New Relic

nerd days 1.0

Reducing toil with Terraform

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Common challenges when building infrastructure

- Manual intervention
- Disaster recovery
- Extensibility
- Replication
- Delivery time
- Track of resources
- Changes review

Introducing Terraform in the Organization

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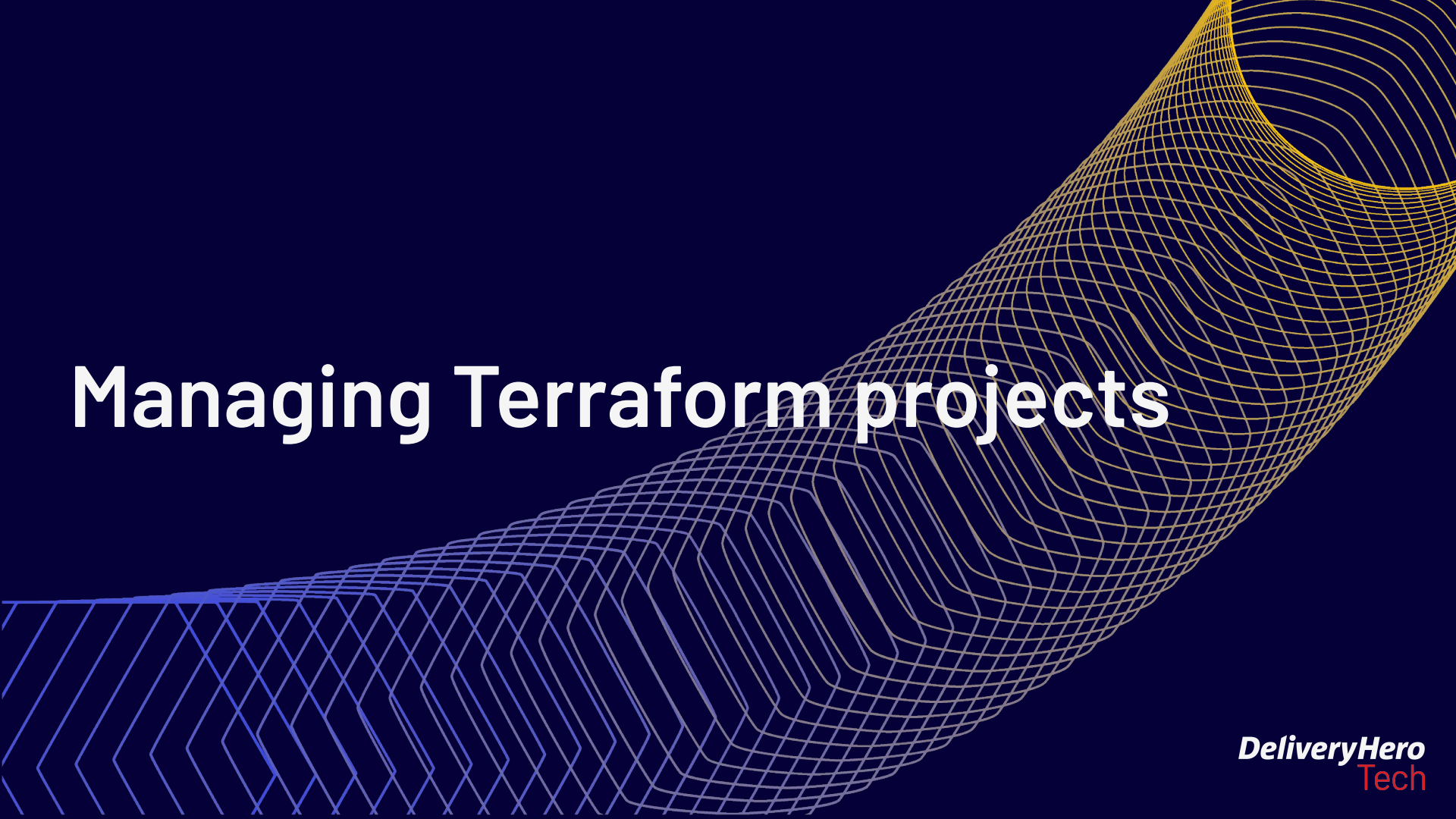
How to adopt Terraform in the organization

1. Define clear responsibilities over the infrastructure
2. Isolate Terraform projects based on ownership
3. Choose the ***Terraform backend*** that suits you best
4. Create Terraform modules to share across the organization

Managing Terraform projects



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Key points:

- Terraform state per resource type
- Ownership is over all teams or an infra team
- Standards are set in common or by an infra team
- Common repository for all the Terraform

Best option for:

- Organizations whose infrastructure and standards are managed by an infrastructure team or across all development teams
- Enabling a centralised self-service workflow
- Keeping consistency and common standards across all the infrastructure

Running Terraform on Remote

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Terraform on remote

Why to run on remote

- No need to keep your local machine running
- Review and approval can be set as required prior to apply
- No need to set permissions per user
- Avoid overlapping changes with “locks”
- Terraform always on latest state

How to run on remote

- Using ***Terraform Cloud*** as a managed solution
- Using ***Atlantis*** as a self-hosted solution

How to start with Atlantis

- Choose the deployment method it suits best to you:
  - *AWS Fargate*
  - *Helm Chart*
  - *Kustomize*
  - *GKE*
  - *Azure Container Instance*
  - *Roll your own*
- Configure the repos you want to use and go!

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DEMO TIME

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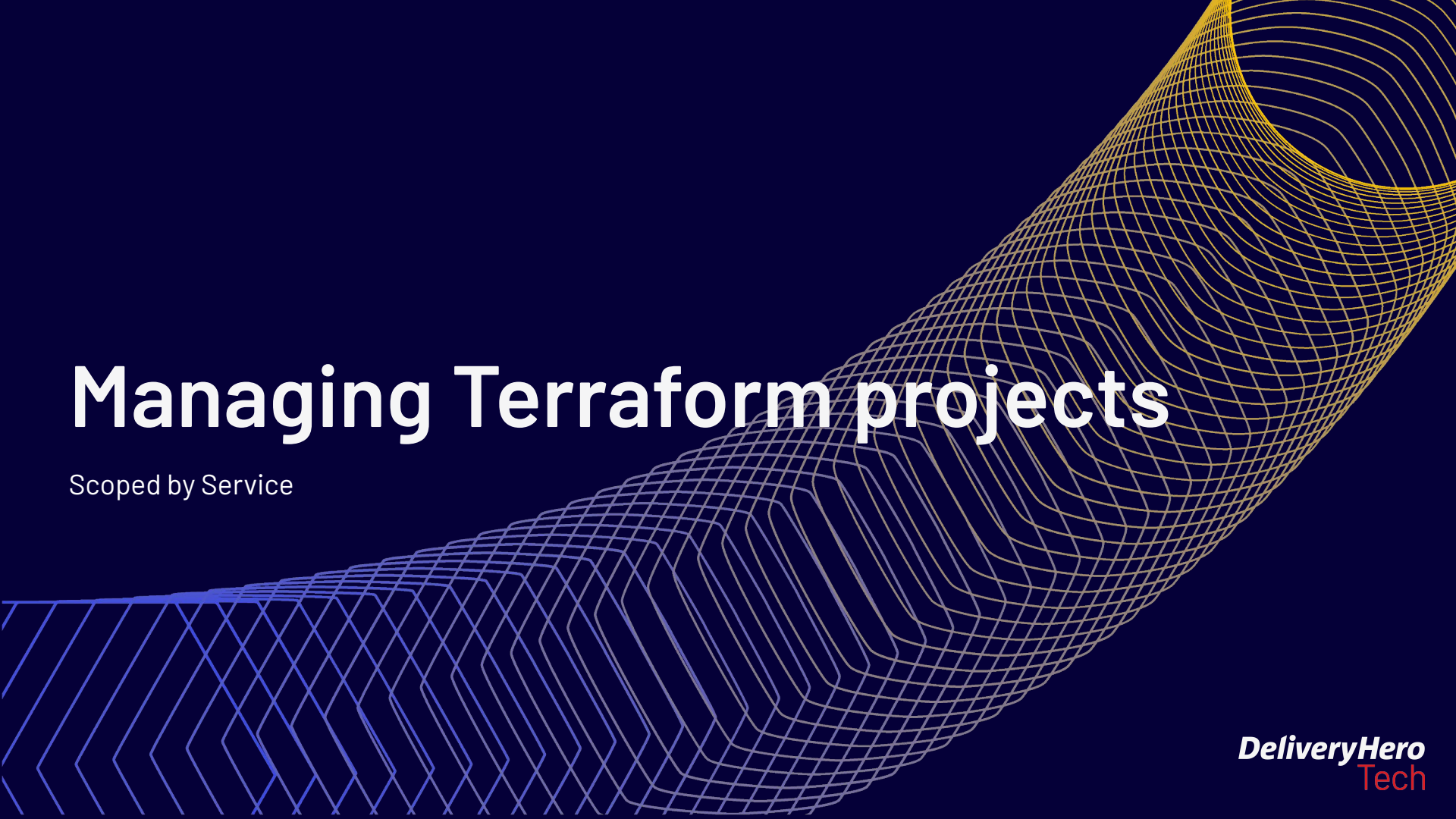
Managing Terraform projects

Scoped by Service



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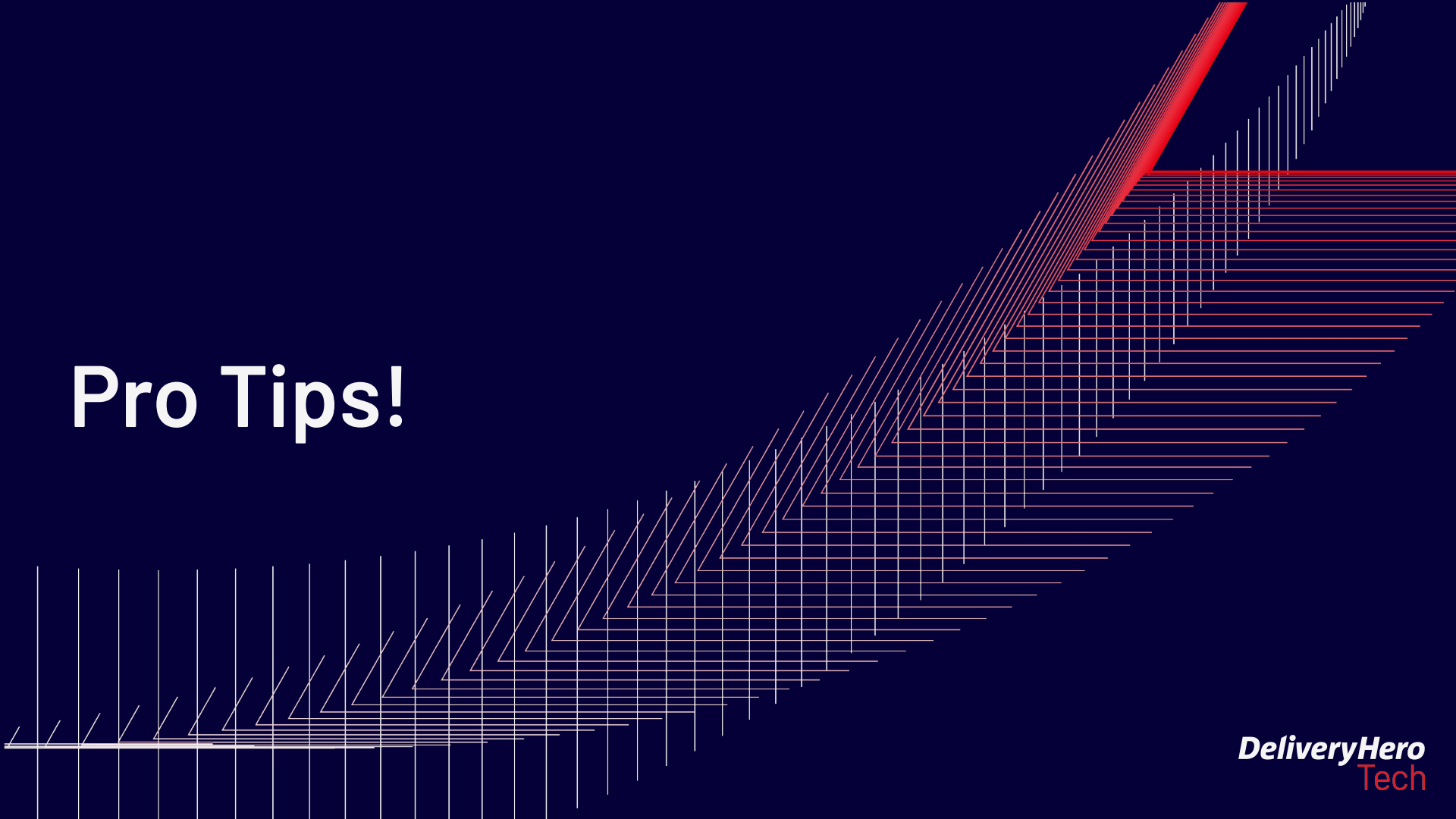
Key points:

- Terraform state per service
- Full ownership by the service owner's team
- Standards are set by the service owner's team
- Terraform can be in different repositories

Best option for:

- Organizations whose teams are fully responsible for their infrastructure and standards
- Keeping the Terraform in the same repo as the service's code
- Fast adoption of new cloud services and Terraform providers

Pro Tips!



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Pro Tips!

- Using variables in all of your Terraform code, allows you to quickly reuse your code within multiple environments.
- Structure your Terraform projects within different directories for each environment and/or location
- ***Workspaces*** allows you to use one single Terraform ***state file*** for multiple environments.
- Terraform has many ***providers***. Combine them together to build your entire infrastructure from a single place.
- Create your own Terraform provider and extend its flexibility.
- Use ***public*** Terraform modules
- ***tfswitch*** is a great tool to manage multiple Terraform versions in your local machine.

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We are hiring!
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https://github.com/deliveryhero/dh-nerddays-demo

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Q&A

Thanks For attending nerd days 1.0

Look out for your chance to request a swag pack in the follow-up email