



TOPIC

IaC con Terraform... e Azure DevOps!

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Who I am



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What is IaC



Infrastructure as Code (IaC) is a method to provision and manage IT infrastructure through the use of source code, rather than through standard operating procedures and manual processes.

Classic Approach



Request of the Infrastructure



Take in charge the request



Point and click provisioning

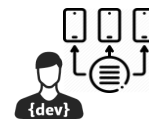
IaC Approach



Review the Infra Delivery Process



Automate Infrastructure Delivery



Self provisioning



Cloud and Virtual Environment are API Driven



New generation infrastructure is more dynamic

Key Benefit

- ✓ Infrastructure standardization
- ✓ Self Provisioning
- ✓ Infrastructure Versioning
- ✓ Centralized Policy Governance
- ✓ Minimization of Risks
- ✓ Documented Infrastructure
- ✓ Infrastructure Automation
- ✓ Enable NetOps through SDN
- ✓ Enable DevOps integration
- ✓ Enable SecOps
- ✓ Increase productivity

IaC as standard for Infrastructure Cloud Delivery



Professional



- ✓ Formal definition of Delivered Infrastructure
- ✓ Deliverable
- ✓ Infrastructure versioning and lifecycle

Quality of Delivery



- ✓ Reusable artefact
- ✓ Increase quality of Infrastructure delivered
- ✓ Enable automation

Innovation



- ✓ Enable DevOps/SecOps/NetOps
- ✓ Enable Policy integration and automation
- ✓ Enable Self Provisioning

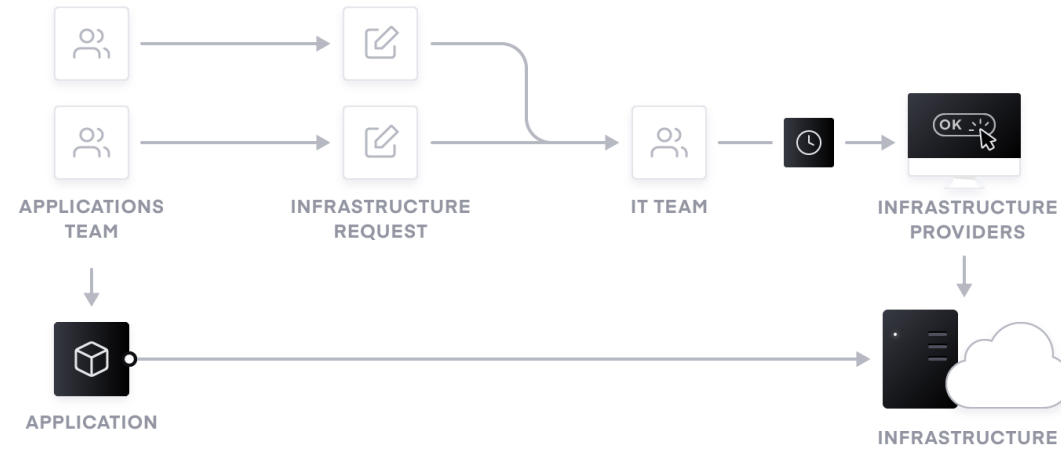


<https://terraform.io>

IaC with Terraform



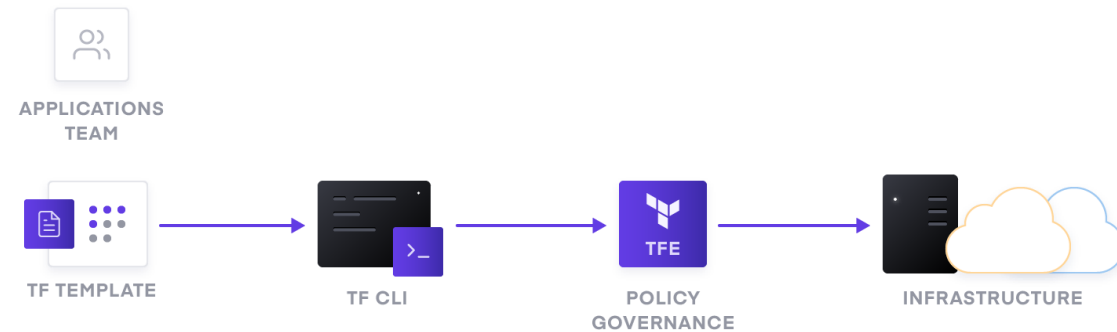
BEFORE TERRAFORM



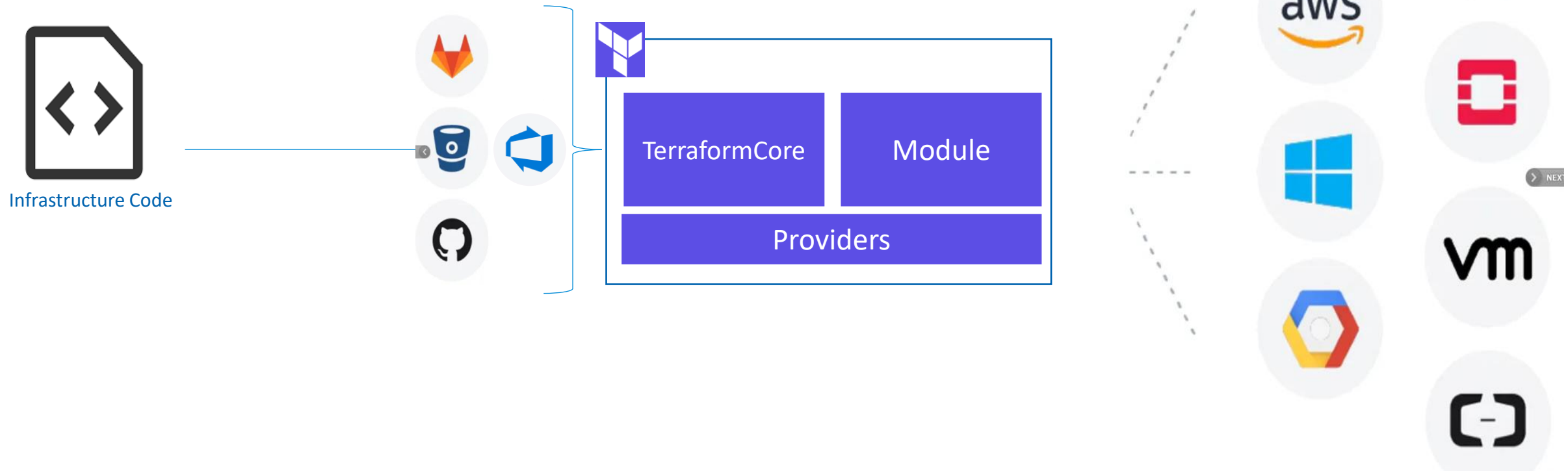
- ❑ Manual provisioning by IT Team
- ❑ No Infrastructure Versioning

AFTER TERRAFORM

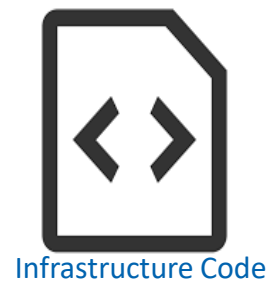
- ✓ Self Provisioning by App Teams
- ✓ Infrastructure Versioning
- ✓ Automated Policy Governance



Terraform Basic Concepts



Terraform workflow



Init

Plan

Apply

Destroy



NEXT



CLI



Cloud



Enterprise



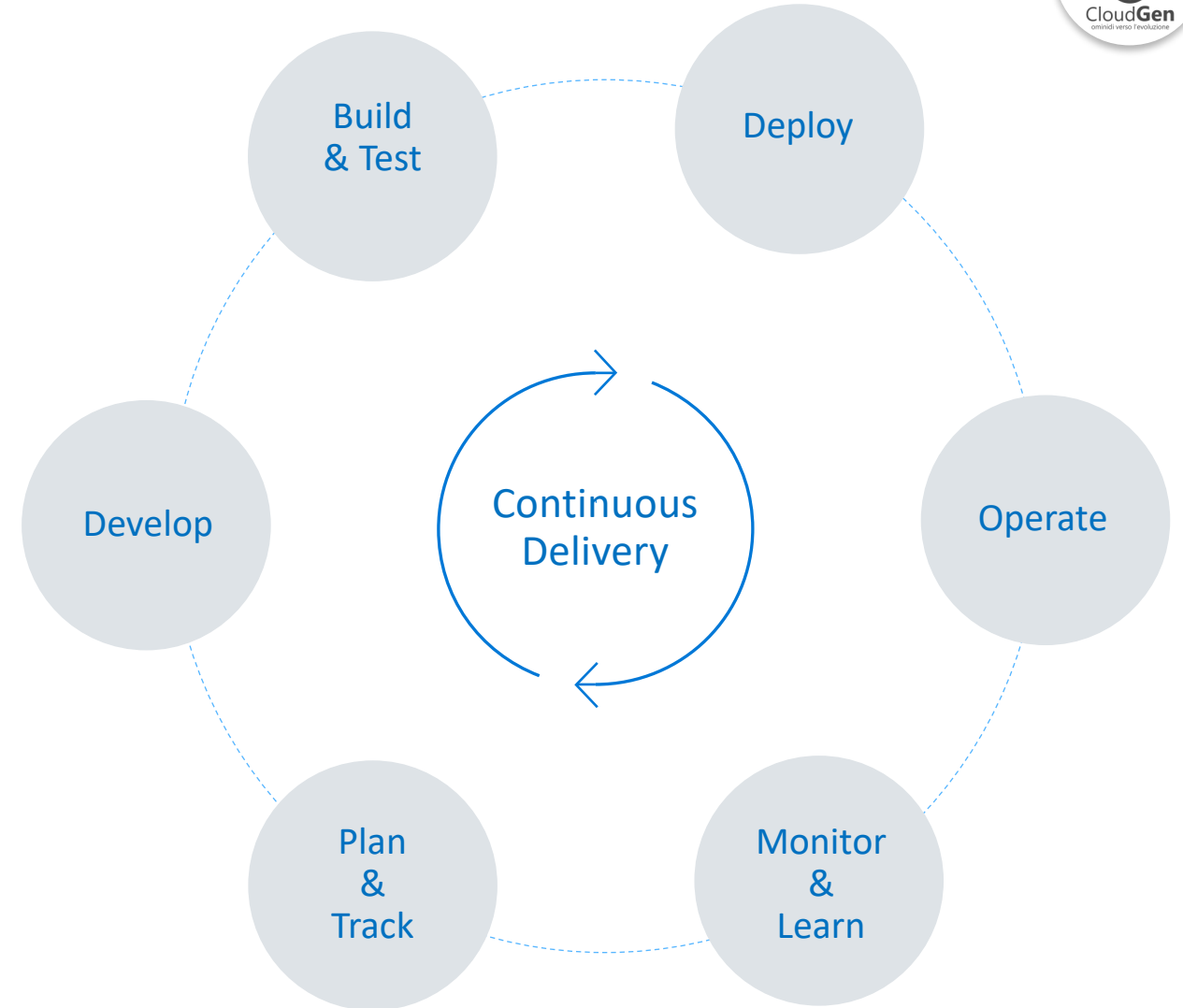
DEMO

What is DevOps?

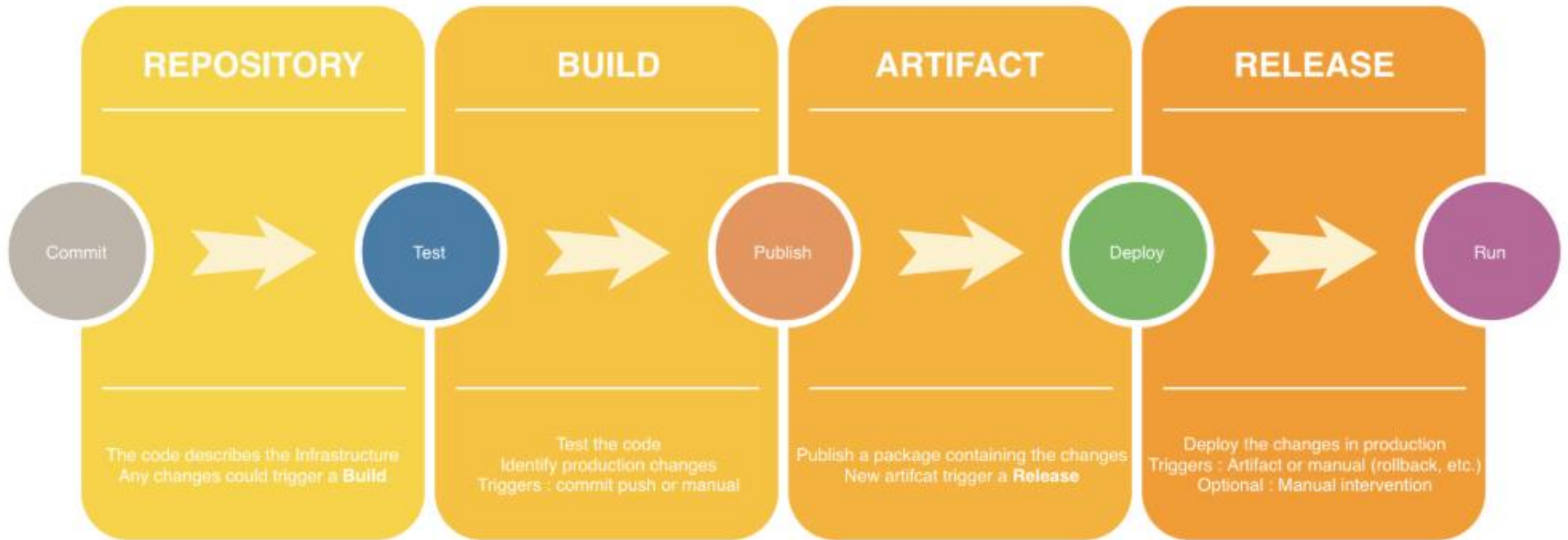
People. Process. Products.



DevOps is the union of **people**, **process**, and **products** to enable continuous delivery of value to your end users.



IaC in a CI/CD Pipeline



Build an Approval Workflow for IaC



Commit

Change the Terraform Code and commit to the Repo (or other supported repository)

Test

Run Terraform Init in order to assure that there are no key configuration Issue

Publish

Run terraform Plan to verify the differences between the new infrastructure committed in the repository and what is already installed.

Deploy

Run the terraform Apply in order to deploy the new infrastructure

Run

Access the new infrastructure in order to assure that the all the infrastructure changes requested are correctly implemented.



DEMO

References



<https://www.terraform.io/>

<https://app.terraform.io/>

<https://aex.dev.azure.com/app/register>

Thanks

Questions?



[Github.com/rcappello](https://github.com/rcappello)



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