

laC for Dev Teams

How laC can bridge the gap between Infra and Dev Teams

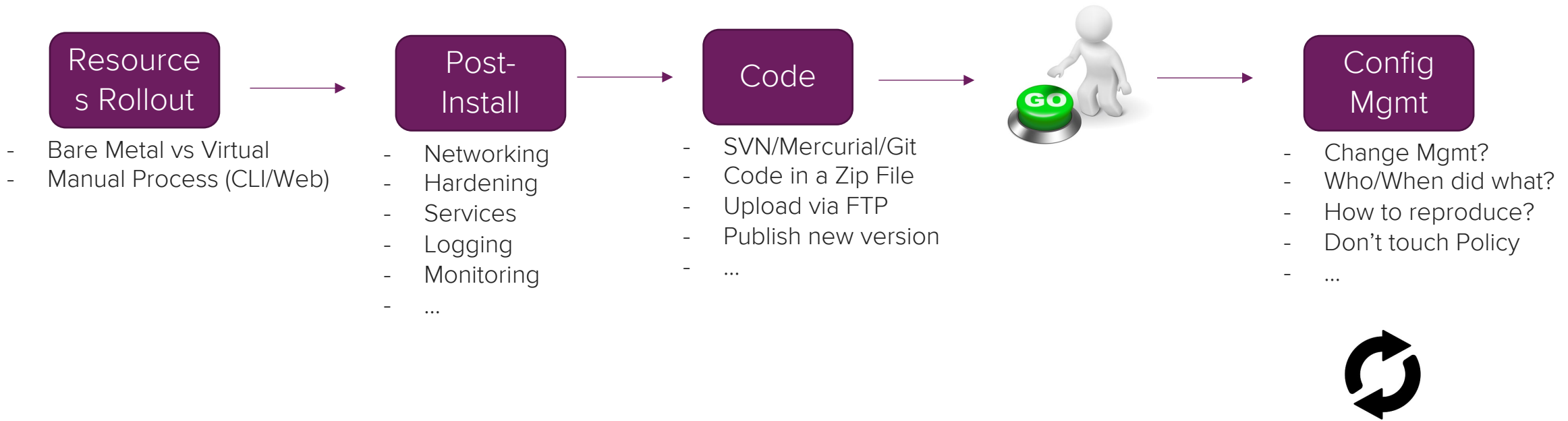
Lucas Albuquerque | 29-04-2021

How used to be...

- Distinct Teams: Dev and Infra
- Two teams, two different goals: Innovation vs Stability
- A lot of manual process and error-prone processes
- How is the culprit?



Traditional SW Delivery process...



API: A Game changer

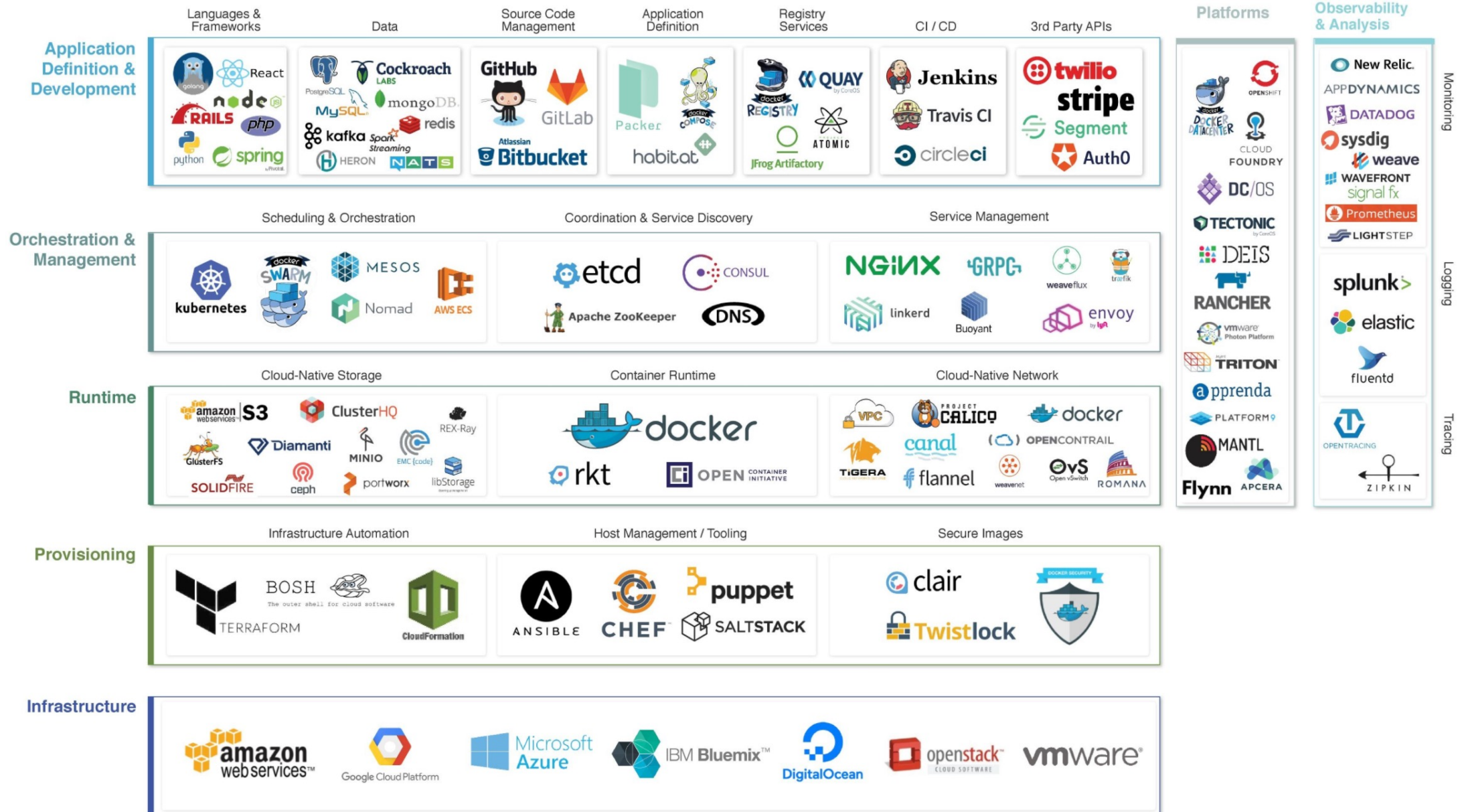
- API for Managing infra and Platform (Cisco, VMware, AWS, Openstack, ...);
- Managing infra using Code (IaC);
- But in an imperative way (non-idempotent);
- For a full automation, we needed declarativeness and idempotency

/storage_pools		Show/Hide	List Operations	Expand Operations	Raw
GET	/storage_pools/				Get the list of Storage Pools.
POST	/storage_pools/				Add a Storage Pool.
PUT	/storage_pools/				Update a Storage Pool.
GET	/storage_pools/{id}				Get a Storage Pool.
DELETE	/storage_pools/{id}				Delete a Storage Pool.
GET	/storage_pools/alerts/				Get the list of alerts generated on any Storage Pool.
GET	/storage_pools/events/				Get the list of events generated on any Storage Pool.
GET	/storage_pools/{id}/stats/				Get the stats for a specified Storage Pool.
GET	/storage_pools/{id}/alerts/				Get the list of alerts generated on a specified Storage Pool.
GET	/storage_pools/{id}/events/				Get the list of alerts generated on a specified Storage Pool.

IaC: Infra-as-Code

- Infra declared as code and managed using SCM Tooling (e.g. Git)
- Reduced **Human Error** and Increased Institutional **Knowledge**
- **Repeatability** and **Consistency**
- Improved **Change Tracking** and **Auditability**
- **Disaster Recovery**

IaC: Landscape



IaC: A Different Mindset

- #1 Pets vs Cattle vs Cockroaches

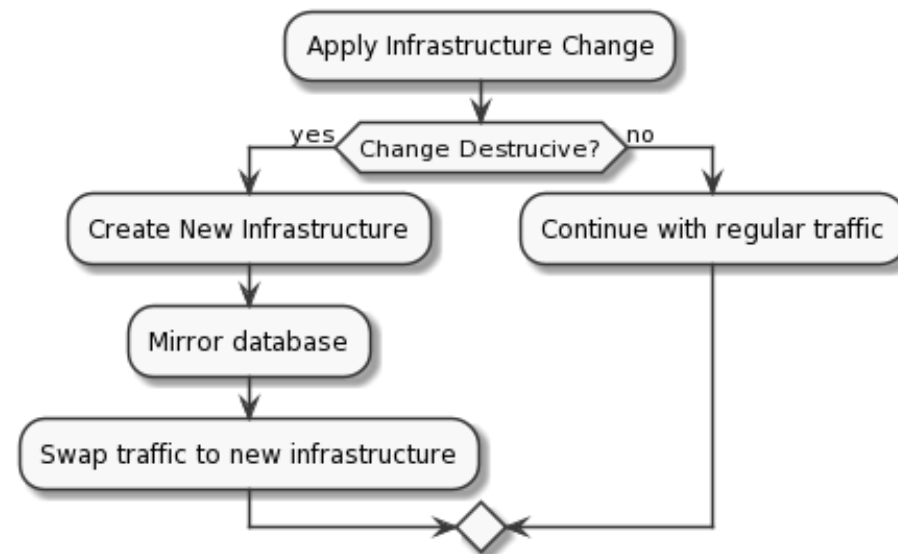


IaC: A Different Mindset

- #2 Focus on Services
 - Split into multiple providers
 - Scale compute down to lower cost
 - Off-loading cross cutting concerns to 3rd party services

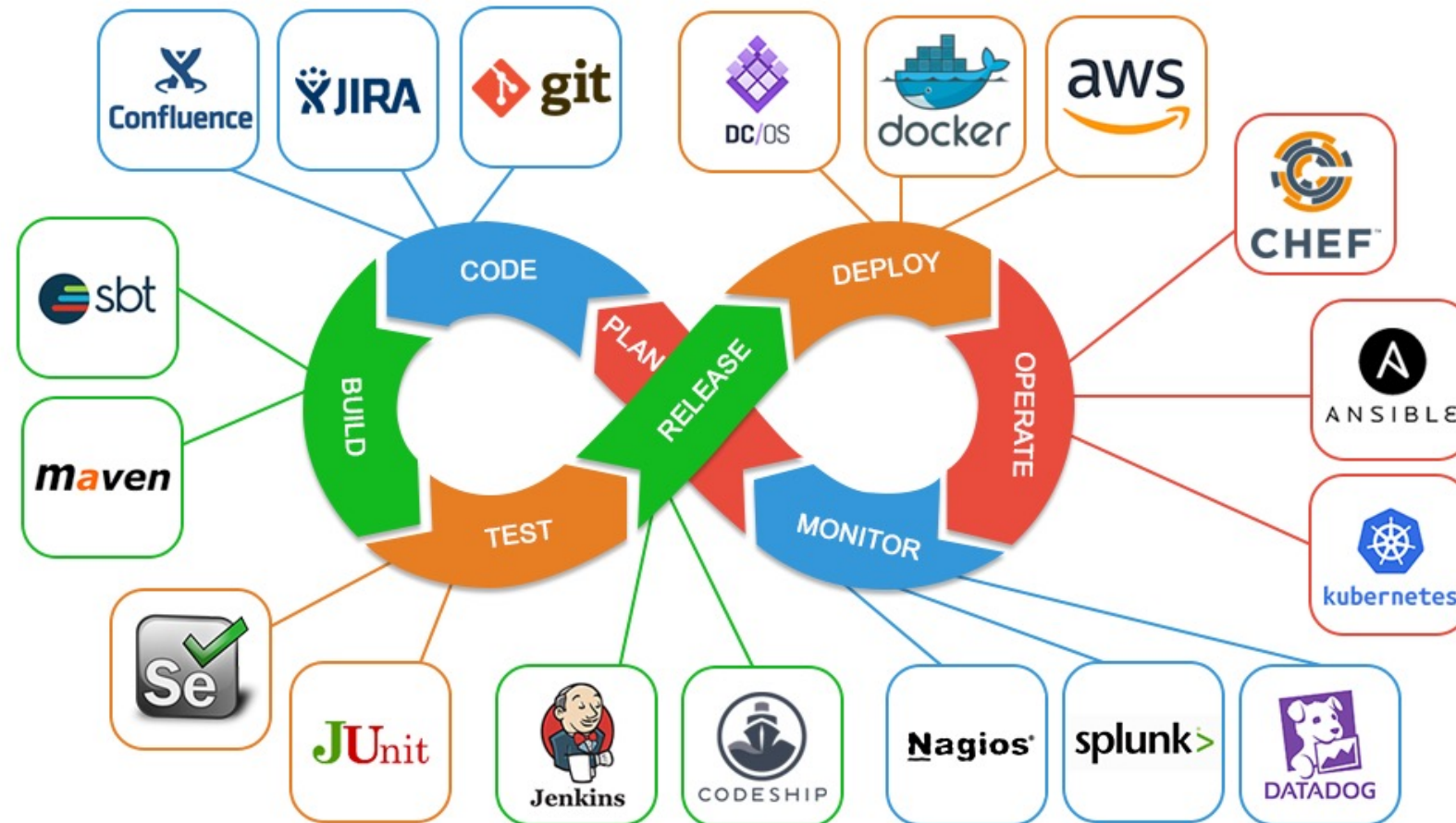
IaC: A Different Mindset

- #3 Infra vs Data
 - Infra can be created and destroyed all the time is the key concept;
 - Pick your single source of truth (Git, S3, SQL/No-SQL, ...);



IaC: A Different Mindset

- #4 DevOps

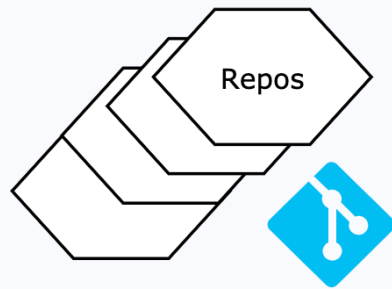


IaC: A Different Mindset

- #5 Apply SW Practices for IaC
 - CI/CD Pipelines;
 - Tests
 - DRY (Modules)
 - Code Review;
 - Branching/Tagging;
 - ...



azure-pipeline.yml



Push



Azure Registry



Pull



Ubuntu
4 vCPUs / 32G RAM



200GB
HDD



Public IP



Thanks for Joining Questions?

Lucas Albuquerque | 29-04-2021



Xebia