

*** as Code**

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What is * as Code?

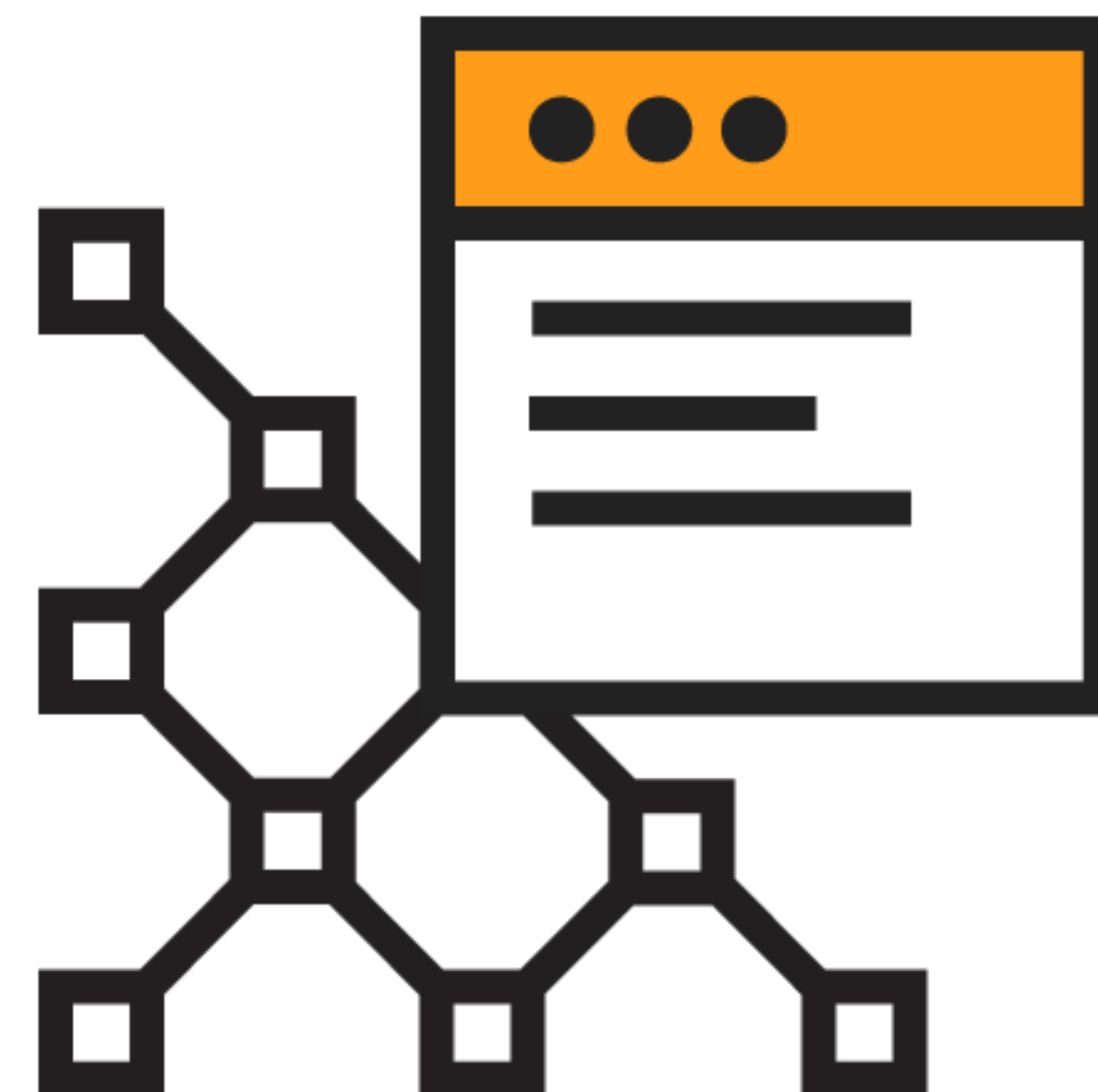
*** = Everything.... Whatever you like... all the things.**

- Infrastructure
- Environments
- Configuration
- Policy

Why * as Code?

- All the normal benefits of good code practices/ways of working
 - Git/version control
 - CI/CD
 - Collaboration
 - Source of truth

laC



What is IaC?

Infrastructure as Code

- Quite simply representing Infrastructure in a human readable format
- These human readable files can be used to provision and manage infrastructure, most commonly using tooling.
- Infrastructure is traditionally an expensive process, particularly in terms of time.
- Cloud computing arch. (even on prem), has pushed this effort even further

Why

Infrastructure as Code

Benefits:

- Cost reduction
- Increase in speed of deployments
- Reduce errors
- Improve infrastructure consistency
- Eliminate configuration drift

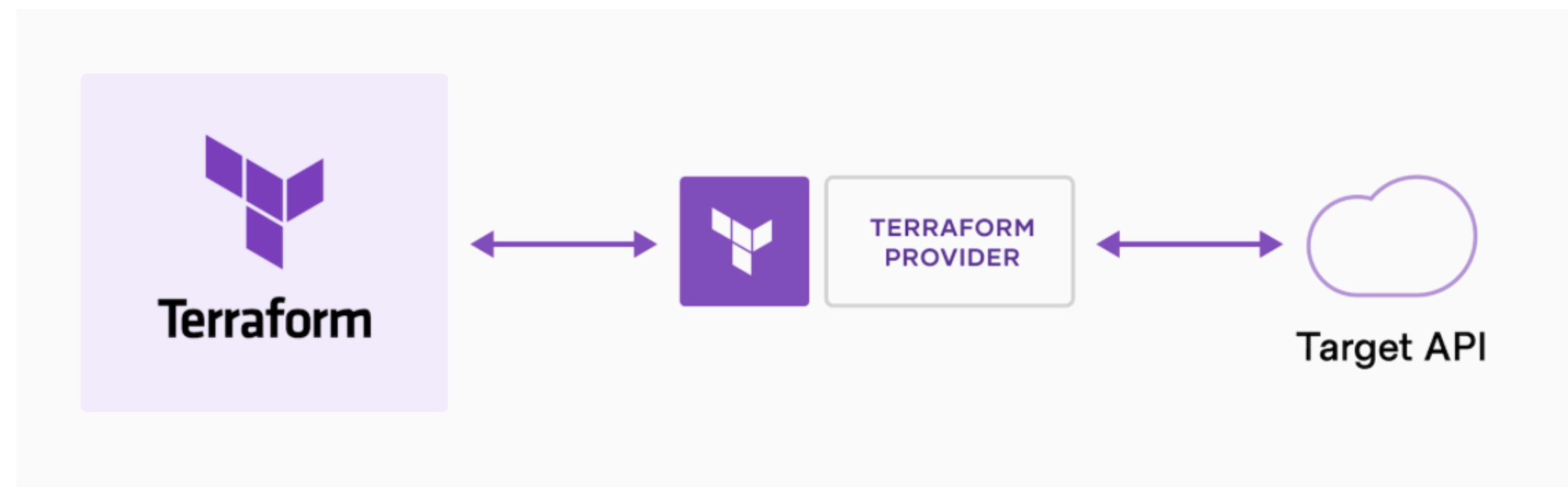
Terraform



What is Terraform?

- A command line tool which provides a workflow for managing Infrastructure.
- Declarative in its approach, meaning that the user 'codes' the desired end result of your infrastructure
- Using the created configuration files, Terraform can figure out:
 - What needs to be created
 - The order it needs to be created in
 - Whether it already exists and is in the correct state
 - Or even if it exists but not exactly how its defined

Providers



- Interface between command line tool and the Platform
- More than 2000 available
- Official ones for Azure, AWS, vmWare etc

State

- Terraform stores the current state (in a file a JSON) after each apply, or refresh.
- During each run, the tool compares the state file against what the provider is reporting.
 - This allows Terraform to figure out what has changed, or what needs to be changed
- State files can be stored remotely for collaboration

Workflow

1. Write

2. Plan

3. Apply

What does it look like?