Deploying Your First Terraform Configuration

Ned Bellavance

HashiCorp Ambassador

@ned1313 | nedinthecloud.com

Module Overview

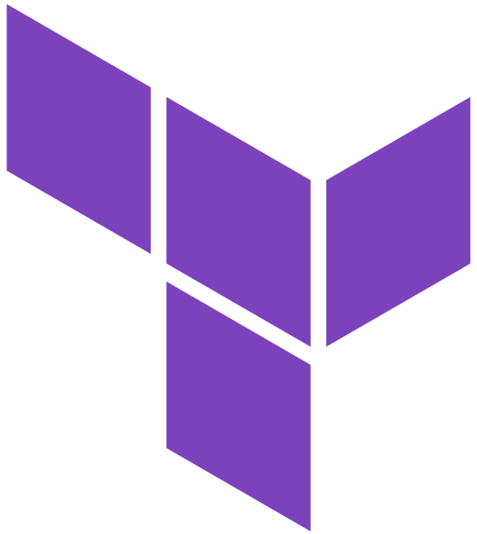
What is Terraform?

- Core components
- Workflow
- Installation

Globomantics scenario

Terraform: "Hello world"

What is Terraform?



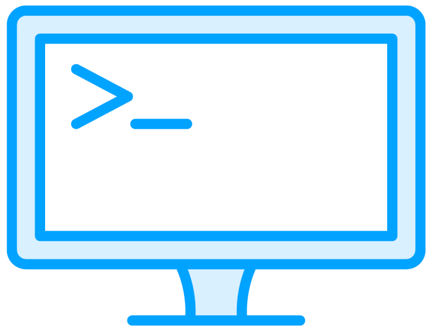
HashiCorp

Terraform

- Infrastructure automation tool
- Open-source
- Vendor agnostic
- Single binary compiled from Go
- Declarative syntax
- HashiCorp Configuration Language or JSON
- Push based deployment

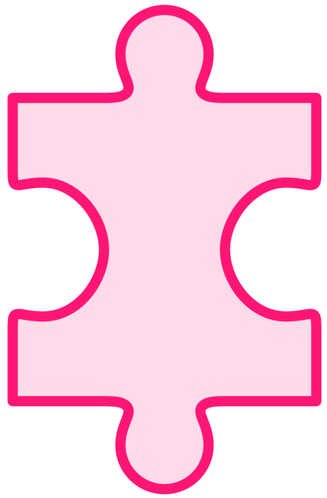
hashicorp.com/brand

Core Components



Executable

Configuration files



Provider plugins

State data

Installation

Download the executable for your platform

Add to your PATH environment variable

Share and enjoy!

Tasks:

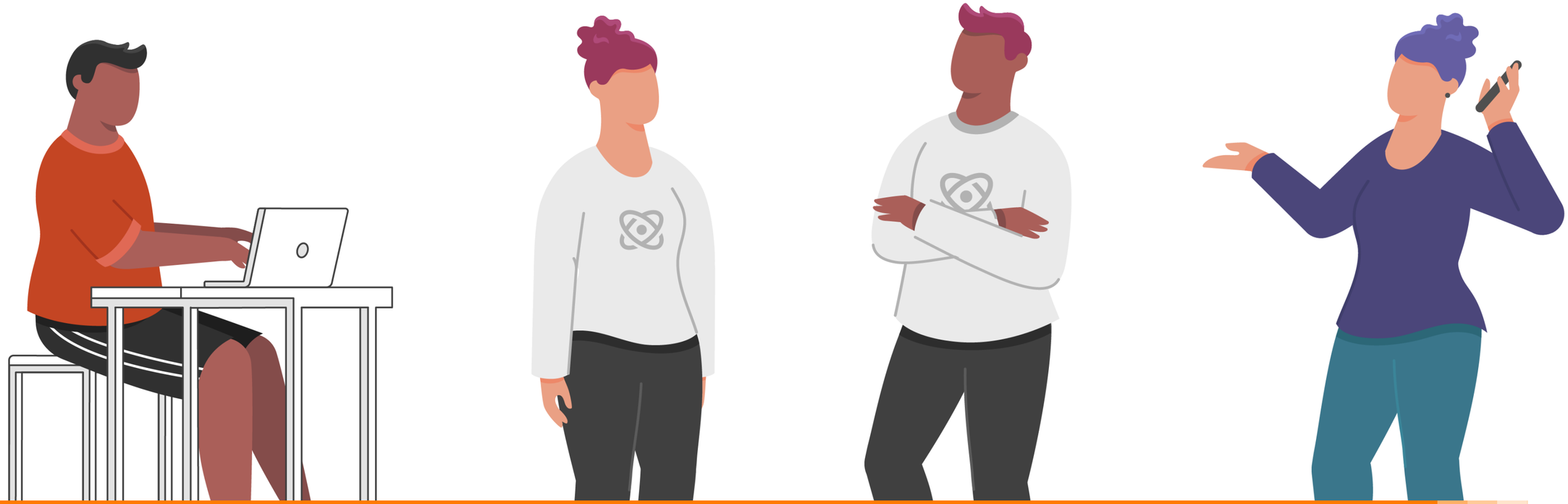
- Install Terraform
- Try out the CLI commands

Prerequisites:

- Code editor
- Exercise files

Globomantics Scenario

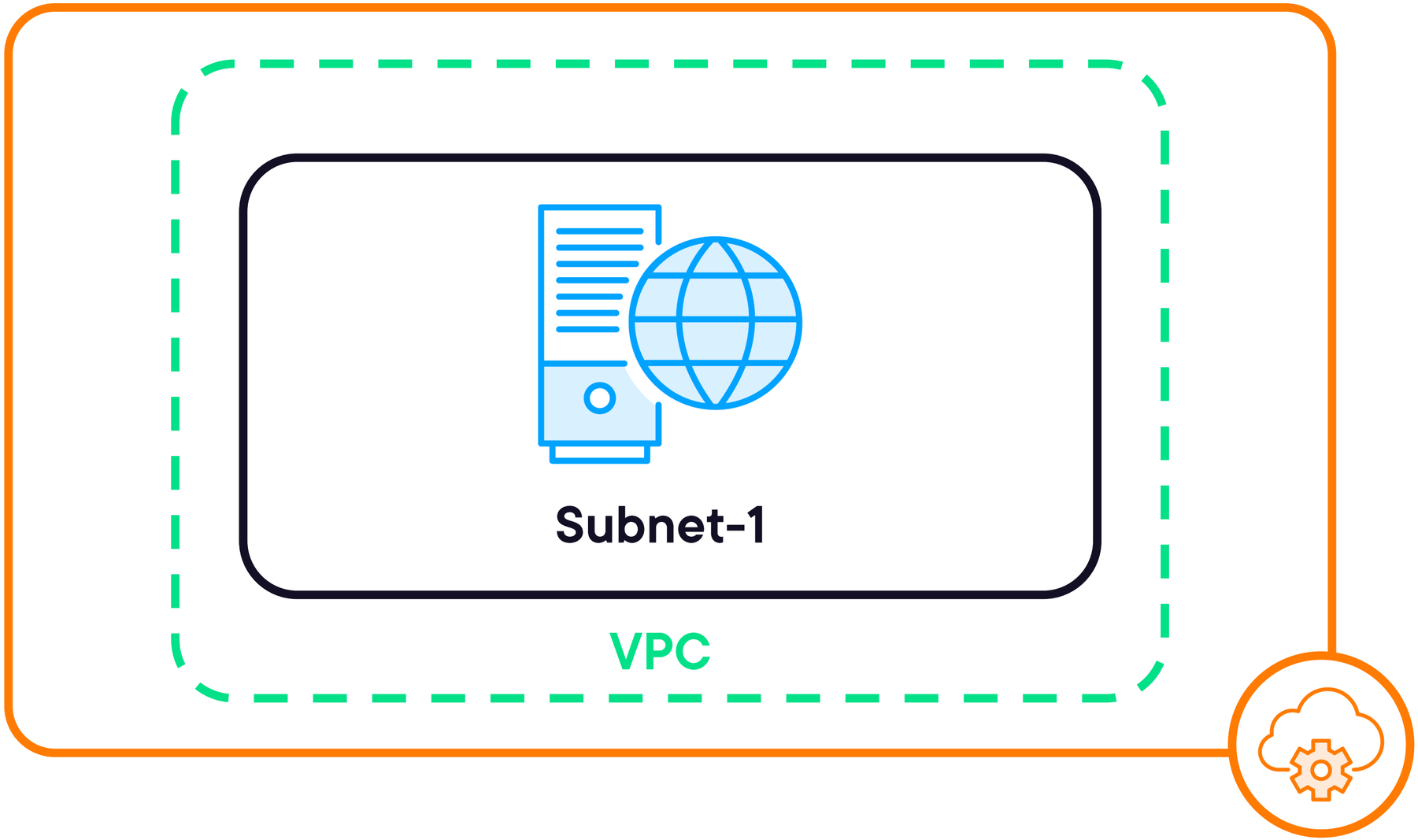
Welcome to Globomantics



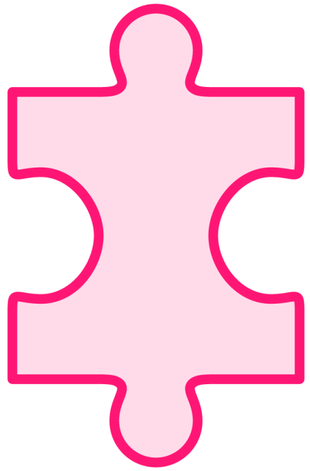
GLOBOMANTICS

LOBOMANTICS

Deployment Architecture



Terraform Object Types



Providers

Resources

Data sources

Block Syntax

main.tf

```
block_type "label" "name_label" {
  key = "value"
  nested_block {
    key = "value"
  }
}
```

Block Syntax

main.tf

```
resource "aws_instance" "web_server" {
  name = "web-server"
  ebs_volume {
    size = 40
  }
}
```

```
resource "aws_instance" "web_server" {
  name = "web-server"
  ebs_volume {
    size = 40
  }
}
```

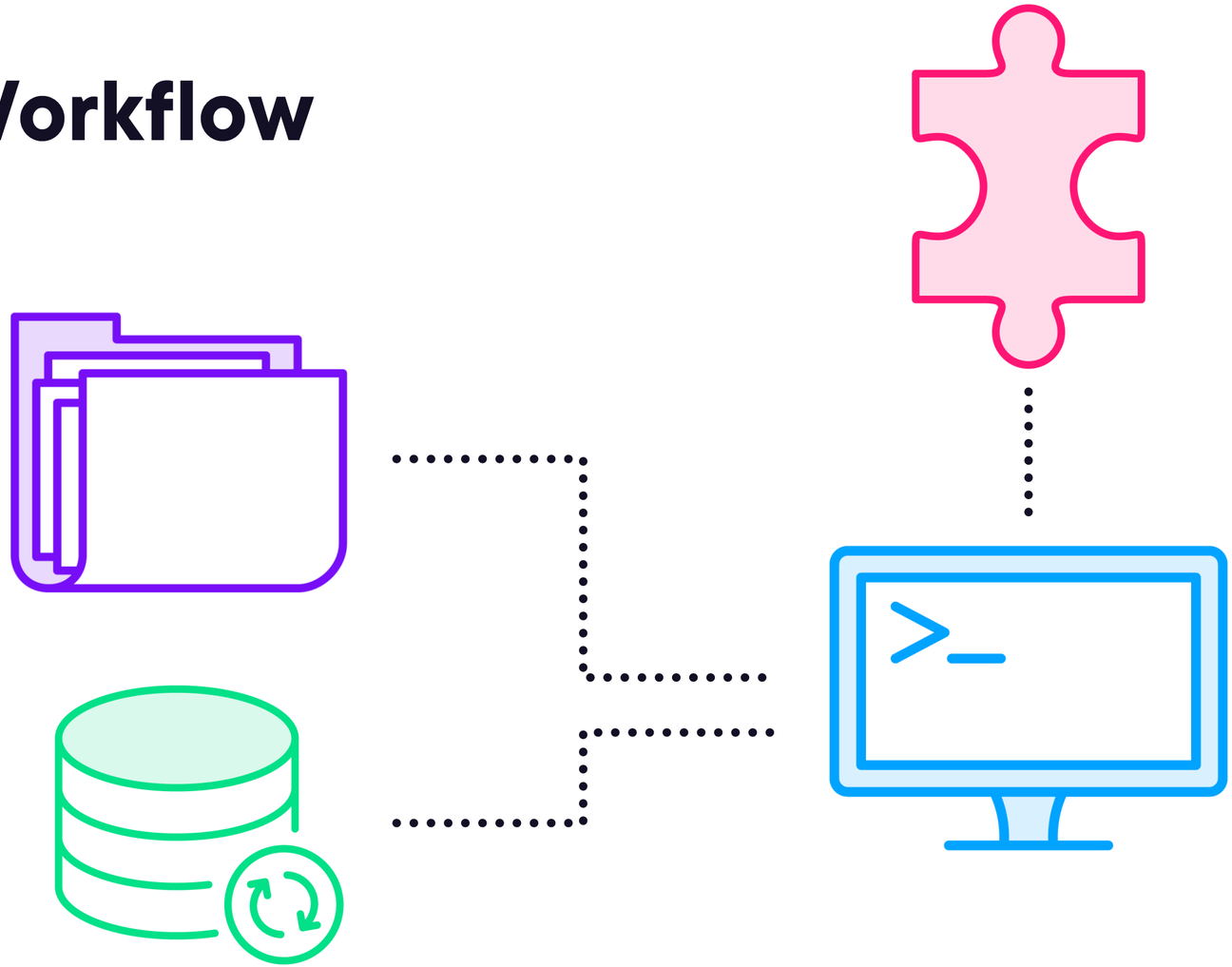
Terraform Object Reference

<resource_type>.<name_label>.<attribute>

aws_instance.web_server.name

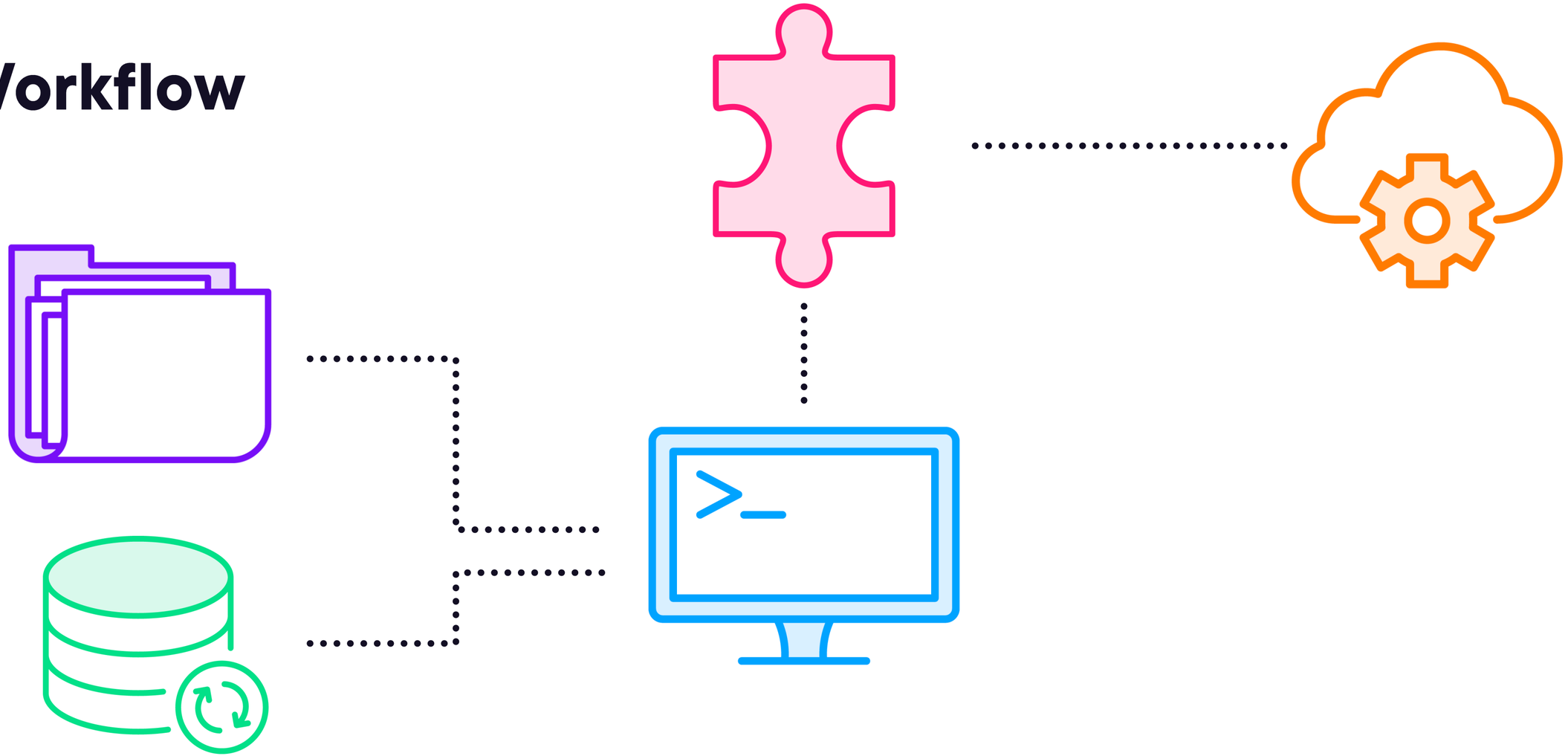
Terraform Workflow

Workflow



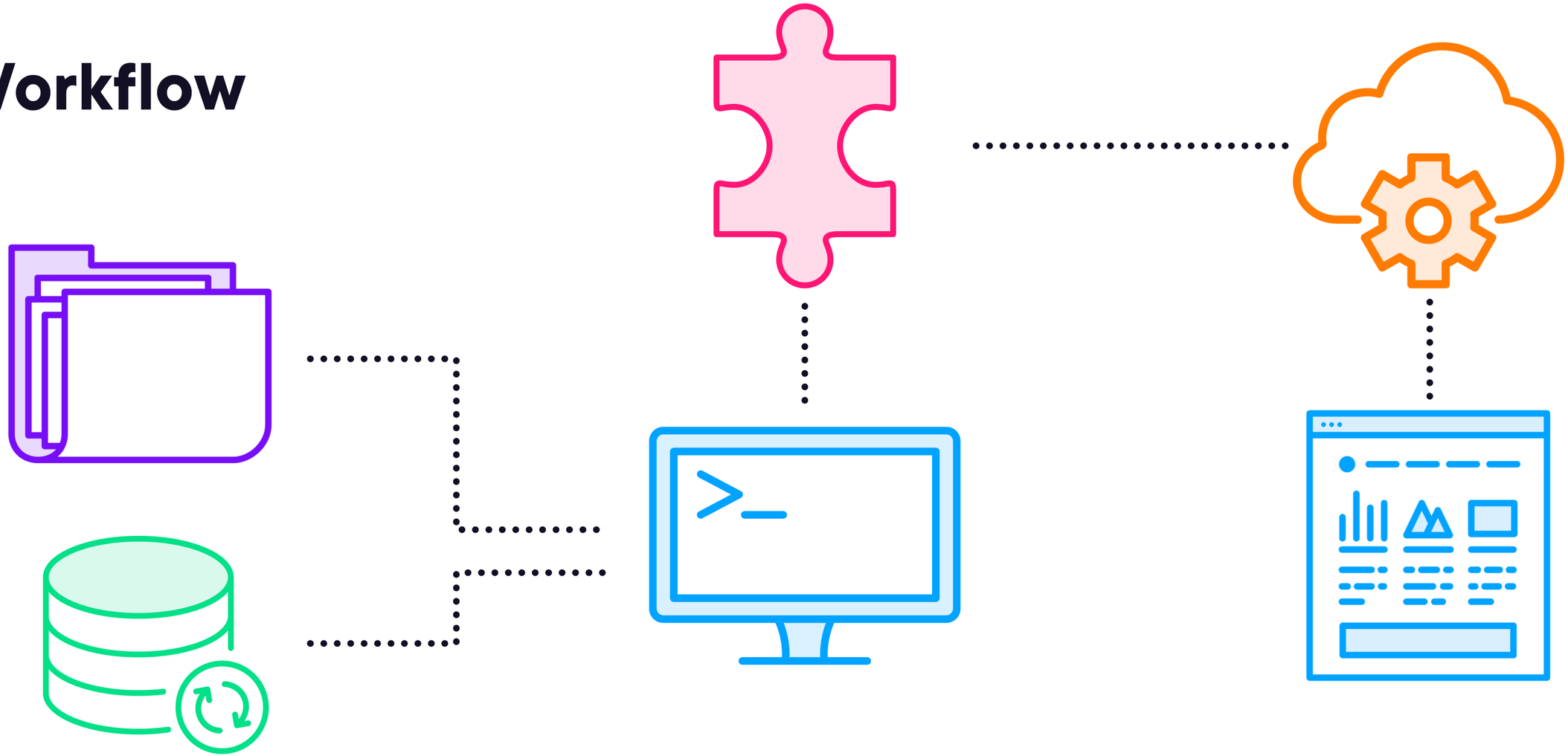
```
$> terraform init
```

Workflow



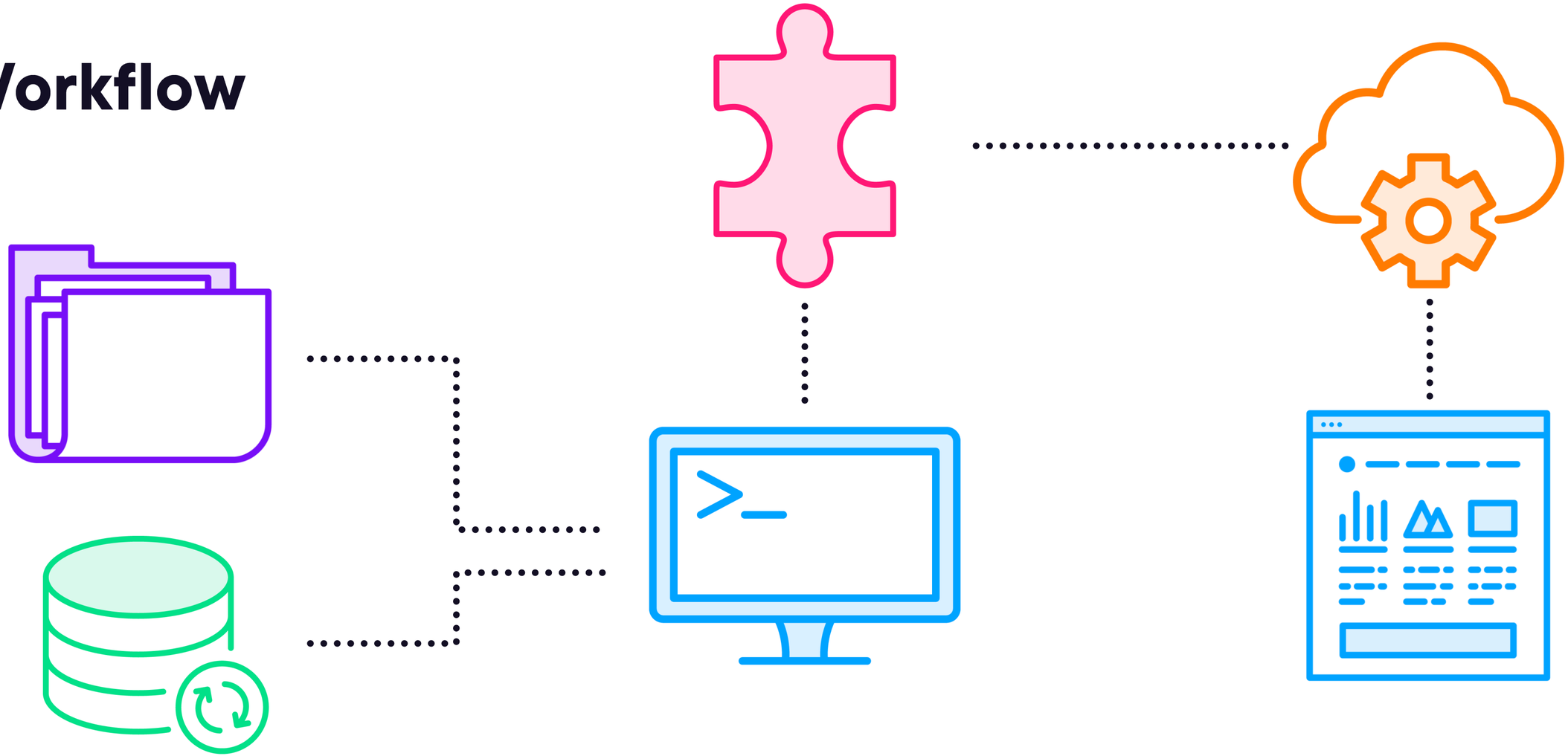
```
$> terraform plan
```

Workflow



```
$> terraform apply
```

Workflow



```
$> terraform destroy
```

Tasks:

- Initialize our configuration
- Plan the deployment
- Apply the plan

Prerequisites:

- AWS account
- AWS access keys

Some of the resources deployed in AWS may cost money. You've been warned.

Module Summary

Terraform is infrastructure automation

Single binary for almost any OS

Provider plug-in architecture

Configurations in JSON or HCL

Basic workflow: init, plan, and apply

Up Next:

Using Input Variables and Outputs