glueck kanja

# Terraform Provider for Microsoft 365

Manage Intune and EntraID as Code

TerraProvider

**glueck▪kanja**

# Which problem are we trying to solve?

— Microsoft 365 tenant (especially **Intune**) configuration is a complex beast

— If you are alone and have just one tenant, you may be ok with 'clicks in portals', but ...

— If you are a **team of admins**, have **multiple tenants** (staging/production | MSP) to manage, **'clicks in portals' is not a scalable option**.

    — documentation

    — change tracking / versioning

    — auditing

    — detect manual changes

    — disaster recovery

    — blueprint tenant creation / automation



glueckkanja.com

**glueck■kanja**
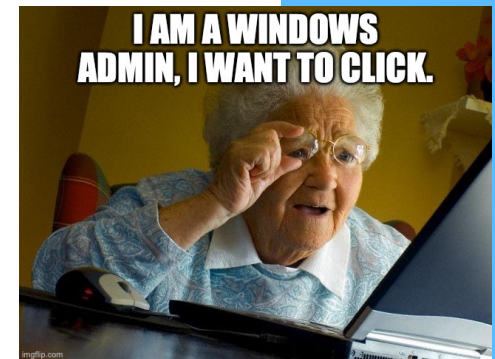
# There are already solutions for this problem

— The general idea is called **Configuration-as-Code**
  (or Desired State Configuration / Infrastructure-as-Code)

— We had a long journey accross multiple tools and approaches

— Some are kind of creative, some are kind of professional including DevOps integration

# glueck kanja
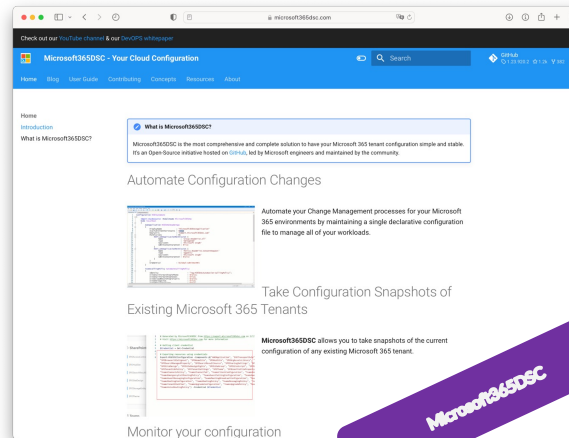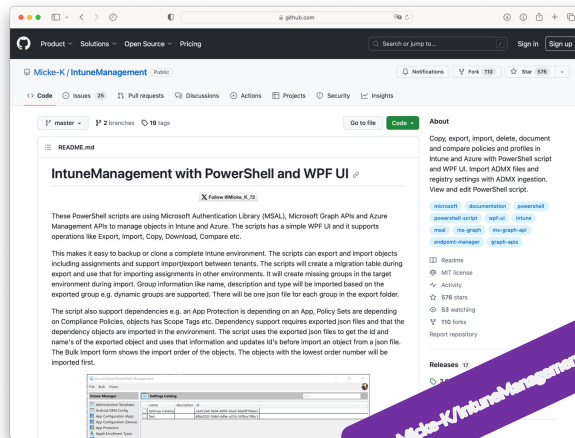
## Powershell? Nails everywhere...

— The **law of the instrument**, law of the hammer, ... is a cognitive bias that involves an over-reliance on a familiar tool. Abraham Maslow wrote in 1966, "**If the only tool you have is a hammer, it is tempting to treat everything as if it were a nail**." (Wikipedia)

— Don't get me wrong:
   We ❤️ Powershell – but **is it the right weapon for Configuration-as-Code**?

— Beside a lot of design considerations and caveats ...
   why not ignore the hammer and check out which toolchain
   is used for **nearly 40% of worldwide cloud automation**?

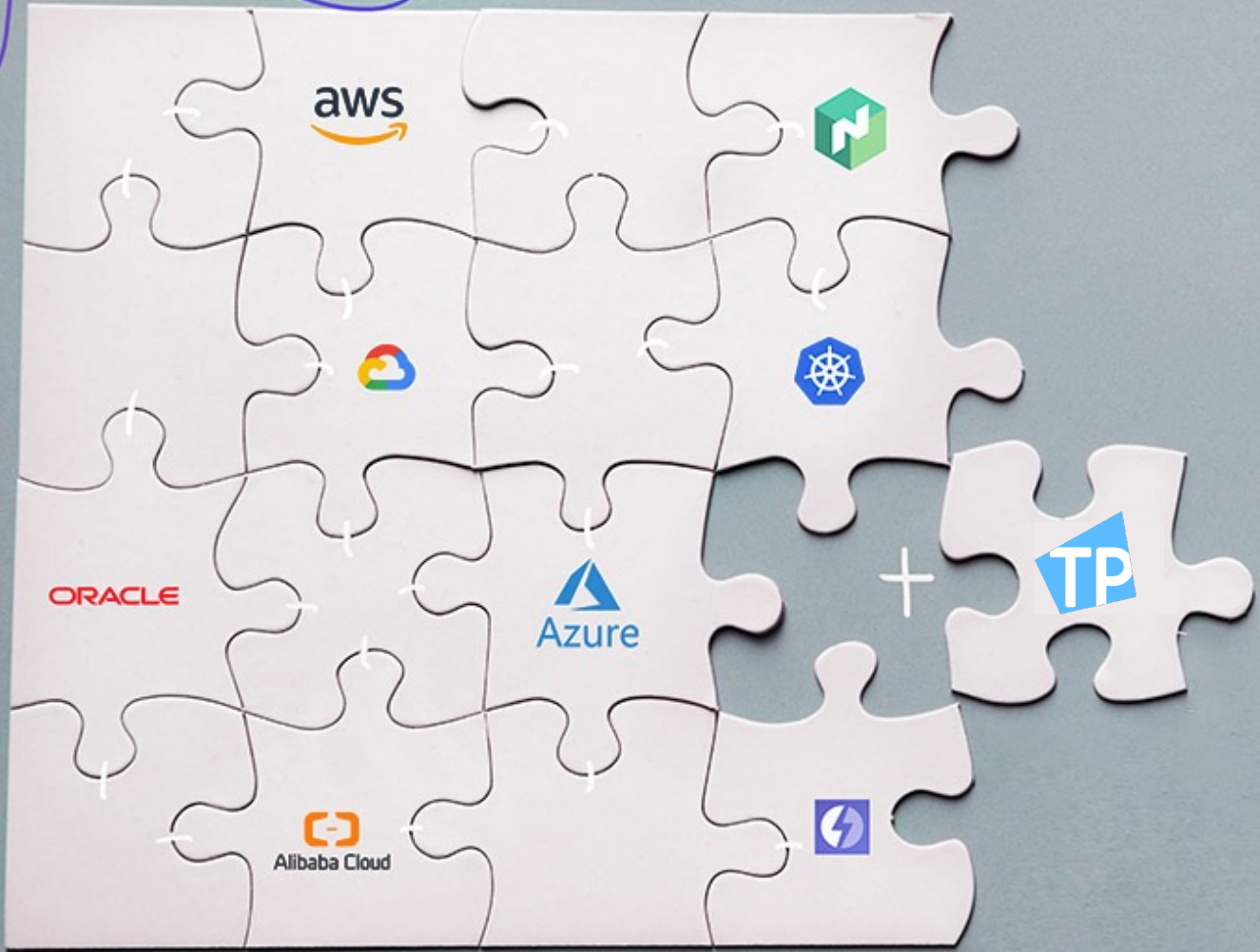glueckkanja.com
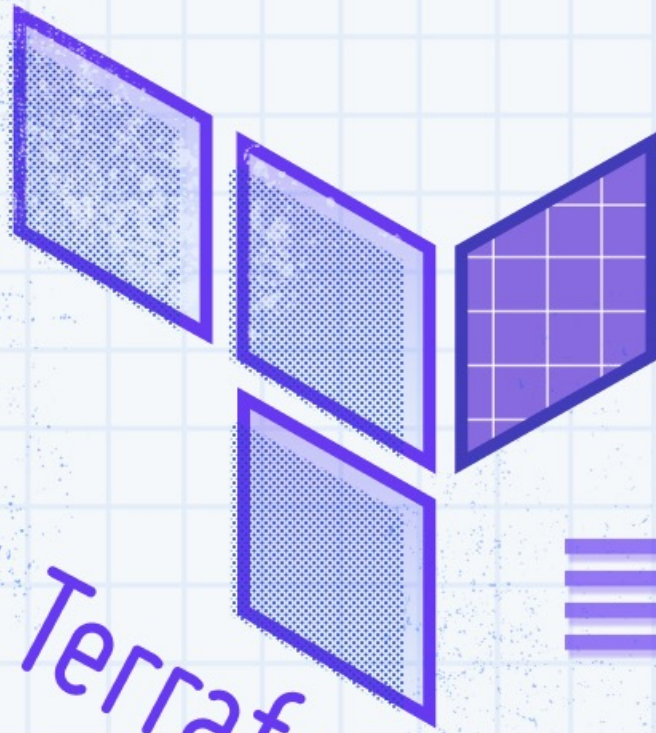
Terraform

# Basic Architecture Terraform

**Terraform template**
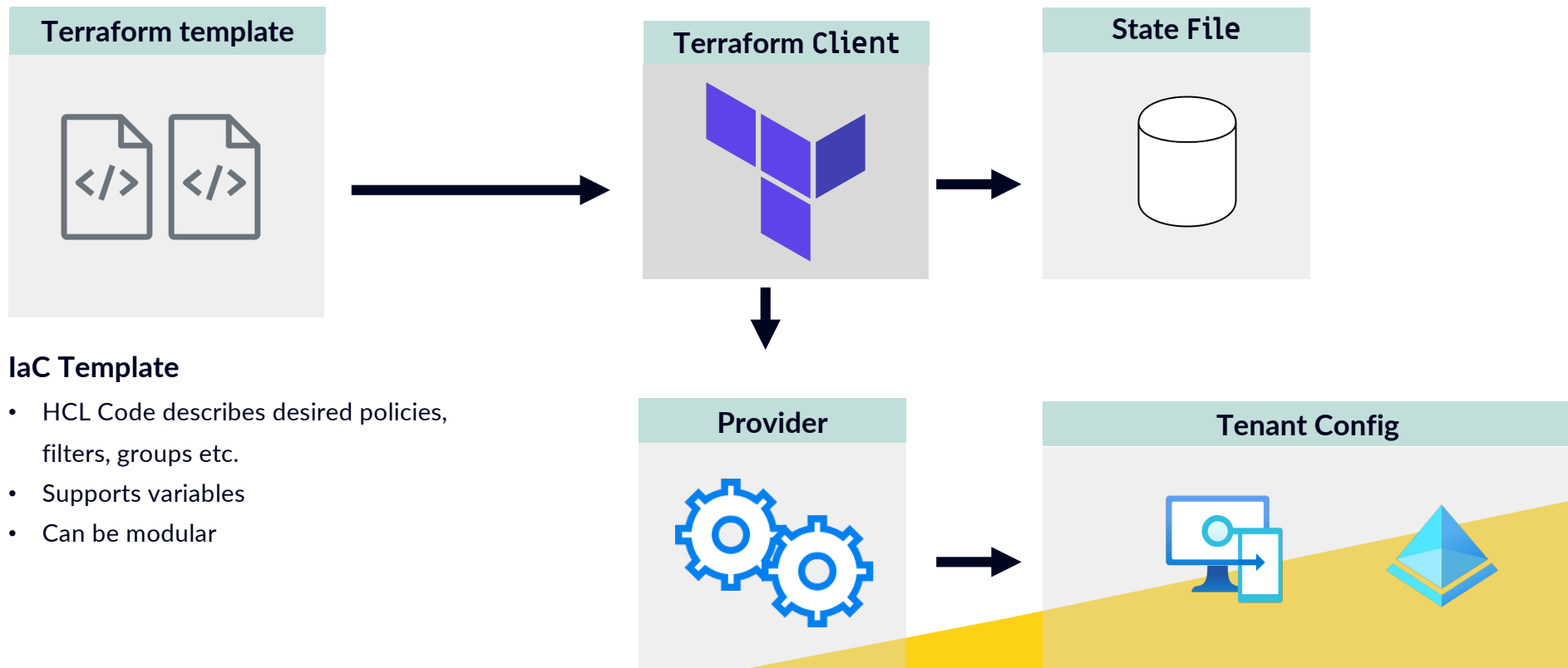


**IaC Template**

- HCL Code describes desired policies, filters, groups etc.
- Supports variables
- Can be modular

**Terraform Client**



**State File**



**Provider**



**Tenant Config**
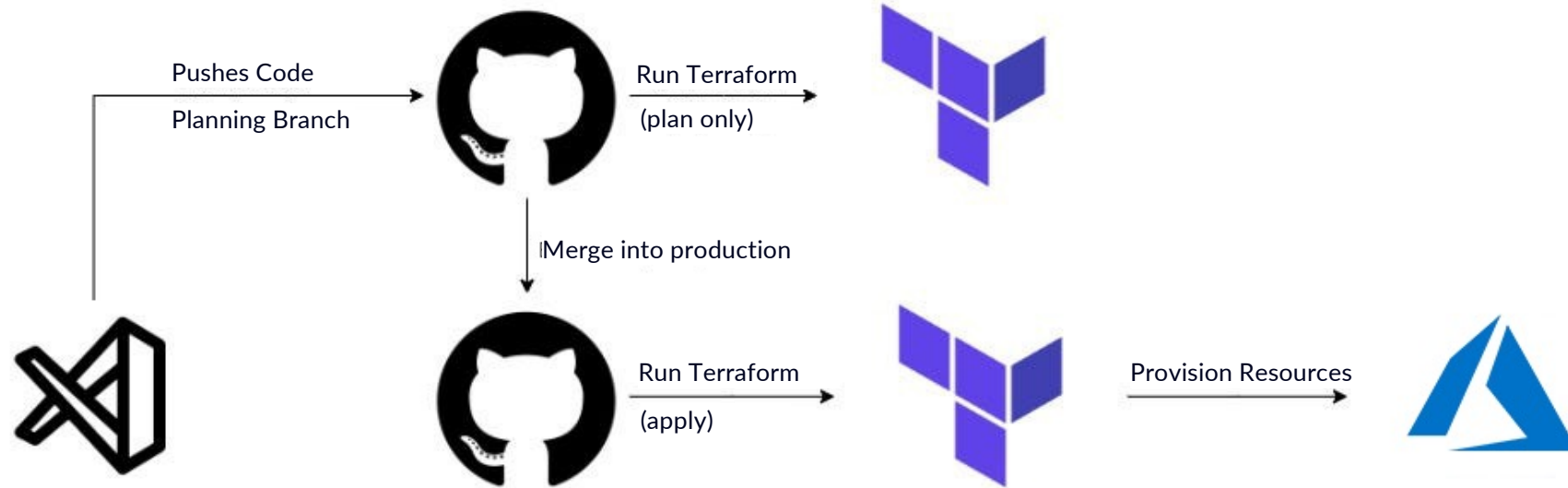
**glueck▪kanja**

# Handles everything? Not yet...

— TerraProvider already handles

  — **Conditional Access** and Authentication Strength Policies

  — **Intune**

    — **Filters**

    — **Compliance Policies**

    — **Configuration Policies** (Templates and Settings Catalog)

    — Windows **Update Rings** / MacOS Update Settings

    — **Endpoint Security Policies** and **Defender configuration**

    — **Autopilot Profiles**, Device Enrollment Settings

  More to come.

# Basic Terraform Lifecycle



Pushes Code
Planning Branch

Run Terraform
(plan only)

Merge into production

Run Terraform
(apply)

Provision Resources

glueckkanja.com

**glueck■kanja**

# Quick-Start content

— We will release a simplified, easy to start base set of policies and best practises

  — Module Structure

  — Parameter Definition Template

  — Premade GitHub Action Templates

  — Basic Policies to start from (main difference to our internal BluePrint)

  — Open Source and available on GitHub

# ...soon™