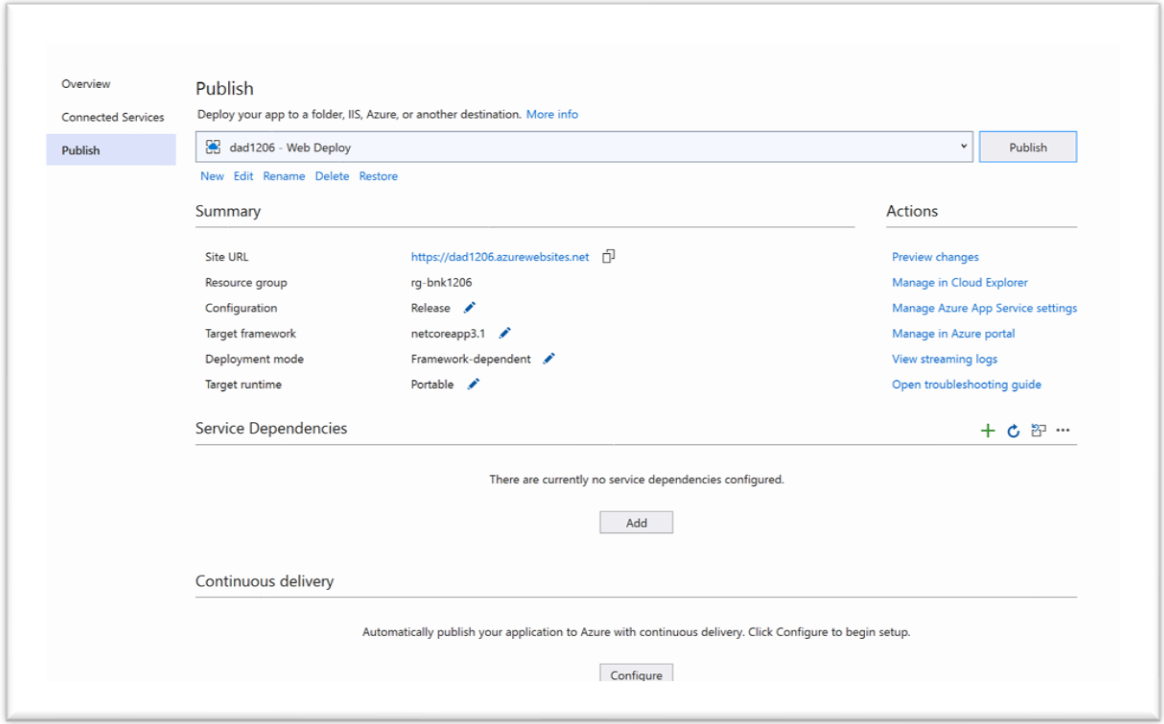
Dad App Base Code

Publish



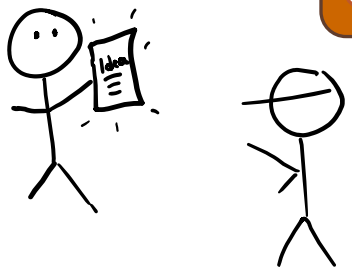
Step 1 – The Cloud Aware App

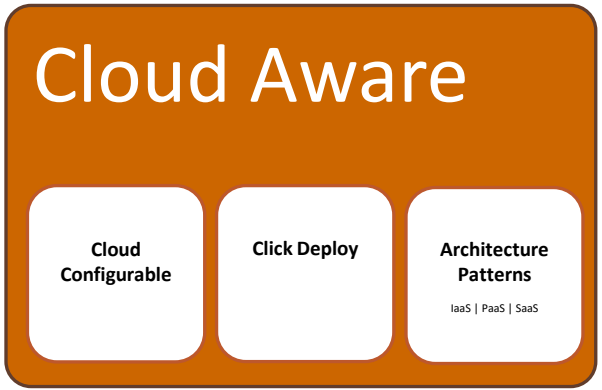
Features

- From Visual Studio
- Runs in the cloud
- Existing code, minimal changes
- Config settings in portal

Concerns

- Repeatability
- Click to deploy
- Governance concerns





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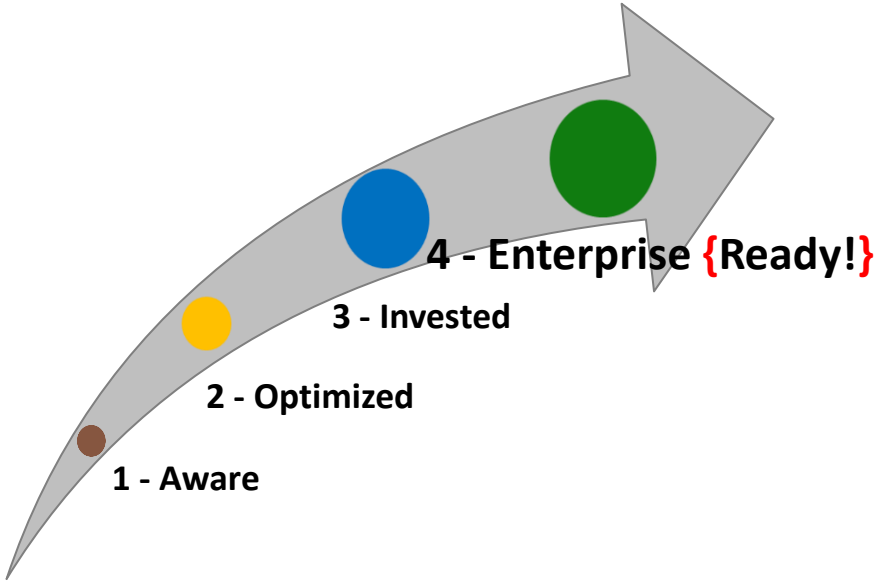
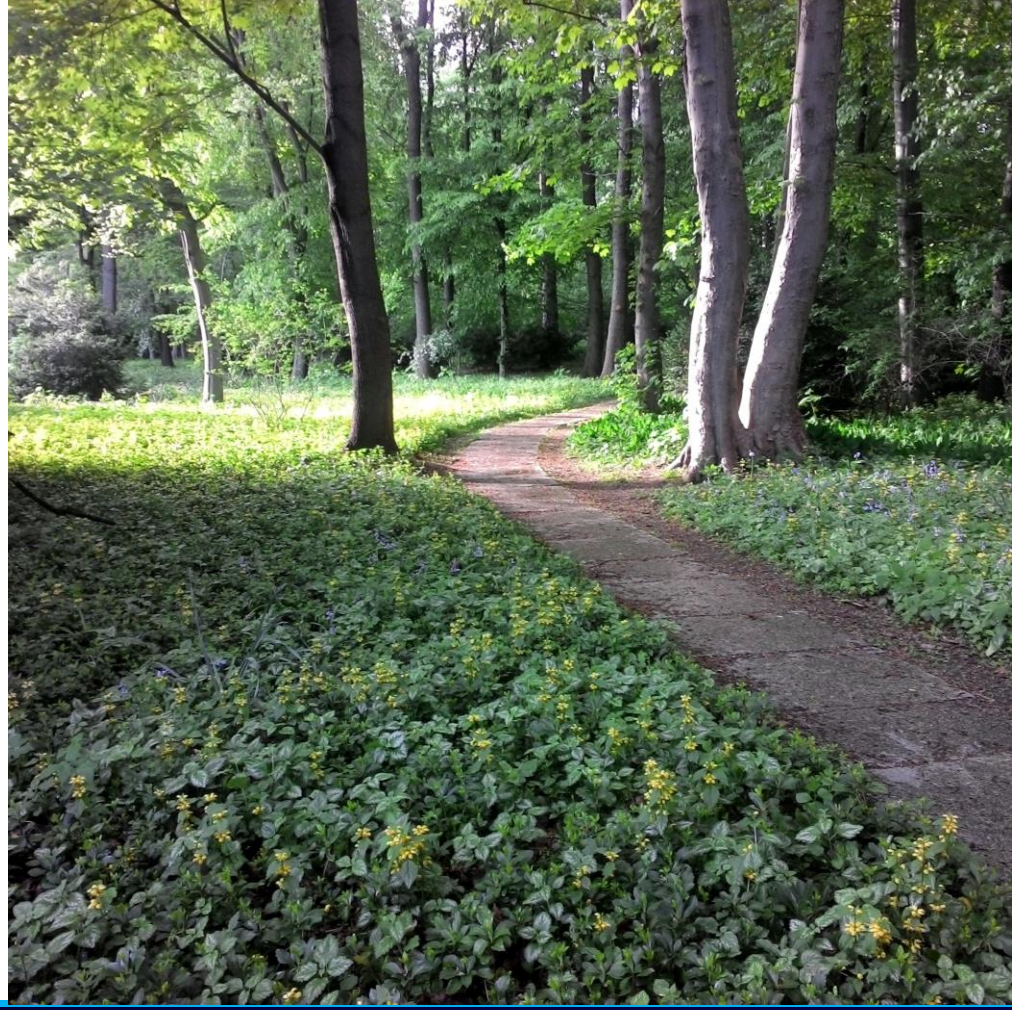
Cloud Journey





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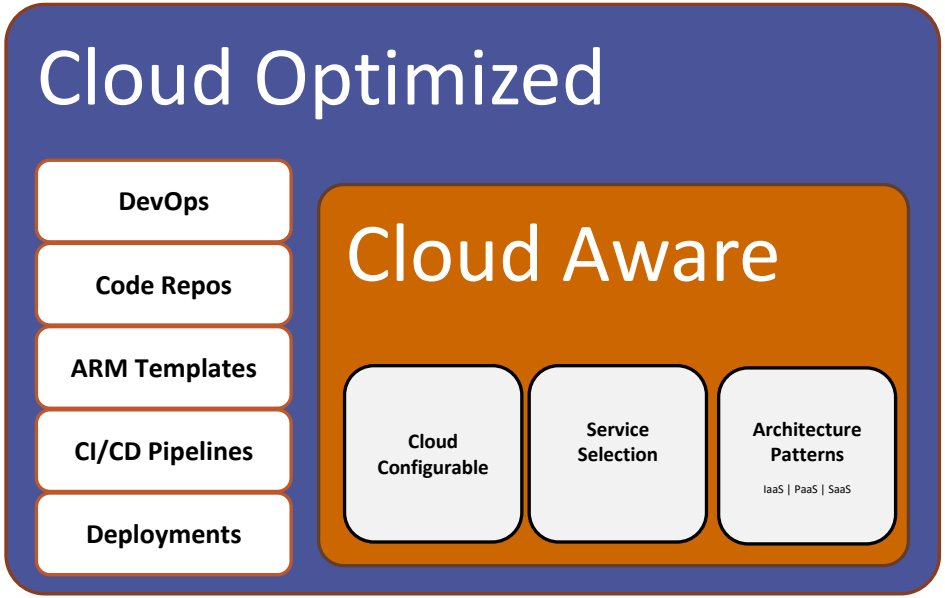
Step 2 - Cloud Optimized

Requirements

- Code Collaboration
- Infrastructure as Code
- DevOps Processes



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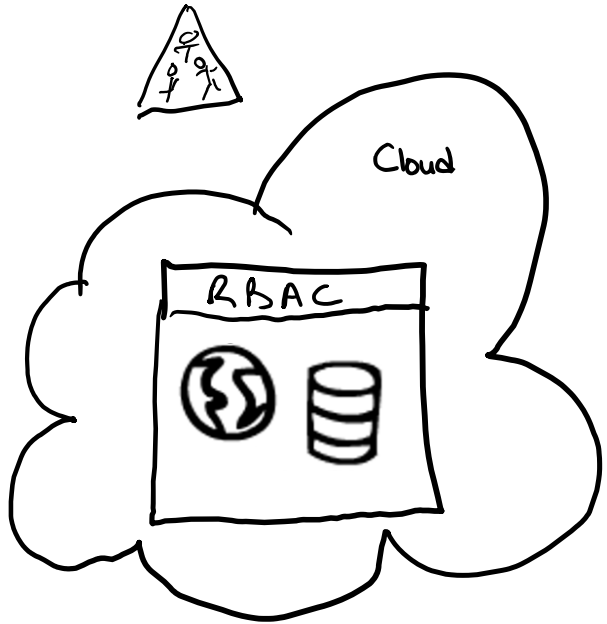
Cloud Resource Group Project

- Infrastructure as Code
- Templates for Services
- Azure Resource Manager
- JSON to describe
- Scriptable & repeatable



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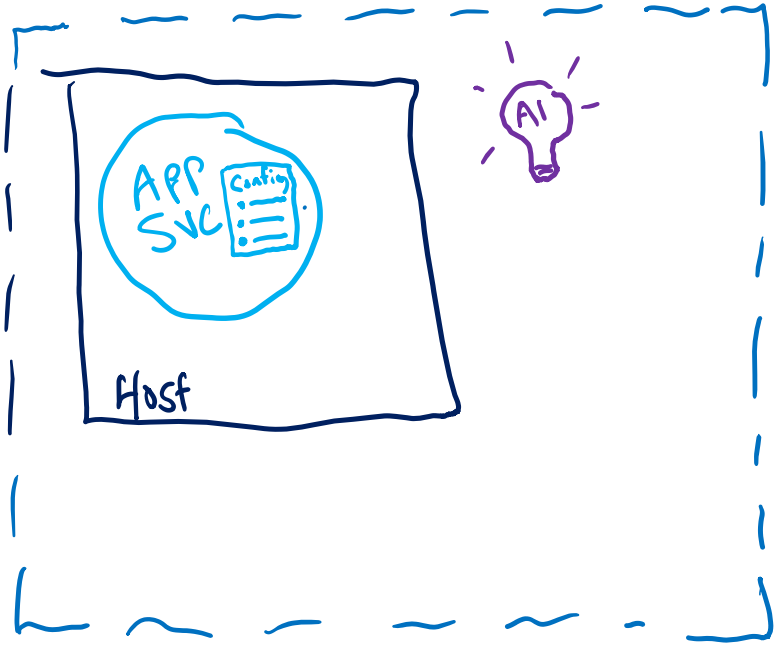
My Web App Template

- App Hosting Plan
- Web Application
- Configuration Settings
- Monitoring
- Data Connection Strings



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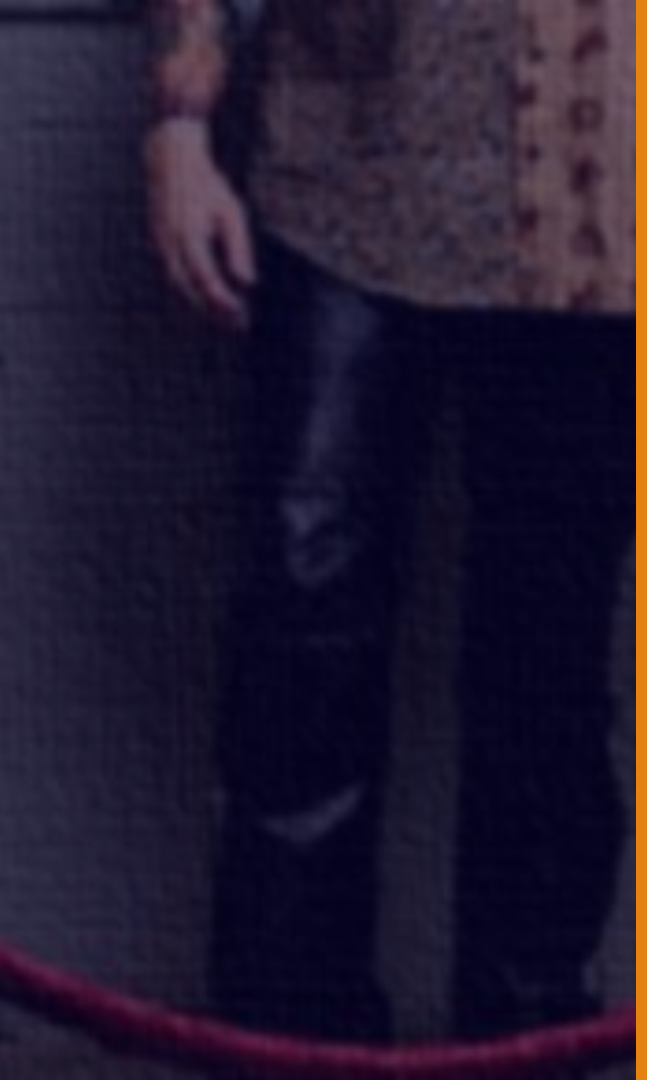


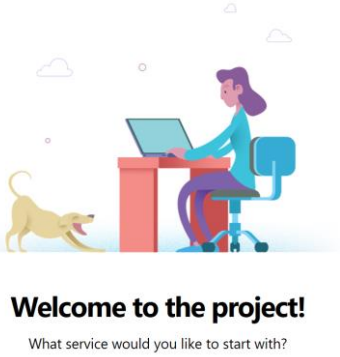
Resource Group Project

Code Collaboration

- Enables Teamwork
- Code **GIT** Repositories
- Pipelines/Actions (build and release)
- Automate Testing

https://dev.azure.com

https://github.com



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Continuous Delivery

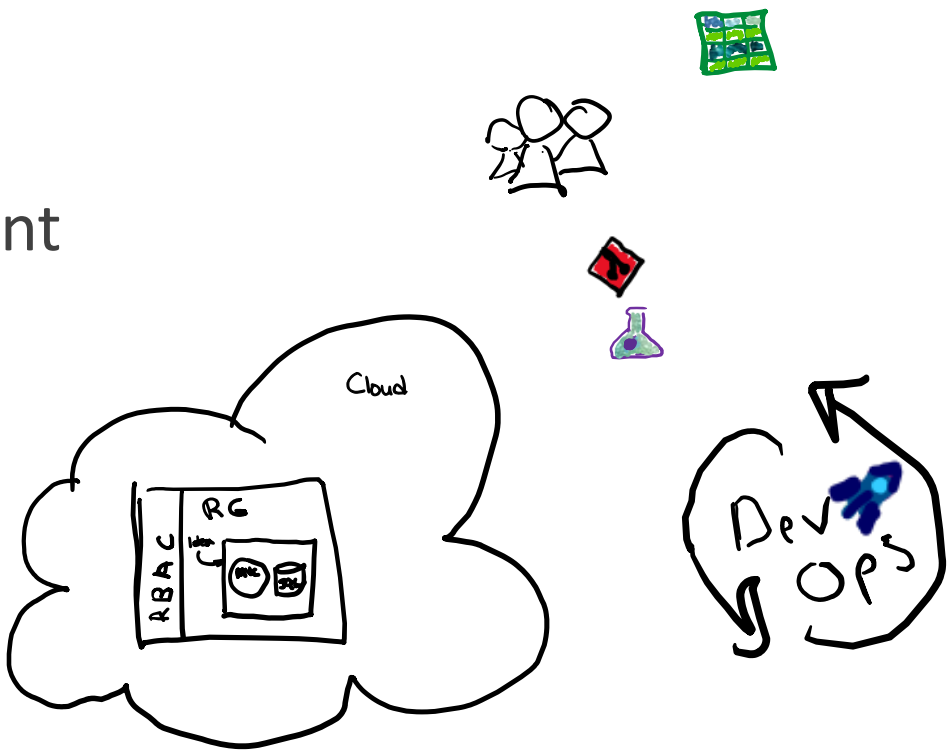
Process for Change

Collaboration

Iterative Development

Agile(ish) in Nature

Reportable



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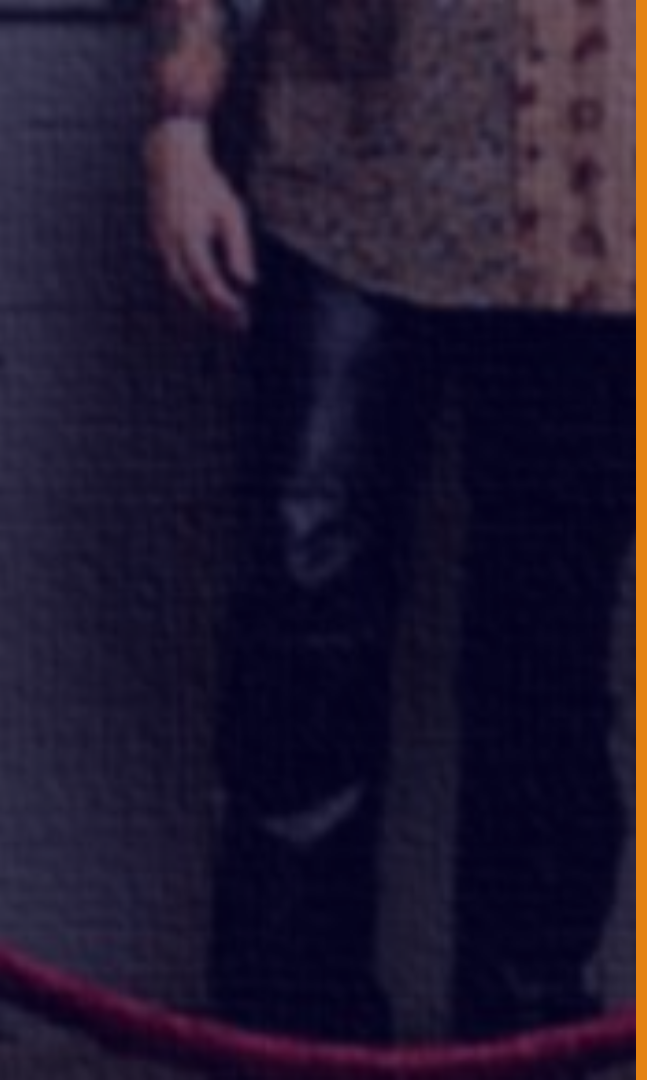
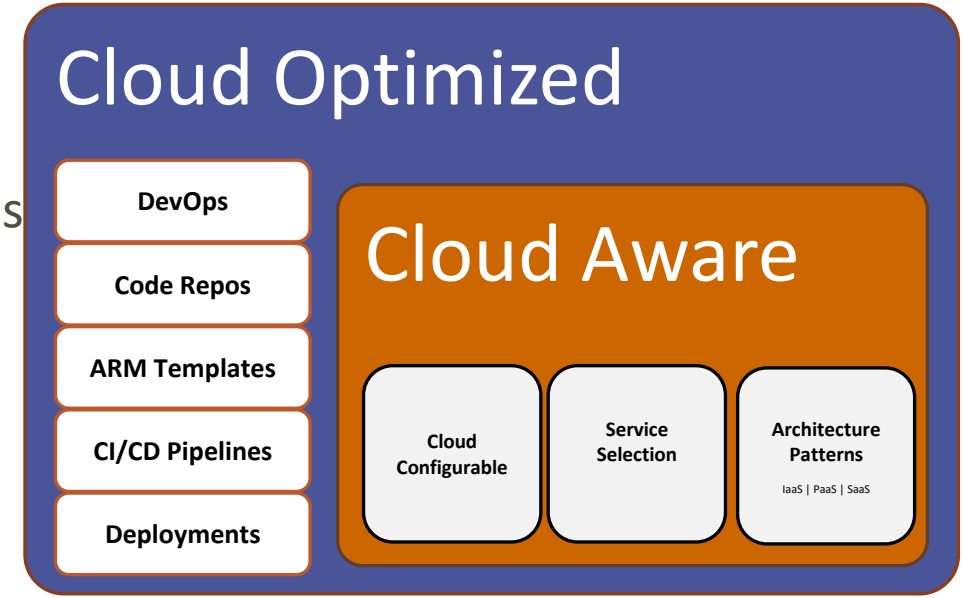


Github

Step 2 - Cloud Optimized

Requirements

- Code collaboration
- DevOps Processes
- Cloud service capabilities
- Application Lifecycles
- Managing delivery



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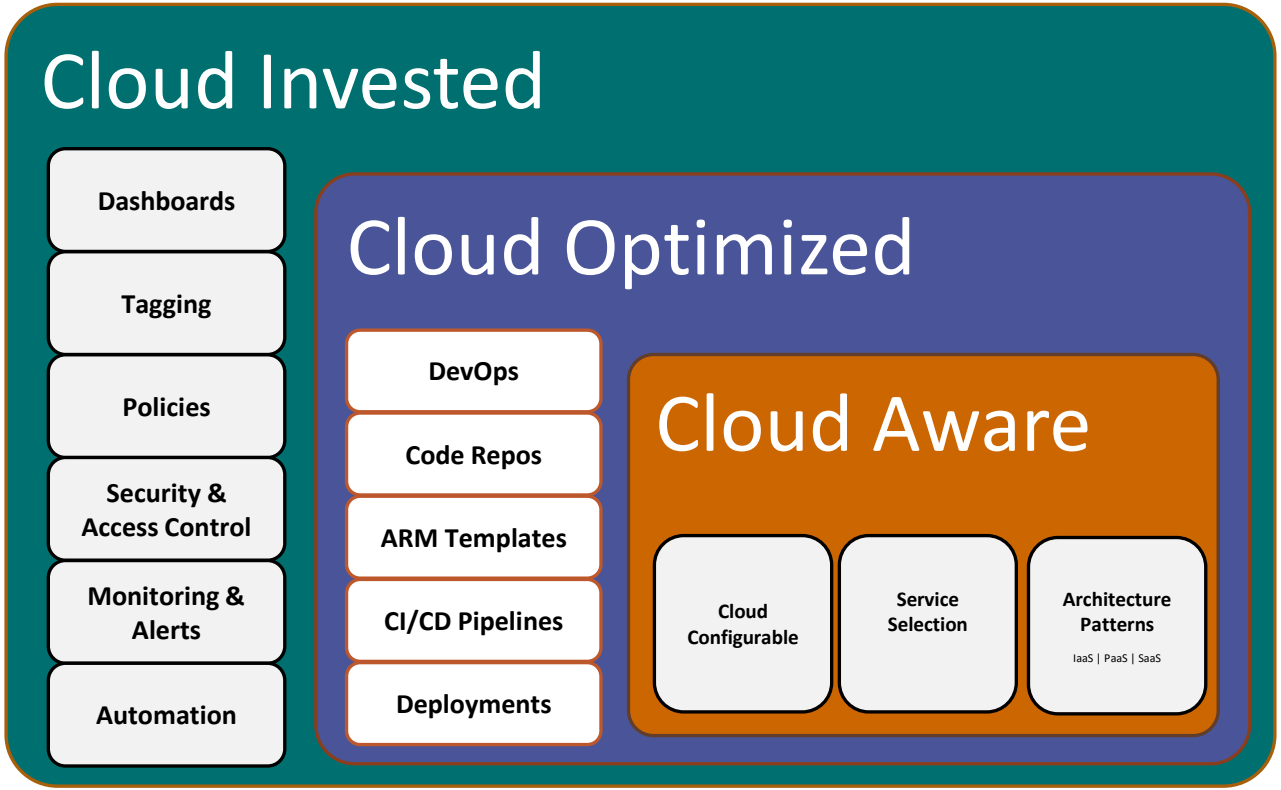
Step 3 – Cloud Invested

Governance

- Operational
- Dashboards
- Cost Mgmt
- Monitoring

Blueprints

- Access
- Compliance
- Policies



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Cloud Governance Concerns

Azure and Github	-	https://bit.ly/**azGitHub**
Azure DevOps	-	https://bit.ly/**azDevOps**
Best Practices	-	https://bit.ly/**azBestPractices**
Cost Management	-	https://bit.ly/**azCostMgmt**
Tagging	-	https://bit.ly/**azTagging**
Location Selection	-	https://bit.ly/**azRegions**
Naming Standards	-	https://bit.ly/**azNames**

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Azure Landing Zone

Governance built in

Secure

Compliant

Controlled Access

Shared Resources

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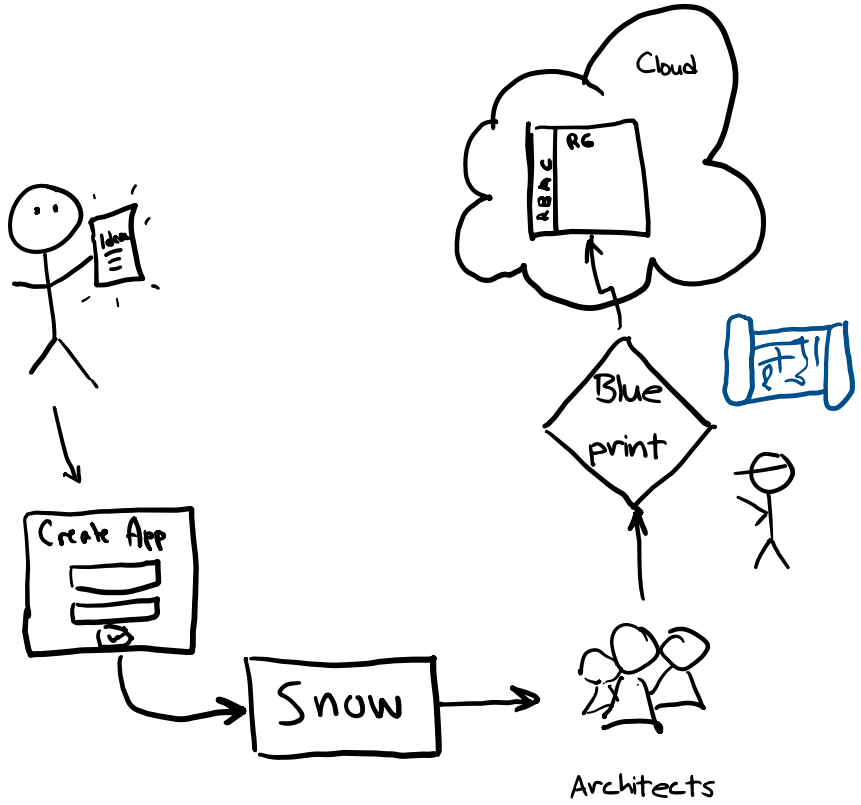
Azure Blueprints

- Resource Group
- Access Control (RBAC)
- Policies
- Templates



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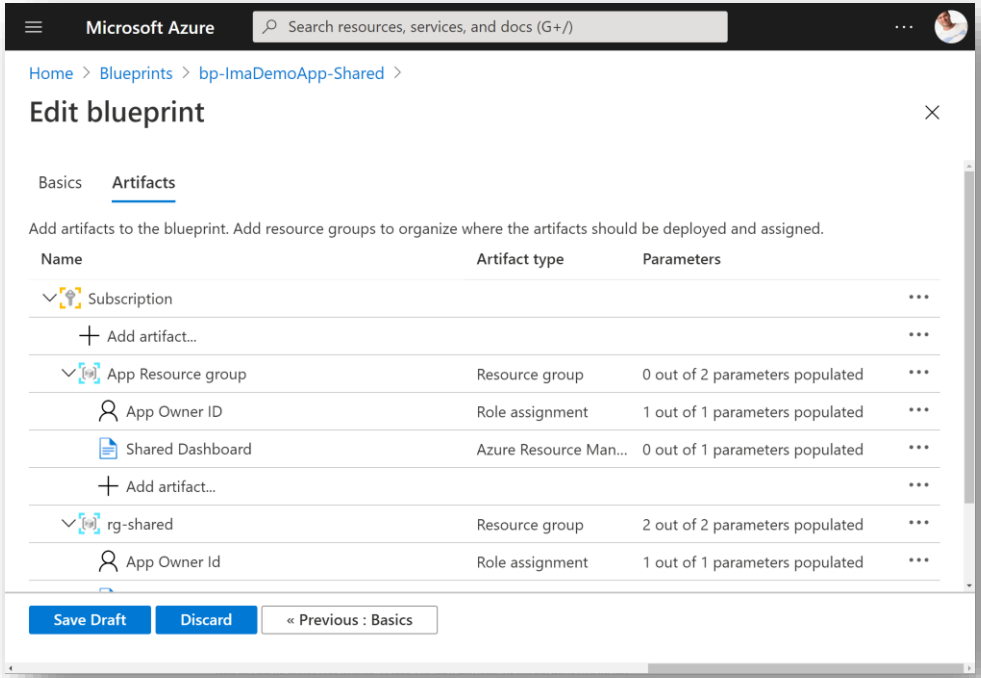
My DemoApp Blueprint

- App Resource Group
- App Owner Assignment (RBAC on RG)
- App Dashboard
- Access to Shared Resources
  - KeyVault
  - Network
  - Storage
- Parameters
  - Owner ID
  - App Name



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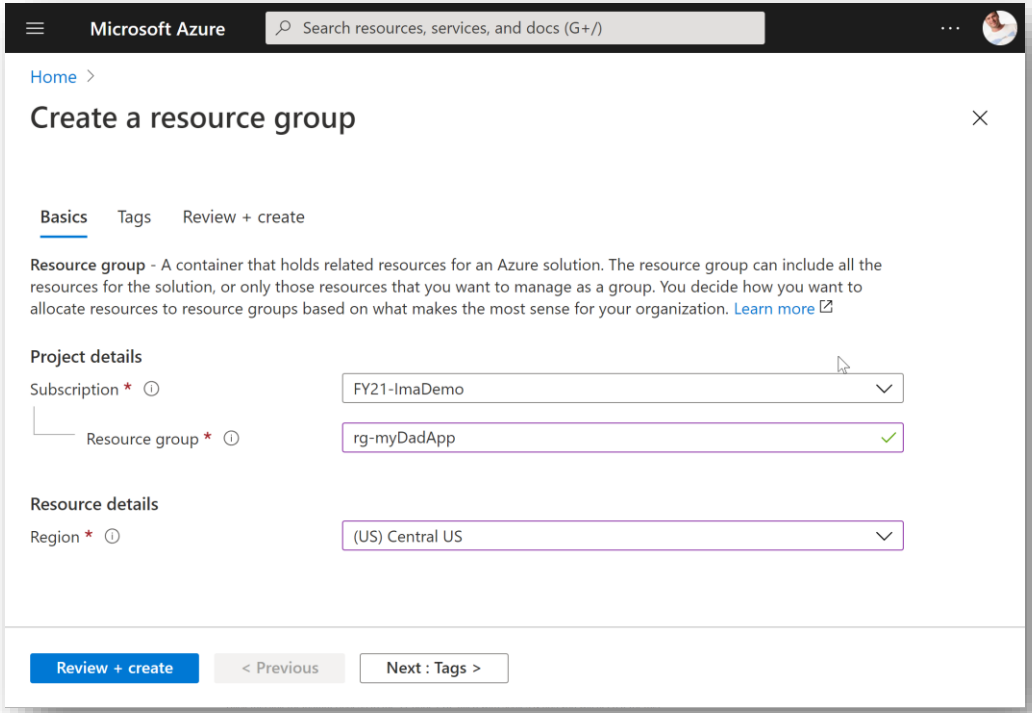
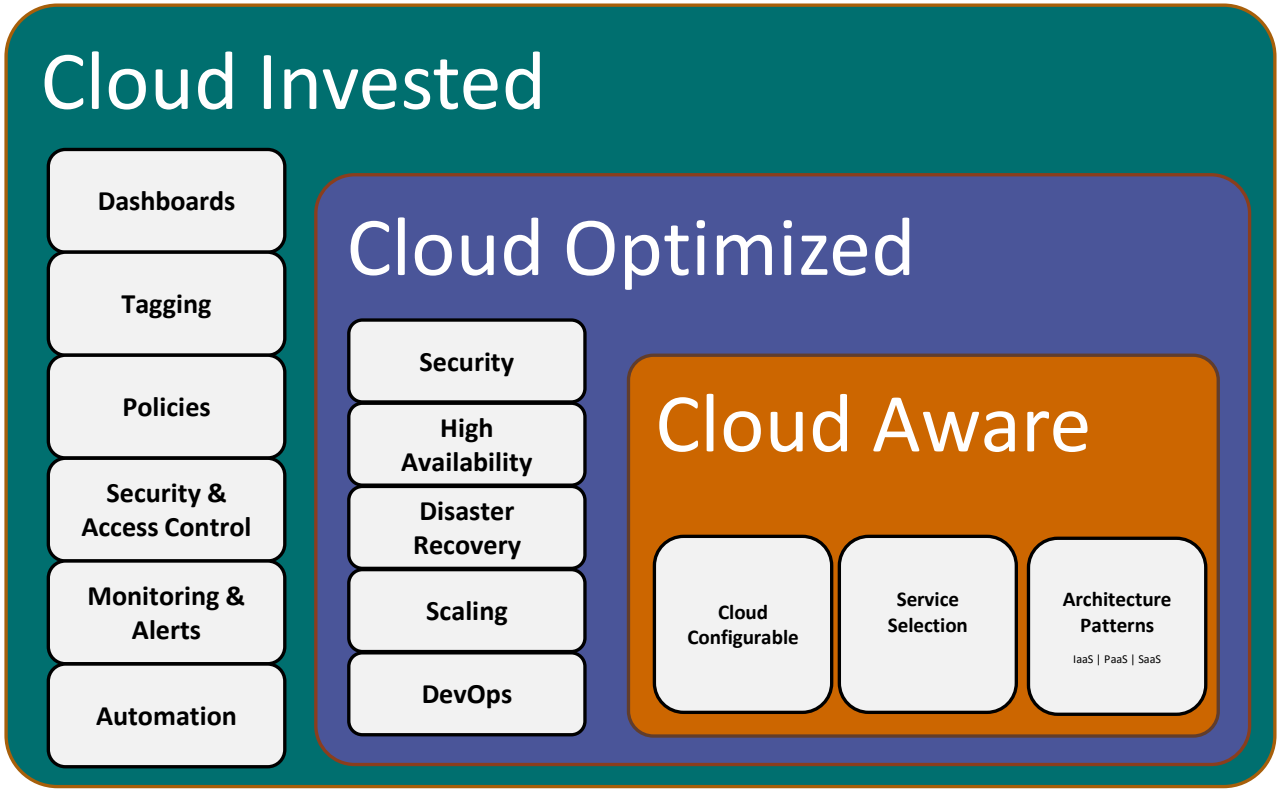
Dad App Base Code



Permit to Cloud = Enterprise{Ready!}

- Operational Intelligence
- Compliance & Security
- Costing
- Learning Library
- Reference Architectures
- Permit to Build Permit to Operate
- Cloud COE



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Considerations

The **Last** Mile

Building a **road** vs creating a **path**

White Chip vs **Blue** Chip

CapEx vs **Op**Ex

Open Mindset

Process vs **Product**

Reference Architectures

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Conclusion

The **journey** to the cloud can be challenging

Take it a **step** at a time

Be aware of the **tools** that can ease the way

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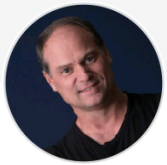

Mike Benkovich
Enterprise Cloud Architect,
Consultant, Developer Tools Ev...

Call to Action...
Where can I get more info?

Give me feedback on LinkedIn
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Try it out with **low hanging fruit**

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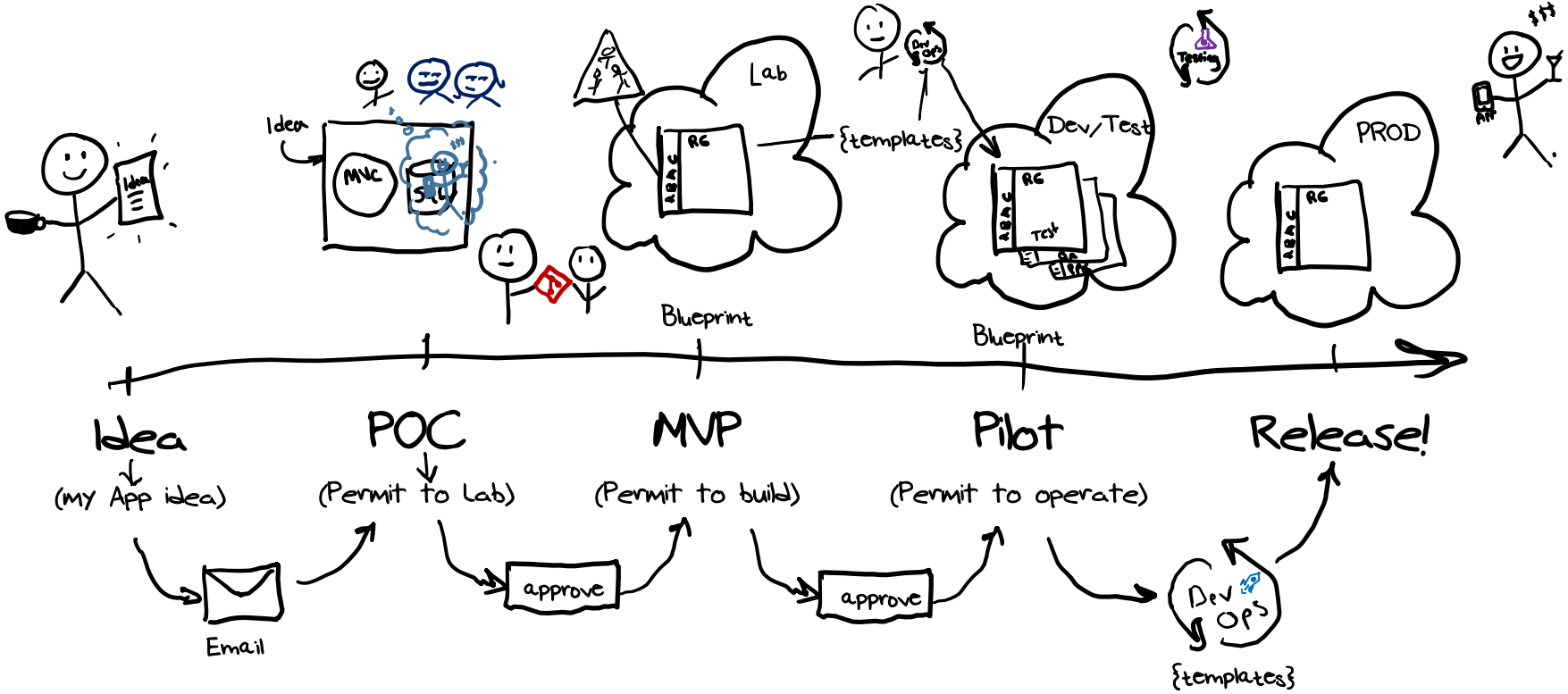
Permit to Cloud



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Journey to the Cloud

- Cloud Governance
  - Compliance Requirements
  - Identity Strategy
  - Cloud Management scope
- Cloud native tools…like Blueprints, Policy, etc.
- Templated deployments
- Code Management
- DevOps Processes
- Measurement of success

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Picking which Cloud

- Leadership
- Compute and Storage options
- Messaging and connectivity
- Networking and on-premises
- Governance
  - Cost Management
  - Identity and Security
  - Monitoring and Compliance

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Which cloud?

aws	- Since 2006 - IaaS Foundation - 175+ services - Account governance
Azure	- PaaS and Enterprise focus - Advanced tooling and management - Subscription based governance - Leverages Identity for O365 and Teams
Google Cloud	- Compute, AI and Search focused - Innovation and Open Source - Containers and Kubernetes
Other	- IBM, VM Ware, Alibaba, etc.

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Azure DevOps vs. Github

Azure DevOps

- Microsoft Team Services
- Enterprise focus
- Private repos by default
- One-stop-shop
  - Repos, Boards, Pipelines
  - Artifacts, Testing

Github

- Open Source favorite
- Community focus
- Public repos by default
- New capabilities
  - Actions
  - Boards

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